TERRAPEX

DE ZEN REALTY COMPANY LTD.

PHASE TWO ENVIRONMENTAL SITE ASSESSMENT

120, 128, 142, 148, 154, 158 QUEEN STREET SOUTH AND 169 CRUMBIE STREET, MISSISSAUGA, ONTARIO

FINAL REPORT

MARCH 4, 2024

Terrapex Environmental Ltd.
65 Nebo Road, Hamilton, Ontario L8W 2C9
Telephone: (905) 632-5939
Email: hamilton@terrapex.com
Website: www.terrapex.com

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LIST OF ACRONYMS

amsl	Above mean sea level
ANSI:	Area of Natural or Scientific Interest
APEC:	Area of Potential Environmental Concern
AST:	Aboveground Storage Tank
BH:	Borehole
BTEX:	Benzene, Toluene, Ethylbenzene, and Xylenes
CALA:	Canadian Analytical Laboratories Association
COC:	Contaminant of Concern
COPC:	Contaminant of Potential Concern
CSA:	Canadian Standards Association
CSM:	Conceptual Site Model
CV:	Combustible Vapour
DO:	Dissolved Oxygen
DNAPL:	Dense Non-aqueous Phase Liquid
EC:	Electrical Conductivity
ERIS:	Environmental Risk Information Service Ltd.
EPA:	Environmental Protection Act
ESA:	Environmental Site Assessment
F1-F4	Petroleum hydrocarbon fractions 1 through 4 of the CCME Canada Wide Standards
HDPE:	High density polyethylene
LDPE:	Low density polyethylene
LEL:	Lower Explosive Limit
LNAPL:	Light Non-aqueous Phase Liquid
LPH:	Liquid-Phase Petroleum Hydrocarbons (free-product)
MECP:	Ministry of Environment, Conservation and Parks
mg/kg:	milligrams per kilogram
m bg	metres below grade
mg/L:	milligrams per litre
MGRA:	Modified Generic Risk Assessment (under O. Reg. 153/04)
MNR:	Ontario Ministry of Natural Resources
MOE:	Ontario Ministry of Environment
MOECC:	Ontario Ministry of Environment and Climate Change
MW:	Monitoring well
NAPL:	Non-aqueous Phase Liquid
NHIC:	Natural Heritage Information Centre
ORP:	oxidation-reduction potential
OSHA:	Occupational Safety and Health Act
PAHs:	Polycyclic Aromatic Hydrocarbons
PCA:	Potentially Contaminating Activity (from O. Reg. 153/04)
PCBs:	Polychlorinated Biphenyls
PHC:	Petroleum Hydrocarbon
PID:	Photo Ionization Detector
ppm:	Parts Per Million
PVC:	Polyvinyl chloride
QA:	Quality Assurance
QC:	Quality Control

LIST OF ACRONYMS (CONTINUED)

QP:	Qualified Person under O. Reg. 143/04
RA:	Risk Assessment
RAP:	Remedial Action Plan
RDL:	Reportable Detection Limit
RSC:	Record of Site Condition (under O. Reg. 153/04)
R.R.O. 1990:	Revised Regulations of Ontario, 1990.
SAR:	Sodium Adsorption Ratio
SCC:	Standards Council of Canada
SCS:	Site Condition Standards (from O. Reg. 153/04)
SOP:	Standard Operating Procedure
SV:	Soil Vapour
SVOCs:	Semi-Volatile Organic Compounds
TCLP	Toxicity Characteristic Leaching Procedure (Reg. 558/00)
TOC:	Total Organic Carbon
TP:	Test Pit
TPH:	Total Petroleum Hydrocarbons
UST:	Underground Storage Tank
VOCs:	Volatile Organic Compounds
WWIS:	Water Well Information System

1.0 EXECUTIVE SUMMARY

Terrapex Environmental Ltd. (Terrapex) was retained by De Zen Realty Company Ltd. (De Zen) to conduct a Phase Two Environmental Site Assessment (ESA) of the properties located at 120, 128, 142, 148, 154, 158 Queen Street South and 169 Crumbie Street in Mississauga, 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 filing a Record of Site Condition (RSC). Based on a Phase One ESA study of the Site, the Phase Two ESA was undertaken to assess Contaminants of Potential Concern (COPCs) at thirty Areas of Potential Environmental Concern (APECs) identified in the Phase One ESA (Terrapex report issued March 4, 2024).

The Site is located on the west side of Queen Street South, Mississauga, in an area of predominately light industrial land use, with residential land use to the west. The Site is an irregular shaped parcel of land measuring approximately 4.3 hectares (10.6 acres). It is occupied by various businesses, including: three multi-unit commercial buildings located at 128 Queen Street South (Streetsville Centre Plaza), 158 Queen Street South (Winchester Place), and 169 Crumbie Street; two free-standing restaurants located at 120 Queen Street South (Tim Hortons) and 154 Queen Street South (Cuchulainn's Irish Pub); and, associated paved parking areas. The Site also includes a vacant, fenced lot which was previously a retail gasoline station located at 142 and 148 Queen Street South.

Due to the proposed re-development of the Site for residential property use and other considerations, the full depth generic Site Condition Standards (SCS) corresponding to Residential/Parkland/Institutional (R/P/I) land use, fine and medium-textured soil, in a non-potable groundwater condition that are listed in Table 3 of the April 15, 2011 *Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act* document have been selected to evaluate soil and groundwater laboratory analytical results.

The Phase Two ESA comprised drilling of boreholes and installation of monitoring wells between February 2023 and November 2023 to facilitate soil and groundwater sampling. During these investigations soil and groundwater sampling and analysis was conducted to assess COPCs at the Site including benzene, toluene, ethylbenzene, and xylenes (BTEX), petroleum hydrocarbons (PHC) F1 to F4 fractions parameters, volatile organic compounds (VOCs), polycyclic aromatic hydrocarbons (PAHs), metals and inorganic parameters, semi-volatile organic compounds, including acid/base/neutral compounds (ABNs) and chlorophenols (CPs), and polychlorinated biphenyls (PCBs).

The Phase Two ESA identified concentrations of hot water soluble (HWS) boron, electrical conductivity (EC), and sodium absorption ratio (SAR) in the soil in excess of the Table 3 SCS. The EC and SAR impacts were located in paved areas of the Site that were used for parking or in areas adjacent to public roadways (i.e. Queen Street South). The HWS boron impacts are situated within the asphalt parking area east and south of 128 Queen Street South, and west of 169 Crumbie Street. The HWS boron soil impacts have been delineated horizontally or vertically. Concentrations of all other COPCs in soil were less than the applicable Table 3 SCS.

Concentrations of sodium, chloride, and selenium in groundwater were also identified in excess of the Table 3 SCS. These impacts were situated in the parking areas of 128 Queen Street South and 169 Crumbie Street. Only one monitoring well exceeded the Table 3 SCS for selenium. Concentrations of all other COPCs in groundwater were less than the applicable Table 3 SCS.

Sediment is not present at the Site, and therefore contaminants of concern are not present within sediment.

Given the locations where the SAR, EC, sodium and chloride were identified, evidence of the use of salt at the Site for the purposes of snow and ice control in winter conditions gathered during the Phase One ESA, and the absence of any other documented potential source of such impacts at or in the vicinity of the Site during the Phase One ESA, the SAR and EC impacts in soil and the sodium and chloride impacts in groundwater identified at the Site have been determined to arise from the application of a substance (specifically, salt) to ground surfaces for the safety of pedestrian and vehicle traffic under conditions of snow or ice. As per Section 49.1 of O. Reg. 153/04, such impacts are not deemed to represent an exceedance of a Site Condition Standard for the purposes of Part XV.1 of the Environmental Protection Act, and therefore the identified elevated EC and SAR in soil and the sodium and chloride in groundwater would not preclude the filing of a Record of Site Condition.

Based on two additional sampling results for selenium in groundwater, the QP_{ESA} has determined that the initial result for the selenium was anomalous and is not considered as an exceedance and therefore would also not preclude the filing of a Record of Site Condition.

In accordance with O.Reg. 153/04, remediation of the identified HWS boron impacts in soil or completion of a Risk Assessment would be required before filing an RSC for the site.

2.0 INTRODUCTION

Terrapex Environmental Ltd. (Terrapex) was retained by De Zen Realty Company Ltd. (De Zen) to conduct a Phase Two Environmental Site Assessment (ESA) of the properties located at 120, 128, 142, 148, 154, 158 Queen Street South and 169 Crumbie Street in Mississauga, 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 filing a Record of Site Condition (RSC) per Ontario Regulation (O. Reg.) 153/04 under the Environmental Protection Act, *Records of Site Condition - Part XV.1 of the Act*.

The objective of the investigation was to assess thirty APECs identified during a previous Phase One ESA work program at the Site in order to identify the location and concentration of contaminants in the land or water on, in, or under the Phase Two property.

The findings of the Phase One ESA are documented in Terrapex's report entitled *Phase One Environmental Site Assessment, 120, 128, 142, 148, 154, and 158 Queen Street South and 169 Crumbie Street, Mississauga, Ontario, Final Report,* dated March 4, 2024.

2.1 SITE DESCRIPTION

The Site is located on the west side of Queen Street South, Mississauga, in an area of predominately light industrial land use, with residential land use to the west. The Site is an irregular shaped parcel of land measuring approximately 4.3 hectares (10.6 acres). It is occupied by various businesses, including: three multi-unit commercial buildings located at 128 Queen Street South (Streetsville Centre Plaza), 158 Queen Street South (Winchester Place), and 169 Crumbie Street; two free-standing restaurants located at 120 Queen Street South (Tim Hortons) and 154 Queen Street South (Cuchulainn's Irish Pub); and, associated paved parking areas. The Site also includes a vacant, fenced lot which was previously a retail gasoline station located at 142 and 148 Queen Street South. There is mix of residential and commercial buildings to the north, east, and south. Railway tracks are located to the west of the Site, followed by residential properties.

The site location is shown in Figure 1. The general site layout and structures are shown in Figure 2A, while Figures 4 and 5A show the potential contaminating activities (PCAs) and APECs identified by the Phase One ESA.

A registered plan of survey for the Phase Two property is attached in Appendix I.

2.2 PROPERTY OWNERSHIP

The registered owner of the Site is De Zen Realty Company Ltd., 4890 Tomken Road #1-4, Mississauga, ON L4W 1J8. Authorization to proceed with this study was given by Mr. Mark Palmieri, Senior Manager, on behalf of De Zen Realty Company Ltd.

2.3 CURRENT AND PROPOSED FUTURE USES

The Site is currently occupied by various businesses in several buildings in a commercial plaza. The Site has historically been used for commercial purposes as a poultry farm in the early 1940s and as a commercial plaza since the early 1960s. Therefore, the current land use as per O. Reg. 153/04 is considered to be commercial. The proposed future use of the Site is proposed to be mixed residential and commercial. Two roads and a public park are proposed to be conveyed to the City of Mississauga. The proposed Master Plan as of December 2023 is shown in Figures 2B and 5B.

2.4 APPLICABLE SITE CONDITION STANDARDS

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

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

- more than 2 m of overburden was observed during the work program;
- the pH determined for the Site ranged from 7.18 to 7.89 in shallow soils (surface to 1.5 m below grade (bg), excluding any surface treatment), which is between the prescribed values of 5 and 9; and from 8.74 to 8.96 in subsurface soils (>1.5 m bg, excluding any surface treatment), which is between the prescribed values of 5 and 11;
- 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;
- stratified site conditions will not be used when evaluating laboratory analytical results;
- the future use of the Site is expected to include residential and parkland use;
- the Site and surrounding properties within 250 m of the Site are serviced with a municipal drinking supply 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;
- 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 at the Site was determined to be fine and medium textured based on field observations and the results of grain size analysis conducted on samples collected on February 15 and 16, 2023.

Based on the above, full depth generic SCS corresponding to Residential/Parkland/Institutional (R/P/I) land use, fine and medium-textured soil, in a potable groundwater condition that are listed in Table 3 of the April 15, 2011 *Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act* are considered applicable for the Site.

3.0 BACKGROUND INFORMATION

3.1 PHYSICAL SETTING

3.1.1 WATER BODIES & AREAS OF NATURAL SIGNIFICANCE

The closest waterbodies are Mullet Creek located approximately 135 m southwest of the Site and the Credit River located approximately 250 m east of the Site. Mullet Creek discharges into the Credit River approximately 4.8 km to the south of the Site, which in turn discharges into Lake Ontario.

According to the City of Mississauga Official Plans, the Site is not within, or immediately adjacent to, an environmentally significant area, a Natural Heritage area, or parkland area.

3.1.2 TOPOGRAPHY & SURFACE WATER DRAINAGE

A review of the Atlas of Canada Toporama online Topographic map (based on information as of 2017) and the Ontario Government Ontario Basic Mapping (OBM) from the online map at geographynetwork.ca/website/obm shows the Site is located on the urban boundary of Mississauga. The topographic map indicates an elevation of 162 m above sea level. The general topography of the area is sloped to the south towards Lake Ontario.

There are no surface water drainage features (e.g., swales, storm water ponds) at the Site, and it is anticipated that storm waters infiltrate into the ground or flows via catch basins to storm drains on-site or along the municipal road allowances.

3.2 PAST INVESTIGATIONS

A summary of pertinent investigation findings from previous reports is presented below in chronological order of work being completed. Terrapex completed a Phase One ESA in accordance with O. Reg. 153/04 for De Zen Realty Company Ltd., titled *Phase One Environmental Site Assessment, 120, 128, 142, 148, 154, and 158 Queen Street South and 169 Crumbie Street, Mississauga, Ontario, Final Report,* dated March 4, 2024, which is summarized in Section 4.3.

Terrapex was provided with the following previous environmental reports for review as part of the scope of the Phase One ESA.

- A Report on Esso Service Station, 148 Queen Street South, Streetsville, Ontario, prepared for Esso Petroleum Canada by O'Connor Associates Environmental Inc., dated March 1988.
- A Site Monitoring Report on Esso Service Station, 148 Queen Street South, Streetsville, (Mississauga), Ontario, prepared for Esso Petroleum Canada by O'Connor Associates

Environmental Inc., dated March 21, 1990.

- A Site Investigation Report on Esso Service Station, 148 Queen Street South, Streetsville, (Mississauga), Ontario, prepared for Imperial Oil, Products Division by O'Connor Associates Environmental Inc., dated June 02, 1994.
- Environmental Investigations, Site Closure Report for Former Esso Service Station, 148 Queen Street South, Streetsville, Ontario, prepared for Imperial Oil Limited by Central Projects Group Inc., dated January 27, 1997.
- A Report on Geotechnical Aspects Proposed Residential Development, 148 Queen Street South, Streetsville, Ontario, prepared for Terrapex Environmental Ltd. by Toronto Inspection Ltd., dated December 06, 2001.
- A Phase II Geo-environmental Site assessment, Former Esso Service Station, 148 Queen Street South, Streetsville, prepared for De Zen Construction Company Limited by Terrapex Environmental Ltd., dated January 17, 2002.
- A Draft Report, Phase I Environmental Site assessment, 128, 142, 148 Queen Street South, Mississauga, prepared for De Zen Construction Company Limited by Terrapex Environmental Ltd., dated May 2007.
- A Final Report, Phase II Environmental Site assessment, 142,148 & Part of 128 Queen Street South, Mississauga, prepared for De Zen Construction Company Limited by Terrapex Environmental Ltd., dated July 02, 2009.
- A Soil Investigation for Proposed 3 and 7 Storey Mixed-Use Building with Two-Level Underground Parking, 142 and 148 Queen Street South, City of Mississauga, prepared for De Zen Construction Company Limited by Soil Engineers Ltd., dated July 2011.
- A Soil Investigation for Proposed Storm Sewer Construction, 142 and 148 Queen Street South, City of Mississauga, prepared for De Zen Construction Company Limited by Soil Engineers Ltd., dated July 2011.
- A Soil Investigation for Proposed New Road Construction, Tannery Street and Queen Street South, City of Mississauga, prepared for De Zen Construction Company Limited by Soil Engineers Ltd., dated September 2011.
- A Soil Investigation for Proposed Mixed-Use Condominium Development, 142 and 148 Queen Street South, City of Mississauga, prepared for De Zen Construction Company Limited by Soil Engineers Ltd., dated April 2014.
- A Phase I Environmental Site assessment, CSA Standard, Existing Commercial Properties, 120, 128, 154 and 158 Queen Street South, City of Mississauga, prepared for De Zen Realty Company Limited by Soil Engineers Ltd., dated June 17, 2022.

Pertinent information from these reports is summarized briefly below.

O'Connor Associates Environmental Inc., 1988, Report on Esso Service Station, 148 Queen Street South, Streetsville, Ontario	
Work Program	• 16 boreholes (10 on-site and 6 Off-site) to a depth of 5.5 to 6.1 m bg. • Monitoring piezometers were installed in each borehole.
Site Condition Standards Applied	No SCS was used for the report
Stratigraphy and Groundwater	• The soil profile consisted of an asphalt cover, a sand and gravel fill, and clay soils with varying proportions of silt. • Bedrock was not encountered. • Groundwater table was at an average depth of 1 m below existing grade. • Local groundwater flow inferred to the northeast and southeast.
Analytical Program	No laboratory analysis was performed for this report
Results	• Residual petroleum hydrocarbon contamination was present in the subsoils beneath the ESSO property. • The contamination appeared to be concentrated in the soils around the USTs, northeast pump island and along the Queen Street property line. • Petroleum products were detected at the water table in BH2.
Comments/Limitations/Other	The following recommendations were provided by O'Connor Associates: • A vapour extraction trial was recommended to assess the applicability of remedial technique to remove residual product from soils. • A VES trench could be designed and installed across the front of the property to inhibit further offsite migration of products and /or vapour. • Monthly monitoring of the piezometers. • Analyzing air samples using gas chromatography to identify types of combustible vapours from selected boreholes. • Pumping of products and/or contaminated groundwater from boreholes in the tank area and the sump in order to contain and accelerate recovery of the subsurface hydrocarbons.

O'Connor Associates Environmental Inc., 1990, Site Monitoring Report on Esso Service Station, 148 Queen Street South, Streetsville, Ontario	
Work Program	• Bi-monthly monitoring of groundwater table depth, liquid plume, vapour plume, and vapour extraction.
Results	• Depth of groundwater ranged from 0.39 to 1.54 m bg. • Direction of groundwater flow was northeast and southwest. • No borehole with liquid products. • 1 borehole with vapour concentration about 10% LEL. • Volume of vapour extraction since November 22, 1988, was 383 L.

O'Connor Associates Environmental Inc., 1994, Site Investigation Report on Esso Service Station, 148 Queen Street South, Streetsville, Ontario	
Objectives/Work Program	• Conduct Subsurface investigation using 12 test pits and 8 existing monitoring wells. • Four 22700 L steel and associated distribution lines were removed from the site. • A bail/recharge test was carried out on a borehole to find hydraulic conductivity of the subsoils. • Soil and groundwater samples were collected and analyzed.
Site Condition Standards Applied	• MOEE Interim Guidelines for the Assessment and Management of Petroleum Contaminated Sites in Ontario (1993) Criteria III and Ontario Regulation 347.
Stratigraphy and Groundwater	• Asphalt, sand and gravel (Fill), silty clay (Till). • Groundwater levels depths ranged from 0.6 m bg to 1.5 m bg

	(03/30/94). • Groundwater flow inferred to the northeast.
Analytical Program	• Soil: Benzene, Toluene, Ethylbenzene and Xylene (BTEX), Total Purgeable Hydrocarbons (TPH) and Lead. • Groundwater: Benzene, Toluene, Ethylbenzene and Xylene (BTEX), Total Purgeable Hydrocarbons (TPH) and Lead.
Results	• Liquid hydrocarbons were observed in the tank excavation. • Approximately 6750L of product and contaminated groundwater were removed from the site during the tank removal. • concentration of BTEX, TPH and lead were exceeded the standard for all the test pit soil samples. • Concentration of benzene exceeded the standard in one sample and lead in two groundwater samples.

Central Projects Group Inc., 1997, Site Closure Report for former Esso Service Station, 148 Queen Street South, Streetsville, Ontario	
Objectives/Work Program	• Identify areas of potential PHC impacts from previous reports review. • Excavate soils for inspection, sampling, and testing purposes. • Conduct verification total organic vapour (TOV) sampling of soils from excavated walls and floor and from re-used fill and submitting for confirmatory lab analyses. • A borehole with monitoring well was drilled in the vicinity of the former USTs.
Site Condition Standards Applied	• MOEE's Guideline for Use at Contaminated Sites in Ontario, June 1996 for commercial/industrial land use with non-potable groundwater conditions with medium and fine textured soils as listed in Table B. • Ontario Regulation 347.
Stratigraphy and Groundwater	• The soil profile consisted of an asphalt cover, a clayey fill material, and a native clay and silt (Till) with traces of sand and gravel. • A true groundwater table was not encountered during the site work indicating the depth is deeper that 3.6 m bg.
Analytical Program	Soil: • Thirty-three (33) worst case soil samples were submitted for analyses of Benzene, Toluene, Ethylbenzene and Xylene (BTEX), and Total Purgeable Hydrocarbons (TPH). • A composite soil sample was submitted for analyses of metals, Polychlorinated Biphenyl (PCBs) and ignitability. Groundwater: • One (1) water sample collected from the above ground water storage tank and submitted to lab for analyses of Benzene, Toluene, Ethylbenzene and Xylene (BTEX), and Total Purgeable Hydrocarbons (TPH). • One (1) groundwater sample collected from BH1 was submitted to lab for the analyses of Benzene, Toluene, Ethylbenzene and Xylene (BTEX), and Total Purgeable Hydrocarbons (TPH).
Results	• Remedial excavation depth ranged from 1.5 m to 3.6 m below grade • The lab results of soil samples meet the MOEE criteria with the exception of two worst case soil samples which exceeded the MOEE criterion for xylene. • The lab result of water sample from the temporary aboveground storage tank indicated the concentrations of PCBs, BTEX, TPH and metals were below the Region of Peel's sewer criteria. • Concentration of BTEX and TPH on groundwater samples meet the relevant MOEE groundwater criteria.
Comments/Limitations/Other	• A total of 497.36 tonnes of PHC-impacted soil was removed from the

	site. • During the site remediation program, approximately 50,000 litres of groundwater was removed from the former UST area and discharged into the Region of Peel's sanitary sewer system. • The remediation objectives were achieved at the site for all tested on-site soils. • Results of groundwater analyses from the site upon the completion program indicated that groundwater meet the MOEE guidelines for the applicable non-potable groundwater criteria listed in Table B of the guideline.

Toronto Inspection Ltd., 2001, Report on Geotechnical Aspects, 148 Queen Street South, Streetsville, Ontario	
Work Program	• The assessment was based on the eight borehole logs and the borehole samples. The field work of borehole drilling, and sampling was conducted by Terrapex Environmental Ltd. • The borehole logs and samples revealed that the subsurface strata consisted of fill to the depth ranging from 0.8m to 2.7 m the existing ground level. The fill consisted of clayey silt, sand and gravel layer with scattered organic seams, traces of wood, brick and asphalt. • Underlying the fill, native deposit of clayey silt till was encountered to the depth of 0.8 m to 2.7 m bg. • The boreholes terminated at depths at 2.9 m to 5.2 m below grade. • Free water was recorded at depths between 1.5 to 4.5 m from grade during drilling program.
Recommendations	• Recommendations for the design and construction of the proposed development was based on subsoil and groundwater condition as provided by Terrapex. • Recommendations were provided for foundation design, basement construction, earthquake consideration, construction of site services, excavation and backfilling, pavement construction.

Terrapex Environmental Ltd., 2002, Phase II Geo-environmental Site Assessment, 148 Queen Street South, Streetsville, Ontario	
Objectives/Work Program	• Eight (8) boreholes to depths ranging from 2.9 m to 5.2 m below grade. • Three (3) monitoring wells.
Site Condition Standards Applied	• The remediation criteria for Table B of the MOE Guideline, for industrial/commercial land use for fine/medium-textured soils. • The remediation criteria for Table B of the MOE Guideline, for residential/park land use.
Stratigraphy and Groundwater	• The site consisted of fill, overlaying a clayey silt till. • Bedrock was not encountered during drilling. • Depth of groundwater ranged between 1.63 m to 2.86 m below grade.
Analytical Program	Soil: • Eight (8) soil samples were submitted for analyses of Benzene, Toluene, Ethylbenzene and Xylene (BTEX), and Total Petroleum Hydrocarbon (TPH) (gas/diesel) and (heavy oils), metals and inorganic parameters. Groundwater: • Three (3) groundwater sample were submitted to lab for the analyses of Benzene, Toluene, Ethylbenzene and Xylene (BTEX), and Total Petroleum Hydrocarbon (TPH) (gas/diesel).
Results	• Four of the eight soil samples analysed contained TPH (heavy oils) at concentrations exceeding criterion from Table B for residential/park land use. • Groundwater samples met the Table B criteria.

Comments/Limitations/Other	The following recommendations were provided by O'Connor Associates: • As much as 2000 m3 of soil might require remediation to meet the applicable generic criteria from the Table B of the guideline, prior to residential redevelopment of the site. • The preliminary geotechnical evaluation indicated that the filled areas of the site were unsuitable for building foundation, and footings would have to taken through the fill to a minimum depth of 0.2 m into the underlying native clayey silt till. • Alternatively, the fill can be removed and replaced with engineered fill to standard foundation depth.

Terrapex Environmental Ltd., 2007, Draft Phase I ESA, 128, 142,148 Queen Street South, Mississauga	
Objective/Work Program	• The Phase I ESA was carried out to identify actual and potential sources of contamination associated with the site arising from current and/or historical activities on the site and neighbouring properties. • The Phase I ESA does not meet the requirements of O. Reg. 153/04.
Potential Contaminating Activities Identified	On-Site: • 148 Queen Street South was operating as a retail fuel outlet until 1994. Based on a previous environmental report, petroleum related parameters from two soil samples along the east property boundary exceeded the Guidelines for Use at Contaminated Sites in Ontario. • In 2001, a phase II ESA by Terrapex indicated that concentrations of petroleum-related parameters in four samples exceeded the applicable Table B of the Guideline, for residential/park land use for total petroleum hydrocarbons (heavy oils). • The building at 142 Queen Street South has been present at the site since at least 1954. Therefore, it is possible that designated substances such as asbestos, lead paint or PCBs may be present in building materials. • A suspected fill and vent pipe were observed on the southwest corner of the building at 142 Queen Street South. Off-Site: • Surrounding land uses did not represent sources of potential environmental concern with the exception of the dry cleaner at 136 Queen Street South, located north of the site.
Areas of Potential Environmental Concern (APEC) Identified	As this report was not conducted to O. Reg. 153/04, specific APECs were not identified.
Comments/Limitations/Other	• It was recommended that prior to demolition at 142 Queen Street South a detailed designated substance survey (DSS) should be conducted, and any regulated materials or designated substances should be handled in accordance with regulations. • The suspected fill and vent pipe observed at 142 Queen Street South may be indicative of a current or historical UST or AST in the building's basement, most likely containing fuel oil to heat the building. If a storage tank is present, it will need to be properly decommissioned in accordance with current regulations and practices and a remedial excavation be conducted, if warranted. It is anticipated that this work can be conducted in conjunction with the building demolition. • The dry cleaner north of the subject site has been in operation since at least 1985. Based on its proximity to the site, it is a potential source of environmental concern, and it is recommended that a subsurface investigation be conducted along the north property line to determine if the dry-cleaning operations have impacted the subject site.

Terrapex Environmental Ltd., 2009, Phase II Environmental Site Assessment, 142,148 and part of 128 Queen Street South, Mississauga	
Objectives/Work Program	• Ten (10) boreholes to depths ranging from 2.1 m to 3.7 m below grade.
Site Condition Standards Applied	• Table 3 SCS for residential/parkland/institutional land use and fine to medium-textured soil.
Stratigraphy and Groundwater	• The site consisted of surficial asphalt at one borehole location, surficial topsoil at one borehole location and surficial gravel fill at other drilling locations. • Fill material comprising sand and varying amounts of silt and clay to depths ranging from 0.8 m bg. • The fill was underlain by native silt with some clay to a maximum depth at 3.7 m bg.
Analytical Program	Soil: • Ten (10) soil samples were submitted for analyses of BTEX and Petroleum Hydrocarbon (PHC) F1 to F4 Fractions. • Three (3) composite soil samples were submitted for analyses of metals and inorganic parameters.
Results	• Two of the ten soil samples analysed contained PHC F3 Fraction at concentrations exceeding the Table 3 SCS. • Two of the three composite soil samples analysed contained electrical conductivity and sodium adsorption ratio at concentrations exceeding the Table 3 SCS.
Comments/Limitations/Other	• As much as 600 m^3 of petroleum hydrocarbon impacted soil might require remediation to meet the applicable generic criteria from the Table 3 SCS, prior to residential redevelopment of the site.

Soil Engineers Ltd., 2011, Soil Investigation Report for Proposed 3 and 7 Storey Mixed-Use Building with Two-Level Underground Parking, 142 and 148 Queen Street South, City of Mississauga	
Work Program	• Ten (10) boreholes to depths ranging from 3.5 to 10.9 m
Recommendations	• Recommendations were provided for foundations, engineered fill, underground garage and slab-on-grade, underground services, backfilling in trenches and excavated areas, pavement design, sidewalks, interlocking stone pavement and landscaping, and excavation. • No tests were carried out to determine whether environmental contaminants are present in the soils.

Soil Engineers Ltd., 2011, Soil Investigation Report for Proposed Storm Sewer Construction	
Work Program	• Four (4) boreholes to a depth of 5.0 m
Recommendations	• Recommendations were provided for storm sewer construction, trench backfilling, pavement restoration, sidewalks and landscaping structures and excavation. • No tests were carried out to determine whether environmental contaminants are present in the soils.

Soil Engineers Ltd., 2011, Soil Investigation Report for Proposed New Road Construction, 142 and 148 Queen Street South, City of Mississauga	
Work Program	• Three (3) boreholes to depths of 4.6 m and 8.0 m.
Recommendations	• Recommendations were provided for new road construction, sidewalks, underground services, construction by open cut, soil parameters and excavation.

Soil Engineers Ltd., 2014, Soil Investigation Report for Proposed Multi-Use Condominium Development, 142 and 148 Queen Street South, City of Mississauga	
Work Program	• Ten (10) boreholes to depths ranging from 6.0 m to 10.9 m. • Five of the ten boreholes were selected for the geotechnical

	assessment for the proposed projects.
Recommendations	• Recommendations were provided for foundation, underground garage, slab-on-grade, underground services, backfilling in trenches and excavated areas, elevator shaft, pavement design, soil parameters and excavation.

Soil Engineers Ltd., 2022, Phase I ESA, 120, 128, 154 and 158 Queen Street South, City of Mississauga	
Objective/Work Program	• The Phase I ESA was carried out to identify any potential environmental concerns associated with the subject site. • The report and format do not meet the requirements of O. Reg. 153/04. Therefore, can not be used in support of filling an RSC.
Potential Contaminating Activities Identified	On-Site: • A total of eight waste generator were identified at the site. • Spill incidents were identified for the site. Off-Site: • Historical printing facility, radio part manufacturing facility and fueling yard were located northeast of the site. • Auto wrecking business and construction business associated with gasoline and diesel fuel oil UST located approximately 185 m south of the site. • Dry cleaning businesses were located adjacent of the site and approximately 175 m southeast. • Records of fuel tanks and storage/use of PCBs was identified at a property located 140 m south of the site. • Former gas station with records of fuel oil tank was located adjacent of the site, 148 Queen Street South. • Various auto services and autobody shops were located within the study area. • 23 waste generators were identified in the study area. • A railway line is located adjacent southwest of the subject site.
Areas of Potential Environmental Concern Identified	As this report was not conducted to O. Reg. 153/04, specific APECs were not identified.
Comments/Limitations/Other	• Based on the findings of the Phase I ESA, SEL concluded that evidence of potential contamination exists at the site. • A Phase II environmental Site assessment was recommended to address the potential environmental concerns.

4.0 SCOPE OF INVESTIGATION

4.1 OVERVIEW OF SITE INVESTIGATION

The scope of Terrapex's current Phase Two ESA comprised the following:

- preparing a drilling and monitoring well installation program and sampling and analysis plan to assess soil and groundwater at the Site;
- supervising the completion of fifty-one monitoring wells (MW101S, MW101D, MW102, MW103S, MW103D, MW104, MW105, MW106, MW107, MW108, MW112, MW113S, MW113D, MW115, MW116, MW118S, MW118D, MW201, MW202, MW203, MW204, MW206, MW207 and MW208) and boreholes (BH109, BH110, BH110A to BH110F, BH111, BH114, BH114A to BH114F, BH117, BH205, BH301 to BH307 and BH401 to BH408) to depths of between 1.2 m bg and 13.9 m bg;
- collecting soil samples during drilling, and logging visual and tactile soil characteristics, and evidence of petroleum hydrocarbon or other chemical impacts, if any;
- measuring soil vapour (SV) concentrations in soil samples; and,
- analysis of soil samples (including QA/QC samples) for BTEX, PHC F1 to F4 fractions, VOCs, PAHs, Inorganics (including metals, hydride forming metals and other regulated parameters (ORPs) including: electrical conductivity (EC), sodium adsorption ratio (SAR), cyanide, hot water soluble boron, mercury, and hexavalent chromium), ABNs, CPs, and PCBs.
- Sampling of groundwater from all newly installed wells using low-flow sampling techniques;
- analysis of groundwater samples (including QA/QC samples) for BTEX, PHCs F1 to F4 fractions, VOCs, PAHs, and Inorganics (including metals, hydride forming metals and other regulated parameters (ORPs) including: cyanide, mercury, and hexavalent chromium, sodium, and chloride), ABNs, CPs, and PCBs; and,
- surveying the elevation of each monitoring well relative to geodetic benchmark.

The borehole and monitoring well locations are shown in Figure 2A.

The sampling procedures are documented in detail in Section 5.0 and in Terrapex's SOPs, attached in Appendix III.

4.2 MEDIA INVESTIGATED

Based on the findings of the Phase One ESA work program by Terrapex, the Phase Two ESA work program documented herein included investigation of the environmental quality of soil and groundwater at the Site. The sampling and analysis plan is included in Appendix II.

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

Soil and groundwater were investigated by soil and groundwater sampling as described in Section 4.1, above.

4.3 PHASE ONE CONCEPTUAL SITE MODEL

The Phase One Conceptual Site Model (CSM) showing the potentially contaminating activities (PCAs) is presented on Figure 4, and the Areas of Potential Environmental Concern (APECs) are presented on Figure 5A. A summary of the CSM is provided below.

The Site is located on the west side of Queen Street South, Mississauga, in an area of predominately light industrial land use, with residential land use to the west. The Site is an irregular shaped parcel of land measuring approximately 4.3 hectares (10.6 acres). It is occupied by various businesses, including: three multi-unit commercial buildings located at 128 Queen Street South (Streetsville Centre Plaza), 158 Queen Street South (Winchester Place), and 169 Crumbie Street; two free-standing restaurants located at 120 Queen Street South (Tim Hortons) and 154 Queen Street South (Cuchulainn's Irish Pub); and, associated paved parking areas. The Site also includes a vacant, fenced lot which was previously a retail gasoline station located at 142 and 148 Queen Street South.

Potentially Contaminating Activities: The following PCAs, as listed in Table 2 of Schedule D of O. Reg. 153/04, were identified on or potentially affecting the Site, per below:

POTENTIALLY CONTAMINATING ACTIVITIES ON, IN OR UNDER THE PHASE ONE PROPERTY

PCA[1]	POTENTIALLY CONTAMINATING ACTIVITY[2]	DESCRIPTION	SOURCE/ REFERENCE	LIKELIHOOD TO CONTRIBUTE TO AN APEC[3]	UNCERTAINTY
PCA 1	30 - Importation of Fill Material of Unknown Quality	The previous Phase II ESA identified fill material from surface to between 0.8 and 2.7 m bg.	Previous reports	Yes. APEC 1	Confirmed – impacts to fill material were identified during previous intrusive investigations. No details on the origin of the fill material.
PCA 2	31 - Ink Manufacturing, Processing and Bulk Storage	A commercial printing and lithographic facility formerly operated at 128 Queen Street South, northwest portion of the Site.	ERIS	Yes. APEC 2	No details of the storage and disposal practices.

PCA[1]	POTENTIALLY CONTAMINATING ACTIVITY[2]	DESCRIPTION	SOURCE/ REFERENCE	LIKELIHOOD TO CONTRIBUTE TO AN APEC[3]	UNCERTAINTY
PCA 3	19 - Electronic and Computer Equipment Manufacturing	A magnetic and optical media manufacturer and reproducer company was operated in the mid-1980s at 128 Queen Street South, northwest portion of the Site.	ERIS	Yes. APEC 3	No details of the storage and disposal practices
PCA 4	55 - Transformer Manufacturing, Processing and Use	Pole mounted transformer is present in the parking lot in front of 169 Crumbie Street building.	Site Visit	Yes. APEC 4	No details on the facility housekeeping, clean up procedure is available.
PCA 5	42 - Pharmaceutical Manufacturing and Processing	A pharmacy was operating at 128 Queen Street South in the 1990s and generated pharmaceutical wastes.	ERIS	Yes. APEC 5	No details of the storage and disposal practices.
PCA 6	33 - Metal Treatment, Coating, Plating and Finishing	A jewelry and silverware manufacturer were operating at 128 Queen Street South in the 1990s.	ERIS	Yes. APEC 6	No details on the facility housekeeping, storage practices, or waste storage is available.
PCA 7	42 - Pharmaceutical Manufacturing and Processing	A pharmacy is operating at 128 Queen Street South from 2015 to present and generates pharmaceutical wastes.	ERIS	Yes. APEC 7	No details of the storage and disposal practices.
PCA 8	37 - Operation of Dry-Cleaning Equipment (where chemicals are used)	Two dry cleaning services operated at 128 Queen Street South.	City Directory	Possible, APEC 8	Use of chemicals cannot be confirmed for historical operation of a dry cleaners at the Site
PCA 9	52 - Storage, maintenance, fuelling and repair of equipment, vehicles, and material used to maintain transportation systems	An automobile service operated at 128 Queen Street South in 1980s.	City Directory	Yes. APEC 9	No details on the facility housekeeping, storage practices, or waste storage is available.

PCA[1]	POTENTIALLY CONTAMINATING ACTIVITY[2]	DESCRIPTION	SOURCE/ REFERENCE	LIKELIHOOD TO CONTRIBUTE TO AN APEC[3]	UNCERTAINTY
PCA 10	28 - Gasoline and Associated Products Storage in Fixed Tanks	Historical heating oil UST reportedly located at 142 Queen Street South.	Previous Reports	Possible. APEC 10	Risk for soil or groundwater contamination is low as RSC#223395 filed for the property in 2017 indicated the identified PCA and associated APEC had been investigated and all COCs were less the applicable Table 3 R/P/I Standards.
PCA 11A	28 - Gasoline and Associated Products Storage in Fixed Tanks	A gasoline service center with fuel tanks was present at 148 Queen Street South until mid 1990s.	ERIS Previous reports Aerials City Directory Chain of Title	Possible. APEC 11A	Risk for soil or groundwater contamination is low as RSC#223395 filed for the property in 2017 indicated the identified PCAs and associated APECs had been investigated and all COCs were less the applicable Table 3 R/P/I Standards.
PCA 11B	52 - Storage, maintenance, fuelling and repair of equipment, vehicles, and material used to maintain transportation systems	An auto centre was present at 148 Queen Street South in 1990s.	ERIS Previous reports Aerials City Directory Chain of Title	Possible. APEC 11B	
PCA 12	31 - Ink Manufacturing, Processing and Bulk Storage	A printing service operated at 169 Crumbie Street.	ERIS City Directory	Yes. APEC 12	No details on the facility housekeeping, storage practices, or waste storage is available.
PCA 13	8 - Chemical Manufacturing, Processing and Bulk Storage	An ambulance service was operating at 169 Crumbie Street and generated inorganic wastes.	ERIS	Possible. APEC 13	No details on the facility housekeeping, storage practices, or waste storage is available.
PCA 14	Other - Spills	Tim Hortons located at 120 Queen Street reported hydraulic oil spill in 2007.	ERIS	Yes. APEC 14	No details of quantity of contaminants were given.
PCA 15	52 - Storage, maintenance, fuelling and repair of equipment, vehicles, and material used to maintain transportation systems	Auto garage currently and historically operated at 169 Crumbie Street	City Directory Site Visit	Yes. APEC 15	No details on the facility housekeeping, storage practices, or waste storage is available.
PCA 16	28 - Gasoline and Associated Products Storage in Fixed Tanks	An above ground waste oil storage tank located at unit 8, JJ's Auto Service of 169 Crumbie Street.	Site Visit	Possible. APEC 16	No cracks or staining were visible during the Site visit. Waste oil removal and disposal is done by professional services.

PCA[1]	POTENTIALLY CONTAMINATING ACTIVITY[2]	DESCRIPTION	SOURCE/ REFERENCE	LIKELIHOOD TO CONTRIBUTE TO AN APEC[3]	UNCERTAINTY
PCA 17	10 - Commercial Autobody Shops	An Autobody shop was historically operated at 169 Crumbie Street.	City Directory	Yes APEC 17	No details on the facility housekeeping, storage practices, or waste storage is available.

[1] As shown on Figure 4.

[2] As set out in Table 2 in Schedule D of O. Reg. 153/04.

[3] Area of potential environmental concern (APEC)

POTENTIALLY CONTAMINATING ACTIVITIES WITHIN THE PHASE ONE STUDY AREA

PCA[1]	POTENTIALLY CONTAMINATING ACTIVITY[2]	ADDRESS/ LOCATION	DESCRIPTION	SOURCE/ REFERENCE	LIKELIHOOD TO CONTRIBUTE TO AN APEC[3]	UNCERTAINTY
PCA 18	46 - Rail Yards, Tracks and Spurs	No municipal address Adjacent, west and southwest	Railway lines are present immediately to the west and southwest of the Site.	FIPs Aerial photographs Site visit	Yes. APEC 18	Exact location impact is unknown.
PCA 19	31 - Ink Manufacturing, Processing and Bulk Storage	131 Queen Street South 20m east	A printing facility formerly operated at the property in the late 1930s.	FIPs	Yes. APEC 19	No details on the types of products being used or storage/ handling practices.
PCA 20	37 - Operation of Dry-Cleaning Equipment (where chemicals are used)	111 Queen Street South 20m north	A dry cleaner operated at the property in the late 1990s.	City directory	Possible. APEC 20	No details on the facility housekeeping, storage practices, or waste storage is available.
PCA 21	19 - Electronic and Computer Equipment Manufacturing	143 Queen Street South 22m east	A radio parts manufacturing facility formerly operated at the property in the late 1930s.	FIPs	Possible. APEC 21	No details on the types of products being used or storage/ handling practices.
PCA 22	31 - Ink Manufacturing, Processing and Bulk Storage	135 Queen Street South 20m northeast	A publishing company operated at this property in the early 1970s.	City Directory	Possible. APEC 22	No details on the chemicals used, storage, handling, or disposal practices.
PCA 23	37 - Operation of Dry-Cleaning Equipment (where chemicals are used)	136 Queen Street South Adjacent	Dry cleaning services operated at this property from the mid 1990s to mid 2010s and generated halogenated wastes.	ERIS	Yes. APEC 23	No details on the chemical's storage, handling, or disposal practices.

PCA[1]	POTENTIALLY CONTAMINATING ACTIVITY[2]	ADDRESS/ LOCATION	DESCRIPTION	SOURCE/ REFERENCE	LIKELIHOOD TO CONTRIBUTE TO AN APEC[3]	UNCERTAINTY
PCA 24	55 - Transformer Manufacturing, Processing and Use	145 Queen Street South 20 m east	Canada Post was registered as a PCB storage facility containing PCB containing light ballast in 1990s.	ERIS	Yes. APEC 24	No details on the storage and handling of the PCB containing equipment.
PCA 25	39 - Paints Manufacturing, Processing and Bulk Storage		A paint and coating manufacturer was operated at the property in the mid 1990s.		Yes. APEC 25	No details on the chemicals used, storage, handling, or disposal practices.
PCA 26	8 - Chemical Manufacturing, Processing and Bulk Storage	168 Queen Street South Adjacent southeast	An office is operating from mid 1990s to present time and generates inorganic laboratory chemicals.	ERIS	Yes. APEC 26	No details on the chemicals used, storage, handling, or disposal practices.
PCA 27	50 - Soap and Detergent Manufacturing, Processing and Bulk Storage		A manufacturer of soap and cleaning compound was operating at the property in 1960s.		Yes. APEC 27	No details on the chemicals used, storage, handling, or disposal practices.
PCA 28	33 - Metal Treatment, Coating, Plating and Finishing		A metalworking machinery and commercial and service industry machinery manufacturer was operating at the property in 1960s.		Yes. APEC 28	No details on the chemicals used, storage, handling, or disposal practices.
PCA 29	8 - Chemical Manufacturing, Processing and Bulk Storage	52 Tannery Court 35 m southwest	A company was operating at the address and generated inorganics from early 1990s to early 2000s.	ERIS	Yes. APEC 29	An RSC submitted in 2013 identified metal and inorganic parameter exceedance in post remediation soil and groundwater samples.
PCA 30	58 - Waste Disposal and Waste Management, including thermal treatment, landfilling and transfer of waste, other than use of biosoils as soil conditioners		275057 Ontario Limited applied for waste processing facility at part of east half of lot 4.	ERIS	Yes. APEC 30	No details on the facility housekeeping, storage practices, or waste storage is available.

PCA[1]	POTENTIALLY CONTAMINATING ACTIVITY[2]	ADDRESS/ LOCATION	DESCRIPTION	SOURCE/ REFERENCE	LIKELIHOOD TO CONTRIBUTE TO AN APEC[3]	UNCERTAINTY
PCA 31	40 - Pesticides (including Herbicides, Fungicides and Anti-Fouling Agents) Manufacturing, Processing, Bulk Storage and Large-Scale Applications	167 Queen Street South 25 m east	A pesticide vendor was operated at this property.	ERIS	Unlikely – downgradient location	No details on the facility housekeeping, storage practices, or waste storage is available.
PCA 32	28 - Gasoline and Associated Products Storage in Fixed Tanks	51 Tannery Street 75 m South	A company was operating at the address and generated light fuels in mid 2010s.	ERIS	Unlikely – downgradient location and intervening distance.	No details on the facility housekeeping, storage practices, or waste storage is available.
PCA 33	11 - Commercial Trucking and Container Terminals	61 Tannery Street 185 m South	Trucking services operated at the property in 1980s.	City Directory	Unlikely – downgradient location and intervening distance.	No details on the facility housekeeping, storage practices, or waste storage is available.
PCA 34	52 - Storage, maintenance, fuelling and repair of equipment, vehicles, and material used to maintain transportation systems	29 Tannery Street 80 m South	An auto parts and an automotive supply companies operated at the property.	City Directory	Unlikely – downgradient location and intervening distance.	No details on the facility housekeeping, storage practices, or waste storage is available.
PCA 35	19 - Electronic and Computer Equipment Manufacturing	6 Maiden Lane 85 m southeast	A dental lab was at this property in the early 1980s and manufacturer medical equipment and supplies	ERIS	Unlikely – cross gradient location and intervening distance.	No details on the chemicals used, storage, handling, or disposal practices.
PCA 36	39 - Paints Manufacturing, Processing and Bulk Storage		A pigment and chemical manufacturing company operated at the property in the early 1970s.	City Directory	Unlikely – cross gradient location and intervening distance.	No details on the facility housekeeping, storage practices, or waste storage is available.
PCA 37	Other - Spills	180 Rutledge Road 110 m South	A development company reported spill of douse water to nearby Mullet creek	ERIS	Unlikely – cross gradient location and intervening distance.	Exact location is not known
PCA 38	28 - Gasoline and Associated Products Storage in Fixed Tanks		A demolition company generated light fuels in 2018.	ERIS	Unlikely – cross gradient location and intervening distance.	No details on the facility housekeeping, storage practices, or waste storage is available.

PCA[1]	POTENTIALLY CONTAMINATING ACTIVITY[2]	ADDRESS/ LOCATION	DESCRIPTION	SOURCE/ REFERENCE	LIKELIHOOD TO CONTRIBUTE TO AN APEC[3]	UNCERTAINTY
PCA 39	8 - Chemical Manufacturing, Processing and Bulk Storage	190 Queen Street South 120 m east	A company was operating at the address and generated inorganic wastes in 2022	ERIS	Unlikely – downgradient location and intervening distance.	No details on the facility housekeeping, storage practices, or waste storage is available.
PCA 40	1 - Acid and Alkali Manufacturing, Processing and Bulk Storage	20 Ontario Street West 140 m northwest	The company operated at the address from mid 1990s to late 2010s generated acid and alkaline wastes containing heavy metals.	ERIS	Unlikely – intervening distance.	No details on the facility housekeeping, storage practices, or waste storage is available.
PCA 41	28 - Gasoline and Associated Products Storage in Fixed Tanks	22 Pearl Street 145 m south	A fuel oil tank was present at this property from early 2010s to 2021.	ERIS	Unlikely – downgradient location and intervening distance.	No details on any secondary containment, leak testing, or maintenance.
PCA 42	12 - Concrete, Cement and Lime Manufacturing	208 Emby Drive 160 m south	A concrete products manufacturing company operated at this property in 1970s.	ERIS	Unlikely – downgradient location and intervening distance.	No details on the chemicals used, storage, handling, or disposal practices.
PCA 43	8 - Chemical Manufacturing, Processing and Bulk Storage		A chemical manufacturing company in 1970s and a furniture repair and refinishing company from early 1990s to early 2000s operated at the property and manufactured chemical products.	ERIS	Unlikely – downgradient location and intervening distance.	No details on the facility housekeeping, storage practices, or waste storage is available.
PCA 44	52 - Storage, maintenance, fuelling and repair of equipment, vehicles, and material used to maintain transportation systems		An automobile parts and supplies use, and rebuilt company was operated at this address from early 1990s to early 2000s.	ERIS	Unlikely – downgradient location and intervening distance.	No details on the chemicals used, storage, handling, or disposal practices.
PCA 45	28 - Gasoline and Associated Products Storage in Fixed Tanks		A liquid fuel outlet was present at this property in the late 1980s.	ERIS	Unlikely – downgradient location and intervening distance.	No details on any secondary containment, leak testing, or maintenance.

PCA[1]	POTENTIALLY CONTAMINATING ACTIVITY[2]	ADDRESS/ LOCATION	DESCRIPTION	SOURCE/ REFERENCE	LIKELIHOOD TO CONTRIBUTE TO AN APEC[3]	UNCERTAINTY
PCA 46	37 - Operation of Dry-Cleaning Equipment (where chemicals are used)	204 Queen Street South 170 m southwest	Dry cleaning company operated at the property from mid 1980s to mid 2000s.	ERIS City Directory	Unlikely – downgradient location and intervening distance.	No details on the facility housekeeping, storage practices, or waste storage is available.
PCA 47	40 - Pesticides (including Herbicides, Fungicides and Anti-Fouling Agents) Manufacturing, Processing, Bulk Storage and Large-Scale Applications		A lawncare company operated at the property in the 1980s.	City Directory	Unlikely – downgradient location and intervening distance.	No details on the facility housekeeping, storage practices, or waste storage is available.
PCA 48	29 - Glass Manufacturing	206 Queen Street South 165 m southwest	A glass works company operated at the property from early 1980s to early 1990s.	City Directory	Unlikely – downgradient location and intervening distance.	No details on the facility housekeeping, storage practices, or waste storage is available.
PCA 49	40 - Pesticides (including Herbicides, Fungicides and Anti-Fouling Agents) Manufacturing, Processing, Bulk Storage and Large-Scale Applications	208 Queen Street South 165 m southwest	A weed and turf service company operated at the property in the early 1970s.	City Directory	Unlikely – downgradient location and intervening distance.	No details on the facility housekeeping, storage practices, or waste storage is available.
PCA 50	52 - Storage, maintenance, fuelling and repair of equipment, vehicles, and material used to maintain transportation systems	214 Queen Street South 120 m southwest	An auto parts and an automotive supply companies operated at the property in the 1970s.	City Directory	Unlikely – downgradient location and intervening distance.	No details on the facility housekeeping, storage practices, or waste storage is available.
PCA 51	8 - Chemical Manufacturing, Processing and Bulk Storage	10 Main Street 190 m east	A company operated at the property generated paint, pigments and coating residues from late 1980s to late 1990s.	ERIS	Unlikely – downgradient location and intervening distance.	No details on the facility housekeeping, storage practices, or waste storage is available.
PCA 52	42 - Pharmaceutical Manufacturing and Processing		A pharmacy operating at the property generated pharmaceutical wastes in 2020-2021.	ERIS	Unlikely – downgradient location and intervening distance.	No details on the facility housekeeping, storage practices, or waste storage is available.
PCA 53	31 - Ink Manufacturing, Processing and Bulk Storage		A photo service operated at the property from late 1960s to mid 1990s..	City Directory	Unlikely – downgradient location and intervening distance.	No details on the facility housekeeping, storage practices, or waste storage is available.

PCA[1]	POTENTIALLY CONTAMINATING ACTIVITY[2]	ADDRESS/ LOCATION	DESCRIPTION	SOURCE/ REFERENCE	LIKELIHOOD TO CONTRIBUTE TO AN APEC[3]	UNCERTAINTY
PCA 54	31 - Ink Manufacturing, Processing and Bulk Storage	95 Joymar drive 235 m south	A commercial printing and lithographic company were operated at this property in the mid 1990s.	ERIS	Unlikely – cross-gradient location and intervening distance.	No details regarding operations and waste storage and disposal at the property.
PCA 55	33 - Metal Treatment, Coating, Plating and Finishing		A hardware, metal products, iron and steel pipes and tubes, metalworks machinery manufacturing company operated at this property in mid 1990s.	ERIS	Unlikely – cross-gradient location and intervening distance.	No details regarding operations and waste storage and disposal at the property.
PCA 56	18 - Electricity Generation, Transformation and Power Stations		A power line company operated at the property and generated aromatic solvents, petroleum distillates, waste oil and lubricants from mid 1990s to mid 2010s.	ERIS	Unlikely – cross-gradient location and intervening distance.	No details on the facility housekeeping, storage practices, or waste storage is available.
PCA 57	28 - Gasoline and Associated Products Storage in Fixed Tanks		Various companies operated at the property from late 2000s to present time generated waste oils and lubricants	ERIS	Unlikely – cross-gradient location and intervening distance.	No details on the facility housekeeping, storage practices, or waste storage is available.
PCA 58	40 - Pesticides (including Herbicides, Fungicides and Anti-Fouling Agents) Manufacturing, Processing, Bulk Storage and Large-Scale Applications		A pesticide operator was listed at this property.	ERIS	Unlikely – cross-gradient location and intervening distance.	No details on the facility housekeeping, storage practices, or waste storage is available.

[1] As shown on Figure 4.

[2] As set out in Table 2 in Schedule D of O. Reg. 153/04.

3 Area of potential environmental concern (APEC)

Overall, a total of 59 PCAs were identified on the Phase One property and within the Phase One Study Area, of which 31 may be contributing to an area of potential environmental concern (APEC) at the Site.

Areas of Potential Environmental Concern: As a result of the PCAs identified and other considerations, the following APECs were identified at the Site:

AREAS OF POTENTIAL ENVIRONMENTAL CONCERN

APEC[1]	LOCATION OF APEC ON PHASE ONE PROPERTY	POTELTIALLY CONTAMINATING ACTIVITY[2]	LOCATION OF PCA (ON-SITE or OFF-SITE)	CONTAMINANTS OF POTENTIAL CONCERN[3]	MEDIA POTENTIALLY IMPACTED (Ground water, Soil, and/or Sediment)
APEC 1	Entire property	30 - Importation of Fill Material of Unknown Quality	On-Site PCA 1	PHCs PAHs Metals Hydride-forming metals (As, Sb, Se) Other regulated parameters (B-HWS, CrVI, CN-, Hg)	Soil Groundwater
APEC 2	128 Queen Street South, Northwest portion of the Site	31 - Ink Manufacturing, Processing and Bulk Storage	On-Site PCA 2	VOCs Metals Hydride-forming metals (As, Sb, Se) Other regulated parameters (B-HWS, CrVI, CN-, Hg)	Soil Groundwater
APEC 3	128 Queen Street South, Northwest portion of the Site	19 - Electronic and Computer Equipment Manufacturing	On-Site PCA 3	VOCs Metals Hydride-forming metals (As, Sb, Se) Other regulated parameters (B-HWS, CrVI, CN-, Hg)	Soil Groundwater
APEC 4	169 Crumbie Street, Northwest portion of the Site	55 - Transformer Manufacturing, Processing and Use	On-Site PCA 4	PCBs ABNs CPs	Soil Groundwater
APEC 5	128 Queen Street South, Northwest portion of the Site	42 - Pharmaceutical Manufacturing and Processing	On-Site PCA 5	VOCs Metals Hydride-forming metals (As, Sb, Se) Other regulated parameters (B-HWS, CrVI, CN-, Hg)	Soil Groundwater
APEC 6	128 Queen Street South, Northwest portion of the Site	33 - Metal Treatment, Coating, Plating and Finishing	On-Site PCA 6	VOCs PHCs Metals Hydride-forming metals (As, Sb, Se) Other regulated parameters (B-HWS, CrVI, CN-, Hg)	Soil Groundwater
APEC 7	128 Queen Street South, Northwest portion of the Site	42 - Pharmaceutical Manufacturing and Processing	On-Site PCA 7	VOCs Metals Hydride-forming metals (As, Sb, Se) Other regulated parameters (B-HWS, CrVI, CN-, Hg)	Soil Groundwater

APEC[1]	LOCATION OF APEC ON PHASE ONE PROPERTY	POTELTIALLY CONTAMINATING ACTIVITY[2]	LOCATION OF PCA (ON-SITE or OFF-SITE)	CONTAMINANTS OF POTENTIAL CONCERN[3]	MEDIA POTENTIALLY IMPACTED (Ground water, Soil, and/or Sediment)
APEC 8	128 Queen Street South, Northwest portion of the Site	37 - Operation of Dry-Cleaning Equipment (where chemicals are used)	On-Site PCA 8	VOCs	Soil Groundwater
APEC 9	128 Queen Street South, Northwest portion of the Site	52 - Storage, maintenance, fuelling and repair of equipment, vehicles, and material used to maintain transportation systems	On-Site PCA 9	VOCs BTEX PHCs PAHs Metals Hydride-forming metals (As, Sb, Se) Other regulated parameters (B-HWS, CrVI, CN-, Hg)	Soil Groundwater
APEC 10	142 Queen Street South, Eastern portion of the Site	28 - Gasoline and Associated Products Storage in Fixed Tanks	On-Site PCA 10	BTEX PHCs PAHs	Soil Groundwater
APEC 11A	148 Queen Street South, Eastern portion of the Site	28 - Gasoline and Associated Products Storage in Fixed Tanks	On-Site PCA 11A	BTEX PHCs PAHs	Soil Groundwater
APEC 11B		52 - Storage, maintenance, fuelling and repair of equipment, vehicles, and material used to maintain transportation systems	On-Site PCA 11B	VOCs BTEX PHCs PAHs Metals Hydride-forming metals (As, Sb, Se) Other regulated parameters (B-HWS, CrVI, CN-, Hg)	Soil Groundwater
APEC 12	169 Crumbie Street, Southwest portion of the Site	31 - Ink Manufacturing, Processing and Bulk Storage	On-Site PCA 12	VOCs Metals Hydride-forming metals (As, Sb, Se) Other regulated parameters (B-HWS, CrVI, CN-, Hg)	Groundwater
APEC 13	169 Crumbie Street, Southwest portion of the Site	8 - Chemical Manufacturing, Processing and Bulk Storage	On-Site PCA 13	Metals Hydride-forming metals (As, Sb, Se) Other regulated parameters (B-HWS, CrVI, CN-, Hg)	Groundwater
APEC 14	120 Queen Street South, Northeast property boundary of the Site	Other- Spills	On-Site PCA 14	BTEX PHCs PAHs	Groundwater

APEC[1]	LOCATION OF APEC ON PHASE ONE PROPERTY	POTELTIALLY CONTAMINATING ACTIVITY[2]	LOCATION OF PCA (ON-SITE or OFF-SITE)	CONTAMINANTS OF POTENTIAL CONCERN[3]	MEDIA POTENTIALLY IMPACTED (Ground water, Soil, and/or Sediment)
APEC 15	169 Crumbie Street, Southwest portion of the Site	52 - Storage, maintenance, fuelling and repair of equipment, vehicles, and material used to maintain transportation systems	On-Site PCA 15	VOCs BTEX PHCs PAHs Metals Hydride-forming metals (As, Sb, Se) Other regulated parameters (B-HWS, CrVI, CN-, Hg)	Soil Groundwater
APEC 16	169 Crumbie Street, Southwest portion of the Site	28 - Gasoline and Associated Products Storage in Fixed Tanks	On-Site PCA 16	BTEX PHCs PAHs	Soil Groundwater
APEC 17	169 Crumbie Street, Southwest portion of the Site	10 - Commercial Autobody Shops	On-Site PCA 17	VOCs BTEX PHCs PAHs Metals Hydride-forming metals (As, Sb, Se) Other regulated parameters (B-HWS, CrVI, CN-, Hg)	Soil Groundwater
APEC 18	Adjacent, west and southwest of the property boundary	46 - Rail Yards, Tracks and Spurs	Off-Site PCA 18 (adjacent west)	BTEX PHCs PAHs Metals Hydride-forming metals (As, Sb, Se) Other regulated parameters (B-HWS, CrVI, CN-, Hg)	Soil Groundwater
APEC 19	131 Queen Street, east of the Site	31 - Ink Manufacturing, Processing and Bulk Storage	Off-Site PCA 19 (20m east)	VOCs Metals Hydride-forming metals (As, Sb, Se) Other regulated parameters (B-HWS, CrVI, CN-, Hg)	Groundwater
APEC 20	111 Queen Street South, north of the Site	37 - Operation of Dry-Cleaning Equipment (where chemicals are used)	Off-Site PCA 20 (20m north)	VOCs	Groundwater
APEC 21	143 Queen Street South, east of the Site	19 - Electronic and Computer Equipment Manufacturing	Off-Site PCA 21 (22 m east)	VOCs Metals Hydride-forming metals (As, Sb, Se) Other regulated parameters (B-HWS, CrVI, CN-, Hg)	Groundwater

APEC[1]	LOCATION OF APEC ON PHASE ONE PROPERTY	POTELTIALLY CONTAMINATING ACTIVITY[2]	LOCATION OF PCA (ON-SITE or OFF-SITE)	CONTAMINANTS OF POTENTIAL CONCERN[3]	MEDIA POTENTIALLY IMPACTED (Ground water, Soil, and/or Sediment)
APEC 22	135 Queen Street South, northeast of the Site	31 - Ink Manufacturing, Processing and Bulk Storage	Off-Site PCA 22 (20 m northeast)	VOCs Metals Hydride-forming metals (As, Sb, Se) Other regulated parameters (B-HWS, CrVI, CN-, Hg)	Groundwater
APEC 23	136 Queen Street South, adjacent of the Site	37 - Operation of Dry-Cleaning Equipment (where chemicals are used)	Off-Site PCA 23 (Adjacent)	VOCs	Soil Groundwater
APEC 24	145 Queen Street South, east of the Site	55 - Transformer Manufacturing, Processing and Use	Off-Site PCA 24 (20m east)	PCBs	Groundwater
APEC 25	145 Queen Street South, east of the Site	39 - Paints Manufacturing, Processing and Bulk Storage	Off-Site PCA 25 (20m east)	VOCs BTEX PHCs Metals Hydride-forming metals (As, Sb, Se) Other regulated parameters (B-HWS, CrVI, CN-, Hg)	Groundwater
APEC 26	168 Queen Street South, adjacent southeast of the Site	8 - Chemical Manufacturing, Processing and Bulk Storage	Off-Site PCA 26 (adjacent southeast)	Metals Hydride-forming metals (As, Sb, Se) Other regulated parameters (B-HWS, CrVI, CN-, Hg)	Soil Groundwater
APEC 27	168 Queen Street South, adjacent southeast of the Site	50 - Soap and Detergent Manufacturing, Processing and Bulk Storage	Off-Site PCA 27 (adjacent southeast)	VOCs sVOCs BTEX PHCs PAHs Metals Hydride-forming metals (As, Sb, Se) Other regulated parameters (B-HWS, CrVI, CN-, Hg)	Soil Groundwater
APEC 28	168 Queen Street South, adjacent southeast of the Site	33 - Metal Treatment, Coating, Plating and Finishing	Off-Site PCA 28 (adjacent southeast)	VOCs PHCs Metals Hydride-forming metals (As, Sb, Se) Other regulated parameters (B-HWS, CrVI, CN-, Hg)	Soil Groundwater

APEC[1]	LOCATION OF APEC ON PHASE ONE PROPERTY	POTELTIALLY CONTAMINATING ACTIVITY[2]	LOCATION OF PCA (ON-SITE or OFF-SITE)	CONTAMINANTS OF POTENTIAL CONCERN[3]	MEDIA POTENTIALLY IMPACTED (Ground water, Soil, and/or Sediment)
APEC 29	52 Tannery Court, southwest of the Site	8 - Chemical Manufacturing, Processing and Bulk Storage	Off-Site PCA 29 (35m southwest)	VOCs BTEX PHCs PAHs Metals Hydride-forming metals (As, Sb, Se) Other regulated parameters (B-HWS, CrVI, CN-, Hg)	Groundwater
APEC 30	52 Tannery Court, southwest of the Site	58 - Waste Disposal and Waste Management, including thermal treatment, landfilling and transfer of waste, other than use of biosoils as soil conditioners	Off-Site PCA 30 (35m southwest)	VOCs BTEX PHCs PAHs Metals Hydride-forming metals (As, Sb, Se) Other regulated parameters (B-HWS, CrVI, CN-, Hg)	Groundwater

[1] Areas of potential environmental concern (APEC) means the area on, in or under a Phase One property where one or more contaminants are potentially present, as determined through the Phase One environmental site assessment, including through,
(a) identification of past or present uses on, in or under the Phase One property, and
(b) identification of potentially contaminating activity.

[2] As set out in Column A of Table 2 of Schedule D.

[3] Contaminants of potential concern (COPC) according to the Method Groups as identified in the "Protocol for in the Assessment of Properties under Part XV.1 of the Environmental Protection Act", March 9, 2004, amended as of July 1, 2011:

BTEX: benzene, toluene, ethylbenzene, xylenes	Hg: mercury	As: arsenic	Cl: chloride
PHCs: petroleum hydrocarbons (F1-F4)	B-HWS: boron, hot water soluble	Sb: antimony	EC: electrical conductivity
VOCs: volatile organic compounds	Cr (VI): chromium (hexavalent)	Se: selenium	SAR: sodium adsorption ratio
PAHs: polycyclic aromatic hydrocarbons	CN-: cyanide	Na: sodium	PCBs: polychlorinated biphenyls
ABNs: Acid/Base/Neutral Compounds	CPs: Chlorophenols		

Contaminants of Potential Concern:

The Contaminants of Potential Concern (COPCs) associated with the APECs are as follows:

- VOCs
- sVOCs
- BTEX
- PHCs
- PAHs
- Metals
- Hydride-forming metals (As, Sb, Se)
- Other regulated parameters (B-HWS, CrVI, CN-, Hg)
- PCBs
- ABNs
- CPs

Underground Utilities:

In general, potential migration pathways for subsurface contaminants at the Site would consist of buried services or remnants of former buried services. However, no such pathways have been identified during the study.

Geology/Hydrogeology:

Available regional or site specific geological and hydrogeological information are summarized below:

SUMMARY OF TOPOGRAPHY, HYDROLOGY AND GEOLOGY

SITE FEATURE	DESCRIPTION / DETAILS
REGIONAL TOPOGRAPHY	The Site appears to be generally flat, generally slopes towards the southeast.
APPROX ELEVATION (amsl)	162 m
PHYSIOGRAPHIC REGION	The Site and Phase One Study Area are located in the physiographic region known as the Till Moraines.
OVERBURDEN SOIL STRATIGRAPHY	The Site and Phase One Study Area are located in Halton Till, comprising of predominantly silt to silty clay, high in matrix carbonate and is clast poor.
BEDROCK AND APPROXIMATE DEPTH	Upper Ordovician shale, limestone, dolostone, and siltstone of the Queenston Formation. Bedrock depth is approximately 10-12 m bg.

SUMMARY OF WATER BODIES, AREAS OF NATURAL SIGNIFICANCE, GROUNDWATER INFORMATION

FEATURE	WITHIN PHASE ONE PROPERTY	WITHIN PHASE ONE STUDY AREA	DESCRIPTION/ DETAILS
WATER BODY	NO	NO	Mullet Creek is located approximately 135m southwest at its closest point.
ANSI	NO	NO	N/A
WELL-HEAD PROTECTION AREA	NO	NO	N/A
MUNICIPAL DRINKING WATER SYSTEM	YES	YES	Supplied by Region of Peel
WELL FOR CONSUMPTION/ AGRICULTURAL USE	NO	NO	N/A

Uncertainty on absence of information: The main uncertainty associated with the CSM developed for the site relates to the limited information regarding operation records of the Site as well as the limited information regarding activities on neighbouring properties. This lack of information is mitigated by conservative assumptions regarding PCAs and APECs.

Notwithstanding the above, it should be noted that Phase One ESAs have inherent limitations, and therefore findings cannot be considered definitive (i.e., the findings of a Phase One ESA are inherently associated with some uncertainty).

Exemption per Section 49.1:

Based on the information gathered during the Phase One ESA, de-icing activities (salt application) for the safety of vehicular or pedestrian traffic under conditions of snow or ice, or both, are known to have occurred at the Site.

Therefore, there are areas of the Site that are used for vehicle transportation/parking activities as well as used as pedestrian walkways. In absences of other sources, the COPCs associated with salt use (e.g., EC and SAR in soils, and chloride and sodium in groundwater) are exempt per Section 49.1 of O.Reg. 153/04.

4.4 DEVIATIONS FROM THE SAMPLING AND ANALYSIS PLAN

There were no deviations from the sampling and analysis plan with the exception of the following:

- BH110, BH114, and BH205 – submitted five additional soil samples for analysis of HWS boron for vertical delineation purposes;
- BH110A to BH110F and BH114A to BH114F – submitted 12 additional soil samples for analysis of HWS boron for horizontal and delineation purposes;
- BH301 to BH307 - submitted 14 additional soil samples for analysis of HWS boron and seven additional soil samples for analysis of total boron for horizontal and vertical delineation purposes;
- BH401, BH402, BH406 and BH407 - submitted 4 additional soil samples for analysis of HWS boron and total boron for horizontal and vertical delineation purposes;
- MW118S – submitted one additional groundwater sample from two groundwater sampling events for analysis of selenium to re-assess the Phase Two ESA laboratory results.

4.5 IMPEDIMENTS

Access to and throughout Site was not impeded at any time during the Phase Two ESA work program.

5.0 INVESTIGATION METHOD

5.1 GENERAL

Prior to borehole/monitoring wells installation at the Site, local utility companies were contacted by Terrapex in order to obtain stake-outs and clearance with respect to buried services. A private locating company, either True North Locates or Landshark Group, was also retained to provide clearance with respect to buried services in the work areas. All intrusive sampling locations were greater than the required distance from all located underground utilities and were given clearance. The approximate locations of the on-Site underground utility locations are provided in Figure 2A.

A site-specific health and safety plan (HASP), Job Safety Analysis (JSA), and Daily Safe Work Permit (DSWP) were prepared by Terrapex prior to commencing all field work. All team members for work supervised by Terrapex, including sub-contractors, read and signed the HASP, JSA, and DSWP before completing intrusive work at the Site.

All methods used during the investigation were completed as per Terrapex's associated standard operating procedure (SOP). Copies of the relevant Terrapex SOPs are included in Appendix III.

5.2 SOIL

5.2.1 SOIL SAMPLING

The drilling program was completed between January 16 and February 9, 2023, for the 100-series boreholes and between June 2 and 12, 2023 for the 200-series boreholes. The 100- series boreholes were advanced for geotechnical/hydrogeological purposes, as well as to investigate the environmental soil quality at the Site. Only BH205 and MW206 of the 200-series boreholes were advanced to investigate environmental soil quality at the Site. The remaining 200-series boreholes were advanced for the purpose of investigating shallow groundwater quality only and were located in areas of the 100-series boreholes where environmental soil quality had already been investigated. Soil samples from the boring locations were generally collected at regular depth intervals (0.6 – 1.5 m) using split-spoon samplers.

Additional drilling was completed on June 20, 2023 for BH110A-F and BH114A-F, on August 11, 2023 for the 300-series boreholes (BH301 to BH307) and on October 6, 2023 for the 400-series boreholes (BH401 to BH408). These boreholes were advanced to delineate soil impacts identified at BH110, BH114 and BH205. Soil samples from the boring locations were generally collected at regular depth intervals of 0.6 m, using either split-spoon samplers or direct-push dual tube samplers.

Fresh nitrile gloves were worn for the handling of each sample. Soil samples were handled and logged as described above.

Detailed drilling procedures and measures to minimize potential cross-contamination or other potential bias are described in Terrapex's SOPs (Appendix III) and in Section 5.9. There were no material deviations from the Standard Operating Procedures regarding borehole drilling during this investigation.

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 placed into laboratory supplied containers for analysis. Samples considered to be "worst-case" samples based on field screening were submitted for analysis and extracted at the laboratory within the required 7 days of sampling. Soil descriptions were recorded based on the Unified Soil Classification System (USCS).

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

5.2.2 FIELD SCREENING MEASUREMENTS

Soil vapour (SV) concentrations were measured in each soil sample, using a RKI Eagle Hydrocarbon Surveyor calibrated to *n*-hexane and operated in "methane elimination" mode and a PID equipped with a 10.6 eV lamp and calibrated to isobutylene, respectively. The Eagle gas detector can measure total combustible organic compounds to a nominal detection level of 5 parts per million by volume (ppm), with an accuracy of approximately ±5%.

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

5.3 GROUNDWATER

5.3.1 MONITORING WELL INSTALLATION

Monitoring wells were installed in 24 of the advanced boreholes (MW101S, MW101D, MW102, MW103S, MW103D, MW104, MW105, MW106, MW107, MW108, MW112, MW113S, MW113D, MW115, MW116, MW118S, MW118D, MW201, MW202, MW203, MW204, MW206, MW207 and MW208) using new 50 mm inside-diameter schedule 40 PVC well pipe and # 10 slot screen. A hydrated bentonite seal was placed above the sand pack to prevent infiltration of surface water into the monitoring well. A steel stick-up casing, cemented in place, was installed at each location. The details of the monitoring well construction are summarized below:

- MW102, MW104, MW105, MW106, MW107, MW108, MW112, MW115, MW116: installed for geotechnical and hydrogeological purposes and constructed with a

1.52 m or 3.05 m (MW106 and MW108 only) screened interval that extended to depths ranging from 8.84 m bg to 11.28 m bg;

- MW101S, MW103S, MW113S, MW118S: installed for geotechnical and hydrogeological purposes, as well as to investigate the environmental quality of the shallow groundwater table; constructed with a 1.52 m screened interval that extended to depths ranging from 4.57 m bg to 6.1 m bg;
- MW101D, MW103D, MW113D, MW118D: advanced for geotechnical and hydrogeological purposes, as well as to investigate the environmental quality of the deeper groundwater table for vertical delineation purposes; constructed with a 1.52 m screened interval that extended to depths ranging from 9.91 m bg to 11.28 m bg; and,
- MW201, MW202, MW203, MW204, MW206, MW207, MW208: installed to investigate the environmental quality of the shallow groundwater table and constructed with a 3.05 m screened interval that extended to depths ranging from 4.57 m bg to 6.1 m bg.

To mitigate cross-contamination, new materials were used for the installation of each monitoring well. Fresh nitrile gloves were donned for the handling of the well material at each well location.

Well installation details are provided on the borehole logs in Appendix III.

5.3.2 MONITORING WELL DEVELOPMENT METHOD

The 100-series monitoring wells were developed on March 1, 2023 to remove drilling debris that may have been introduced during well installation and to minimize any potential sampling and analytical bias that may result from excessive particulate capture within groundwater samples recovered from these wells. Additional development was completed on June 5 through 9, 2023 for the 200-series monitoring wells.

Prior to development, the wells were monitored for combustible vapours in the well headspace. Depth to water and depth to the bottom of the well were also measured prior to well development. The volume of water in the well and its annulus were calculated based on the depth measurements, diameter of the well standpipe and annulus, and assumed annulus porosity of 30%.

The wells were developed using a surge block and a dedicated inertial sampler comprising low density polyethylene (LDPE) tubing and a LDPE foot valve. Each well was surged and purged until water free of visible particulate was yielded or until a “dry” condition was encountered for three consecutive cycles, which ever came first. The use of this technique resulted in the removal of between 4.5 L and 56 L from each of the monitoring wells.

5.3.3 FIELD MEASUREMENTS OF WATER QUALITY PARAMETERS

Prior to sampling the existing monitoring wells, geochemical water quality parameters; temperature, pH, specific conductivity, dissolved oxygen (DO), and oxidation-reduction potential (ORP), were measured. Water quality parameters were taken using an YSI 556 MPS water quality meter and recorded over five-minute intervals during purging. When the parameters had stabilized to within requirements outlined in the Terrapex SOP, the well was deemed suitable for sampling. Water quality parameters were not measured in monitoring well MW204 as the well was observed to be dry.

Further explanation is provided in the Terrapex SOP attached in Appendix III.

5.3.4 GROUNDWATER SAMPLING

Prior to sampling, the monitoring activities included measuring of combustible vapours and total organic vapour concentrations within the headspace of each well immediately upon removal of the well standpipe cap, using a RKI Eagle Hydrocarbon Surveyor calibrated to *n*-hexane and operated in “methane elimination” mode and a PID equipped with a 10.6 eV lamp and calibrated to isobutylene, respectively. The depth to water in the well was measured using a Heron interface probe. The presence, and apparent thickness (if applicable), of any light non-aqueous phase liquids (LNAPL) in the well was also assessed using the interface probe.

Groundwater monitoring was completed on March 8, 2023, March 15, 2023, April 18, 2023, and June 16, 2023. Groundwater sampling was completed on March 8, 2023 (MW101S/101D, MW103S/103D, MW113S/113D, and MW118S/118D) and June 16, 2023 (MW118S and all 200-series monitoring wells). Additional groundwater sampling was completed on July 27, 2023 and November 6, 2023 for monitoring well MW118S only. It should be noted that MW116 could not be located during the monitoring event on March 8, 2023 and MW204 was observed to be dry during monitoring event on June 16, 2023 and could not be sampled.

During the groundwater sampling events, it was noted that groundwater levels were measured above the screened interval in several monitoring wells. In order to properly characterize petroleum hydrocarbon contamination in APECs where PHCs are identified as a COPC, groundwater samples submitted for PHC analysis were collected from at least one monitoring well per APEC where the groundwater levels intersected the monitoring well screened interval.

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

Sampling was conducted using a peristaltic pump as per Terrapex's SOP. Groundwater samples were collected directly into pre-cleaned, laboratory supplied bottles, placed in a cooler with ice, and shipped within one day of collection with chain of custody to the laboratory for analysis.

5.4 ANALYTICAL TESTING

Laboratory analytical services for this work program involving soil and groundwater media were provided by Bureau Veritas Laboratories (BV Labs) of Mississauga, Ontario. At the time of the assessment, BV Labs was accredited by the Standards Council of Canada (SCC) and International Standard ISO/IEC 17025:2005.

A summary of the soil samples, including blind field duplicates (selected on the basis of field screening), submitted for laboratory analysis are as follows:

- twenty-two soil samples were submitted for laboratory analysis of BTEX or BTEX and PHC F1 to F4 fractions;
- twelve soil samples were submitted for laboratory analysis of VOCs;
- eleven soil samples were submitted for laboratory analysis of PAHs;
- twenty-seven soil samples were submitted for laboratory analysis of metals and inorganics;
- thirty-eight soil samples were submitted for laboratory analysis of ORPs (HWS boron only);
- one soil sample was submitted for laboratory analysis of ABNs;
- one soil sample was submitted for laboratory analysis of CPs; and,
- one soil sample was submitted for laboratory analysis of PCBs.

A summary of the groundwater samples, including blind field duplicates, submitted for laboratory analysis are as follows:

- sixteen groundwater samples were submitted for laboratory analysis of BTEX and PHC F1 to F4 Fractions;
- sixteen groundwater samples were submitted for laboratory analysis of VOCs;
- eight groundwater samples were submitted for laboratory analysis of PAHs;
- twelve groundwater samples were submitted for laboratory analysis of metals and inorganics;
- two groundwater samples were submitted for laboratory analysis of selenium only;
- one groundwater sample was submitted for laboratory analysis of ABNs;
- one groundwater sample was submitted for laboratory analysis of CPs; and,
- two groundwater samples were submitted for laboratory analysis of PCBs.

The specific sample locations and parameters analyzed at each location are shown in Figures 7 through 26.

5.5 RESIDUE MANAGEMENT PROCEDURES

Soil cuttings and purge water were removed from the site following the completion of the field activities by Clarkway Construction Company Ltd. of Brampton, Ontario for disposal at a licensed waste receiving facility.

5.6 ELEVATION SURVEYING

The 100-series, 200-series, 300-series, and 400-series boreholes and monitoring wells (including ground surface and top of pipe elevation, as applicable) were surveyed by Terrapex during the current work program using a TOPCON HiPer V GNSS Receiver. A geodetic site benchmark established by the TOPCON Receiver at monitoring well MW102 and used for the survey had an elevation of 162.79 m amsl.

5.7 QUALITY ASSURANCE AND QUALITY CONTROL MEASURES

During groundwater sampling, dedicated sampling tubing 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 fresh municipal water between each monitoring well. A fresh pair of nitrile gloves was donned at each well location.

Pre-cleaned soil and groundwater sample containers for the Site's specific parameters were provided by BV Labs and used at each borehole and monitoring well location for the collection of soil and groundwater.

Samples for analyses were placed in a cooler with loose ice and shipped with signed chain of custody and custody seals to BV Labs for analysis.

The BV Labs Quality Assurance/Quality Control (QA/QC) program consisted of the analysis of laboratory replicates, process and method blanks, method duplicates, method spikes and surrogate percent recoveries, as appropriate for the particular analysis protocol.

Five "blind" field duplicates from soil samples taken during the drilling activities, were submitted to the laboratory for chemical analysis for QA/QC purposes during the Phase Two ESA work program. The field duplicates and corresponding soil samples are as follows (collected during the January 16 to February 9, 2023, June 2 to 12, 2023, June 20, 2023, August 11, 2023, and October 6, 2023 drilling programs):

- MW9106-8 (duplicate of MW106-8) and MW906-6 (duplicate of MW206-6) were submitted for analysis of BTEX and PHC F1 to F4 fractions;
- MW906-6 (duplicate of MW206-6) were submitted for analysis of VOCs;
- MW9117-3 (duplicate of MW117-3) and MW906-1 (duplicate of MW206-1) were submitted for analysis of PAHs;

- MW9110-2 (duplicate of MW110-2) and MW906-1 (duplicate of MW206-1) were submitted for analysis of inorganics;
- BH114A-92 (duplicate of BH114A-2), BH3003 (duplicate of BH302-3), and BH4100-2 (duplicate of BH407-2) were submitted for analysis of HWS boron only, and
- BH4100-4 (duplicate of BH407-4) was submitted for analysis of total boron only.

A methanol blank was also submitted for VOC analysis.

Over the course of the Phase Two ESA work program, eight “blind” groundwater field duplicates were submitted for QA/QC purposes as follows:

- MW1000 (field duplicate of MW113S) and MW1000 (field duplicate of MW203) were submitted for analysis of BTEX and PHC F1 to F4 fractions;
- MW1000 (field duplicate of MW113S) and MW1000 (field duplicate of MW203) were submitted for analysis of VOCs;
- MW1000 (field duplicate of MW203) was submitted for analysis of PAHs;
- MW1000 (field duplicate of MW113S) and MW1000 (field duplicate of MW203) were submitted for analysis of inorganics; and,
- MW2000 (field duplicate of MW208) was submitted for analysis of PCBs.

A trip blank sample was also submitted for VOC analysis.

The laboratory was not informed of the nature or number of field QA/QC samples.

6.0 REVIEW AND EVALUATION

6.1 GEOLOGY

Geological information from the Phase One ESA, is summarized below:

SITE FEATURE	DESCRIPTION / DETAILS
PHYSIOGRAPHIC REGION	The Site and Phase One Study Area are located in the physiographic region known as the Peel Plain, comprising till moraines.
OVERBURDEN SOIL STRATIGRAPHY	The Site and Phase One Study Area are located in Halton Till, comprising of predominantly silt to silty clay, high in matrix carbonate and is clast poor.
BEDROCK AND APPROXIMATE DEPTH	Upper Ordovician shale, limestone, dolostone, and siltstone of the Queenston Formation. Bedrock depth is approximately 10-12 m bg.

The stratigraphy encountered at the Site during the Phase Two ESA comprised asphalt paving all drilling locations except MW103S, MW103D, MW104 and MW208 which comprised topsoil and MW206 which comprised concrete. The surface material was underlain by fill material consisting of clayey silt with some sand and gravel extending to depths ranging from 0.7 m to 2.9 m bg. The fill material is underlain by a clayey silt till with varying sand and gravel content to a depth of 13.7 m bg. No deleterious material was observed in samples of fill collected during drilling.

Saturated conditions or changes in soil colour indicative of the apparent shallow water table were observed at depths ranging from approximately 3.7 m to 5.5 m bg in the clayey silt till stratum. Shale bedrock was encountered in fourteen of the boreholes at depths ranging from 10.9 m to 13.9 m bg.

Borehole logs illustrating the soil stratigraphy are included in Appendix IV.

6.2 GROUNDWATER ELEVATIONS AND FLOW DIRECTION

Groundwater was encountered in overburden during the installation of the boreholes.

Monitoring wells MW101S, MW103S, MW113S, MW118S, MW201 to MW204, and MW206 to MW208 were screened to intercept the apparent water table with either 1.5 m or 3.05 m screens with the top of the screen depths ranging between 1.5 m and 3.1 m bg. The remaining monitoring wells were screened to assess deeper saturated conditions with the top of the 1.52 m or 3.05 m screen depths ranging between 6.6 m at 9.7 m bg.

Depths to groundwater measured within the monitoring wells are summarized as follows:

- March 8, 2023 - ranged between 0.41 m bg at MW102 to 10.16 m bg at MW101D;
- March 15, 2023 - ranged between 0.35 m bg at MW102 to 8.94 m bg at MW101D;

- April 18, 2023 - ranged between 0.77 m bg at MW101S to 5.11 m bg at MW108; and,
- June 16, 2023 – ranged between 0.58 m bg at MW202 to 3.69 m bg at MW207.

Monitoring data is shown in Table 1.

LNAPL was not observed during monitoring, purging, or sampling of the monitoring wells during this work program.

Groundwater elevations for the shallow and deep groundwater tables were calculated based on the water level data from April 18, 2023. Groundwater contours were electronically generated using Surfer™ Surface Mapping System with Point Kriging geostatistical gridding method to interpolate the data points. Interpreted shallow and deep groundwater table contours based on these calculations are shown in Figure 3A and 3B, respectively. The direction of groundwater flow was interpreted to be to the south/southeast.

6.3 GROUNDWATER HYDRAULIC GRADIENTS AND CONDUCTIVITY

Based on the measured groundwater elevations on April 18, 2023, the average horizontal hydraulic gradient over the area assessed was calculated as approximately 0.03 m/m.

Based on hydraulic conductivity tests conducted on March 15, 2023, the interpreted hydraulic conductivity values for the Site are as follows:

- MS101S, 9.3×10^{-9} m/s
- MW102, 1.2×10^{-8} m/s
- MW105, 4.1×10^{-10} m/s
- MW113D, 3.4×10^{-9} m/s
- MW115, 2.2×10^{-9} m/s
- MW118D, 1.8×10^{-7} m/s

Detailed information regarding the conductivity testing is provided in Terrapex's hydrogeological assessment report (draft dated July 6, 2023).

The vertical gradient was measured at the monitoring well clusters MW101S/MW101D, MW103S/MW103D, MW113S/MW113D and MW118S/MW118D. The vertical gradient varied from 0.14 m/m at MW113 to 0.55 m/m at MW101 m/m downward.

6.4 FINE AND MEDIUM SOIL TEXTURE

The results of grain-size analyses indicated that native soil consisted primarily of clayey silt to silty clay with some sand, therefore, comparison criteria for fine and medium textured soil was applied at the Site (Section 17(4) of the *Standards*). Copies of the grain-size analyses are included in Appendix V.

6.5 SOIL FIELD SCREENING

Field evidence of potentially impacted soil was not observed in any of the soil samples collected. The SV concentration measured in recovered samples from the sampling locations were all less than 5 ppm (the detection limit of the instrument). SV readings are detailed in the borehole/monitoring well logs in Appendix IV.

6.6 SOIL QUALITY

The laboratory results from the Phase Two ESA indicate that the concentrations of COPCs at the Site were less than the applicable Table 3 SCS at the locations tested, except the following:

- MW101, MW102, MW105, MW107, MW108, BH109, BH110, MW113, BH114, BH117 and BH205, concentrations of electrical conductivity (EC) and sodium adsorption ratio (SAR) exceeded the Table 3 SCS in soil samples collected from 0.8 m to 1.4 m bg;
- MW106 and BH111, concentrations of EC and SAR exceeded the Table 3 SCS in a soil sample collected from 0 m to 0.6 m bg;
- MW115, concentrations of EC and SAR exceeded the Table 3 SCS in a soil sample collected from 1.5 m to 2.1 m bg;
- MW116 and MW118, concentrations of EC exceeded the Table 3 SCS in a soil sample collected from 0.8 m to 1.4 m bg;
- BH110, BH114 and BH205, concentration of hot water soluble (HWS) boron exceeded the Table 3 SCS in soil samples collected from 0.8 m to 1.4 m bg;
- BH110A, BH110D, BH110E, BH114C, BH114D, BH114F, BH301, BH305, and BH307, concentration of HWS boron exceeded the Table 3 SCS in soil samples collected from 0.6 m to 1.2 m bg; and,
- BH305 and BH306, concentration of HWS boron exceeded the Table 3 SCS in soil samples collected from 1.5 m to 1.8 m bg.

The locations where an elevated level of EC and SAR in soil has been identified at the Site are in areas that have had road salt applied or are immediately adjacent to those that are likely to have received road salt application. On this basis, the QP_{ESA} has determined that the levels of SAR and EC in soil exceeded the applicable Site Condition Standards solely due to the application of road salt for the purposes of ensuring the safety of vehicular or pedestrian traffic under snow or ice or both. As noted in the Phase One ESA CSM, in absences of other sources, the COPCs

associated with salt use (e.g., EC and SAR in soils, sodium and chloride in groundwater) are exempt per Paragraph 1 of Section 49.1 of O. Reg. 153/04. As a result, the applicable Site Condition Standards for SAR and EC in soil have not been deemed to be exceeded for the purpose of the Environmental Protection Act, and as a result, have not been considered COCs.

The impacted HWS boron soils were situated in the parking areas east and south of the plaza at 128 Queen Street South (Area 1 and Area 2, respectively) and in the parking area west of the building at 169 Crumbie Street (Area 3). The impacted HWS boron soils were characterized by a layer of impacted media ranging from approximately 0.6 to 1.5 m bg. Note that soil samples BH305-3 and BH306-3 identified exceedences of HWS boron at depths from 1.5 to 1.8 m bg. However, as both soil samples also contained concentrations for total boron less than the Table 3 SCS and Table 3 SCS for HWS boron applies to surface soils only (soils <1.5 m in depth), both samples are considered to have met the *Standards.* The HWS boron results are illustrated on Figure 13 and the estimated area of HWS boron impacted soil at the Site is shown in Figure 27, and in the cross-sections (Figures 34, 44, 46 and 48).

The analytical results for BTEX/PHCs, VOCs, PAHs, inorganic, ABNs, CPs, and PCBs analyses in soil are shown in Tables 2 through 8. A summary of all the soil sampling results is shown in Figures 7 through 16.

The SV concentration measured for each soil sample, the soil conditions, sample depths and chemical parameters analysed at each borehole are presented in the borehole/monitoring well logs in Appendix IV. Copies of the Laboratory Certificates of Analyses are attached in Appendix V.

6.7 GROUNDWATER QUALITY

All groundwater samples collected on March 8 and June 16, 2023 had concentrations of all analysed parameters less than the applicable Table 3 SCS, with the exception of the following:

- sodium and chloride in monitoring wells MW113S, and MW118S; and,
- selenium in monitoring well MW118S.

However, monitoring well MW118S was re-sampled for selenium on July 27, 2023 and November 6, 2023 and had concentrations of selenium less than the applicable Table 3 SCS.

Based on the two additional sampling results for monitoring well MW118S, the QP_{ESA} has determined that the initial result on June 16, 2023 of the selenium exceedance was anomalous and is not considered as an exceedance.

The locations where elevated levels of sodium and chloride in groundwater have been identified at the Site are in areas that have had road salt applied or are immediately adjacent to those that are likely to have received road salt application. On this basis, the QP_{ESA} has determined that the levels of sodium and chloride in groundwater exceeded the applicable Site Condition

Standards solely due to the application of road salt for the purposes of ensuring the safety of vehicular or pedestrian traffic under snow or ice or both. As noted in the Phase One ESA CSM, in absences of other sources, the COPCs associated with salt use (e.g., EC and SAR in soils, sodium and chloride in groundwater) are exempt per Paragraph 1 of Section 49.1 of O. Reg. 153/04. As a result, the applicable Site Condition Standards for sodium and chloride in groundwater have not been deemed to be exceeded for the purpose of the Environmental Protection Act, and as a result, have not been considered COCs.

The analytical results for BTEX/PHCs, VOCs, PAHs, inorganics, ABNs, CPs, and PCBs analyses from the sampling events are shown in Tables 9 through 15. A summary of all the groundwater sampling results is shown in Figures 17 through 26. Copies of the Laboratory Certificates of Analyses are attached in Appendix V.

6.8 SEDIMENT QUALITY

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

6.9 QUALITY ASSURANCE AND QUALITY CONTROL RESULTS

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 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 with the exception of:

- The recovery of 2,4-dinitrophenol in the Matrix Spike in the QA/QC batch for BV Labs job# C3G2781 was outside the control limits, however, overall quality control meets acceptability criteria.
- The recovery of chromium VI in the Matrix Spike in the QA/QC batch for BV Labs job# C3G2781 was below the lower control limit and may be due to the sample matrix.
- The recovery of Aroclor 1260 and Total PCBs in the Matrix Spike in the QA/QC batch for BV Labs job# C3G2781 exceeded the acceptance limits, which may be due to sample inhomogeneity.
- The recovery of dibromochloromethane in the Spiked Blank in the QA/QC batch for BV Labs job# C333819 was above the upper control limit and may represent a high bias, however, for results that are non detect the potential bias has no impact.
- The recovery of lead in the Matrix Spike in the QA/QC batch for BV Labs job# C333819 was not calculated due to high target analytes or sample matrix interference.

- The recovery of 1,2,4-trichlorobenzene in the Spiked Blank in the QA/QC batch for BV Labs job# C3I0354 was outside the control limits, however, overall quality control meets acceptability criteria.

The results do not impact the conclusions of this report.

Detection Limits: There were no instances in the laboratory reports wherein the detection limits were adjusted due to the high recovery of analytes or insufficient sample that resulted in elevated detection limits above the applicable Table 3 SCS.

Field Duplicate Samples: Field duplicate sample results are presented in the soil and groundwater analytical results tables. Relative percent difference (RPD) for field duplicate sample results is calculated as follows:

$$RPD = \left| \frac{result_1 - result_2}{\frac{1}{2}\, x\, (result_1 + result_2)} \right| x\ 100\%$$

RPD is not calculated where reported concentrations are less than five times the method detection limit. Terrapex's SOPs establish alert criteria for RPDs ranging between 10% and 50%, depending on the parameter. Increased RPD values may be encountered whenever duplicate analyses are completed on samples representing heterogeneous fill materials, however significant concerns regarding the validity of analytical results would generally not be suspected if calculated RPDs do not exceed the specified alert criteria by more than a factor of two.

RPDs were below the alert criteria in all soil samples except for the following:

- HWS boron, chromium, lead and zinc between soil sample BH110-2 and its field duplicate BH9110-2 had RPDs of 49%, 72%, 45%, and 32%, respectively;
- HWS boron between soil sample BH114A-2 and its field duplicate BH114A-92 had a RPD of 39%; and,
- uranium between soil sample soil sample MW206-2 and its field duplicate MW906-2 had a RPD of 81%.

In all instances, the noted variability is likely a function of the variable distribution of contaminants in the fill material and is not indicative of poor data quality.

RPDs were below the alert criteria in all groundwater samples except for the following:

- cyanide between groundwater sample MW113S and its field duplicate MW1000 which had a RPD of 40%.

Given that the concentration cyanide in the affected groundwater samples and corresponding field duplicate was at least 5x less than the applicable *Standards*, the elevated RPDs noted above would not impact the conclusions of this report.

Overall, acceptable correlation was observed between the duplicate samples and their corresponding sampling pairs for each of the tested parameters.

6.10 CONCEPTUAL SITE MODEL

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.

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 assumed groundwater flow direction.

Figures 1 through 68 illustrating the Phase Two CSM are attached and referenced in the appropriate sections above. The Phase Two CSM is included in Appendix VI.

7.0 CONCLUSIONS

The Phase Two ESA investigation of the site, as documented in this report, identified concentrations of hot water soluble boron in soil at concentrations in excess of the Table 3 SCS. The HWS boron impacts are situated within the asphalt parking area east and south of 128 Queen Street South, and west of 169 Crumbie Street. The HWS boron soil impacts have been delineated horizontally or vertically. Concentrations of all other COPCs were less than the applicable Table 3 SCS in all soil samples collected.

Concentrations of all COPCs were less than the applicable Table 3 SCS in groundwater with the exception of a selenium exceedance at MW118S. Based on the two consecutive confirmatory results for identified selenium impacts in groundwater the QP_{ESA} has determined that the initial result for the selenium impacts was anomalous and is not considered as an exceedance and therefore would also not preclude the filing of a Record of Site Condition.

Sediment is not present at the site, and therefore contaminants of concern are not present within sediment.

In accordance with O.Reg. 153/04, remediation of the identified HWS boron soil impacts or completion of a Risk Assessment would be required before filing an RSC for the site.

7.1 SIGNATURES

This report has been completed in accordance with the terms of reference for this project as agreed upon by De Zen Realty Company Ltd. (the Client) and Terrapex Environmental Ltd. (Terrapex) and generally accepted engineering or environmental consulting practices in this area.

The reported information is believed to provide a reasonable representation of the general environmental conditions at the site; however, studies of this nature have inherent limitations. The data were collected at specific 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.

Terrapex has relied in good faith on information and representations obtained from the Client and third parties and, except where specifically identified, has made no attempt to verify such information. Terrapex accepts no responsibility for any deficiency or inaccuracy in this report as a result of any misstatement, omission, misrepresentation, or fraudulent act of those providing information. Terrapex shall not be responsible for conditions or consequences arising from relevant facts that were concealed, withheld, or not fully disclosed at the time of the study.

This report has been prepared for the sole use of De Zen Realty Company Ltd. 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 De Zen Realty Company Ltd.

Sincerely,
TERRAPEX ENVIRONMENTAL LTD.

Geoff Lussier, Dipl.
Senior Project Manager

Jennifer O'Grady, P.Eng.
Senior Reviewer
Qualified Person (QP_{ESA})

LICENSED PROFESSIONAL ENGINEER
Mar. 4, 2024
J. L. O'GRADY
90353459
PROVINCE OF ONTARIO

8.0 REFERENCES

Topographic Map: Atlas of Canada Toporama online Topographic map (based on information as of 2017);

Ontario Base Map (OBM): Ontario Government Ontario Basic Mapping (OBM) from the online map at geographynetwork.ca/website/obm;

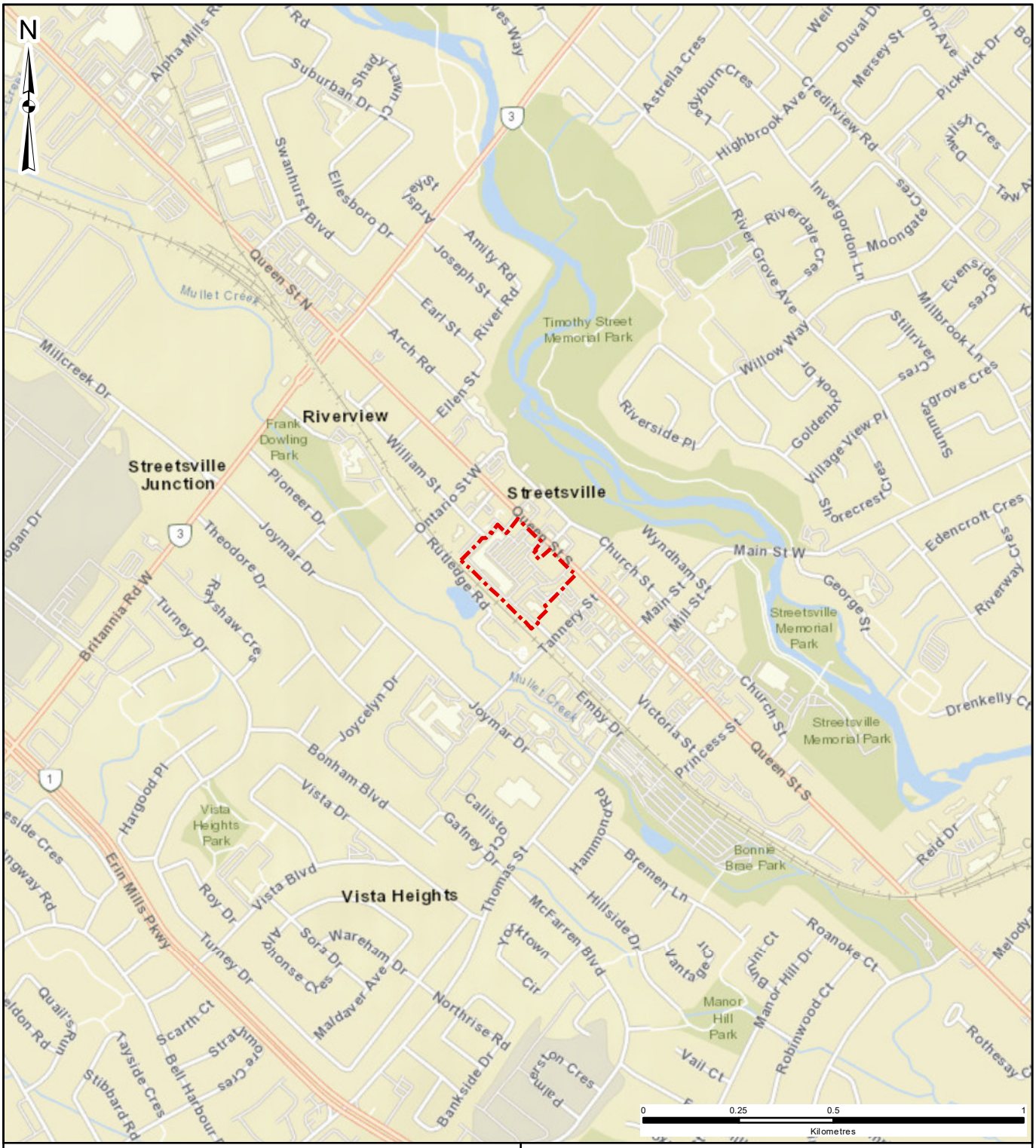
Quaternary Geology of Ontario, Southern Sheet, Map 2556, Ministry of Northern Developments and Mines, 1991;

Bedrock Geology of Ontario, Southern Sheet, Ontario Geological Survey, Map 2544, Ministry of Northern Development and Mines, 1991;

Ontario Well Records map at: https://www.ontario.ca/environment-and-energy/map-well-records;

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

FIGURES



LEGEND

SITE BOUNDARY

DATA SOURCE: ESRI
MAP PROJECTION: NAD 1983 UTM Zone 17N

CLIENT:
DE ZEN REALTY COMPANY LTD.

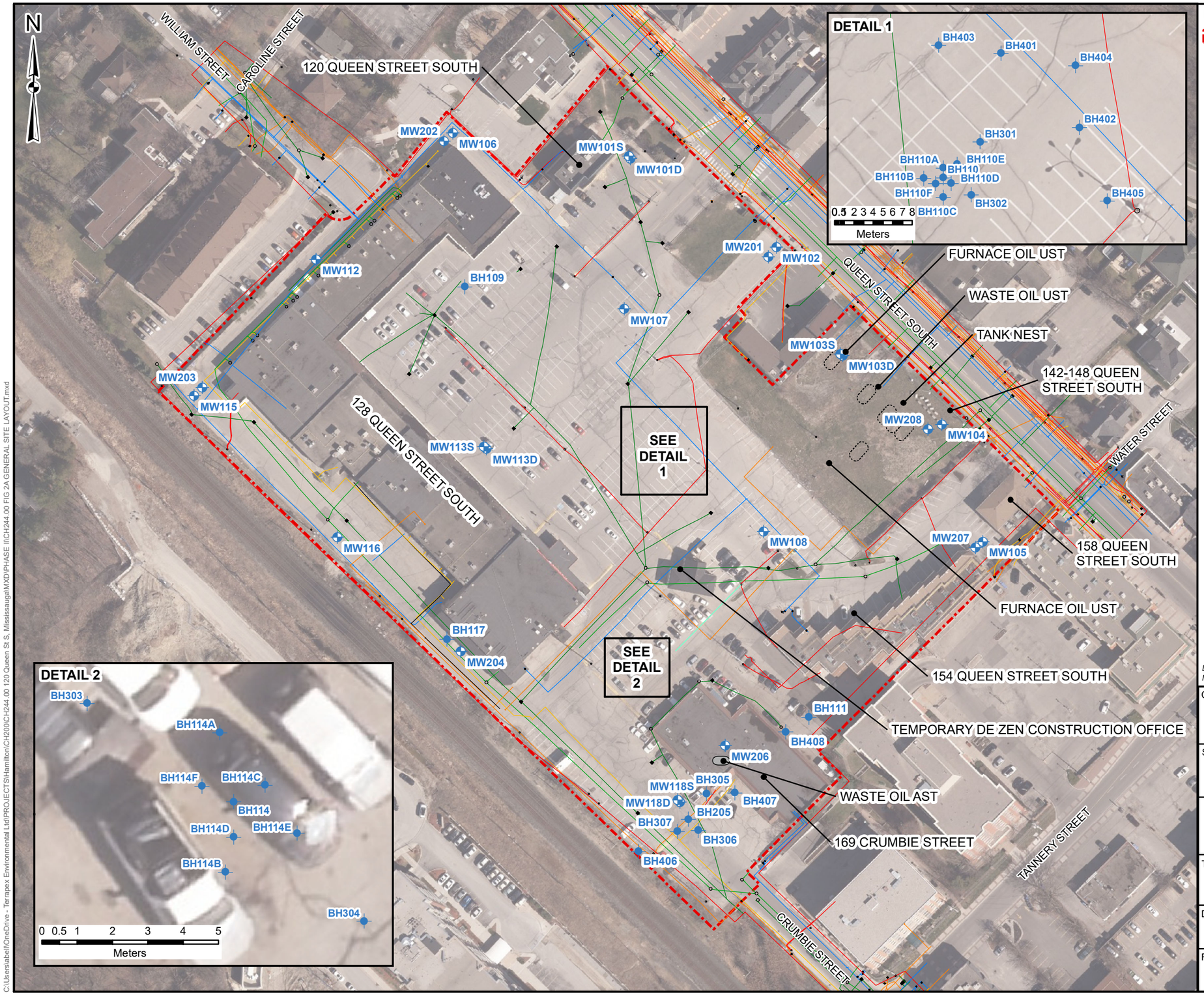
SITE LOCATION:
120, 128, 142, 148, 154, 158 QUEEN STREET SOUTH
AND 169 CRUMBIE STREET, MISSISSAUGA, ONTARIO

TERRAPEX

TITLE:
SITE LOCATION

DRAWN BY: JS	PROJECT NO.: CH244.00	CHECKED BY: GLL
REVISION: 00	DATE: FEBRUARY 2023	**FIGURE: 1**

jserroul C:\Users\JSerroul\OneDrive - Terrapex Environmental Ltd\PROJECTS\Hamilton\CH200\CH244.00 120 Queen St S, Mississauga\MXD\FIG 1 SITE LOCATION.mxd



LEGEND

- SITE BOUNDARY
- BOREHOLE
- MONITORING WELL
- CURRENT ABOVEGROUND STORAGE TANK (AST)
- FORMER UNDERGROUND STORAGE TANK (UST)

DATA SOURCE: FIRST BASE SOLUTIONS
MAP PROJECTION: NAD 1983 UTM ZONE 17N

CLIENT:
DE ZEN REALTY COMPANY LTD.

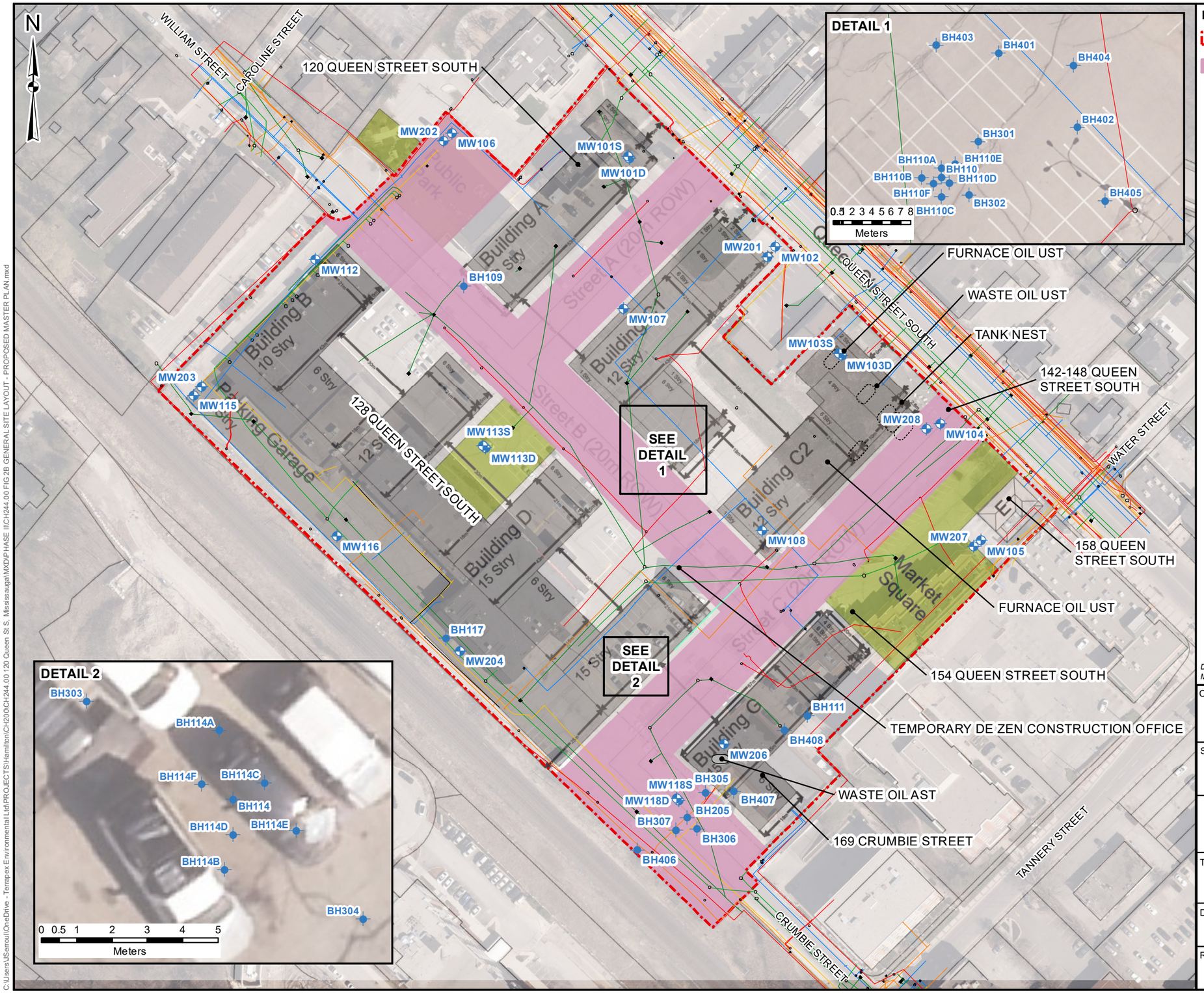
SITE LOCATION:
120, 128, 142, 148, 154, 158 QUEEN STREET SOUTH AND 169 CRUMBIE STREET, MISSISSAUGA, ONTARIO

TERRAPEX

TITLE:
GENERAL SITE LAYOUT

DRAWN BY:	PROJECT NO.:	CHECKED BY:
JS/ SW/ AB	CH244.00	GLL
REVISION:	DATE:	FIGURE:
00	JANUARY 2024	**2A**

C:\Users\abell\OneDrive - Terrapex Environmental Ltd\PROJECTS\Hamilton\CH200\CH244.00 120 Queen St S, Mississauga\MXD\PHASE II\CH244.00 FIG 2A GENERAL SITE LAYOUT.mxd



LEGEND

- SITE BOUNDARY
- PROPOSED LANDS TO BE DEDICATED TO THE CITY OF MISSISSAUGA
- BOREHOLE
- MONITORING WELL
- CURRENT ABOVEGROUND STORAGE TANK (AST)
- FORMER UNDERGROUND STORAGE TANK (UST)

0 20 40 60
Metres

DATA SOURCE: FIRST BASE SOLUTIONS, PROPOSED SITE PLAN PROVIDED BY CLIENT.
MAP PROJECTION: NAD 1983 UTM ZONE 17N

CLIENT:
DE ZEN REALTY COMPANY LTD.

SITE LOCATION:
120, 128, 142, 148, 154, 158 QUEEN STREET SOUTH AND 169 CRUMBIE STREET, MISSISSAUGA, ONTARIO

TERRAPEX

TITLE:
GENERAL SITE LAYOUT - PROPOSED MASTER PLAN

DRAWN BY:	PROJECT NO.:	CHECKED BY:
JS/ SW/ AB	CH244.00	GLL
REVISION: 00	DATE: FEBRUARY 2024	FIGURE: **2B**

C:\Users\JSerrou\OneDrive - Terrapex Environmental Ltd\PROJECTS\Hamilton\CH200\CH244.00 120 Queen St S, Mississauga\MXD\PHASE II\CH244.00 FIG 2B GENERAL SITE LAYOUT - PROPOSED MASTER PLAN.mxd

LEGEND

- SITE BOUNDARY
- MONITORING WELL
- EQUIPOTENTIAL CONTOUR
- INTERPRETED DIRECTION OF GROUNDWATER MOVEMENT
- **222.86** STATIC WATER LEVEL (18 April 2023) (masl)

0 10 20 30 40 50
Metres

DATA SOURCE: FIRST BASE SOLUTIONS
MAP PROJECTION: NAD 1983 UTM ZONE 17N

CLIENT:
DE ZEN REALTY COMPANY LTD.

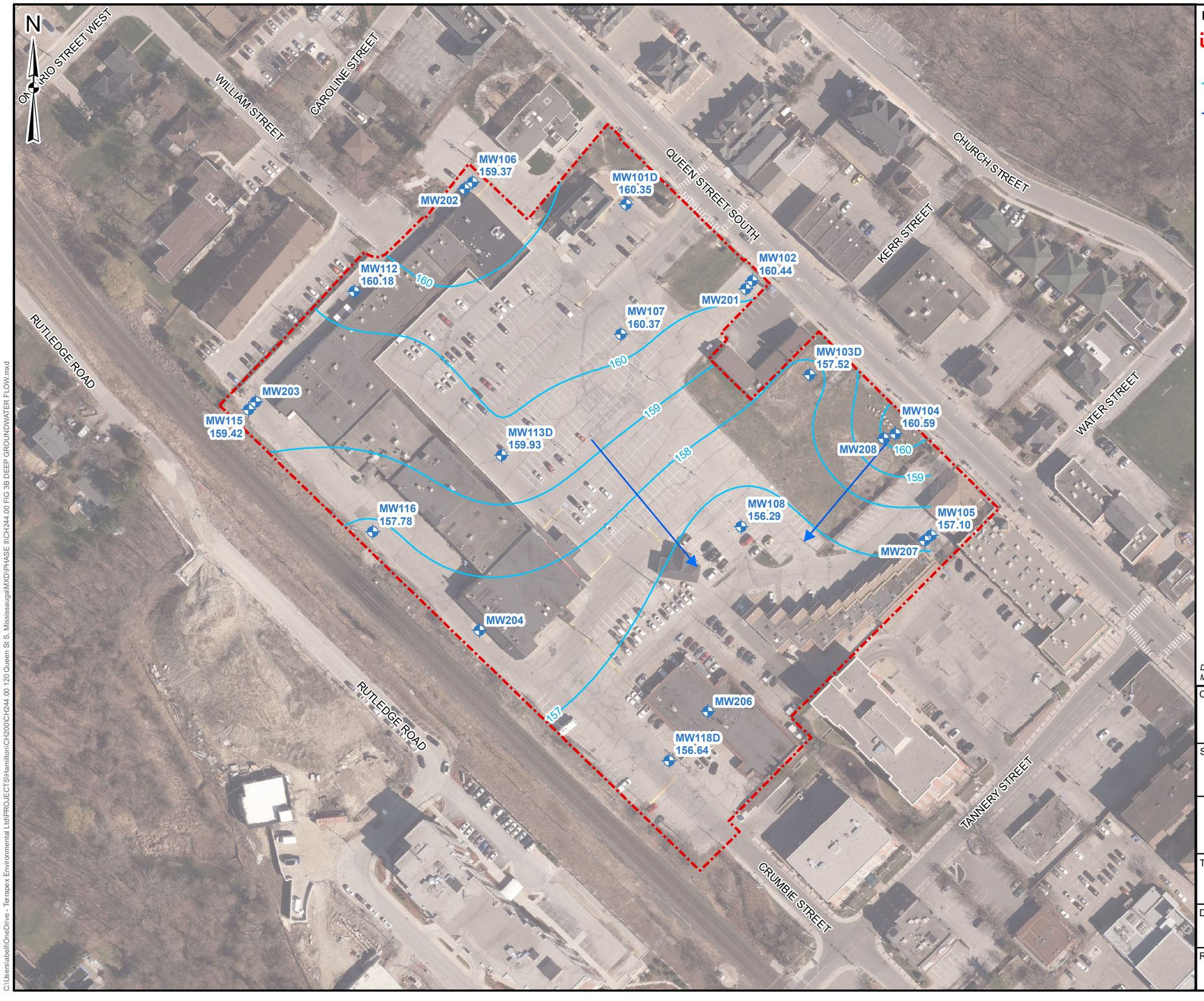
SITE LOCATION:
120, 128, 142, 148, 154, 158 QUEEN STREET SOUTH AND 169 CRUMBIE STREET, MISSISSAUGA, ONTARIO

TERRAPEX

TITLE:
INTERPRETED SHALLOW GROUNDWATER FLOW (AS OF APRIL 18, 2023)

DRAWN BY:	PROJECT NO.:	CHECKED BY:
JS/ SW/ AB	CH244.00	GLL
REVISION: 00	DATE: JULY 2023	FIGURE: **3A**

C:\Users\abell\OneDrive - Terrapex Environmental Ltd\PROJECTS\Hamilton\CH200\CH244.00 120 Queen St S, Mississauga\MXD\PHASE II\CH244.00 FIG 3A SHALLOW GROUNDWATER FLOW.mxd



C:\Users\abell\OneDrive - Terrapex Environmental Ltd\PROJECTS\Hamilton\CH200\CH244.00 120 Queen St S, Mississauga\MXD\PHASE II\CH244.00 FIG 3B DEEP GROUNDWATER FLOW.mxd

LEGEND

- SITE BOUNDARY
- MONITORING WELL
- EQUIPOTENTIAL CONTOUR
- INTERPRETED DIRECTION OF GROUNDWATER MOVEMENT

222.86 STATIC WATER LEVEL (18 April 2023) (masl)

NOTE: ELEVATION FOR MAY 18, 2023 USED FOR MW102. WELL WAS COVERED DURING APRIL 18, 2023 MONITORING EVENT.

0 10 20 30 40 50
Metres

DATA SOURCE: FIRST BASE SOLUTIONS
MAP PROJECTION: NAD 1983 UTM ZONE 17N

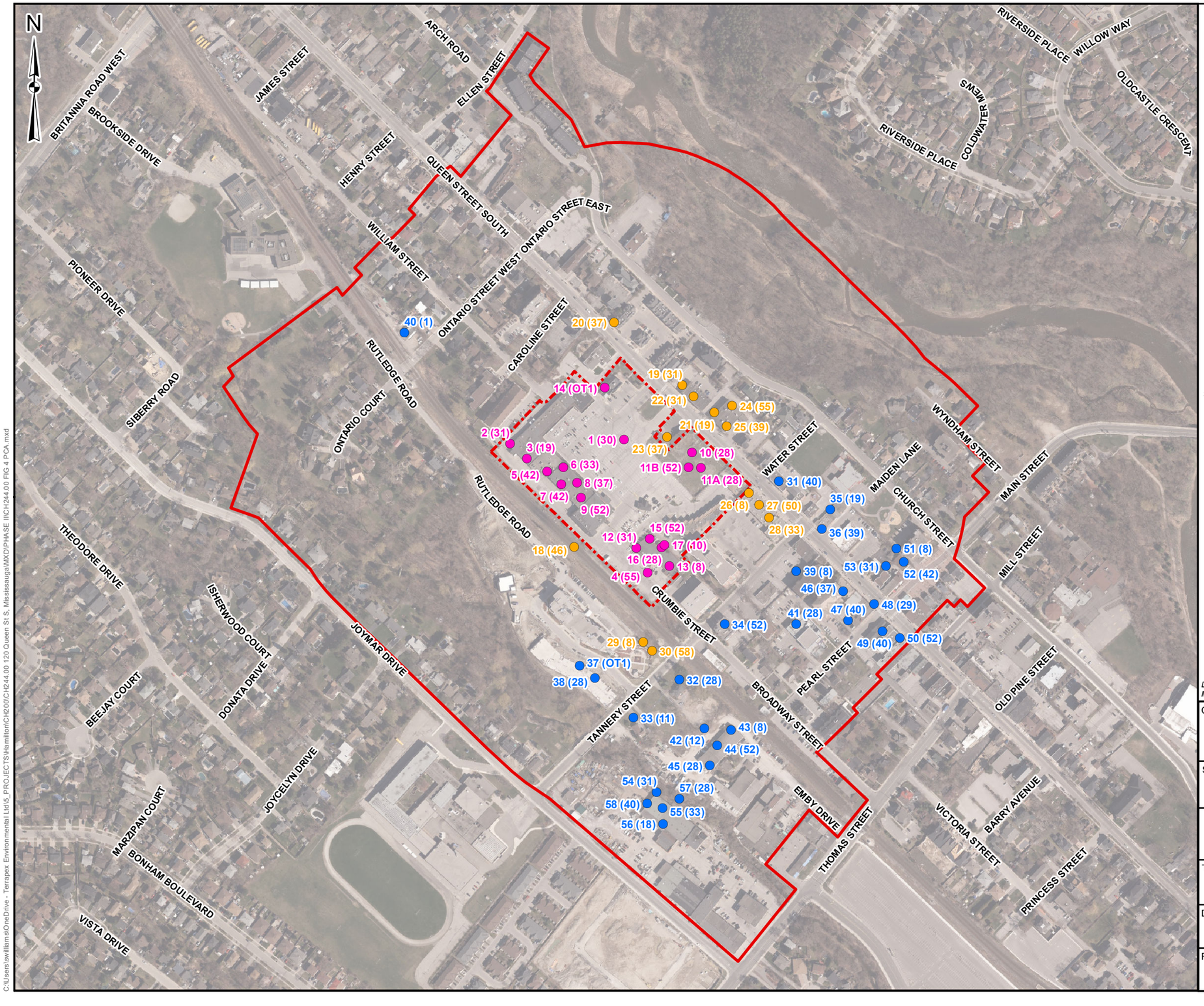
CLIENT:
DE ZEN REALTY COMPANY LTD.

SITE LOCATION:
120, 128, 142, 148, 154, 158 QUEEN STREET SOUTH AND 169 CRUMBIE STREET, MISSISSAUGA, ONTARIO

TERRAPEX

TITLE:
INTERPRETED DEEP GROUNDWATER FLOW (AS OF APRIL 18, 2023)

DRAWN BY:	PROJECT NO.:	CHECKED BY:
JS/ SW/ AB	CH244.00	GLL
REVISION: 00	DATE: JULY 2023	FIGURE: **3B**



LEGEND

- SITE BOUNDARY
- STUDY AREA

POTENTIALLY CONTAMINATING ACTIVITIES

- ON-SITE PCA LEADING TO APEC
- OFF-SITE PCA LEADING TO APEC
- OFF-SITE PCA NOT LEADING TO APEC

POTENTIALLY CONTAMINATING ACTIVITY TYPES

1. ACID AND ALKALI MANUFACTURING, PROCESSING AND BULK STORAGE
2. ADHESIVES AND RESINS MANUFACTURING, PROCESSING AND BULK STORAGE
8. CHEMICAL MANUFACTURING, PROCESSING AND BULK STORAGE
11. COMMERCIAL TRUCKING AND CONTAINER TERMINALS
12. CONCRETE, CEMENT AND LIME MANUFACTURING
18. ELECTRICITY GENERATION, TRANSFORMATION AND POWER STATIONS
19. ELECTRONIC AND COMPUTER EQUIPMENT MANUFACTURING
28. GASOLINE AND ASSOCIATED PRODUCTS STORAGE IN FIXED TANKS
29. GLASS MANUFACTURING
30. IMPORTATION OF FILL MATERIAL OF UNKNOWN QUALITY
31. INK MANUFACTURING, PROCESSING AND BULK STORAGE
33. METAL TREATMENT, COATING, PLATING AND FINISHING
37. OPERATION OF DRY CLEANING EQUIPMENT (WHERE CHEMICALS ARE USED)
39. PAINTS MANUFACTURING, PROCESSING AND BULK STORAGE
40. PESTICIDES (INCLUDING HERBICIDES, FUNGICIDES AND ANTI-FOULING AGENTS) MANUFACTURING, PROCESSING, BULK STORAGE AND LARGE-SCALE APPLICATIONS
42. PHARMACEUTICAL MANUFACTURING AND PROCESSING
46. RAIL YARDS, TRACKS AND SPURS
50. SOAP AND DETERGENT MANUFACTURING, PROCESSING AND BULK STORAGE
52. STORAGE, MAINTENANCE, FUELLING AND REPAIR OF EQUIPMENT, VEHICLES, AND MATERIAL USED TO MAINTAIN TRANSPORTATION SYSTEMS
55. TRANSFORMER MANUFACTURING, PROCESSING AND USE
58. WASTE DISPOSAL AND WASTE MANAGEMENT, INCLUDING THERMAL TREATMENT, LANDFILLING AND TRANSFER OF WASTE, OTHER THAN USE OF BIOSOILS AS SOIL CONDITIONERS

OT1. OTHER - SPILLS

NOTE:

- PCA ID (PCA TYPE)

REFER TO TABLE 10.1 and 10.2 IN THE REPORT FOR ADDITIONAL DETAILS.

0 50 100 150 200
Metres

DATA SOURCE: FIRST BASE SOLUTIONS
MAP PROJECTION: NAD 1983 UTM ZONE 17N

CLIENT:
DE ZEN REALTY COMPANY LTD.

SITE LOCATION:
120, 128, 142, 148, 154, 158 QUEEN STREET SOUTH AND 169 CRUMBIE STREET, MISSISSAUGA, ONTARIO

TERRAPEX

TITLE:
CONCEPTUAL SITE MODEL AND POTENITALLY CONTAMINATING ACTIVITIES

DRAWN BY:	PROJECT NO.:	CHECKED BY:
JS	CH244.00	GLL
REVISION: 00	DATE: SEPTEMBER 2023	FIGURE: 4

C:\Users\swilliams\OneDrive - Terrapex Environmental Ltd\5_PROJECTS\Hamilton\CH200\CH244.00 120 Queen St S, Mississauga\MXD\PHASE II\CH244.00 FIG 4 PCA.mxd

N

APEC	PCA ID	PCA TYPE	DESCRIPTION
1	1	30	IMPORTATION OF FILL MATERIAL OF UNKNOWN QUALITY
2	2	31	INK MANUFACTURING, PROCESSING AND BULK STORAGE
3	3	19	ELECTRONIC AND COMPUTER EQUIPMENT MANUFACTURING
4	4	55	TRANSFORMER MANUFACTURING, PROCESSING AND USE
5	5	42	PHARMACEUTICAL MANUFACTURING AND PROCESSING
6	6	33	METAL TREATMENT, COATING, PLATING AND FINISHING
7	7	42	PHARMACEUTICAL MANUFACTURING AND PROCESSING
8	8	37	OPERATION OF DRY CLEANING EQUIPMENT (WHERE CHEMICALS ARE USED)
9	9	52	STORAGE, MAINTENANCE, FUELLING AND REPAIR OF EQUIPMENT, VEHICLES, AND MATERIAL USED TO MAINTAIN TRANSPORTATION SYSTEMS
10	10	28	GASOLINE AND ASSOCIATED PRODUCTS STORAGE IN FIXED TANKS
11A	11A	28	GASOLINE AND ASSOCIATED PRODUCTS STORAGE IN FIXED TANKS
11B	11B	52	STORAGE, MAINTENANCE, FUELLING AND REPAIR OF EQUIPMENT,
12	12	31	INK MANUFACTURING, PROCESSING AND BULK STORAGE
13	13	8	CHEMICAL MANUFACTURING, PROCESSING AND BULK STORAGE
14	14	Other	SPILLS

CAROLINE STREET

120 QUEEN STREET SOUTH

MW202 MW106 MW101S MW101D MW112 BH109 MW201 MW102 MW107 MW103S MW103D MW208 MW104 MW203 MW115 MW113S MW113D MW116 MW108 MW207 MW105 BH117 MW204 MW206 BH111 BH408 MW118S MW118D BH305 BH407 BH307 BH205 BH306 BH406

KERR STREET

QUEEN STREET SOUTH

128 QUEEN STREET SOUTH

WATER STREET

RUTLEDGE ROAD

CRUMBIE STREET

BROADWAY STREET

SEE DETAIL 1

SEE DETAIL 2

FURNACE OIL UST

WASTE OIL UST

TANK NEST

142-148 QUEEN STREET SOUTH

158 QUEEN STREET SOUTH

FURNACE OIL UST

154 QUEEN STREET SOUTH

TEMPORARY DE ZEN CONSTRUCTION OFFICE

169 CRUMBIE STREET

WASTE OIL AST

DETAIL 1

BH403 BH401 BH404 BH402 BH301 BH110A BH110E BH110 BH110B BH110D BH110F BH302 BH110C BH405

0 0.5 2 3 4 5 6 7 8
Meters

DETAIL 2

BH303 BH114A BH114F BH114C BH114 BH114D BH114E BH114B BH304

0 0.5 1 2 3 4 5
Meters

APEC	PCA ID	PCA TYPE	DESCRIPTION
15	15	52	STORAGE, MAINTENANCE, FUELLING AND REPAIR OF EQUIPMENT, VEHICLES, AND MATERIAL USED TO MAINTAIN TRANSPORTATION SYSTEMS
16	16	28	GASOLINE AND ASSOCIATED PRODUCTS STORAGE IN FIXED TANKS
17	17	10	COMMERCIAL AUTOBODY SHOPS
18	18	46	RAIL YARDS, TRACKS AND SPURS
19	19	31	INK MANUFACTURING, PROCESSING AND BULK STORAGE
20	20	37	OPERATION OF DRY CLEANING EQUIPMENT (WHERE CHEMICALS ARE USED)
21	21	19	ELECTRONICS AND COMPUTER EQUIPMENT MANUFACTURING
22	22	31	INK MANUFACTURING, PROCESSING AND BULK STORAGE
23	23	37	OPERATION OF DRY CLEANING EQUIPMENT (WHERE CHEMICALS ARE USED)
24	24	55	TRANSFORMER MANUFACTURING, PROCESSING AND USE
25	25	39	PAINTS MANUFACTURING, PROCESSING AND BULK STORAGE
26	26	8	CHEMICAL MANUFACTURING, PROCESSING AND BULK STORAGE
27	27	50	SOAP AND DETERGENT MANUFACTURING, PROCESSING AND BULK STORAGE
28	28	33	METAL TREATMENT, COATING, PLATING AND FINISHING
29	29	8	CHEMICAL MANUFACTURING, PROCESSING AND BULK STORAGE
30	30	58	WASTE DISPOSAL AND WASTE MANAGEMENT, INCLUDING THERMAL TREATMENT, LANDFILLING AND TRANSFER OF WASTE, OTHER THAN USE OF BIOSOILS AS SOIL CONDITIONERS

LEGEND

- SITE BOUNDARY
- BOREHOLE
- MONITORING WELL
- CURRENT ABOVEGROUND STORAGE TANK (AST)
- FORMER UNDERGROUND STORAGE TANK (UST)

AREA OF POTENTIAL ENVIRONMENTAL CONCERN

- APEC-1 (ENTIRE PROPERTY)
- APEC-2,3,5,6,7,8,9
- APEC-4
- APEC-10
- APEC-11A
- APEC-11B
- APEC-12,13,15,17
- APEC-16
- APEC-14
- APEC-18
- APEC-19,20,22
- APEC-21,24, 25
- APEC-23
- APEC-27,28
- APEC-29,30

0 10 20 30 40 50
Metres

DATA SOURCE: FIRST BASE SOLUTIONS
MAP PROJECTION: NAD 1983 UTM ZONE 17N

CLIENT:
DE ZEN REALTY COMPANY LTD.

SITE LOCATION:
120, 128, 142, 148, 154, 158 QUEEN STREET SOUTH AND 169 CRUMBIE STREET, MISSISSAUGA, ONTARIO

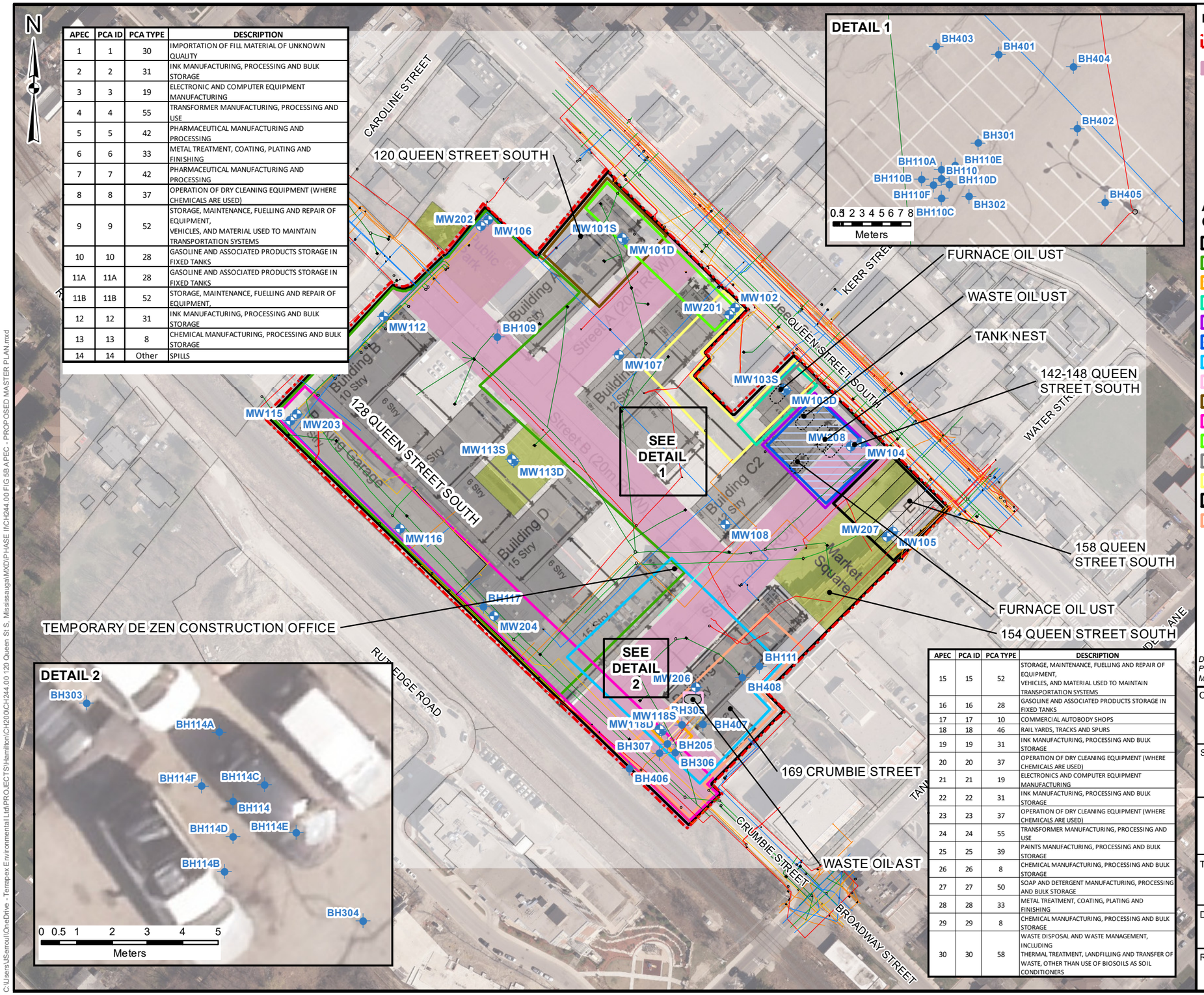
TERRAPEX

TITLE:
CONCEPTUAL SITE MODEL - AREAS OF POTENTIAL ENVIRONMENTAL CONCERN

DRAWN BY:	PROJECT NO.:	CHECKED BY:
JS/ SW/ AB	CH244.00	GLL
REVISION: 00	DATE: JANUARY 2024	FIGURE: **5A**

C:\Users\abell\OneDrive - Terrapex Environmental Ltd\PROJECTS\Hamilton\CH200\CH244.00 120 Queen St S, Mississauga\MXD\PHASE II\CH244.00 FIG 5AAPEC.mxd

APEC	PCA ID	PCA TYPE	DESCRIPTION
1	1	30	IMPORTATION OF FILL MATERIAL OF UNKNOWN QUALITY
2	2	31	INK MANUFACTURING, PROCESSING AND BULK STORAGE
3	3	19	ELECTRONIC AND COMPUTER EQUIPMENT MANUFACTURING
4	4	55	TRANSFORMER MANUFACTURING, PROCESSING AND USE
5	5	42	PHARMACEUTICAL MANUFACTURING AND PROCESSING
6	6	33	METAL TREATMENT, COATING, PLATING AND FINISHING
7	7	42	PHARMACEUTICAL MANUFACTURING AND PROCESSING
8	8	37	OPERATION OF DRY CLEANING EQUIPMENT (WHERE CHEMICALS ARE USED)
9	9	52	STORAGE, MAINTENANCE, FUELLING AND REPAIR OF EQUIPMENT, VEHICLES, AND MATERIAL USED TO MAINTAIN TRANSPORTATION SYSTEMS
10	10	28	GASOLINE AND ASSOCIATED PRODUCTS STORAGE IN FIXED TANKS
11A	11A	28	GASOLINE AND ASSOCIATED PRODUCTS STORAGE IN FIXED TANKS
11B	11B	52	STORAGE, MAINTENANCE, FUELLING AND REPAIR OF EQUIPMENT,
12	12	31	INK MANUFACTURING, PROCESSING AND BULK STORAGE
13	13	8	CHEMICAL MANUFACTURING, PROCESSING AND BULK STORAGE
14	14	Other	SPILLS



LEGEND

- SITE BOUNDARY
- PROPOSED LANDS TO BE DEDICATED TO THE CITY OF MISSISSAUGA
- BOREHOLE
- MONITORING WELL
- CURRENT ABOVEGROUND STORAGE TANK (AST)
- FORMER UNDERGROUND STORAGE TANK (UST)

AREA OF POTENTIAL ENVIRONMENTAL CONCERN

- APEC-1 (ENTIRE PROPERTY)
- APEC-2,3,5,6,7,8,9
- APEC-4
- APEC-10
- APEC-11A
- APEC-11B
- APEC-12,13,15,17
- APEC-16
- APEC-14
- APEC-18
- APEC-19,20,22
- APEC-21,24, 25
- APEC-23
- APEC-27,28
- APEC-29,30

0 20 40 60
Metres

DATA SOURCE: FIRST BASE SOLUTIONS,
PROPOSED SITE PLAN PROVIDED BY CLIENT.
MAP PROJECTION: NAD 1983 UTM ZONE 17N

APEC	PCA ID	PCA TYPE	DESCRIPTION
15	15	52	STORAGE, MAINTENANCE, FUELLING AND REPAIR OF EQUIPMENT, VEHICLES, AND MATERIAL USED TO MAINTAIN TRANSPORTATION SYSTEMS
16	16	28	GASOLINE AND ASSOCIATED PRODUCTS STORAGE IN FIXED TANKS
17	17	10	COMMERCIAL AUTOBODY SHOPS
18	18	46	RAIL YARDS, TRACKS AND SPURS
19	19	31	INK MANUFACTURING, PROCESSING AND BULK STORAGE
20	20	37	OPERATION OF DRY CLEANING EQUIPMENT (WHERE CHEMICALS ARE USED)
21	21	19	ELECTRONICS AND COMPUTER EQUIPMENT MANUFACTURING
22	22	31	INK MANUFACTURING, PROCESSING AND BULK STORAGE
23	23	37	OPERATION OF DRY CLEANING EQUIPMENT (WHERE CHEMICALS ARE USED)
24	24	55	TRANSFORMER MANUFACTURING, PROCESSING AND USE
25	25	39	PAINTS MANUFACTURING, PROCESSING AND BULK STORAGE
26	26	8	CHEMICAL MANUFACTURING, PROCESSING AND BULK STORAGE
27	27	50	SOAP AND DETERGENT MANUFACTURING, PROCESSING AND BULK STORAGE
28	28	33	METAL TREATMENT, COATING, PLATING AND FINISHING
29	29	8	CHEMICAL MANUFACTURING, PROCESSING AND BULK STORAGE
30	30	58	WASTE DISPOSAL AND WASTE MANAGEMENT, INCLUDING THERMAL TREATMENT, LANDFILLING AND TRANSFER OF WASTE, OTHER THAN USE OF BIOSOILS AS SOIL CONDITIONERS

CLIENT:
DE ZEN REALTY COMPANY LTD.

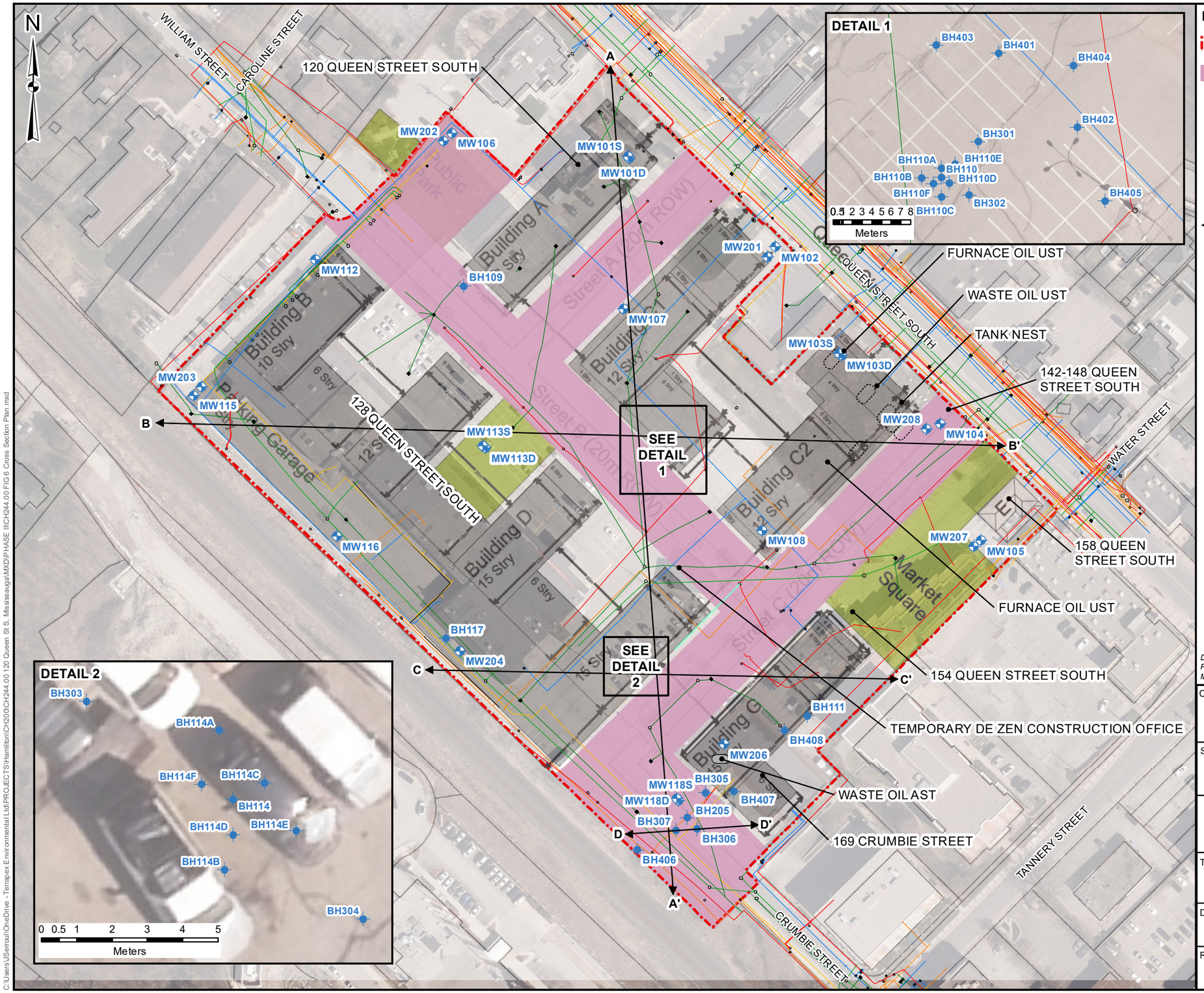
SITE LOCATION:
120, 128, 142, 148, 154, 158 QUEEN STREET SOUTH AND 169 CRUMBIE STREET, MISSISSAUGA, ONTARIO

TERRAPEX

TITLE:
CONCEPTUAL SITE MODEL - AREAS OF POTENTIAL ENVIRONMENTAL CONCERN - PROPOSED MASTER PLAN

DRAWN BY:	PROJECT NO.:	CHECKED BY:
JS/ SW/ AB	CH244.00	GLL
REVISION: 00	DATE: FEBRUARY 2024	FIGURE: **5B**

C:\Users\JSerroul\OneDrive - Terrapex Environmental Ltd\PROJECTS\Hamilton\CH\200\CH244.00 120 Queen St S, Mississauga\MXD\PHASE II\CH244.00 FIG 5B APEC - PROPOSED MASTER PLAN.mxd



LEGEND

- SITE BOUNDARY
- PROPOSED LANDS TO BE DEDICATED TO THE CITY OF MISSISSAUGA
- BOREHOLE
- MONITORING WELL
- CURRENT ABOVEGROUND STORAGE TANK (AST)
- FORMER UNDERGROUND STORAGE TANK (UST)
- CROSS SECTIONS

0 20 40 60
Metres

DATA SOURCE: FIRST BASE SOLUTIONS,
PROPOSED SITE PLAN PROVIDED BY CLIENT
MAP PROJECTION: NAD 1983 UTM ZONE 17N

CLIENT:
DE ZEN REALTY COMPANY LTD.

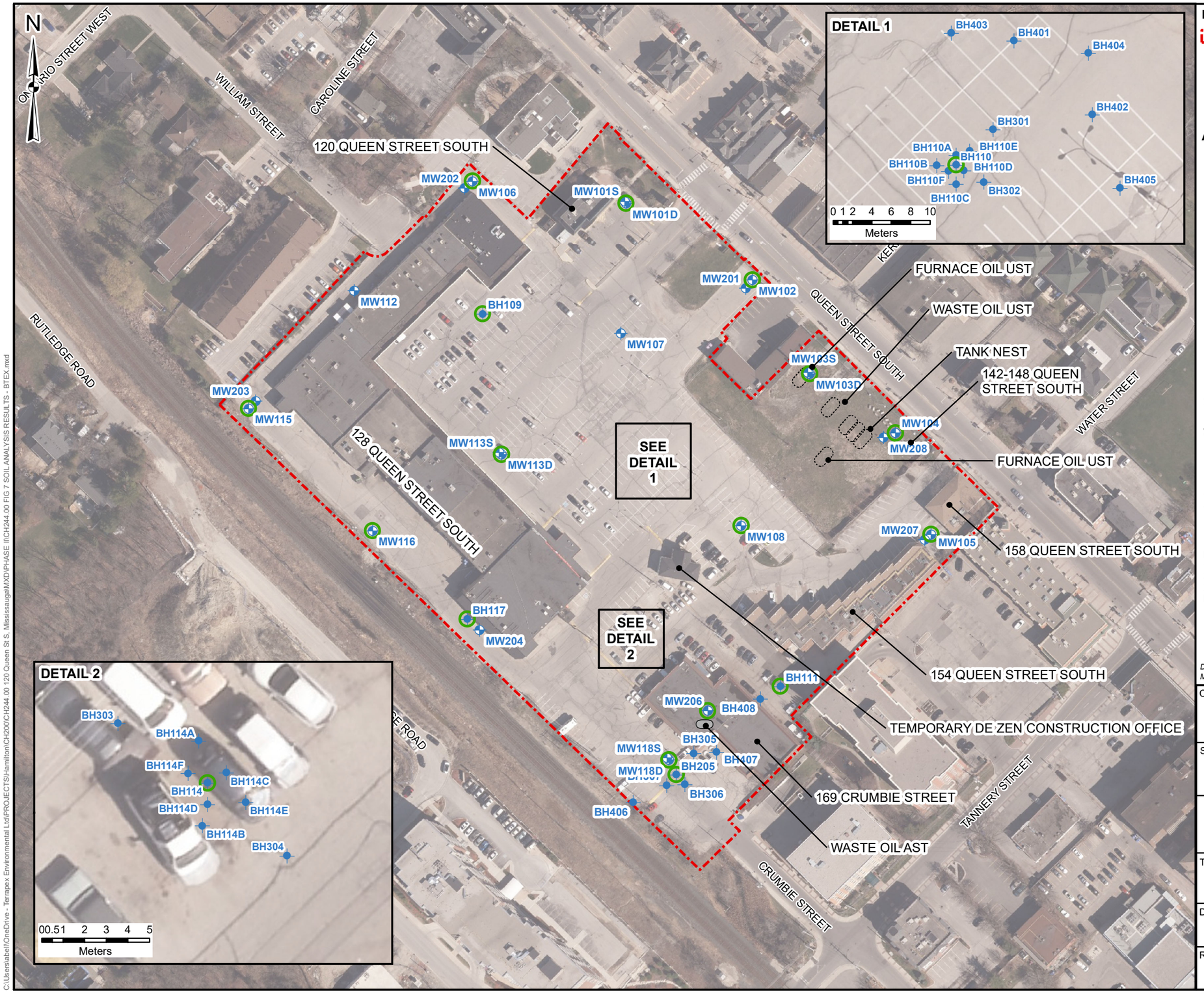
SITE LOCATION:
120, 128, 142, 148, 154, 158 QUEEN STREET SOUTH AND 169 CRUMBIE STREET, MISSISSAUGA, ONTARIO

TERRAPEX

TITLE:
CROSS SECTION PLAN

DRAWN BY:	PROJECT NO.:	CHECKED BY:
JS/ SW/ AB	CH244.00	GLL
REVISION: 00	DATE: FEBRUARY 2024	FIGURE: 6

C:\Users\JSerrou\OneDrive - Terrapex Environmental Ltd\PROJECTS\Hamilton\CH200\CH244.00 120 Queen St S, Mississauga\MXD\PHASE II\CH244.00 FIG 6 Cross Section Plan.mxd



C:\Users\abell\OneDrive - Terrapex Environmental Ltd\PROJECTS\Hamilton\CH200\CH244.00_120 Queen St S, Mississauga\MXD\PHASE II\CH244.00 FIG 7 SOIL ANALYSIS RESULTS - BTEX.mxd

LEGEND

- SITE BOUNDARY
- BOREHOLE
- MONITORING WELL
- CURRENT ABOVEGROUND STORAGE TANK (AST)
- FORMER UNDERGROUND STORAGE TANK (UST)

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 RESIDENTIAL/PARKLAND/INSTITUTIONAL 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 30 40 50
Metres

DATA SOURCE: FIRST BASE SOLUTIONS
MAP PROJECTION: NAD 1983 UTM ZONE 17N

CLIENT:

DE ZEN REALTY COMPANY LTD.

SITE LOCATION:

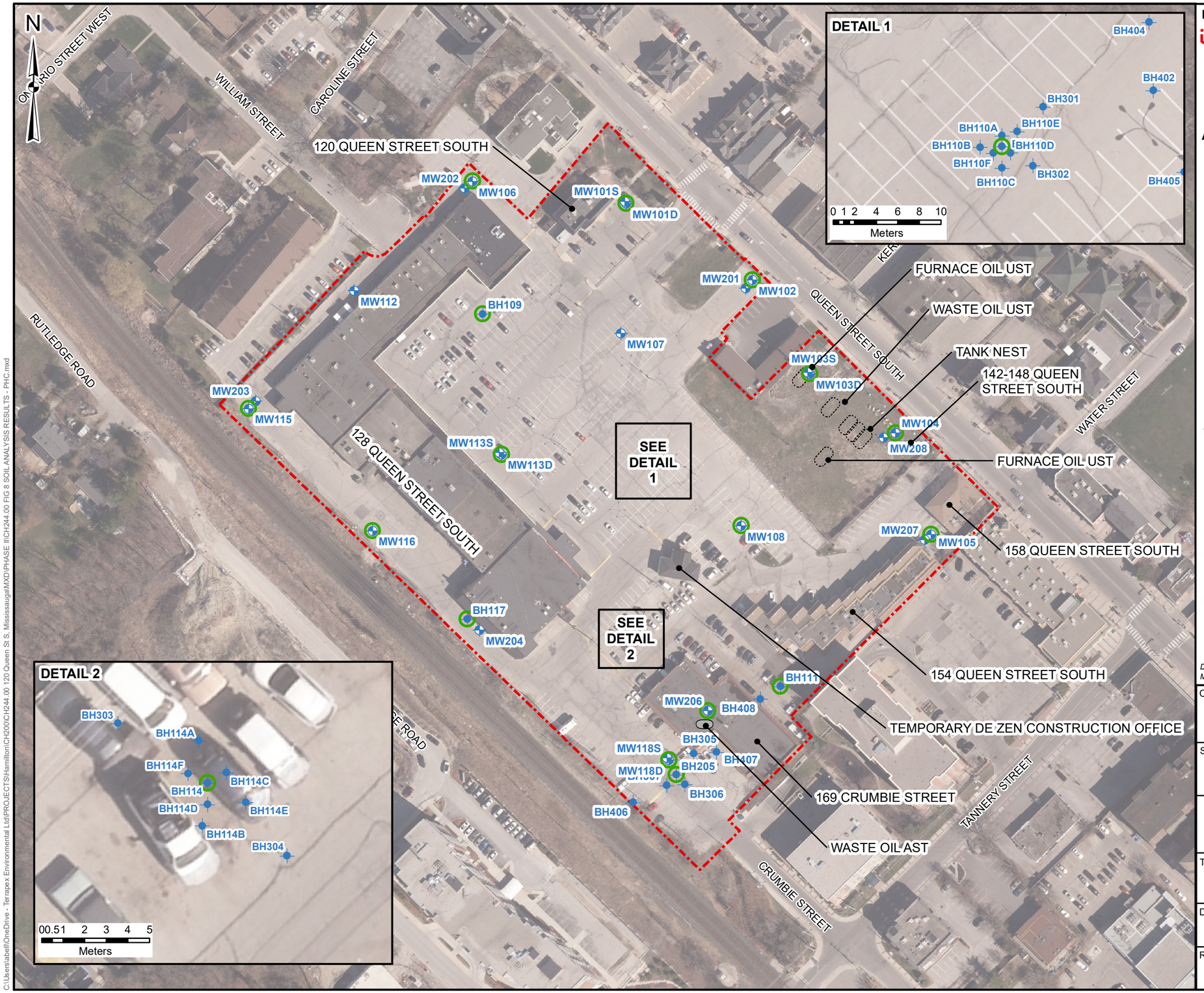
120, 128, 142, 148, 154, 158 QUEEN STREET SOUTH AND 169 CRUMBIE STREET, MISSISSAUGA, ONTARIO

TERRAPEX

TITLE:

SOIL ANALYSIS RESULTS - BTEX

DRAWN BY:	PROJECT NO.:	CHECKED BY:
JS/ SW/ AB	CH244.00	GLL
REVISION:	**DATE:**	**FIGURE:**
00	NOVEMBER 2023	**7**



LEGEND

- SITE BOUNDARY
- BOREHOLE
- MONITORING WELL
- CURRENT ABOVEGROUND STORAGE TANK (AST)
- FORMER UNDERGROUND STORAGE TANK (UST)

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 RESIDENTIAL/PARKLAND/INSTITUTIONAL 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 30 40 50
Metres

DATA SOURCE: FIRST BASE SOLUTIONS
MAP PROJECTION: NAD 1983 UTM ZONE 17N

CLIENT:
DE ZEN REALTY COMPANY LTD.

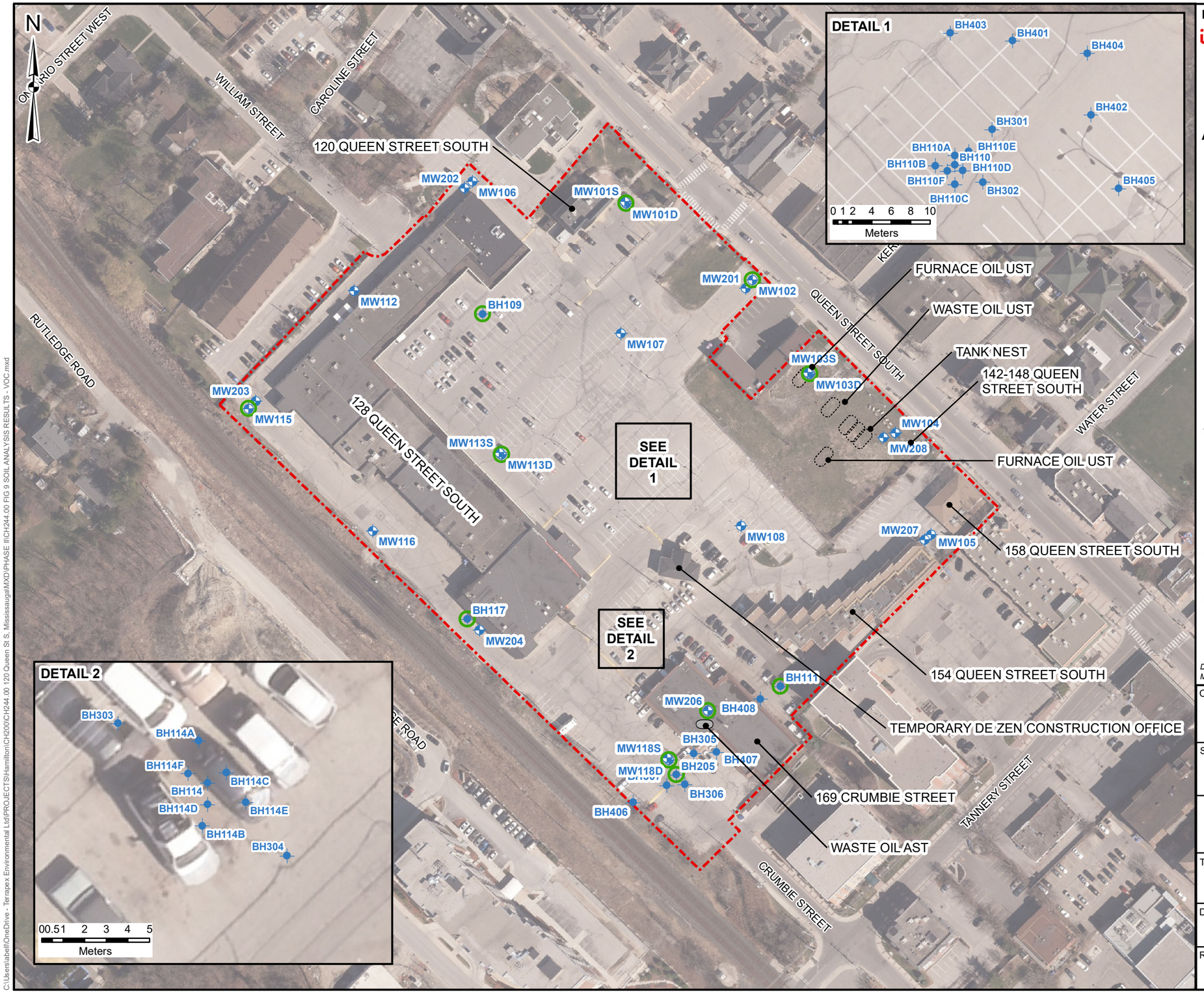
SITE LOCATION:
120, 128, 142, 148, 154, 158 QUEEN STREET SOUTH AND 169 CRUMBIE STREET, MISSISSAUGA, ONTARIO

TERRAPEX

TITLE:
SOIL ANALYSIS RESULTS - PHCs

DRAWN BY:	PROJECT NO.:	CHECKED BY:
JS/ SW/ AB	CH244.00	GLL
REVISION: 00	DATE: NOVEMBER 2023	FIGURE: 8

C:\Users\abell\OneDrive - Terrapex Environmental Ltd\PROJECTS\Hamilton\CH200\CH244.00 120 Queen St S, Mississauga\MXD\PHASE II\CH244.00 FIG 8 SOIL ANALYSIS RESULTS - PHC.mxd



C:\Users\abell\OneDrive - Terrapex Environmental Ltd\PROJECTS\Hamilton\CH200\CH244.00\120 Queen St S, Mississauga\MXD\PHASE II\CH244.00 FIG 9 SOIL ANALYSIS RESULTS - VOC.mxd

LEGEND

- SITE BOUNDARY
- BOREHOLE
- MONITORING WELL
- CURRENT ABOVEGROUND STORAGE TANK (AST)
- FORMER UNDERGROUND STORAGE TANK (UST)

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 RESIDENTIAL/PARKLAND/INSTITUTIONAL 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 30 40 50
Metres

DATA SOURCE: FIRST BASE SOLUTIONS
MAP PROJECTION: NAD 1983 UTM ZONE 17N

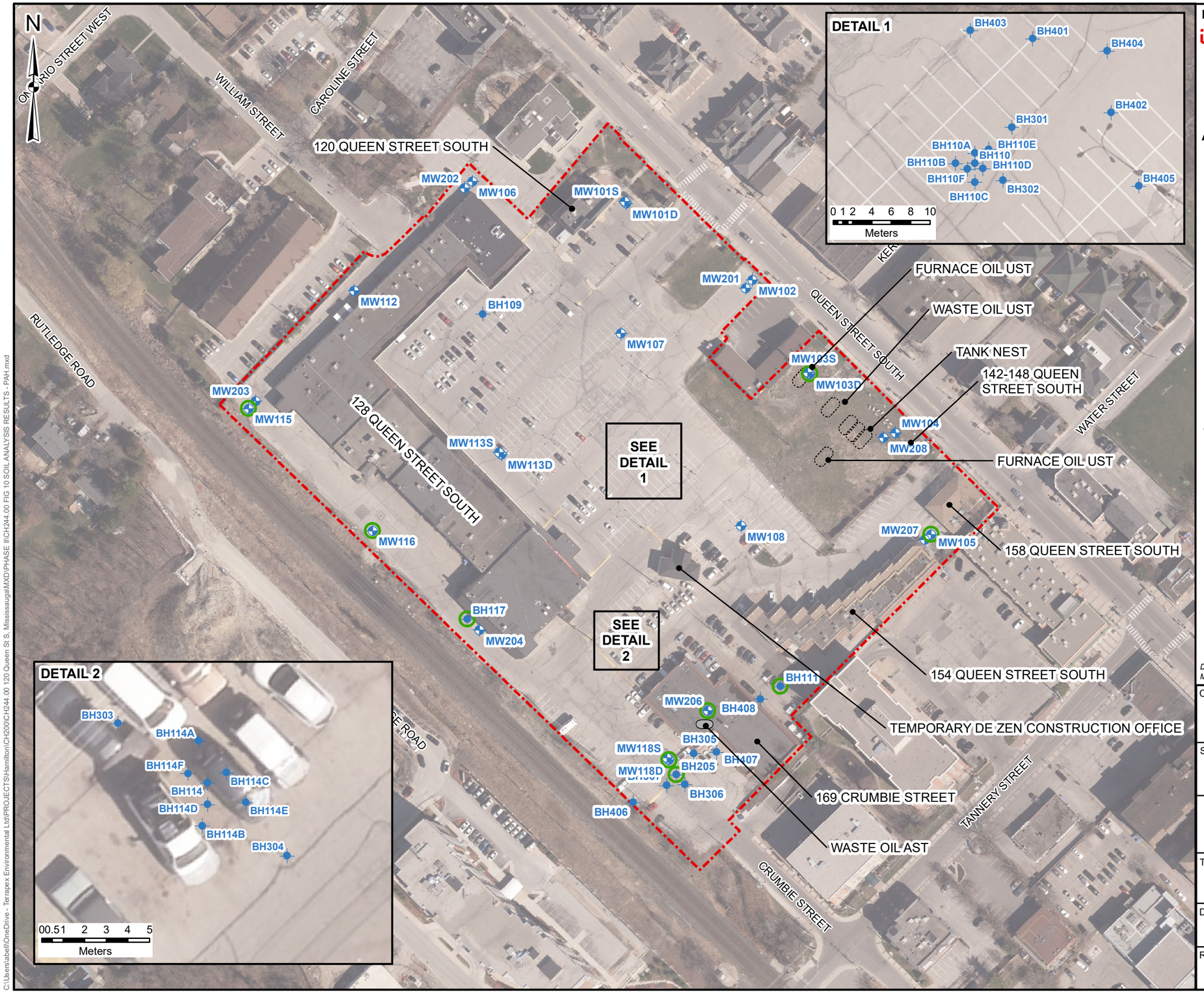
CLIENT:
DE ZEN REALTY COMPANY LTD.

SITE LOCATION:
120, 128, 142, 148, 154, 158 QUEEN STREET SOUTH AND 169 CRUMBIE STREET, MISSISSAUGA, ONTARIO

TERRAPEX

TITLE:
SOIL ANALYSIS RESULTS - VOCs

DRAWN BY:	PROJECT NO.:	CHECKED BY:
JS/ SW/ AB	CH244.00	GLL
REVISION: 00	DATE: NOVEMBER 2023	FIGURE: 9



C:\Users\abell\OneDrive - Terrapex Environmental Ltd\PROJECTS\Hamilton\CH200\CH244.00_120 Queen St S, Mississauga\MXD\PHASE II\CH244.00 FIG 10 SOIL ANALYSIS RESULTS - PAH.mxd

LEGEND

- SITE BOUNDARY
- BOREHOLE
- MONITORING WELL
- CURRENT ABOVEGROUND STORAGE TANK (AST)
- FORMER UNDERGROUND STORAGE TANK (UST)

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 RESIDENTIAL/PARKLAND/INSTITUTIONAL 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 30 40 50
Metres

DATA SOURCE: FIRST BASE SOLUTIONS
MAP PROJECTION: NAD 1983 UTM ZONE 17N

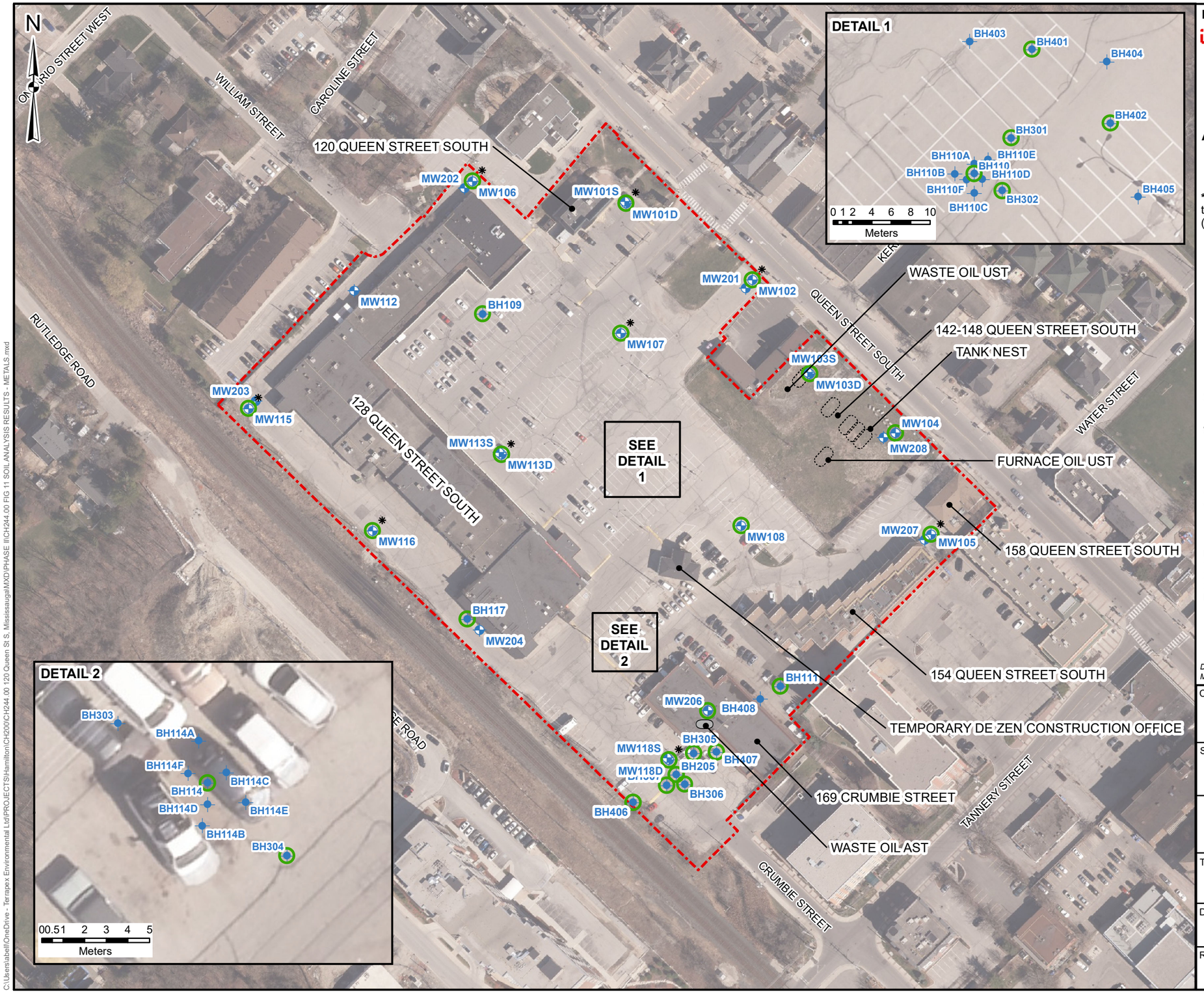
CLIENT:
DE ZEN REALTY COMPANY LTD.

SITE LOCATION:
120, 128, 142, 148, 154, 158 QUEEN STREET SOUTH AND 169 CRUMBIE STREET, MISSISSAUGA, ONTARIO

TERRAPEX

TITLE:
SOIL ANALYSIS RESULTS - PAHs

DRAWN BY:	PROJECT NO.:	CHECKED BY:
JS/ SW/ AB	CH244.00	GLL
REVISION: 00	DATE: NOVEMBER 2023	FIGURE: 10



C:\Users\abell\OneDrive - Terrapex Environmental Ltd\PROJECTS\Hamilton\CH200\CH244.00_120 Queen St S, Mississauga\MXD\PHASE II\CH244.00 FIG 11 SOIL ANALYSIS RESULTS - METALS.mxd

LEGEND

- SITE BOUNDARY
- BOREHOLE
- MONITORING WELL
- CURRENT ABOVEGROUND STORAGE TANK (AST)
- FORMER UNDERGROUND STORAGE TANK (UST)

ANALYSIS INFORMATION

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

* Electrical Conductivity and Sodium Adsorption Ratio are deemed to meet the site condition standard per Section 49.1, O. Reg. 153/04 (Please refer to Conceptual Site Model text).

STANDARD INFORMATION

MECP TABLE 3: FULL DEPTH GENERIC SCS IN A NON-POTABLE GROUND WATER CONDITION FOR RESIDENTIAL/PARKLAND/INSTITUTIONAL 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 30 40 50
Metres

DATA SOURCE: FIRST BASE SOLUTIONS
MAP PROJECTION: NAD 1983 UTM ZONE 17N

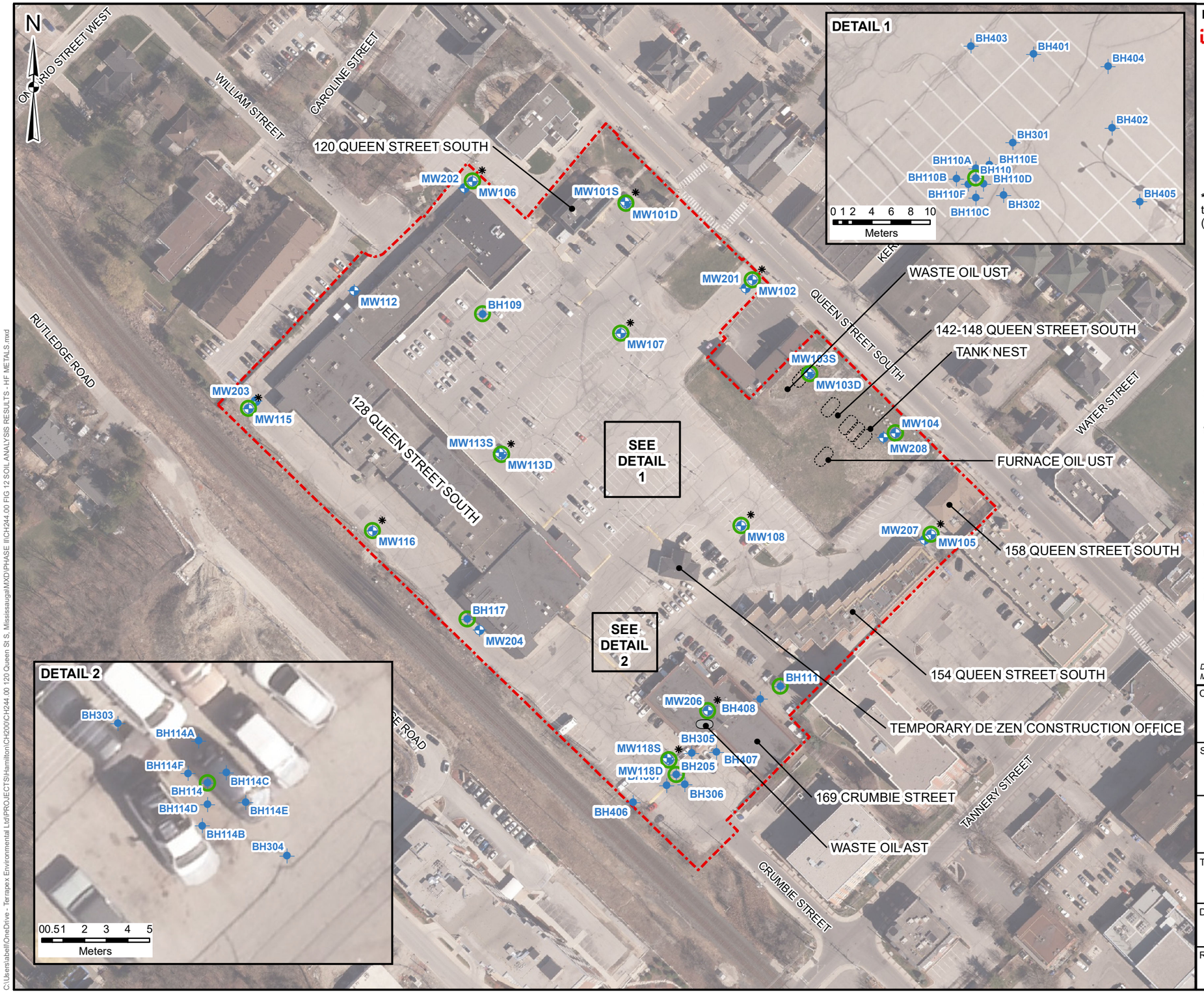
CLIENT:
DE ZEN REALTY COMPANY LTD.

SITE LOCATION:
120, 128, 142, 148, 154, 158 QUEEN STREET SOUTH AND 169 CRUMBIE STREET, MISSISSAUGA, ONTARIO

TERRAPEX

TITLE:
SOIL ANALYSIS RESULTS - METALS

DRAWN BY:	PROJECT NO.:	CHECKED BY:
JS/ SW/ AB	CH244.00	GLL
REVISION: 00	DATE: DECEMBER 2023	FIGURE: 11



C:\Users\abell\OneDrive - Terrapex Environmental Ltd\PROJECTS\Hamilton\CH200\CH244.00_120 Queen St S, Mississauga\MXD\PHASE II\CH244.00 FIG 12 SOIL ANALYSIS RESULTS - HF METALS.mxd

LEGEND

- SITE BOUNDARY
- BOREHOLE
- MONITORING WELL
- CURRENT ABOVEGROUND STORAGE TANK (AST)
- FORMER UNDERGROUND STORAGE TANK (UST)

* Electrical Conductivity and Sodium Adsorption Ratio are deemed to meet the site condition standard per Section 49.1, O. Reg. 153/04 (Please refer to Conceptual Site Model text).

STANDARD INFORMATION

MECP TABLE 3: FULL DEPTH GENERIC SCS IN A NON-POTABLE GROUND WATER CONDITION FOR RESIDENTIAL/PARKLAND/INSTITUTIONAL 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 30 40 50
Metres

DATA SOURCE: FIRST BASE SOLUTIONS
MAP PROJECTION: NAD 1983 UTM ZONE 17N

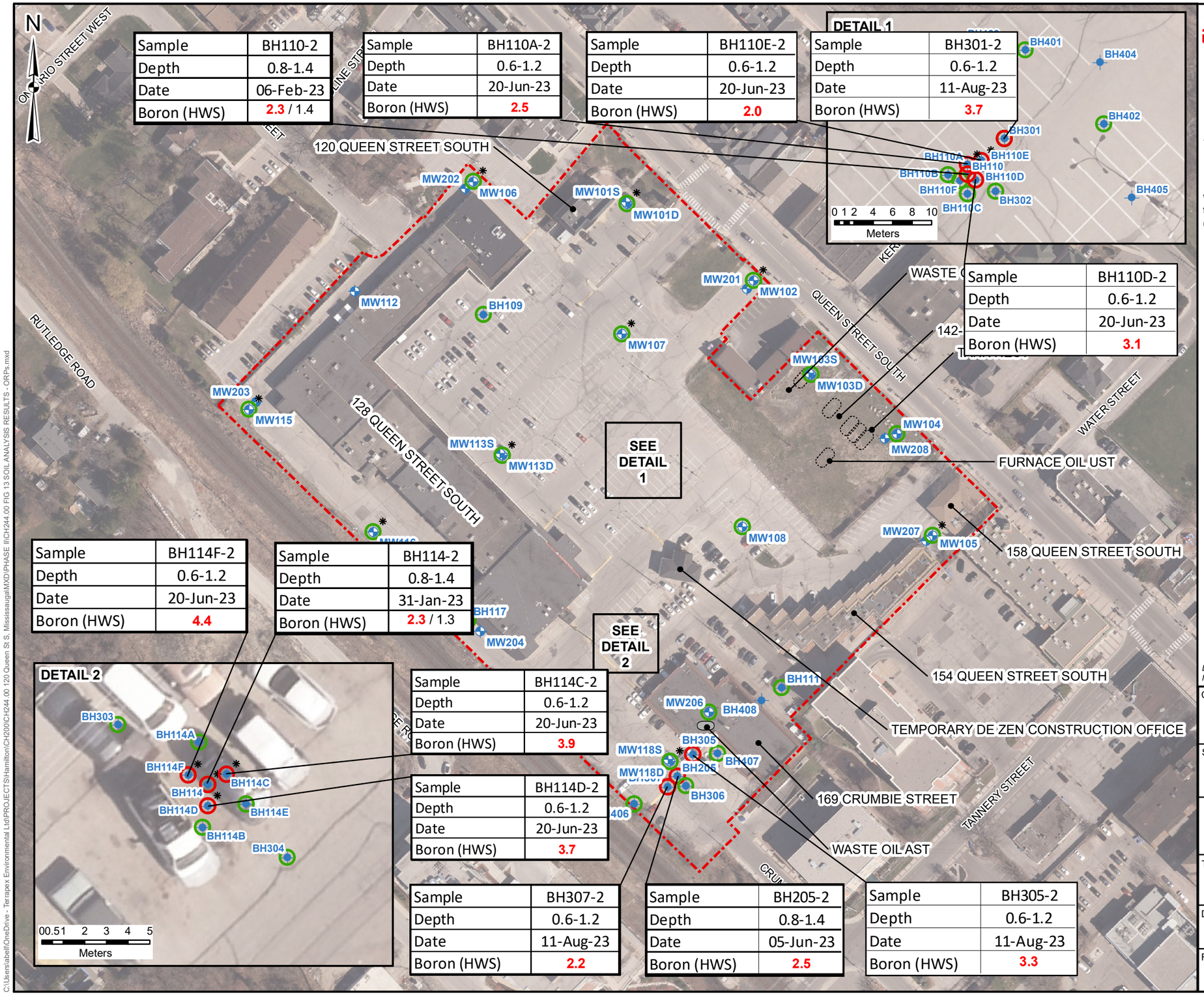
CLIENT:
DE ZEN REALTY COMPANY LTD.

SITE LOCATION:
120, 128, 142, 148, 154, 158 QUEEN STREET SOUTH AND 169 CRUMBIE STREET, MISSISSAUGA, ONTARIO

TERRAPEX

TITLE:
SOIL ANALYSIS RESULTS - HYDRIDE-FORMING METALS

DRAWN BY:	PROJECT NO.:	CHECKED BY:
JS/ SW/ AB	CH244.00	GLL
REVISION:	**DATE:**	**FIGURE:**
00	JANUARY 2024	**12**



Sample	BH110-2
Depth	0.8-1.4
Date	06-Feb-23
Boron (HWS)	**2.3** / 1.4

Sample	BH110A-2
Depth	0.6-1.2
Date	20-Jun-23
Boron (HWS)	**2.5**

Sample	BH110E-2
Depth	0.6-1.2
Date	20-Jun-23
Boron (HWS)	**2.0**

Sample	BH301-2
Depth	0.6-1.2
Date	11-Aug-23
Boron (HWS)	**3.7**

Sample	BH110D-2
Depth	0.6-1.2
Date	20-Jun-23
Boron (HWS)	**3.1**

Sample	BH114F-2
Depth	0.6-1.2
Date	20-Jun-23
Boron (HWS)	**4.4**

Sample	BH114-2
Depth	0.8-1.4
Date	31-Jan-23
Boron (HWS)	**2.3** / 1.3

Sample	BH114C-2
Depth	0.6-1.2
Date	20-Jun-23
Boron (HWS)	**3.9**

Sample	BH114D-2
Depth	0.6-1.2
Date	20-Jun-23
Boron (HWS)	**3.7**

Sample	BH307-2
Depth	0.6-1.2
Date	11-Aug-23
Boron (HWS)	**2.2**

Sample	BH205-2
Depth	0.8-1.4
Date	05-Jun-23
Boron (HWS)	**2.5**

Sample	BH305-2
Depth	0.6-1.2
Date	11-Aug-23
Boron (HWS)	**3.3**

LEGEND

- SITE BOUNDARY
- BOREHOLE
- MONITORING WELL
- CURRENT ABOVEGROUND STORAGE TANK (AST)
- FORMER UNDERGROUND STORAGE TANK (UST)

ANALYSIS INFORMATION

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

* Electrical Conductivity and Sodium Adsorption Ratio are deemed to meet the site condition standard per Section 49.1, O. Reg. 153/04 (Please refer to Conceptual Site Model text).

STANDARD INFORMATION

SAMPLE	
DEPTH	
DATE	
PARAMETER	RESULT
Boron (HWS)	

MECP TABLE 3 SCS
1.5

MECP TABLE 3: FULL DEPTH GENERIC SCS IN A NON-POTABLE GROUND WATER CONDITION FOR RESIDENTIAL/PARKLAND/INSTITUTIONAL 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 30 40 50
Metres

DATA SOURCE: FIRST BASE SOLUTIONS
MAP PROJECTION: NAD 1983 UTM ZONE 17N

CLIENT:
DE ZEN REALTY COMPANY LTD.

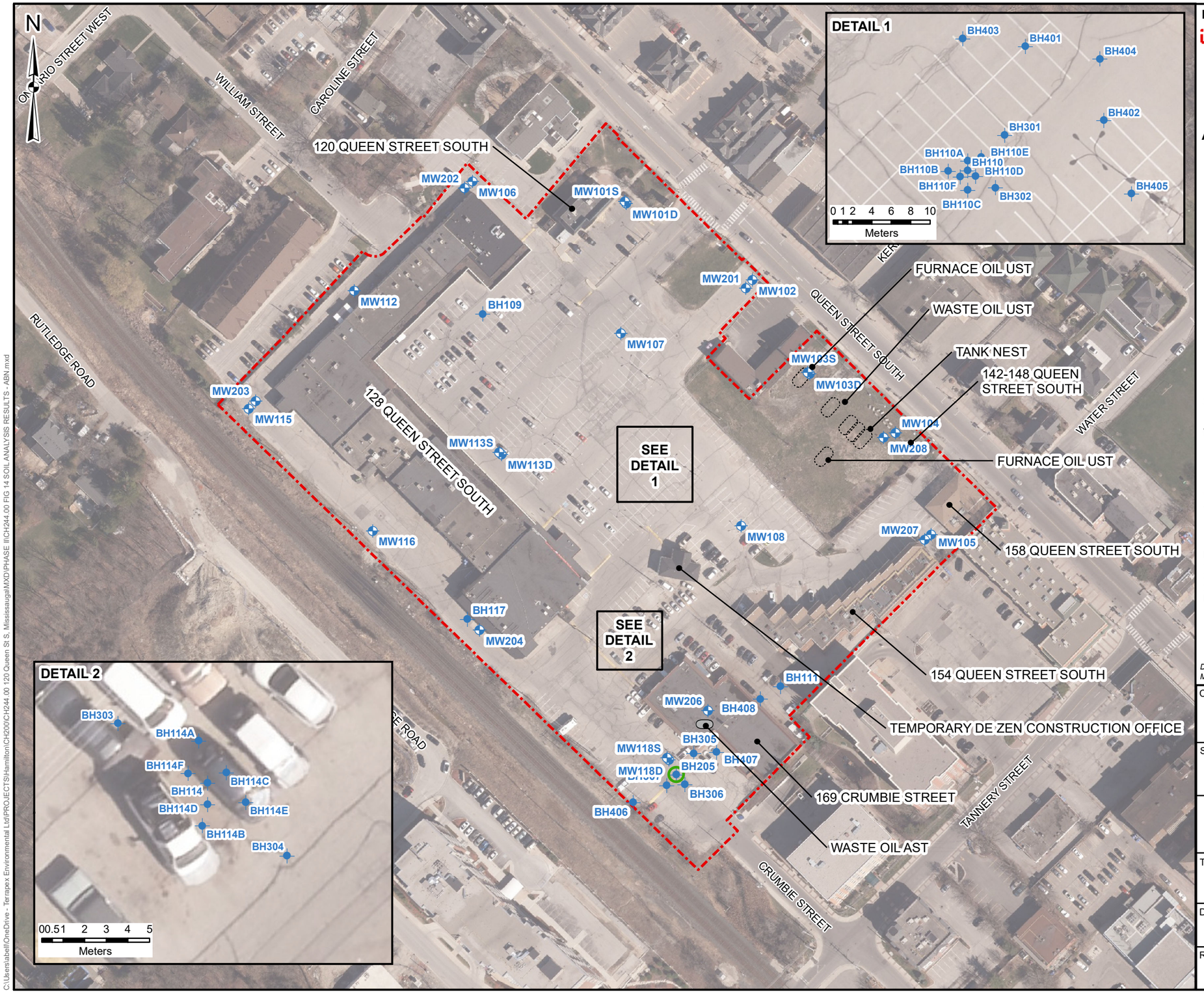
SITE LOCATION:
120, 128, 142, 148, 154, 158 QUEEN STREET SOUTH AND 169 CRUMBIE STREET, MISSISSAUGA, ONTARIO

TERRAPEX

TITLE:
SOIL ANALYSIS RESULTS - OTHER REGULATED PARAMETERS

DRAWN BY:	PROJECT NO.:	CHECKED BY:
JS/ SW/ AB	CH244.00	GLL
REVISION: 00	DATE: DECEMBER 2023	FIGURE: 13

C:\Users\abell\OneDrive - Terrapex Environmental Ltd\PROJECTS\Hamilton\CH200\CH244.00 120 Queen St S, Mississauga\MXD\PHASE II\CH244.00 FIG 13 SOIL ANALYSIS RESULTS - ORPs.mxd



C:\Users\abell\OneDrive - Terrapex Environmental Ltd\PROJECTS\Hamilton\CH200\CH244.00 120 Queen St S, Mississauga\MXD\PHASE II\CH244.00 FIG 14 SOIL ANALYSIS RESULTS - ABN.mxd

LEGEND

- SITE BOUNDARY
- BOREHOLE
- MONITORING WELL
- CURRENT ABOVEGROUND STORAGE TANK (AST)
- FORMER UNDERGROUND STORAGE TANK (UST)

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 RESIDENTIAL/PARKLAND/INSTITUTIONAL 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 30 40 50
Metres

DATA SOURCE: FIRST BASE SOLUTIONS
MAP PROJECTION: NAD 1983 UTM ZONE 17N

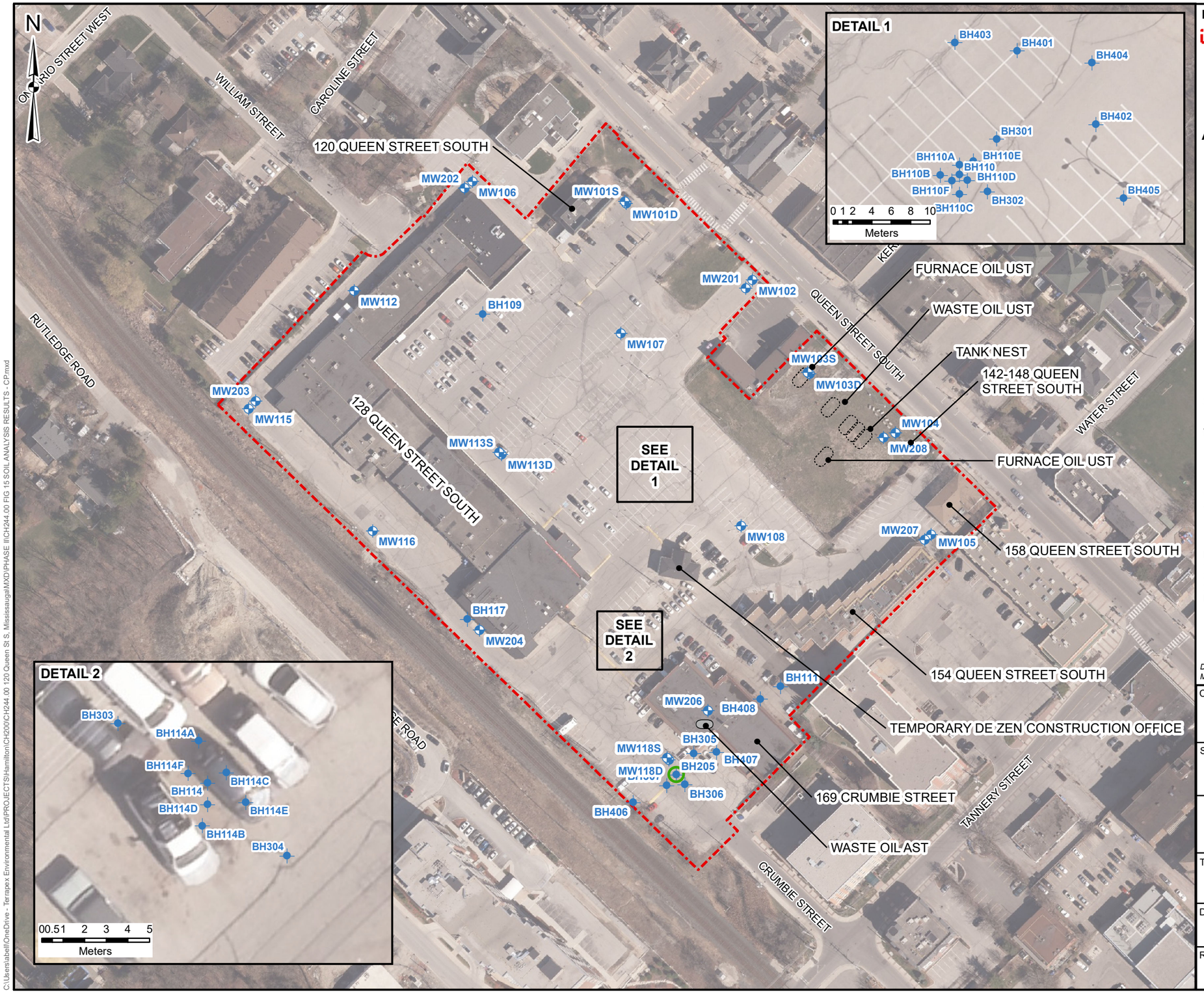
CLIENT:
DE ZEN REALTY COMPANY LTD.

SITE LOCATION:
120, 128, 142, 148, 154, 158 QUEEN STREET SOUTH AND 169 CRUMBIE STREET, MISSISSAUGA, ONTARIO

TERRAPEX

TITLE:
SOIL ANALYSIS RESULTS - ABNs

DRAWN BY:	PROJECT NO.:	CHECKED BY:
JS/ SW/ AB	CH244.00	GLL
REVISION:	**DATE:**	**FIGURE:**
00	DECEMBER 2023	**14**



C:\Users\abell\OneDrive - Terrapex Environmental Ltd\PROJECTS\Hamilton\CH200\CH244.00 120 Queen St S, Mississauga\MXD\PHASE II\CH244.00 FIG 15 SOIL ANALYSIS RESULTS - CP.mxd

LEGEND

- SITE BOUNDARY
- BOREHOLE
- MONITORING WELL
- CURRENT ABOVEGROUND STORAGE TANK (AST)
- FORMER UNDERGROUND STORAGE TANK (UST)

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 RESIDENTIAL/PARKLAND/INSTITUTIONAL 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 30 40 50
Metres

DATA SOURCE: FIRST BASE SOLUTIONS
MAP PROJECTION: NAD 1983 UTM ZONE 17N

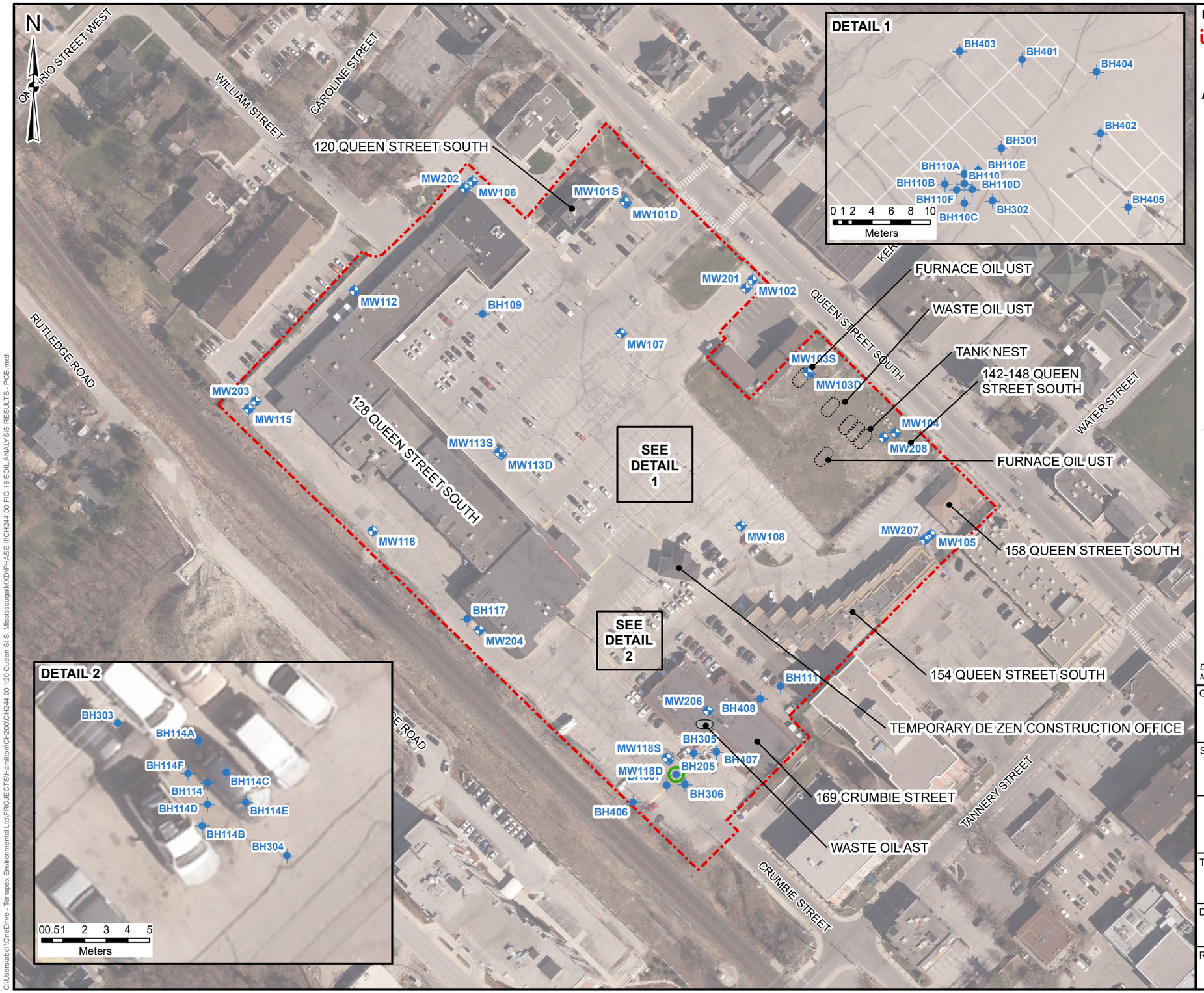
CLIENT:
DE ZEN REALTY COMPANY LTD.

SITE LOCATION:
120, 128, 142, 148, 154, 158 QUEEN STREET SOUTH AND 169 CRUMBIE STREET, MISSISSAUGA, ONTARIO

TERRAPEX

TITLE:
SOIL ANALYSIS RESULTS - CPs

DRAWN BY:	PROJECT NO.:	CHECKED BY:
JS/ SW/ AB	CH244.00	GLL
REVISION: 00	DATE: DECEMBER 2023	FIGURE: 15



C:\Users\abell\OneDrive - Terrapex Environmental Ltd\PROJECTS\Hamilton\CH200\CH244.00 120 Queen St S, Mississauga\MXD\PHASE II\CH244.00 FIG 16 SOIL ANALYSIS RESULTS - PCB.mxd

LEGEND

- SITE BOUNDARY
- CURRENT ABOVEGROUND STORAGE TANK (AST)
- FORMER UNDERGROUND STORAGE TANK (UST)

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 RESIDENTIAL/PARKLAND/INSTITUTIONAL 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 30 40 50
Metres

DATA SOURCE: FIRST BASE SOLUTIONS
MAP PROJECTION: NAD 1983 UTM ZONE 17N

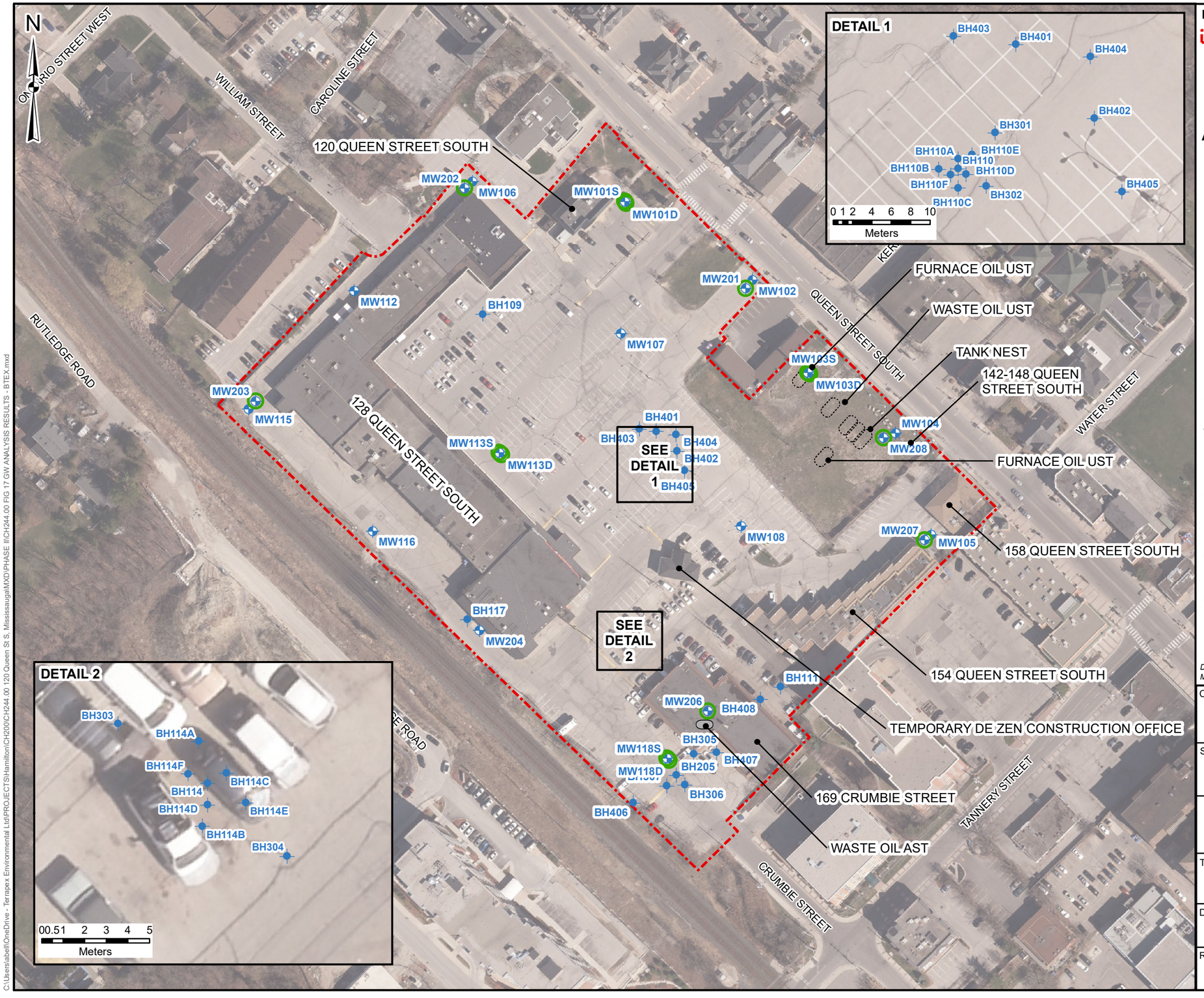
CLIENT:
DE ZEN REALTY COMPANY LTD.

SITE LOCATION:
120, 128, 142, 148, 154, 158 QUEEN STREET SOUTH AND 169 CRUMBIE STREET, MISSISSAUGA, ONTARIO

TERRAPEX

TITLE:
SOIL ANALYSIS RESULTS - CPs

DRAWN BY:	PROJECT NO.:	CHECKED BY:
JS/ SW/ AB	CH244.00	GLL
REVISION: 00	DATE: DECEMBER 2023	FIGURE: 16



C:\Users\abell\OneDrive - Terrapex Environmental Ltd\PROJECTS\Hamilton\CH200\CH244.00 120 Queen St S, Mississauga\MXD\PHASE II\CH244.00 FIG 17 GW ANALYSIS RESULTS - BTEX.mxd

LEGEND

- SITE BOUNDARY
- BOREHOLE
- MONITORING WELL
- CURRENT ABOVEGROUND STORAGE TANK (AST)
- FORMER UNDERGROUND STORAGE TANK (UST)

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 30 40 50
Metres

DATA SOURCE: FIRST BASE SOLUTIONS
MAP PROJECTION: NAD 1983 UTM ZONE 17N

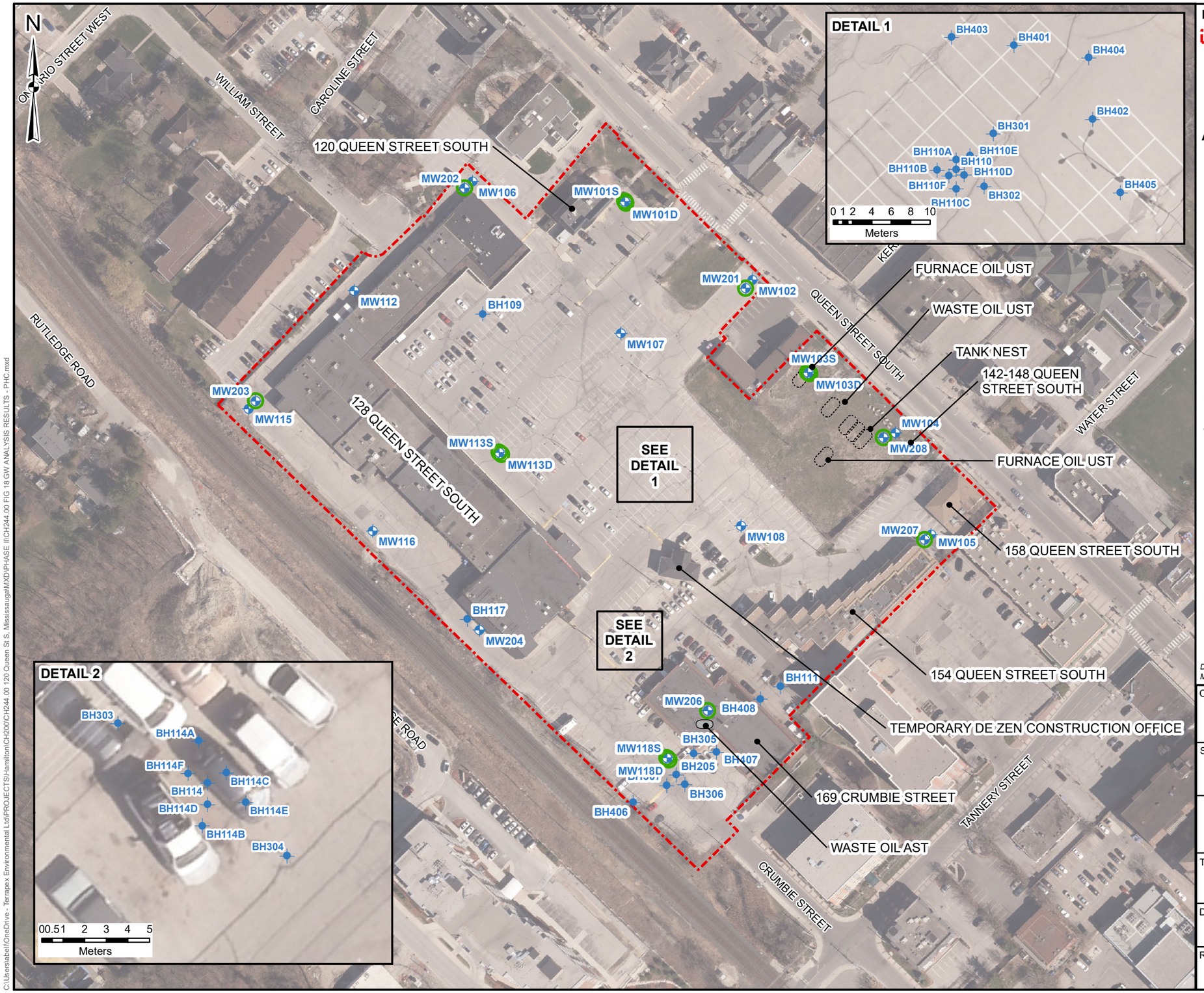
CLIENT:
DE ZEN REALTY COMPANY LTD.

SITE LOCATION:
120, 128, 142, 148, 154, 158 QUEEN STREET SOUTH AND 169 CRUMBIE STREET, MISSISSAUGA, ONTARIO

TERRAPEX

TITLE: **GROUNDWATER ANALYSIS RESULTS BTEX**

DRAWN BY:	PROJECT NO.:	CHECKED BY:
JS/ SW/ AB	CH244.00	GLL
REVISION: 00	DATE: DECEMBER 2023	FIGURE: 17



C:\Users\abell\OneDrive - Terrapex Environmental Ltd\PROJECTS\Hamilton\CH200\CH244.00 120 Queen St S, Mississauga\MXD\PHASE II\CH244.00 FIG 18 GW ANALYSIS RESULTS - PHC.mxd

LEGEND

- SITE BOUNDARY
- BOREHOLE
- MONITORING WELL
- CURRENT ABOVEGROUND STORAGE TANK (AST)
- FORMER UNDERGROUND STORAGE TANK (UST)

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 30 40 50
Metres

DATA SOURCE: FIRST BASE SOLUTIONS
MAP PROJECTION: NAD 1983 UTM ZONE 17N

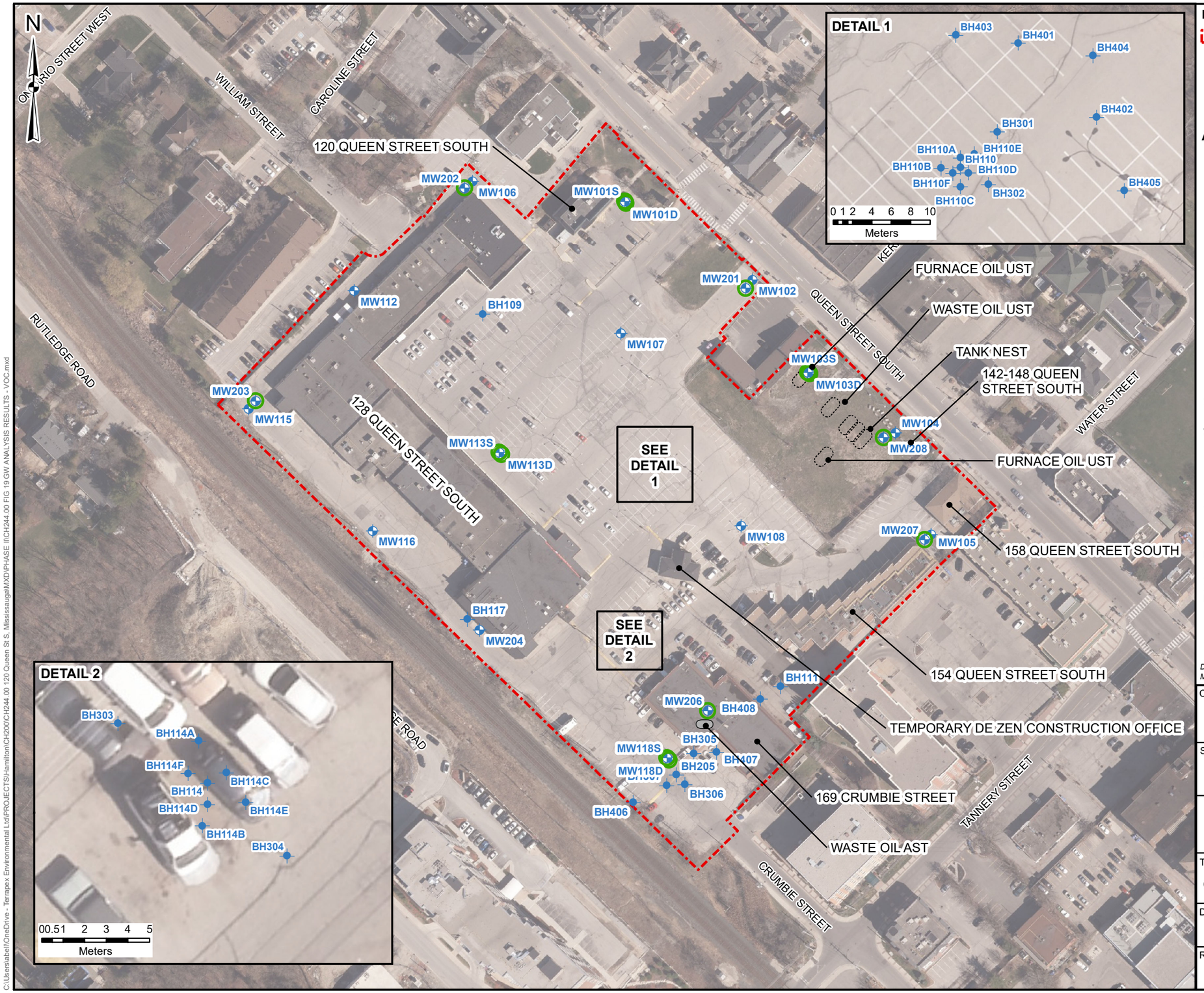
CLIENT:
DE ZEN REALTY COMPANY LTD.

SITE LOCATION:
120, 128, 142, 148, 154, 158 QUEEN STREET SOUTH AND 169 CRUMBIE STREET, MISSISSAUGA, ONTARIO

TERRAPEX

TITLE:
GROUNDWATER ANALYSIS RESULTS PHCs

DRAWN BY:	PROJECT NO.:	CHECKED BY:
JS/ SW/ AB	CH244.00	GLL
REVISION: 00	DATE: DECEMBER 2023	FIGURE: 18



C:\Users\abell\OneDrive - Terrapex Environmental Ltd\PROJECTS\Hamilton\CH200\CH244.00 120 Queen St S, Mississauga\MXD\PHASE II\CH244.00 FIG 19 GW ANALYSIS RESULTS - VOC.mxd

LEGEND

- SITE BOUNDARY
- BOREHOLE
- MONITORING WELL
- CURRENT ABOVEGROUND STORAGE TANK (AST)
- FORMER UNDERGROUND STORAGE TANK (UST)

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 30 40 50
Metres

DATA SOURCE: FIRST BASE SOLUTIONS
MAP PROJECTION: NAD 1983 UTM ZONE 17N

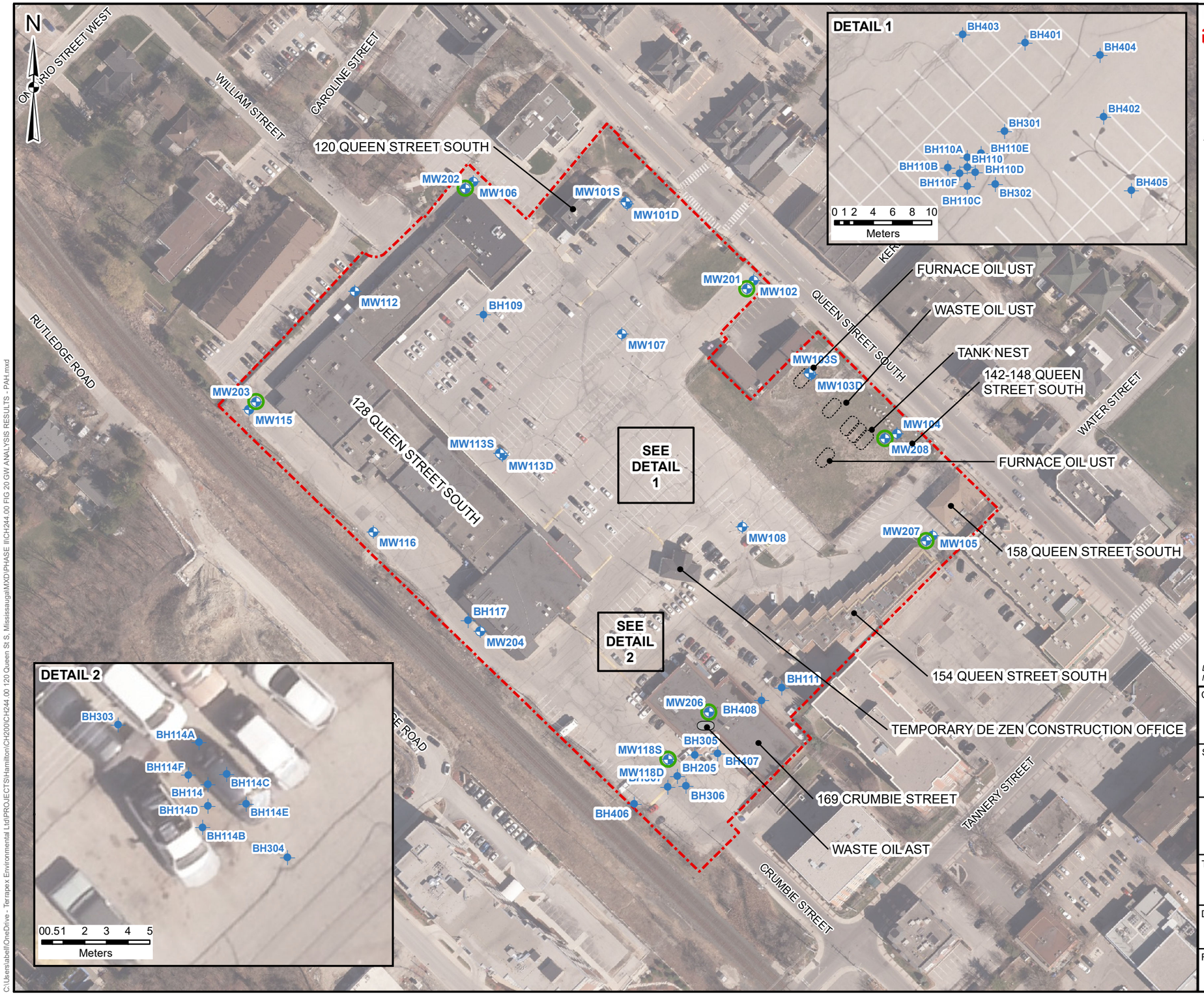
CLIENT:
DE ZEN REALTY COMPANY LTD.

SITE LOCATION:
120, 128, 142, 148, 154, 158 QUEEN STREET SOUTH AND 169 CRUMBIE STREET, MISSISSAUGA, ONTARIO

TERRAPEX

TITLE:
GROUNDWATER ANALYSIS RESULTS - VOCs

DRAWN BY:	PROJECT NO.:	CHECKED BY:
JS/ SW/ AB	CH244.00	GLL
REVISION: 00	DATE: DECEMBER 2023	FIGURE: 19



C:\Users\abell\OneDrive - Terrapex Environmental Ltd\PROJECTS\Hamilton\CH200\CH244.00 120 Queen St S, Mississauga\MXD\PHASE II\CH244.00 FIG 20 GW ANALYSIS RESULTS - PAH.mxd

LEGEND

- SITE BOUNDARY
- BOREHOLE
- MONITORING WELL
- CURRENT ABOVEGROUND STORAGE TANK (AST)
- FORMER UNDERGROUND STORAGE TANK (UST)

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 30 40 50
Metres

DATA SOURCE: FIRST BASE SOLUTIONS
MAP PROJECTION: NAD 1983 UTM ZONE 17N

CLIENT:
DE ZEN REALTY COMPANY LTD.

SITE LOCATION:
120, 128, 142, 148, 154, 158 QUEEN STREET SOUTH AND 169 CRUMBIE STREET, MISSISSAUGA, ONTARIO

TERRAPEX

TITLE:
GROUNDWATER ANALYSIS RESULTS - PAHs

DRAWN BY:	PROJECT NO.:	CHECKED BY:
JS/ SW/ AB	CH244.00	GLL
REVISION: 00	DATE: DECEMBER 2023	FIGURE: **20**

N

ONTARIO STREET WEST

WILLIAM STREET

CAROLINE STREET

120 QUEEN STREET SOUTH

MW202 MW106 MW101S MW101D

MW112 BH109 MW107

MW201 MW102

RUTLEDGE ROAD

QUEEN STREET SOUTH

MW103S MW103D

MW203 MW115

128 QUEEN STREET SOUTH

MW113S MW113D

SEE DETAIL 1

MW116 MW108

MW207 MW105

MW104 MW208

WATER STREET

BH117 MW204

SEE DETAIL 2

BH111

MW206 BH408

BH305 BH407

MW118S BH205

MW118D BH306

BH406

TANNERY STREET

CRUMBIE STREET

FURNACE OIL UST

WASTE OIL UST

TANK NEST

142-148 QUEEN STREET SOUTH

FURNACE OIL UST

158 QUEEN STREET SOUTH

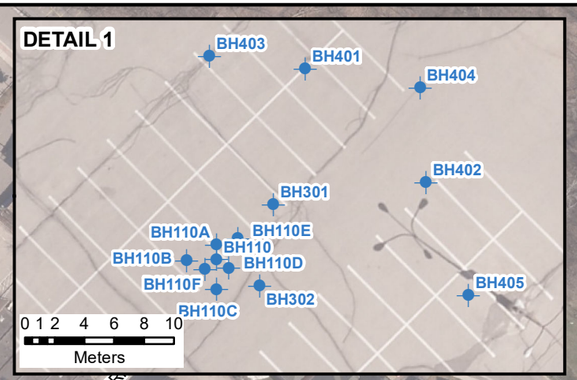
154 QUEEN STREET SOUTH

TEMPORARY DE ZEN CONSTRUCTION OFFICE

169 CRUMBIE STREET

WASTE OIL AST

DETAIL 1



DETAIL 2

LEGEND

- SITE BOUNDARY
- BOREHOLE
- MONITORING WELL
- CURRENT ABOVEGROUND STORAGE TANK (AST)
- FORMER UNDERGROUND STORAGE TANK (UST)

ANALYSIS INFORMATION

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

* Sodium and Chloride are deemed to meet the site condition standard per Section 49.1, O. Reg. 153/04 (Please refer to Conceptual Site Model text).

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 30 40 50
Metres

DATA SOURCE: FIRST BASE SOLUTIONS
MAP PROJECTION: NAD 1983 UTM ZONE 17N

CLIENT:
DE ZEN REALTY COMPANY LTD.

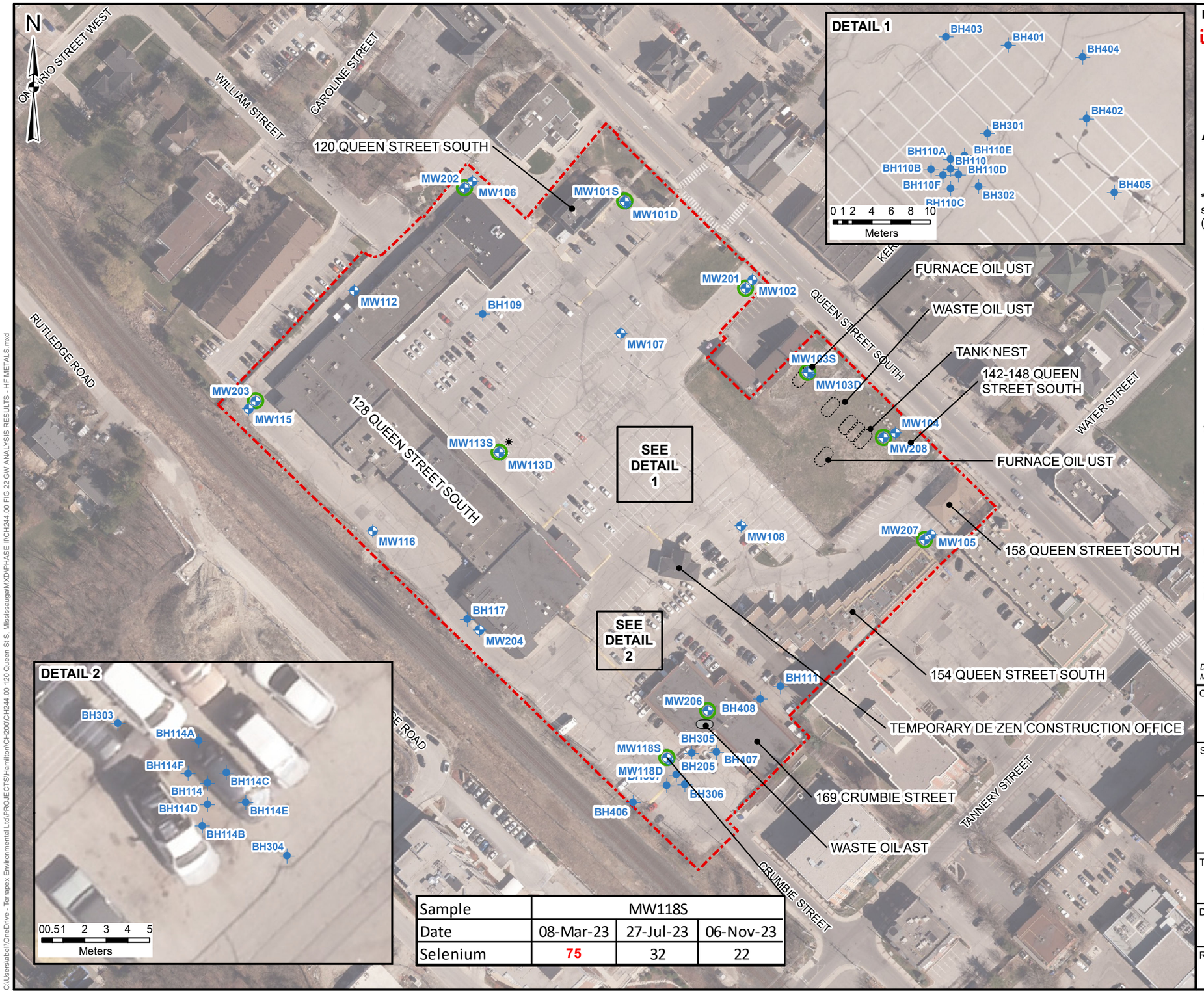
SITE LOCATION:
120, 128, 142, 148, 154, 158 QUEEN STREET SOUTH AND 169 CRUMBIE STREET, MISSISSAUGA, ONTARIO

TERRAPEX

TITLE:
GROUNDWATER ANALYSIS RESULTS - METALS

DRAWN BY:	PROJECT NO.:	CHECKED BY:
JS/ SW/ AB	CH244.00	GLL
REVISION: 00	DATE: DECEMBER 2023	FIGURE: **21**

C:\Users\abell\OneDrive - Terrapex Environmental Ltd\PROJECTS\Hamilton\CH200\CH244.00 120 Queen St S, Mississauga\MXD\PHASE II\CH244.00 FIG 21 GW ANALYSIS RESULTS - METALS.mxd



Sample	MW118S		
Date	08-Mar-23	27-Jul-23	06-Nov-23
Selenium	75	32	22

LEGEND

- SITE BOUNDARY
- BOREHOLE
- MONITORING WELL
- CURRENT ABOVEGROUND STORAGE TANK (AST)
- FORMER UNDERGROUND STORAGE TANK (UST)

ANALYSIS INFORMATION

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

* Sodium and Chloride are deemed to meet the site condition standard per Section 49.1, O. Reg. 153/04 (Please refer to Conceptual Site Model text).

STANDARD INFORMATION

SAMPLE		MECP TABLE 3 SCS
DATE		
PARAMETER	RESULT	
Selenium		63

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 30 40 50
Metres

DATA SOURCE: FIRST BASE SOLUTIONS
MAP PROJECTION: NAD 1983 UTM ZONE 17N

CLIENT:
DE ZEN REALTY COMPANY LTD.

SITE LOCATION:
120, 128, 142, 148, 154, 158 QUEEN STREET SOUTH AND 169 CRUMBIE STREET, MISSISSAUGA, ONTARIO

TERRAPEX

TITLE:
GROUNDWATER ANALYSIS RESULTS - HYDRIDE-FORMING METALS

DRAWN BY:	PROJECT NO.:	CHECKED BY:
JS/ SW/ AB	CH244.00	GLL
REVISION:	**DATE:**	**FIGURE:**
00	DECEMBER 2023	**22**

C:\Users\abell\OneDrive - Terrapex Environmental Ltd\PROJECTS\Hamilton\CH200\CH244.00 120 Queen St S, Mississauga\MXD\PHASE II\CH244.00 FIG 22 GW ANALYSIS RESULTS - HF METALS.mxd

N

ONTARIO STREET WEST

WILLIAM STREET

CAROLINE STREET

120 QUEEN STREET SOUTH

MW202 MW106 MW101S MW101D

MW112 BH109 MW107

MW201 MW102

MW103S MW103D

MW203 MW115

MW113S MW113D

MW104 MW208

MW116 MW108

MW207 MW105

BH117 MW204

BH111

MW206 BH408

BH305 BH407

MW118S BH205

MW118D BH306

BH406

RUTLEDGE ROAD

128 QUEEN STREET SOUTH

QUEEN STREET SOUTH

WATER STREET

TANNERY STREET

CRUMBIE STREET

FURNACE OIL UST

WASTE OIL UST

TANK NEST

142-148 QUEEN STREET SOUTH

FURNACE OIL UST

158 QUEEN STREET SOUTH

154 QUEEN STREET SOUTH

TEMPORARY DE ZEN CONSTRUCTION OFFICE

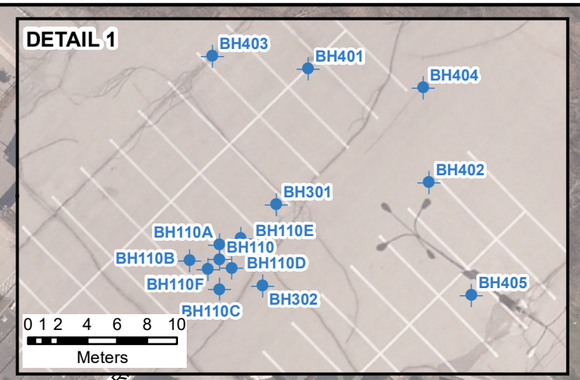
169 CRUMBIE STREET

WASTE OIL AST

SEE DETAIL 1

SEE DETAIL 2

DETAIL 1



DETAIL 2

LEGEND

- SITE BOUNDARY
- BOREHOLE
- MONITORING WELL
- CURRENT ABOVEGROUND STORAGE TANK (AST)
- FORMER UNDERGROUND STORAGE TANK (UST)

ANALYSIS INFORMATION

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

* Sodium and Chloride are deemed to meet the site condition standard per Section 49.1, O. Reg. 153/04 (Please refer to Conceptual Site Model text).

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 30 40 50
Metres

DATA SOURCE: FIRST BASE SOLUTIONS
MAP PROJECTION: NAD 1983 UTM ZONE 17N

CLIENT:
DE ZEN REALTY COMPANY LTD.

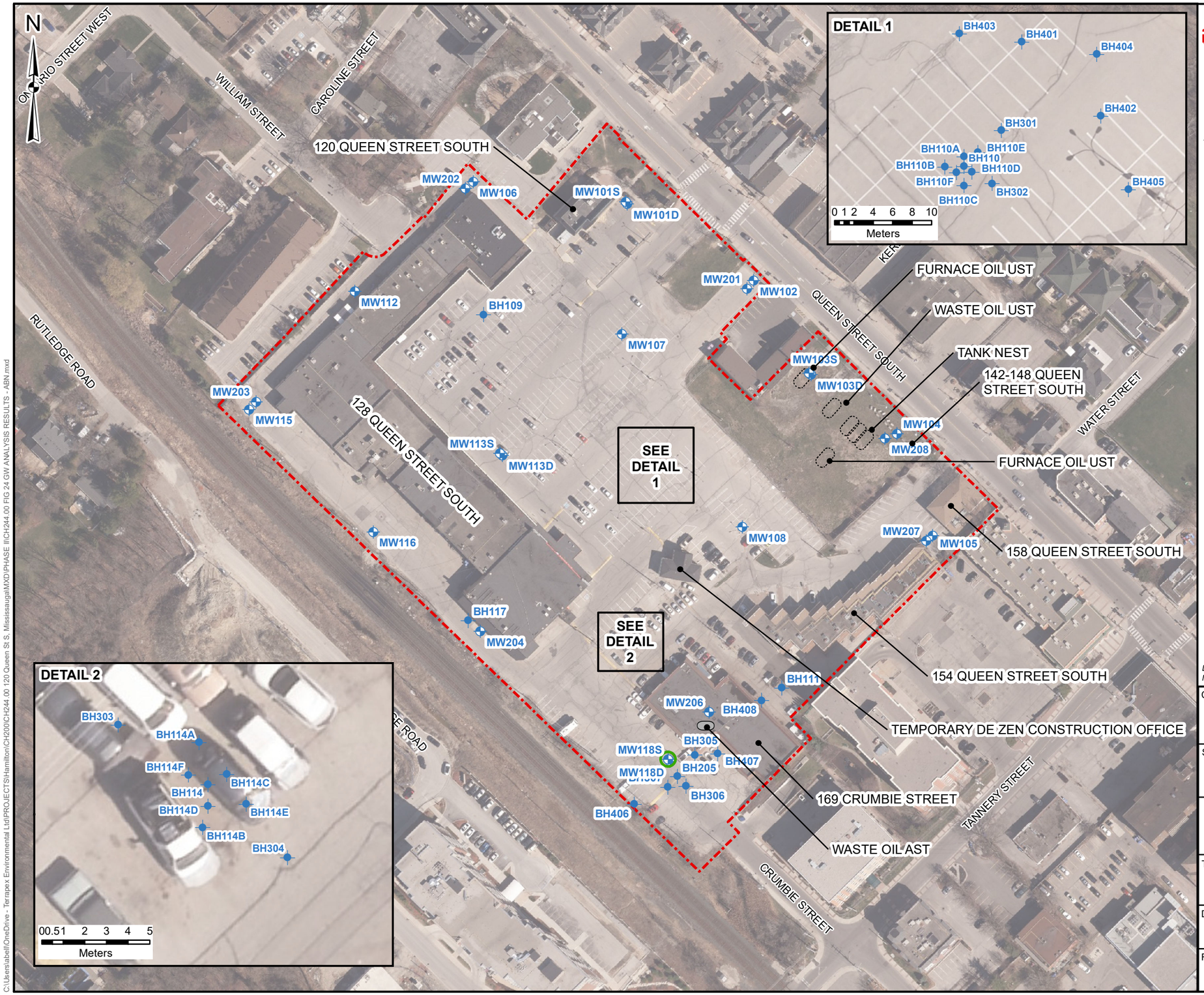
SITE LOCATION:
120, 128, 142, 148, 154, 158 QUEEN STREET SOUTH AND 169 CRUMBIE STREET, MISSISSAUGA, ONTARIO

TERRAPEX

TITLE:
GROUNDWATER ANALYSIS RESULTS - OTHER REGULATED PARAMETERS

DRAWN BY:	PROJECT NO.:	CHECKED BY:
JS/ SW/ AB	CH244.00	GLL
REVISION: 00	DATE: DECEMBER 2023	FIGURE: **23**

C:\Users\abell\OneDrive - Terrapex Environmental Ltd\PROJECTS\Hamilton\CH200\CH244.00 120 Queen St S, Mississauga\MXD\PHASE II\CH244.00 FIG 23 GW ANALYSIS RESULTS - ORPs.mxd



C:\Users\abell\OneDrive - Terrapex Environmental Ltd\PROJECTS\Hamilton\CH200\CH244.00 120 Queen St S, Mississauga\MXD\PHASE II\CH244.00 FIG 24 GW ANALYSIS RESULTS - ABN.mxd

LEGEND

- SITE BOUNDARY
- BOREHOLE
- MONITORING WELL
- CURRENT ABOVEGROUND STORAGE TANK (AST)
- FORMER UNDERGROUND STORAGE TANK (UST)

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 30 40 50
Metres

DATA SOURCE: FIRST BASE SOLUTIONS
MAP PROJECTION: NAD 1983 UTM ZONE 17N

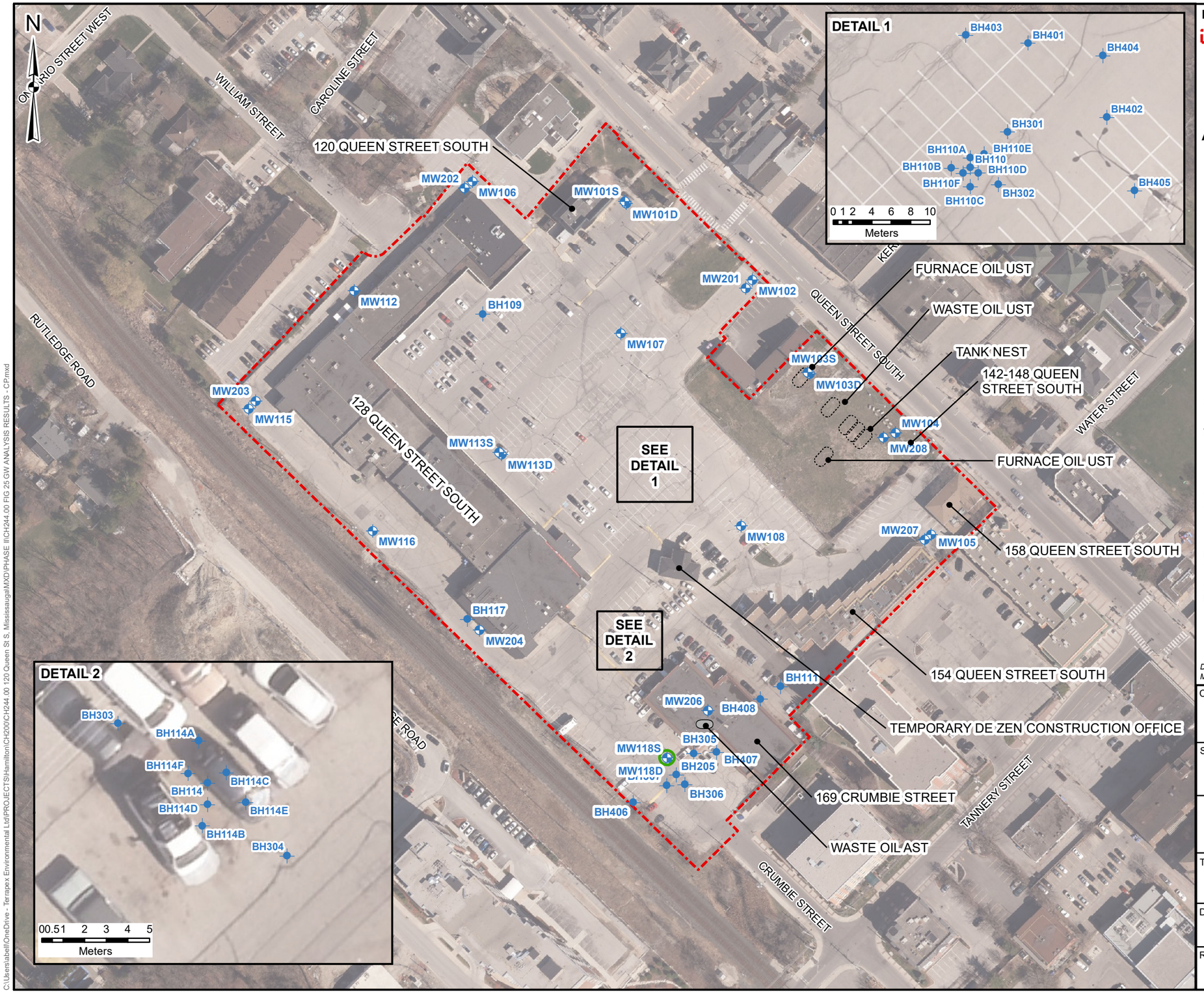
CLIENT:
DE ZEN REALTY COMPANY LTD.

SITE LOCATION:
120, 128, 142, 148, 154, 158 QUEEN STREET SOUTH AND 169 CRUMBIE STREET, MISSISSAUGA, ONTARIO

TERRAPEX

TITLE:
GROUNDWATER ANALYSIS RESULTS - ABNs

DRAWN BY:	PROJECT NO.:	CHECKED BY:
JS/ SW/ AB	CH244.00	GLL
REVISION: 00	DATE: DECEMBER 2023	FIGURE: **24**



C:\Users\abell\OneDrive - Terrapex Environmental Ltd\PROJECTS\Hamilton\CH200\CH244.00 120 Queen St S, Mississauga\MXD\PHASE II\CH244.00 FIG 25 GW ANALYSIS RESULTS - CP.mxd

LEGEND

- SITE BOUNDARY
- BOREHOLE
- MONITORING WELL
- CURRENT ABOVEGROUND STORAGE TANK (AST)
- FORMER UNDERGROUND STORAGE TANK (UST)

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 30 40 50
Metres

DATA SOURCE: FIRST BASE SOLUTIONS
MAP PROJECTION: NAD 1983 UTM ZONE 17N

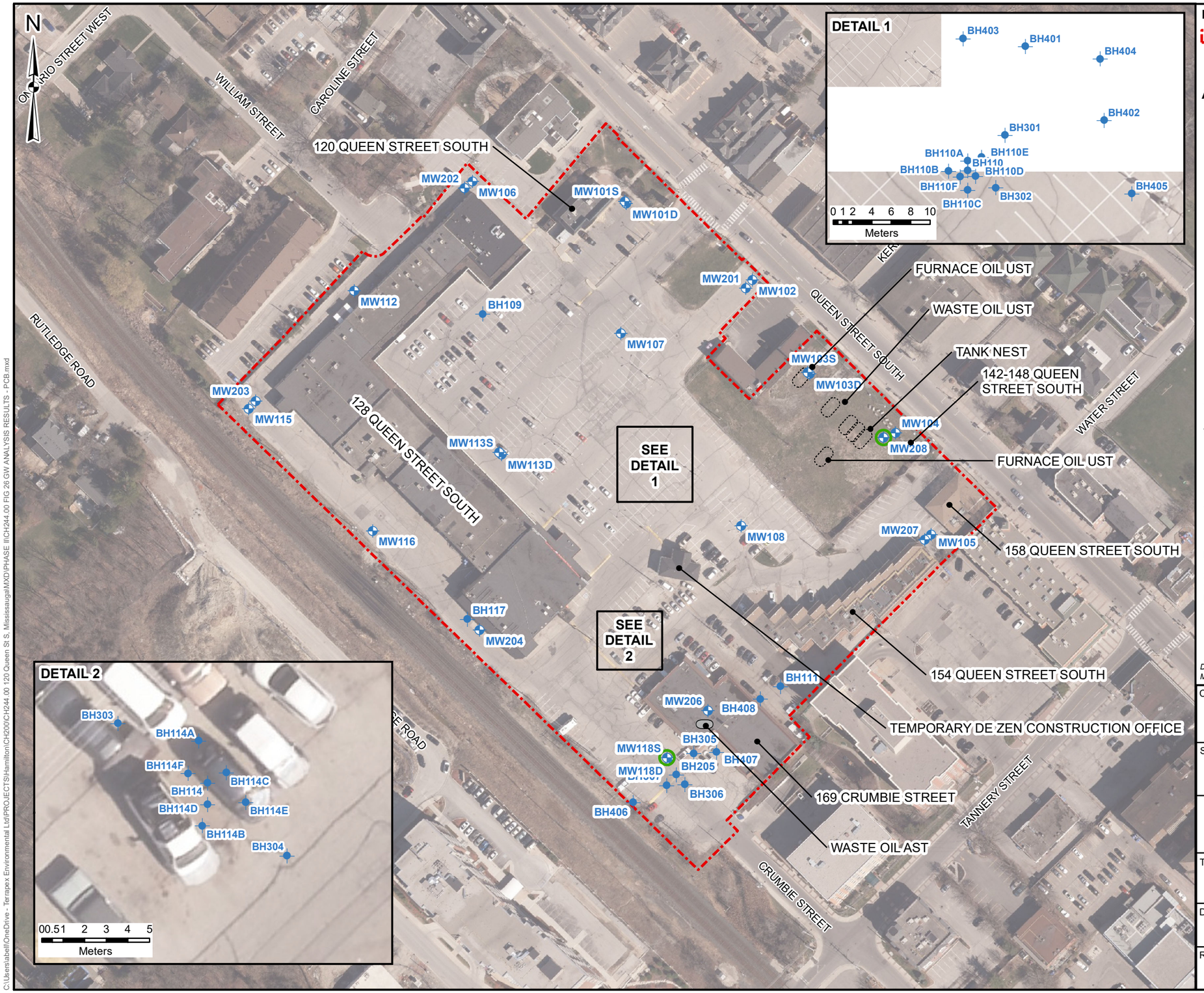
CLIENT:
DE ZEN REALTY COMPANY LTD.

SITE LOCATION:
120, 128, 142, 148, 154, 158 QUEEN STREET SOUTH AND 169 CRUMBIE STREET, MISSISSAUGA, ONTARIO

TERRAPEX

TITLE:
GROUNDWATER ANALYSIS RESULTS - CPs

DRAWN BY:	PROJECT NO.:	CHECKED BY:
JS/ SW/ AB	CH244.00	GLL
REVISION: 00	DATE: DECEMBER 2023	FIGURE: **25**



C:\Users\abell\OneDrive - Terrapex Environmental Ltd\PROJECTS\Hamilton\CH200\CH244.00 120 Queen St S, Mississauga\MXD\PHASE II\CH244.00 FIG 26 GW ANALYSIS RESULTS - PCB.mxd

LEGEND

- SITE BOUNDARY
- CURRENT ABOVEGROUND STORAGE TANK (AST)
- FORMER UNDERGROUND STORAGE TANK (UST)

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 30 40 50
Metres

DATA SOURCE: FIRST BASE SOLUTIONS
MAP PROJECTION: NAD 1983 UTM ZONE 17N

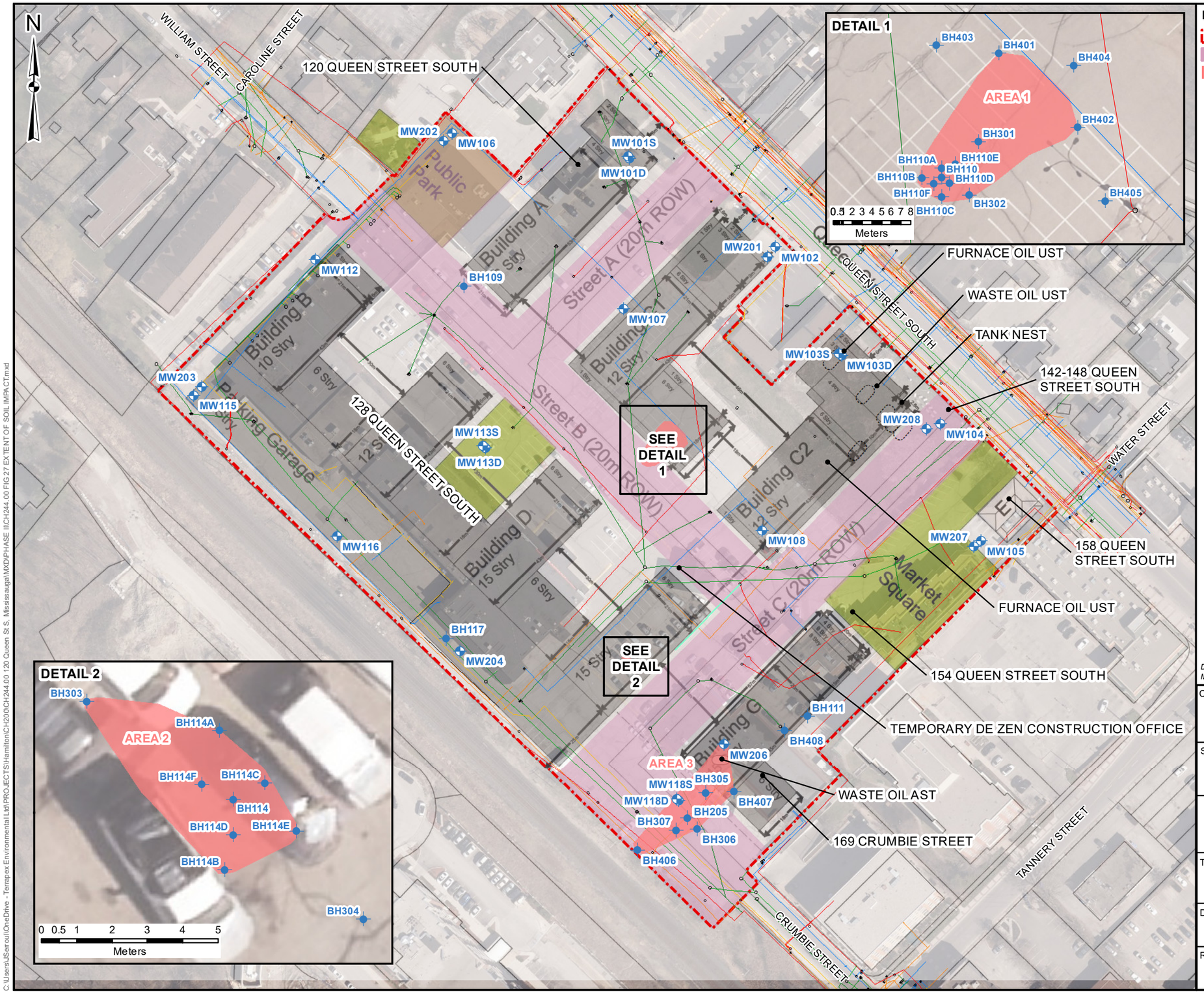
CLIENT:
DE ZEN REALTY COMPANY LTD.

SITE LOCATION:
120, 128, 142, 148, 154, 158 QUEEN STREET SOUTH AND 169 CRUMBIE STREET, MISSISSAUGA, ONTARIO

TERRAPEX

TITLE:
GROUNDWATER ANALYSIS RESULTS - PCBs

DRAWN BY:	PROJECT NO.:	CHECKED BY:
JS/ SW/ AB	CH244.00	GLL
REVISION: 00	DATE: DECEMBER 2023	FIGURE: **26**



LEGEND

- SITE BOUNDARY
- PROPOSED LANDS TO BE DEDICATED TO THE CITY OF MISSISSAUGA
- EXTENT OF SOIL IMPACT
- BOREHOLE
- MONITORING WELL
- CURRENT ABOVEGROUND STORAGE TANK (AST)
- FORMER UNDERGROUND STORAGE TANK (UST)

0 10 20 30 40 50
Metres

DATA SOURCE: FIRST BASE SOLUTIONS
MAP PROJECTION: NAD 1983 UTM ZONE 17N

CLIENT:
DE ZEN REALTY COMPANY LTD.

SITE LOCATION:
120, 128, 142, 148, 154, 158 QUEEN STREET SOUTH AND 169 CRUMBIE STREET, MISSISSAUGA, ONTARIO

TERRAPEX

TITLE:
EXTENT OF SOIL IMPACT

DRAWN BY:	PROJECT NO.:	CHECKED BY:
JS/ SW/ AB	CH244.00	GLL
REVISION: 00	DATE: FEBRUARY 2024	FIGURE: **27**

C:\Users\JSerrouit\OneDrive - Terrapex Environmental Ltd\PROJECTS\Hamilton\CH2000\CH244.00 120 Queen St S, Mississauga\MXD\PHASE II\CH244_00 FIG 27 EXTENT OF SOIL IMPACT.mxd

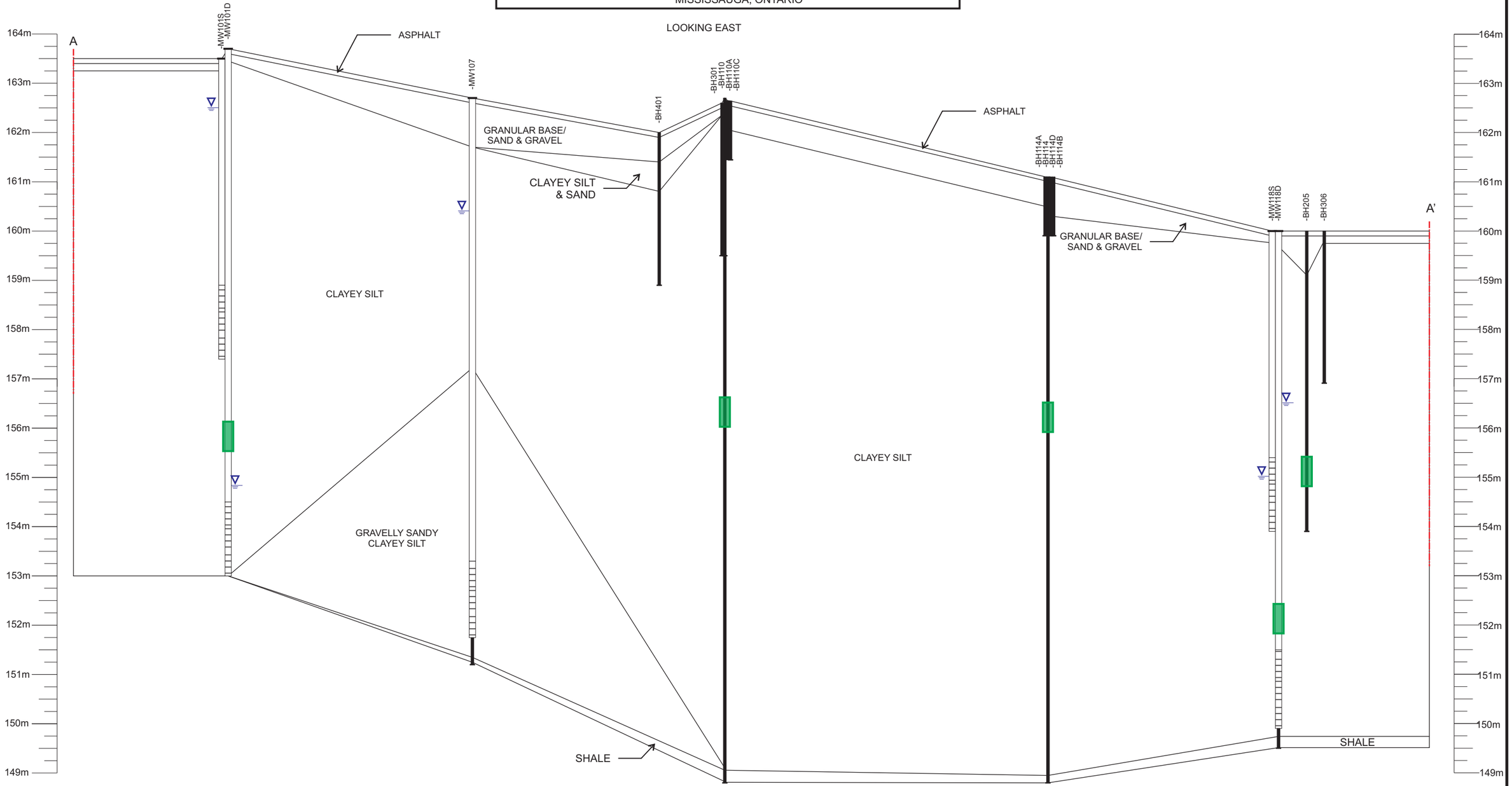
TERRAPEX

CROSS SECTION A-A' - SOIL ANALYTICAL RESULTS - BTEX

120, 128, 142, 148, 154, 158 QUEEN STREET SOUTH & 169 CRUMBIE STREET
MISSISSAUGA, ONTARIO

CLIENT

DE ZEN REALTY COMPANY LIMITED



LEGEND

- MONITORING WELL
- SCREENED LEVEL
- BOREHOLE
- GROUNDWATER LEVEL (AS OF MARCH 15, 2023)
- INFERRED GROUNDWATER LEVEL

SOIL ANALYSIS INFORMATION

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

SCS (Site Conditions Standards) refer to Standards from Table 3 of April 15, 2011 *Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act*; Residential / Parkland / Institutional land use, medium and fine textured soil

VERTICAL SCALE: 0 — 2m — 4m

HORIZONTAL SCALE: 0 — 25m — 50m

	CH244.00
SCALE	AS SHOWN
DATE	DECEMBER 2023
DRAWN	AB
CHECKED	
DRAWING #	FIGURE 28

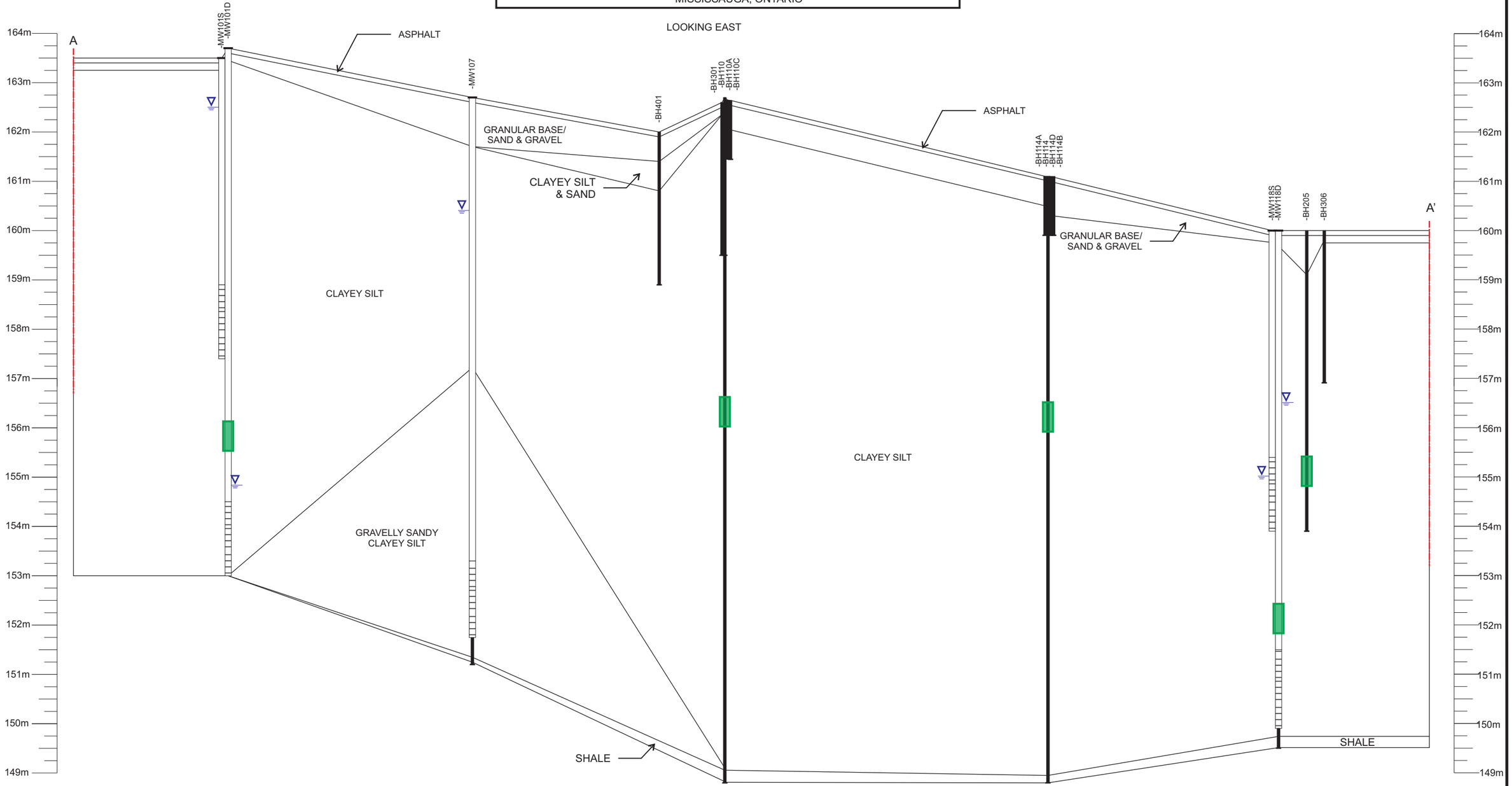
TERRAPEX

CROSS SECTION A-A' - SOIL ANALYTICAL RESULTS - PHCs

120, 128, 142, 148, 154, 158 QUEEN STREET SOUTH & 169 CRUMBIE STREET
MISSISSAUGA, ONTARIO

CLIENT

DE ZEN REALTY COMPANY LIMITED



LEGEND

- MONITORING WELL
- SCREENED LEVEL
- BOREHOLE
- GROUNDWATER LEVEL (AS OF MARCH 15, 2023)
- INFERRED GROUNDWATER LEVEL

SOIL ANALYSIS INFORMATION

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

SCS (Site Conditions Standards) refer to Standards from Table 3 of April 15, 2011 *Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act*; Residential / Parkland / Institutional land use, medium and fine textured soil

VERTICAL SCALE: 0 — 2m — 4m

HORIZONTAL SCALE: 0 — 25m — 50m

	CH244.00
SCALE	AS SHOWN
DATE	DECEMBER 2023
DRAWN	AB
CHECKED	
DRAWING #	FIGURE 29

TERRAPEX

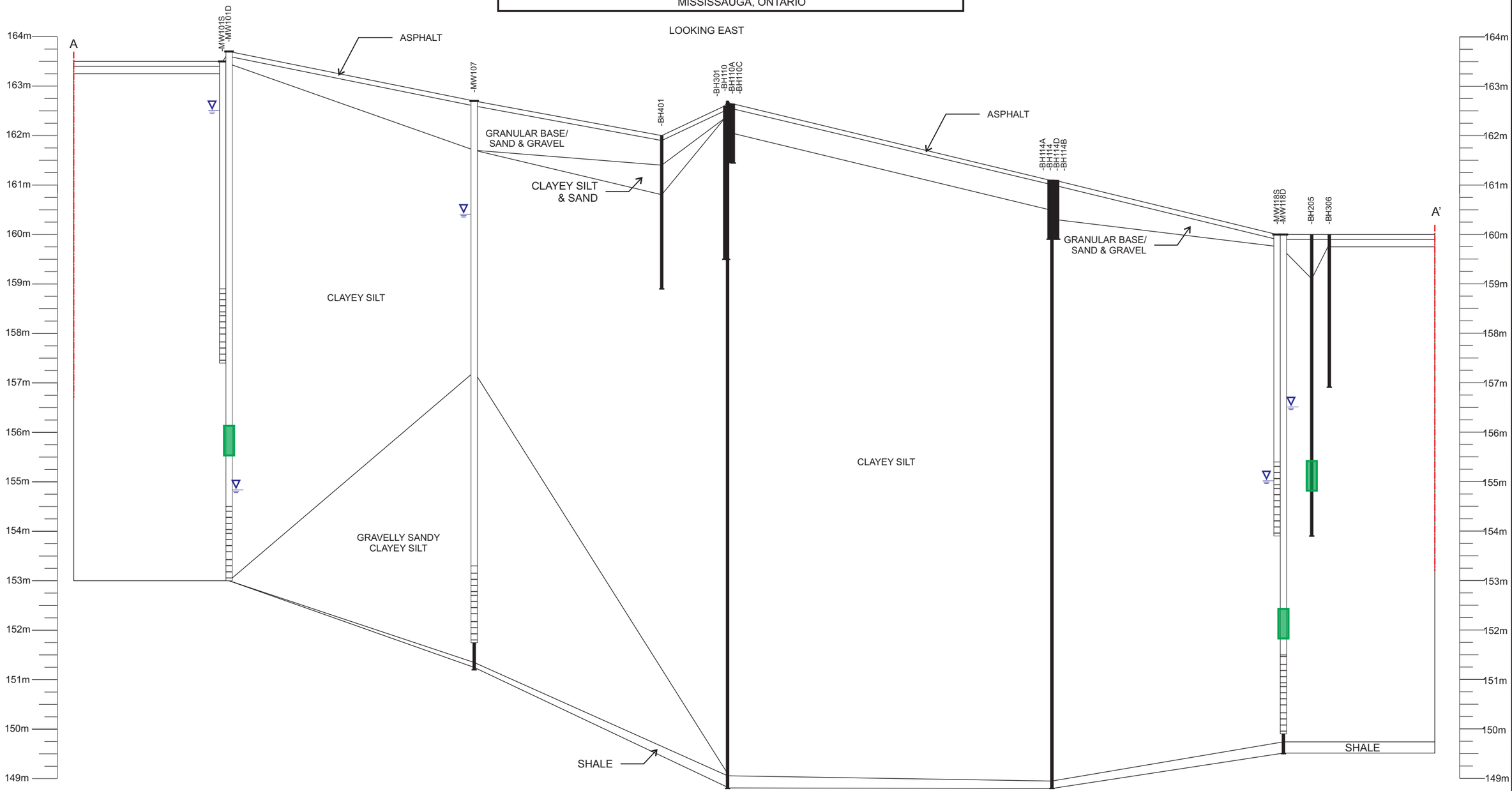
CROSS SECTION A-A' - SOIL ANALYTICAL RESULTS - VOCs

120, 128, 142, 148, 154, 158 QUEEN STREET SOUTH & 169 CRUMBIE STREET
MISSISSAUGA, ONTARIO

CLIENT

DE ZEN REALTY COMPANY LIMITED

LOOKING EAST



LEGEND

- MONITORING WELL
- SCREENED LEVEL
- BOREHOLE
- GROUNDWATER LEVEL (AS OF MARCH 15, 2023)
- INFERRED GROUNDWATER LEVEL

SOIL ANALYSIS INFORMATION

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

SCS (Site Conditions Standards) refer to Standards from Table 3 of April 15, 2011 *Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act*; Residential / Parkland / Institutional land use, medium and fine textured soil

VERTICAL SCALE: 0 — 2m — 4m

HORIZONTAL SCALE: 0 — 25m — 50m

	CH244.00
SCALE	AS SHOWN
DATE	DECEMBER 2023
DRAWN	AB
CHECKED	
DRAWING #	FIGURE 30

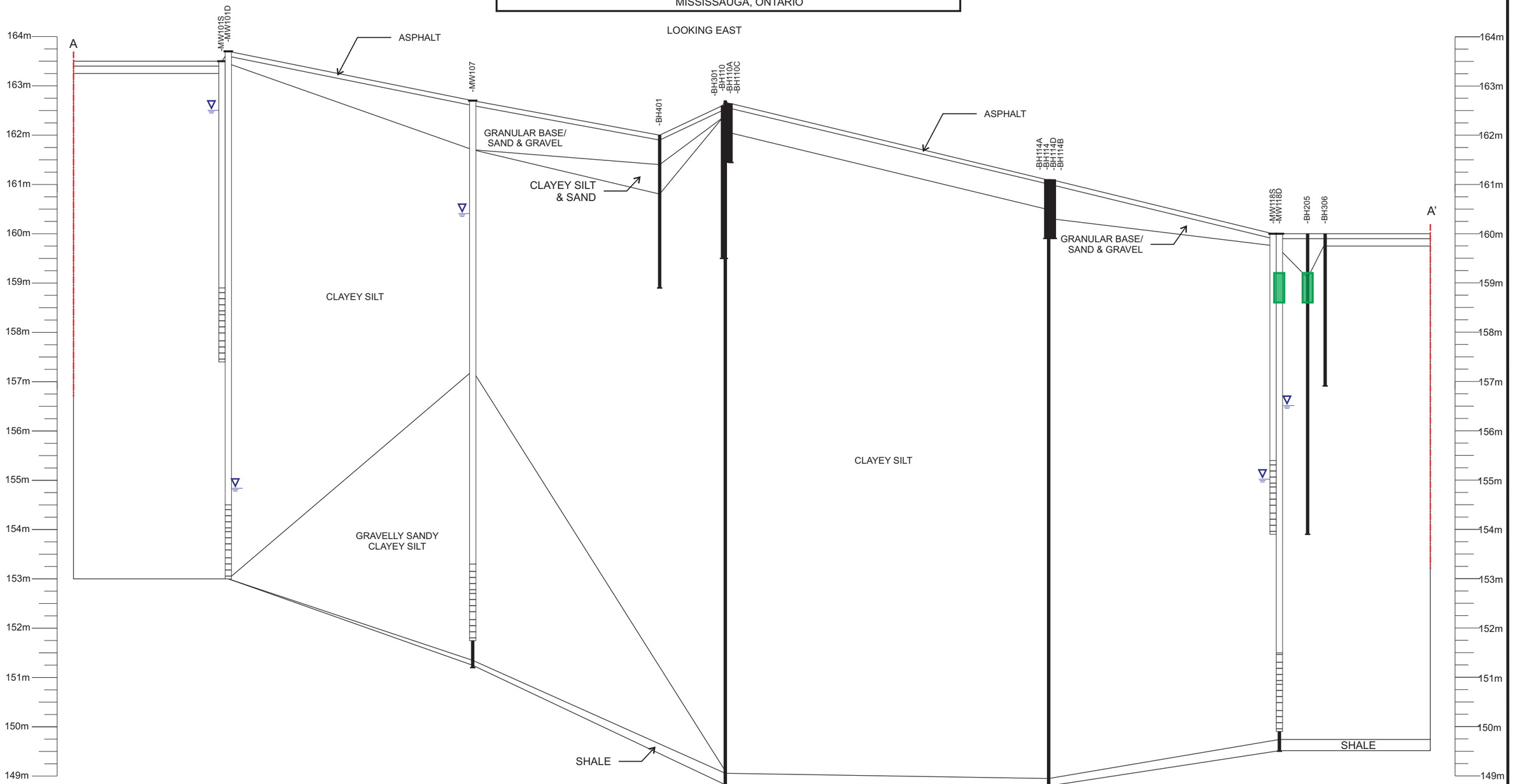
TERRAPEX

CROSS SECTION A-A' - SOIL ANALYTICAL RESULTS - PAHs

120, 128, 142, 148, 154, 158 QUEEN STREET SOUTH & 169 CRUMBIE STREET
MISSISSAUGA, ONTARIO

CLIENT

DE ZEN REALTY COMPANY LIMITED



LEGEND

- MONITORING WELL
- SCREENED LEVEL
- BOREHOLE
- GROUNDWATER LEVEL (AS OF MARCH 15, 2023)
- INFERRED GROUNDWATER LEVEL

SOIL ANALYSIS INFORMATION

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

SCS (Site Conditions Standards) refer to Standards from Table 3 of April 15, 2011 *Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act*; Residential / Parkland / Institutional land use, medium and fine textured soil

VERTICAL SCALE: 0 — 2m — 4m

HORIZONTAL SCALE: 0 — 25m — 50m

CH244.00

SCALE: AS SHOWN

DATE: DECEMBER 2023

DRAWN: AB | CHECKED:

DRAWING #

FIGURE 31

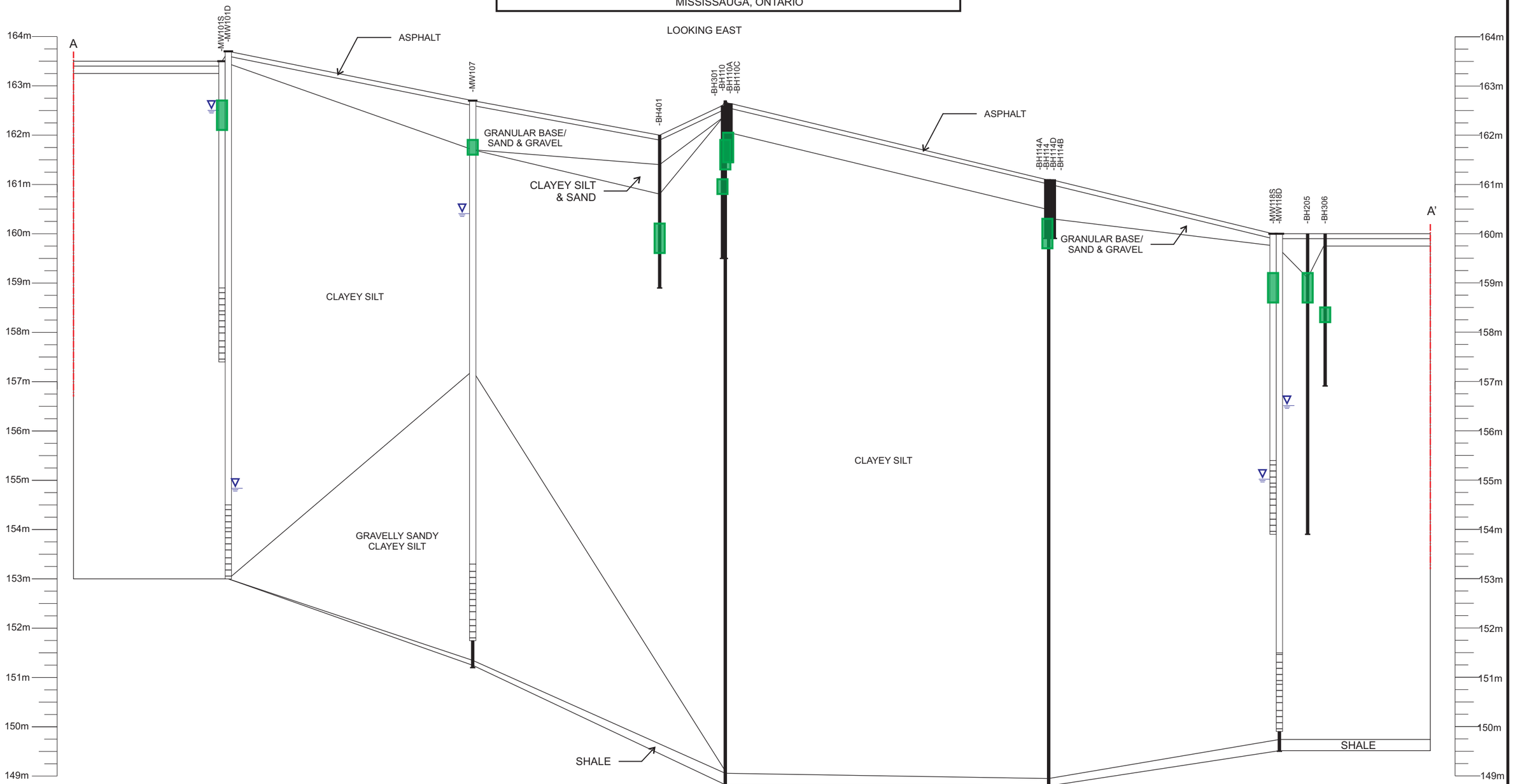
TERRAPEX

CROSS SECTION A-A' - SOIL ANALYTICAL RESULTS - METALS

120, 128, 142, 148, 154, 158 QUEEN STREET SOUTH & 169 CRUMBIE STREET
MISSISSAUGA, ONTARIO

CLIENT

DE ZEN REALTY COMPANY LIMITED



LEGEND

- MONITORING WELL
- SCREENED LEVEL
- BOREHOLE
- GROUNDWATER LEVEL (AS OF MARCH 15, 2023)
- INFERRED GROUNDWATER LEVEL

SOIL ANALYSIS INFORMATION

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

SCS (Site Conditions Standards) refer to Standards from Table 3 of April 15, 2011 *Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act*; Residential / Parkland / Institutional land use, medium and fine textured soil

VERTICAL SCALE: 0 — 2m — 4m

HORIZONTAL SCALE: 0 — 25m — 50m

CH244.00

SCALE: AS SHOWN

DATE: DECEMBER 2023

DRAWN: AB | CHECKED:

DRAWING #

FIGURE 32

TERRAPEX

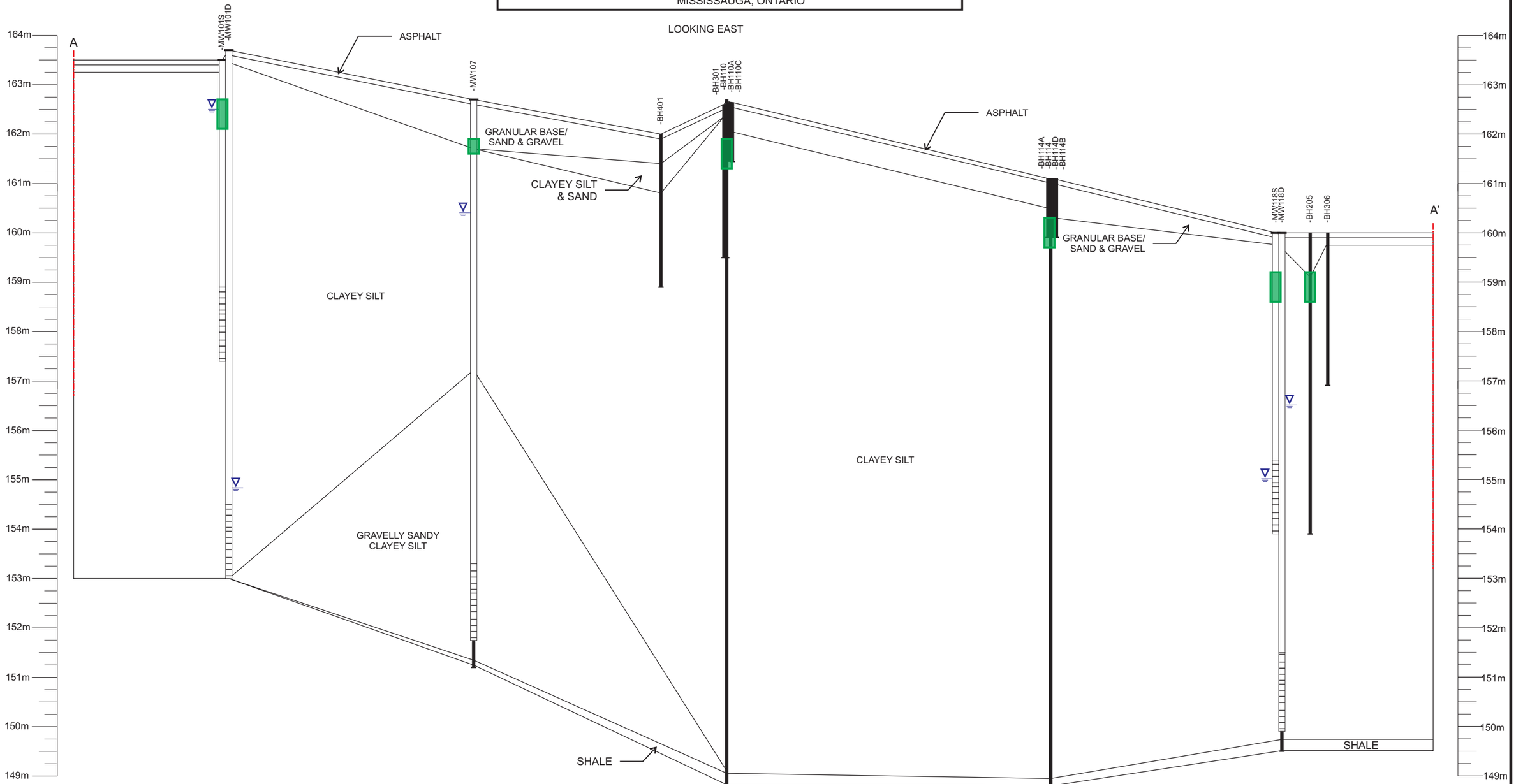
CROSS SECTION A-A' - SOIL ANALYTICAL RESULTS - HYDRIDE FORMING METALS

120, 128, 142, 148, 154, 158 QUEEN STREET SOUTH & 169 CRUMBIE STREET
MISSISSAUGA, ONTARIO

CLIENT

DE ZEN REALTY COMPANY LIMITED

LOOKING EAST



LEGEND

- MONITORING WELL
- SCREENED LEVEL
- BOREHOLE
- GROUNDWATER LEVEL (AS OF MARCH 15, 2023)
- INFERRED GROUNDWATER LEVEL

SOIL ANALYSIS INFORMATION

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

SCS (Site Conditions Standards) refer to Standards from Table 3 of April 15, 2011 *Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act*; Residential / Parkland / Institutional land use, medium and fine textured soil

VERTICAL SCALE: 0 2m 4m

HORIZONTAL SCALE: 0 25m 50m

CH244.00

SCALE: AS SHOWN

DATE: DECEMBER 2023

DRAWN: AB | CHECKED:

DRAWING #

FIGURE 33

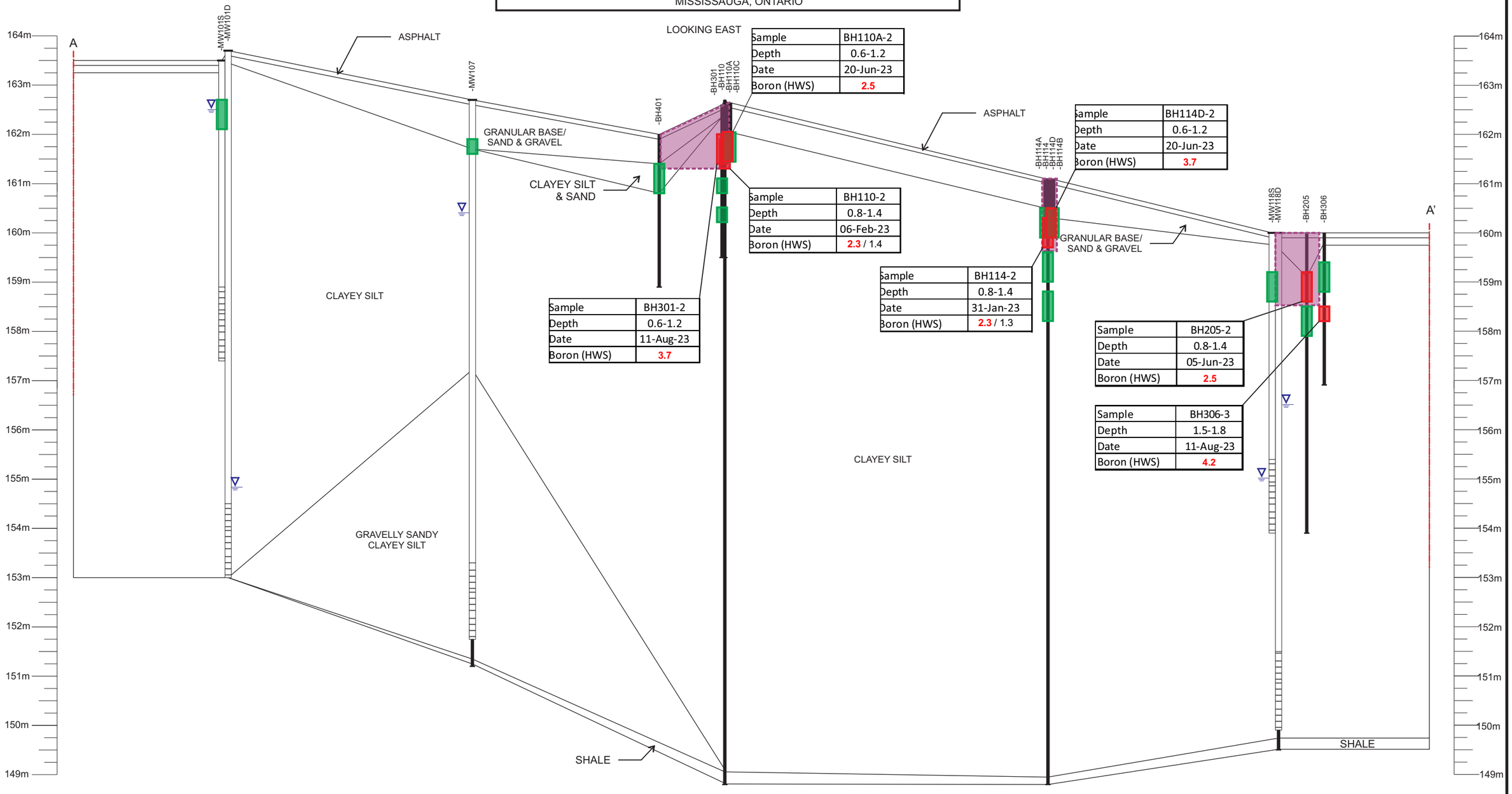
TERRAPEX

CROSS SECTION A-A' - SOIL ANALYTICAL RESULTS - OTHER REGULATED PARAMETERS

120, 128, 142, 148, 154, 158 QUEEN STREET SOUTH & 169 CRUMBIE STREET
MISSISSAUGA, ONTARIO

CLIENT

DE ZEN REALTY COMPANY LIMITED



Sample	BH110A-2
Depth	0.6-1.2
Date	20-Jun-23
Boron (HWS)	2.5

Sample	BH110-2
Depth	0.8-1.4
Date	06-Feb-23
Boron (HWS)	2.3 / 1.4

Sample	BH301-2
Depth	0.6-1.2
Date	11-Aug-23
Boron (HWS)	3.7

Sample	BH114D-2
Depth	0.6-1.2
Date	20-Jun-23
Boron (HWS)	3.7

Sample	BH114-2
Depth	0.8-1.4
Date	31-Jan-23
Boron (HWS)	2.3 / 1.3

Sample	BH205-2
Depth	0.8-1.4
Date	05-Jun-23
Boron (HWS)	2.5

Sample	BH306-3
Depth	1.5-1.8
Date	11-Aug-23
Boron (HWS)	4.2

LEGEND

- MONITORING WELL
- SCREENED LEVEL
- BOREHOLE
- GROUNDWATER LEVEL (AS OF MARCH 15, 2023)
- INFERRED GROUNDWATER LEVEL
- EXTENT OF IMPACTS IN SOIL

SOIL ANALYSIS INFORMATION

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

SCS (Site Conditions Standards) refer to Standards from Table 3 of April 15, 2011 *Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act*; Residential / Parkland / Institutional land use, medium and fine textured soil

Sample I.D. — Sample depth

BH103-4 – (depth)		TABLE 3 SCS
PARAMETERS	µg/g	
BORON (HWS)		1.5

Concentration

VERTICAL SCALE: 0 2m 4m

HORIZONTAL SCALE: 0 25m 50m

	CH244.00
SCALE	AS SHOWN
DATE	DECEMBER 2023
DRAWN AB	CHECKED
DRAWING #	FIGURE 34

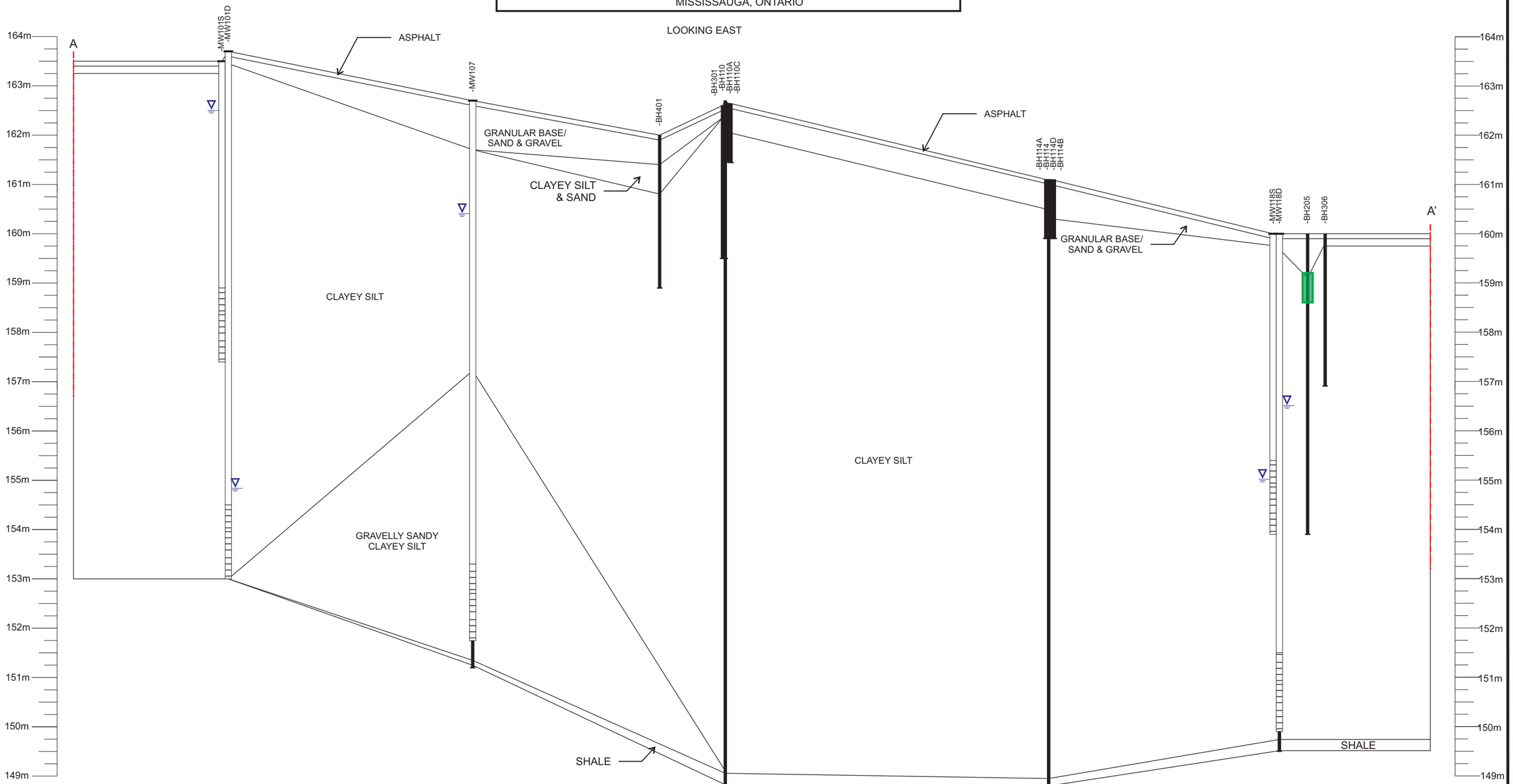
TERRAPEX

CROSS SECTION A-A' - SOIL ANALYTICAL RESULTS - ABNs

120, 128, 142, 148, 154, 158 QUEEN STREET SOUTH & 169 CRUMBIE STREET
MISSISSAUGA, ONTARIO

CLIENT

DE ZEN REALTY COMPANY LIMITED



LEGEND

- MONITORING WELL
- SCREENED LEVEL
- BOREHOLE
- GROUNDWATER LEVEL (AS OF MARCH 15, 2023)
- INFERRED GROUNDWATER LEVEL

SOIL ANALYSIS INFORMATION

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

SCS (Site Conditions Standards) refer to Standards from Table 3 of April 15, 2011 *Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act*; Residential / Parkland / Institutional land use, medium and fine textured soil

VERTICAL SCALE: 0 — 2m — 4m

HORIZONTAL SCALE: 0 — 25m — 50m

	CH244.00
SCALE	AS SHOWN
DATE	DECEMBER 2023
DRAWN	AB
CHECKED	
DRAWING #	FIGURE 35

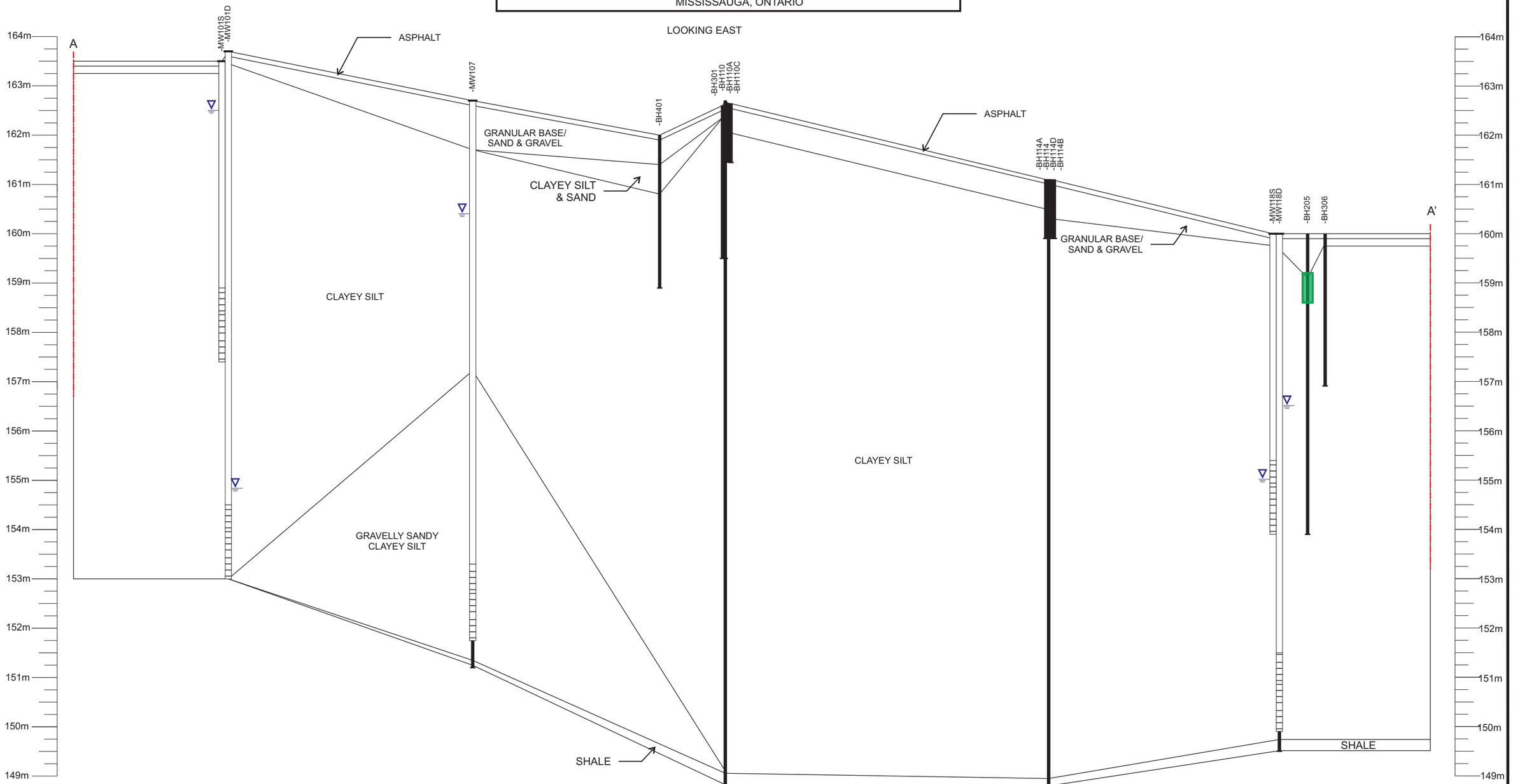
TERRAPEX

CROSS SECTION A-A' - SOIL ANALYTICAL RESULTS - CPs

120, 128, 142, 148, 154, 158 QUEEN STREET SOUTH & 169 CRUMBIE STREET
MISSISSAUGA, ONTARIO

CLIENT

DE ZEN REALTY COMPANY LIMITED



LEGEND

- MONITORING WELL
- SCREENED LEVEL
- BOREHOLE
- GROUNDWATER LEVEL (AS OF MARCH 15, 2023)
- INFERRED GROUNDWATER LEVEL

SOIL ANALYSIS INFORMATION

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

SCS (Site Conditions Standards) refer to Standards from Table 3 of April 15, 2011 *Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act*; Residential / Parkland / Institutional land use, medium and fine textured soil

VERTICAL SCALE: 0 — 2m — 4m

HORIZONTAL SCALE: 0 — 25m — 50m

CH244.00

SCALE: AS SHOWN

DATE: DECEMBER 2023

DRAWN: AB | CHECKED:

DRAWING #

FIGURE 36

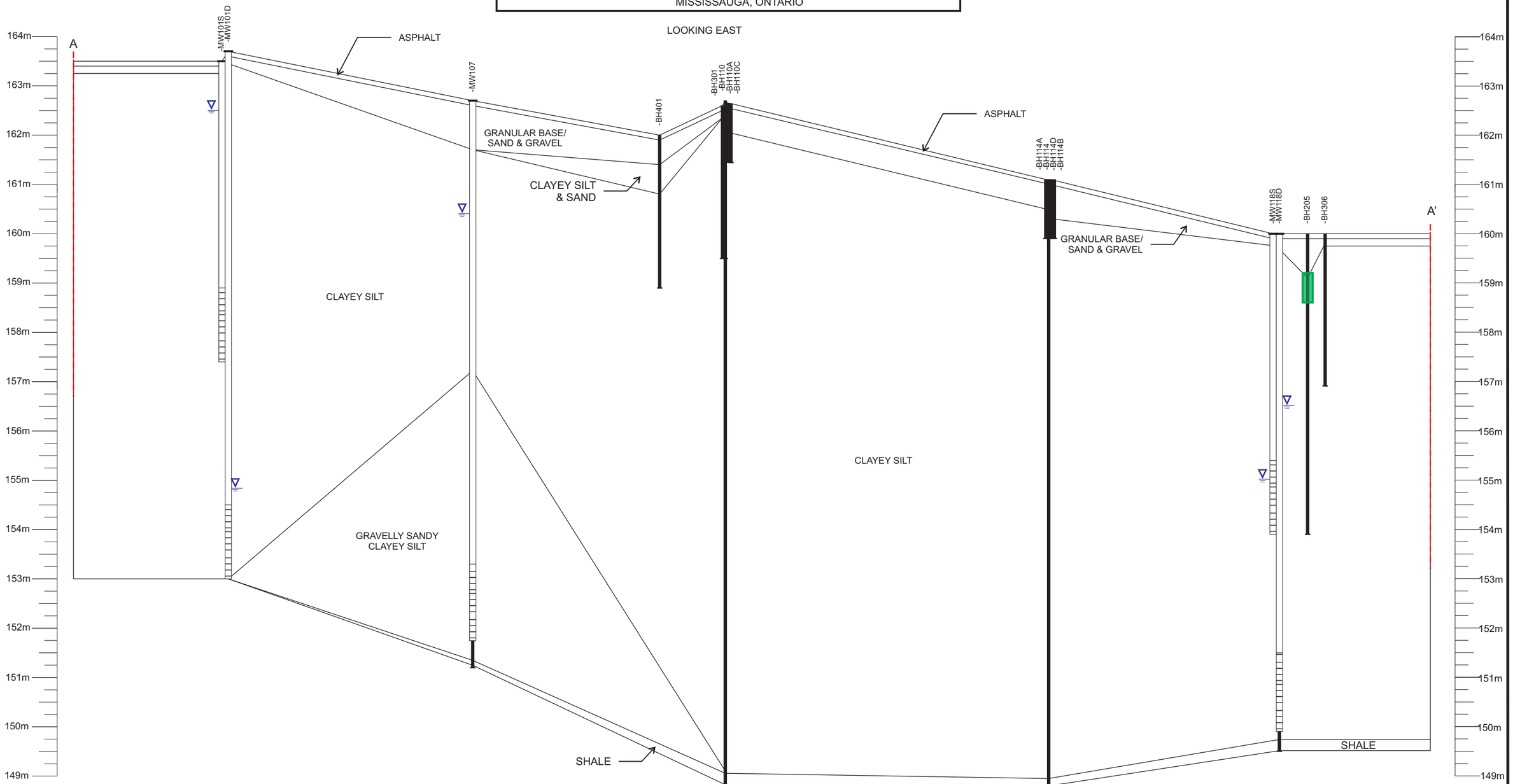
TERRAPEX

CROSS SECTION A-A' - SOIL ANALYTICAL RESULTS - PCBs

120, 128, 142, 148, 154, 158 QUEEN STREET SOUTH & 169 CRUMBIE STREET
MISSISSAUGA, ONTARIO

CLIENT

DE ZEN REALTY COMPANY LIMITED



LEGEND

- MONITORING WELL
- SCREENED LEVEL
- BOREHOLE
- GROUNDWATER LEVEL (AS OF MARCH 15, 2023)
- INFERRED GROUNDWATER LEVEL

SOIL ANALYSIS INFORMATION

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

SCS (Site Conditions Standards) refer to Standards from Table 3 of April 15, 2011 *Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act*; Residential / Parkland / Institutional land use, medium and fine textured soil

VERTICAL SCALE: 0 — 2m — 4m

HORIZONTAL SCALE: 0 — 25m — 50m

CH244.00

SCALE: AS SHOWN

DATE: DECEMBER 2023

DRAWN: AB | CHECKED:

DRAWING #

FIGURE 37

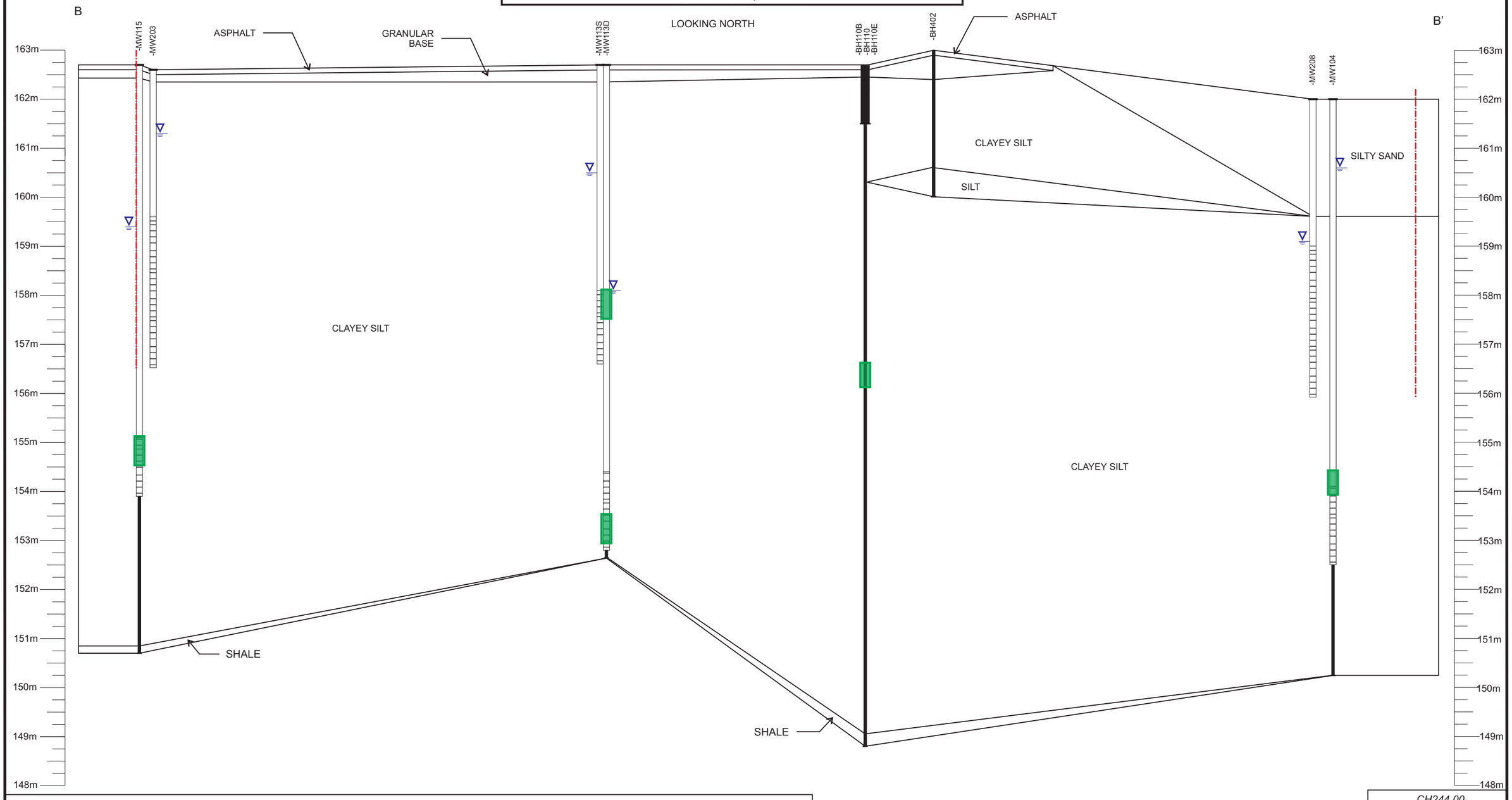
TERRAPEX

CROSS SECTION B-B' - SOIL ANALYTICAL RESULTS - BTEX

120, 128, 142, 148, 154, 158 QUEEN STREET SOUTH & 169 CRUMBIE STREET
MISSISSAUGA, ONTARIO

CLIENT

DE ZEN REALTY COMPANY LIMITED



LEGEND

- MONITORING WELL
- SCREENED LEVEL
- BOREHOLE
- GROUNDWATER LEVEL (AS OF MARCH 15, 2023)
- INFERRED GROUNDWATER LEVEL

SOIL ANALYSIS INFORMATION

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

SCS (Site Conditions Standards) refer to Standards from Table 3 of April 15, 2011 *Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act*; Residential / Parkland / Institutional land use, medium and fine textured soil

VERTICAL SCALE: 0 2m 4m

HORIZONTAL SCALE: 0 25m 50m

CH244.00

SCALE: AS SHOWN

DATE: DECEMBER 2023

DRAWN: AB | CHECKED:

DRAWING #

FIGURE 38

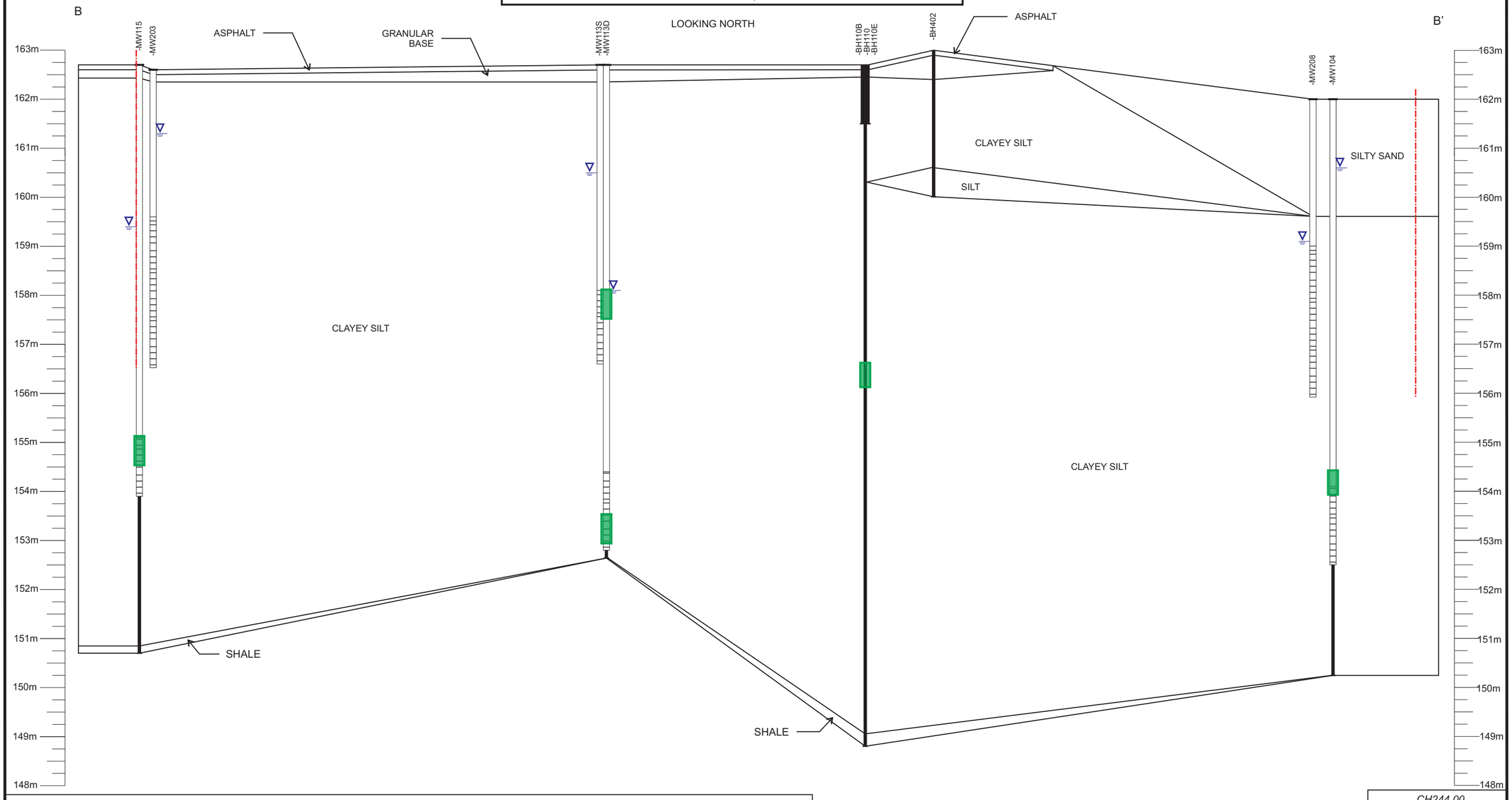
TERRAPEX

CROSS SECTION B-B' - SOIL ANALYTICAL RESULTS - PHCs

120, 128, 142, 148, 154, 158 QUEEN STREET SOUTH & 169 CRUMBIE STREET
MISSISSAUGA, ONTARIO

CLIENT

DE ZEN REALTY COMPANY LIMITED



LEGEND

- MONITORING WELL
- SCREENED LEVEL
- BOREHOLE
- GROUNDWATER LEVEL (AS OF MARCH 15, 2023)
- INFERRED GROUNDWATER LEVEL

SOIL ANALYSIS INFORMATION

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

SCS (Site Conditions Standards) refer to Standards from Table 3 of April 15, 2011 *Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act*; Residential / Parkland / Institutional land use, medium and fine textured soil

VERTICAL SCALE: 0 2m 4m

HORIZONTAL SCALE: 0 25m 50m

CH244.00

SCALE: AS SHOWN

DATE: DECEMBER 2023

DRAWN: AB | CHECKED:

DRAWING #

FIGURE 39

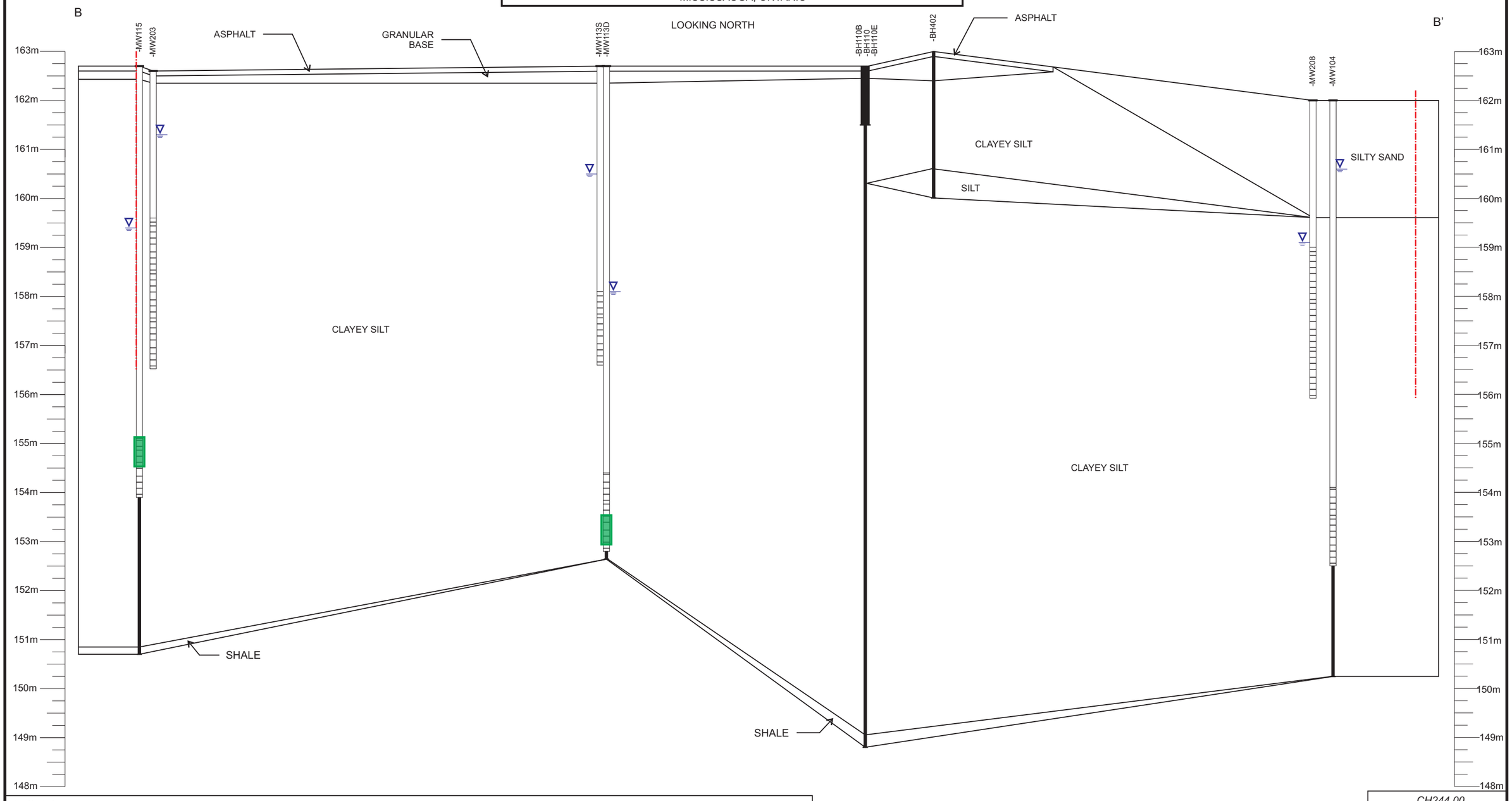
TERRAPEX

CROSS SECTION B-B' - SOIL ANALYTICAL RESULTS - VOCs

120, 128, 142, 148, 154, 158 QUEEN STREET SOUTH & 169 CRUMBIE STREET
MISSISSAUGA, ONTARIO

CLIENT

DE ZEN REALTY COMPANY LIMITED



LEGEND

- MONITORING WELL
- SCREENED LEVEL
- BOREHOLE
- GROUNDWATER LEVEL (AS OF MARCH 15, 2023)
- INFERRED GROUNDWATER LEVEL

SOIL ANALYSIS INFORMATION

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

SCS (Site Conditions Standards) refer to Standards from Table 3 of April 15, 2011 *Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act*; Residential / Parkland / Institutional land use, medium and fine textured soil

VERTICAL SCALE: 0 2m 4m

HORIZONTAL SCALE: 0 25m 50m

CH244.00

SCALE: AS SHOWN

DATE: DECEMBER 2023

DRAWN: AB | CHECKED:

DRAWING #

FIGURE 40

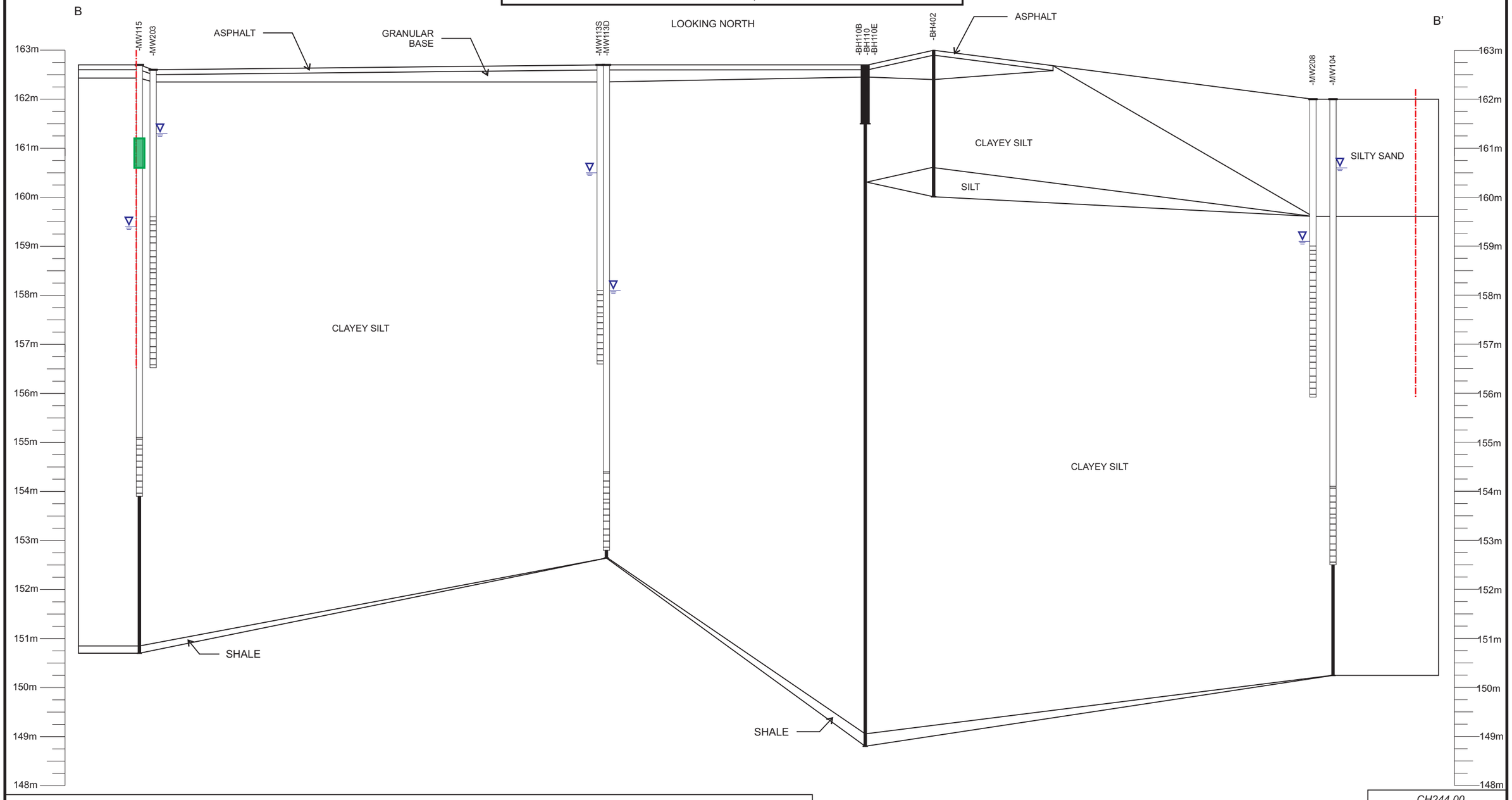
TERRAPEX

CROSS SECTION B-B' - SOIL ANALYTICAL RESULTS - PAHs

120, 128, 142, 148, 154, 158 QUEEN STREET SOUTH & 169 CRUMBIE STREET
MISSISSAUGA, ONTARIO

CLIENT

DE ZEN REALTY COMPANY LIMITED



LEGEND

- MONITORING WELL
- SCREENED LEVEL
- BOREHOLE
- GROUNDWATER LEVEL (AS OF MARCH 15, 2023)
- INFERRED GROUNDWATER LEVEL

SOIL ANALYSIS INFORMATION

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

SCS (Site Conditions Standards) refer to Standards from Table 3 of April 15, 2011 *Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act*; Residential / Parkland / Institutional land use, medium and fine textured soil

VERTICAL SCALE: 0 2m 4m

HORIZONTAL SCALE: 0 25m 50m

CH244.00

SCALE: AS SHOWN

DATE: DECEMBER 2023

DRAWN: AB | CHECKED:

DRAWING #

FIGURE 41

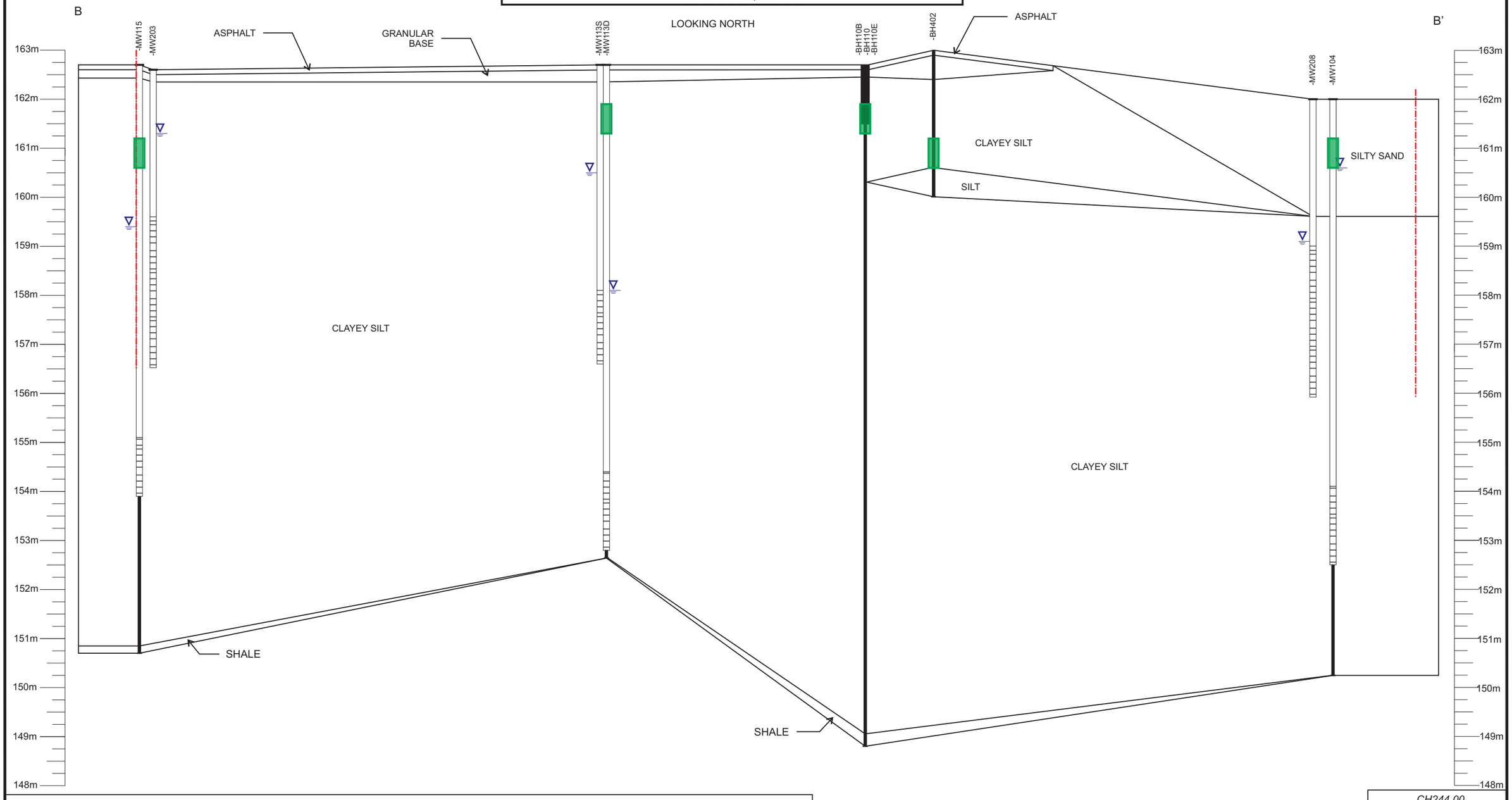
TERRAPEX

CROSS SECTION B-B' - SOIL ANALYTICAL RESULTS - METALS

120, 128, 142, 148, 154, 158 QUEEN STREET SOUTH & 169 CRUMBIE STREET
MISSISSAUGA, ONTARIO

CLIENT

DE ZEN REALTY COMPANY LIMITED



LEGEND

- MONITORING WELL
- SCREENED LEVEL
- BOREHOLE
- GROUNDWATER LEVEL (AS OF MARCH 15, 2023)
- INFERRED GROUNDWATER LEVEL

SOIL ANALYSIS INFORMATION

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

SCS (Site Conditions Standards) refer to Standards from Table 3 of April 15, 2011 *Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act*; Residential / Parkland / Institutional land use, medium and fine textured soil

VERTICAL SCALE: 0 2m 4m

HORIZONTAL SCALE: 0 25m 50m

CH244.00

SCALE: AS SHOWN

DATE: DECEMBER 2023

DRAWN: AB | CHECKED:

DRAWING #

FIGURE 42

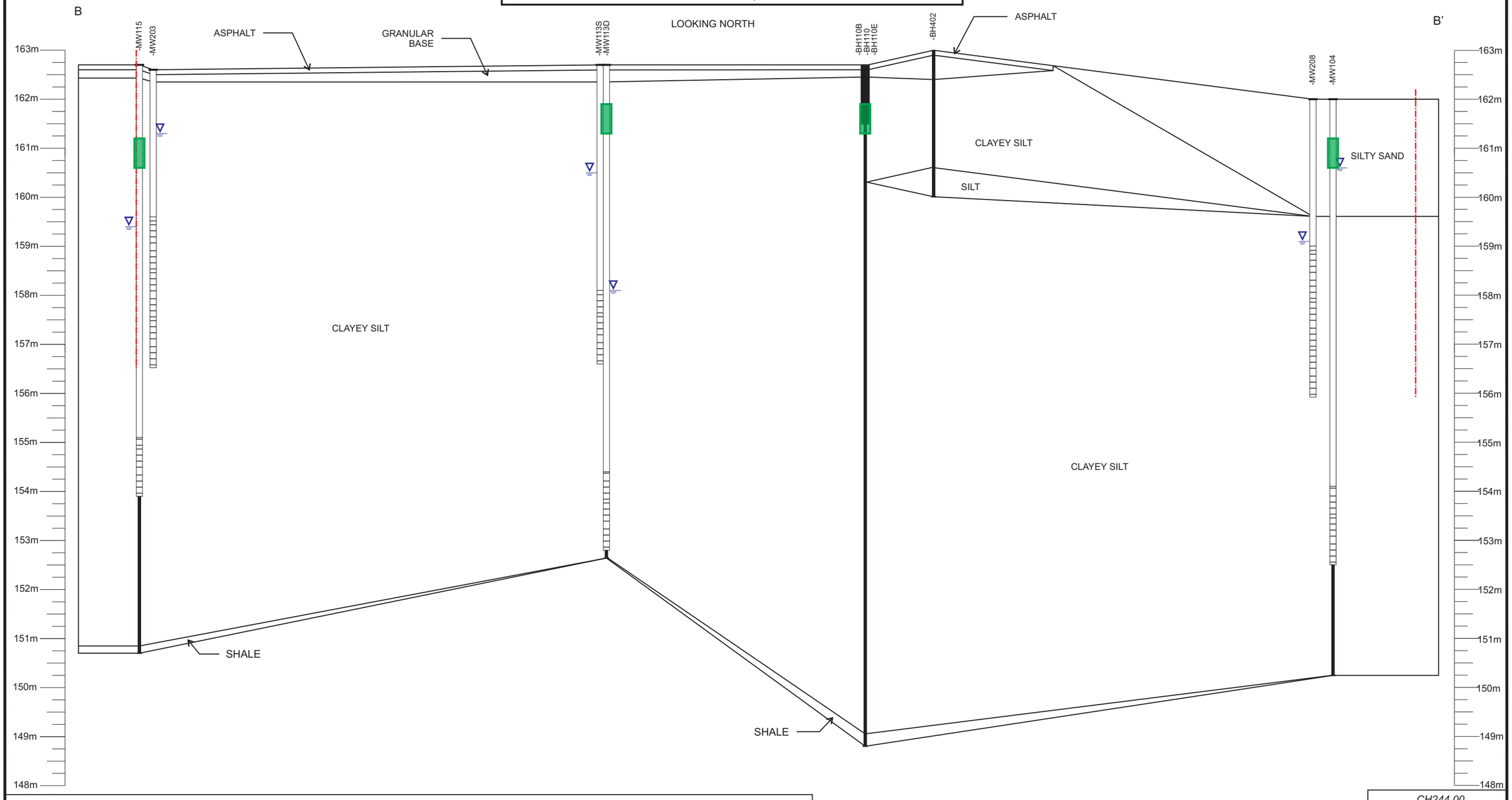
TERRAPEX

CROSS SECTION B-B' - SOIL ANALYTICAL RESULTS - HYDRIDE-FORMING METALS

120, 128, 142, 148, 154, 158 QUEEN STREET SOUTH & 169 CRUMBIE STREET
MISSISSAUGA, ONTARIO

CLIENT

DE ZEN REALTY COMPANY LIMITED



LEGEND

- MONITORING WELL
- SCREENED LEVEL
- BOREHOLE
- GROUNDWATER LEVEL (AS OF MARCH 15, 2023)
- INFERRED GROUNDWATER LEVEL

SOIL ANALYSIS INFORMATION

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

SCS (Site Conditions Standards) refer to Standards from Table 3 of April 15, 2011 *Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act*; Residential / Parkland / Institutional land use, medium and fine textured soil

VERTICAL SCALE: 0 2m 4m

HORIZONTAL SCALE: 0 25m 50m

	CH244.00
SCALE	AS SHOWN
DATE	DECEMBER 2023
DRAWN	AB
CHECKED	
DRAWING #	FIGURE 43

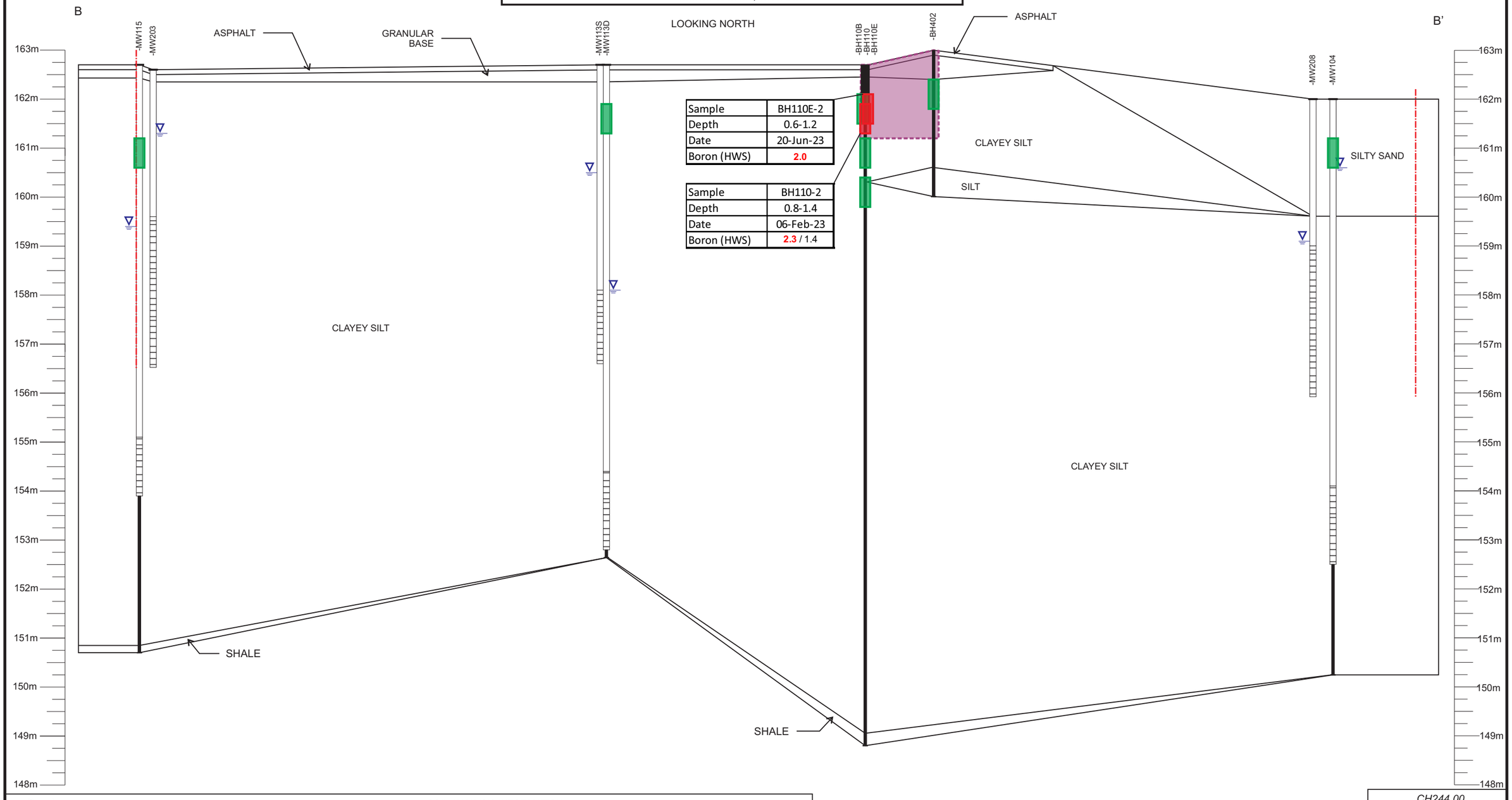
TERRAPEX

CROSS SECTION B-B' - SOIL ANALYTICAL RESULTS - OTHER REGULATED PARAMETERS

120, 128, 142, 148, 154, 158 QUEEN STREET SOUTH & 169 CRUMBIE STREET
MISSISSAUGA, ONTARIO

CLIENT

DE ZEN REALTY COMPANY LIMITED



Sample	BH110E-2
Depth	0.6-1.2
Date	20-Jun-23
Boron (HWS)	2.0

Sample	BH110-2
Depth	0.8-1.4
Date	06-Feb-23
Boron (HWS)	2.3 / 1.4

LEGEND

- MONITORING WELL
- SCREENED LEVEL
- BOREHOLE
- GROUNDWATER LEVEL (AS OF MARCH 15, 2023)
- INFERRED GROUNDWATER LEVEL
- EXTENT OF IMPACTS IN SOIL

SOIL ANALYSIS INFORMATION

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

SCS (Site Conditions Standards) refer to Standards from Table 3 of April 15, 2011 *Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act*; Residential / Parkland / Institutional land use, medium and fine textured soil

Sample I.D. — Sample depth

BH103-4 – (depth)		TABLE 3 SCS
PARAMETERS	µg/g	
BORON (HWS)		1.5

Concentration

VERTICAL SCALE: 0 2m 4m

HORIZONTAL SCALE: 0 25m 50m

CH244.00

SCALE: AS SHOWN

DATE: DECEMBER 2023

DRAWN: AB CHECKED:

DRAWING #

FIGURE 44

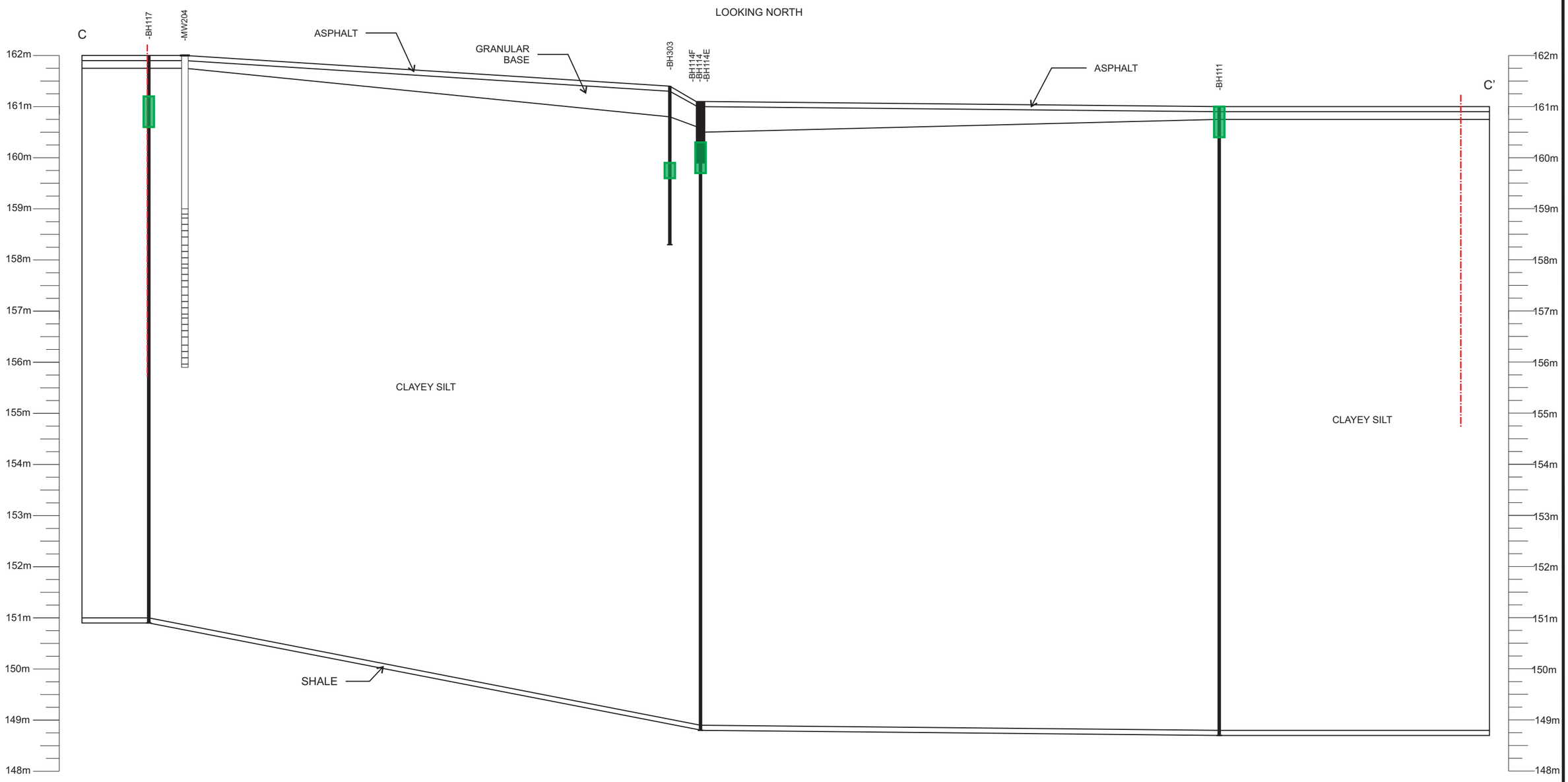
TERRAPEX

CROSS SECTION C-C' - SOIL ANALYTICAL RESULTS - METALS

120, 128, 142, 148, 154, 158 QUEEN STREET SOUTH & 169 CRUMBIE STREET
MISSISSAUGA, ONTARIO

CLIENT

DE ZEN REALTY COMPANY LIMITED



LEGEND

- MONITORING WELL
- SCREENED LEVEL
- BOREHOLE

SOIL ANALYSIS INFORMATION

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

SCS (Site Conditions Standards) refer to Standards from Table 3 of April 15, 2011 *Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act*; Residential / Parkland / Institutional land use, medium and fine textured soil

VERTICAL SCALE: 0 2m 4m

HORIZONTAL SCALE: 0 15m 30m

	CH244.00
SCALE	AS SHOWN
DATE	DECEMBER 2023
DRAWN AB	CHECKED
DRAWING #	FIGURE 45

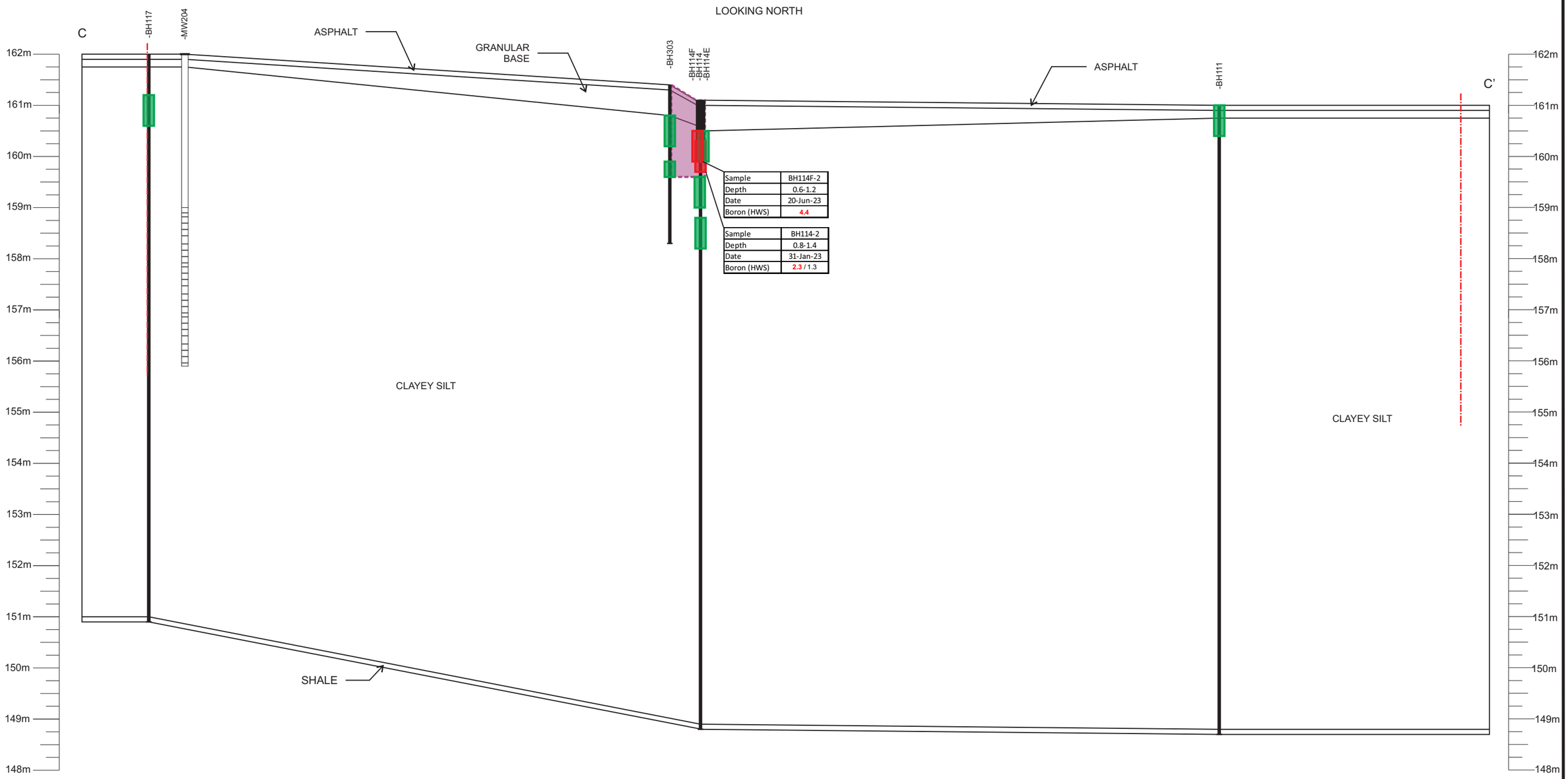
TERRAPEX

CROSS SECTION C-C' - SOIL ANALYTICAL RESULTS - OTHER REGULATED PARAMETERS

120, 128, 142, 148, 154, 158 QUEEN STREET SOUTH & 169 CRUMBIE STREET
MISSISSAUGA, ONTARIO

CLIENT

DE ZEN REALTY COMPANY LIMITED



LEGEND

- MONITORING WELL
- SCREENED LEVEL
- BOREHOLE

SOIL ANALYSIS INFORMATION

- Less than or equal to Table 3 SCS
- Greater than Table 3 SCS
- EXTENT OF IMPACTS IN SOIL

Sample I.D. — Sample depth: BH103-4 – (depth)	Concentration: µg/g	TABLE 3 SCS
PARAMETERS		
BORON (HWS)		1.5

SCS (Site Conditions Standards) refer to Standards from Table 3 of April 15, 2011 *Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act*; Residential / Parkland / Institutional land use, medium and fine textured soil

VERTICAL SCALE: 0 — 2m — 4m

HORIZONTAL SCALE: 0 — 15m — 30m

CH244.00	
SCALE	AS SHOWN
DATE	DECEMBER 2023
DRAWN AB	CHECKED
DRAWING #	FIGURE 46

TERRAPEX

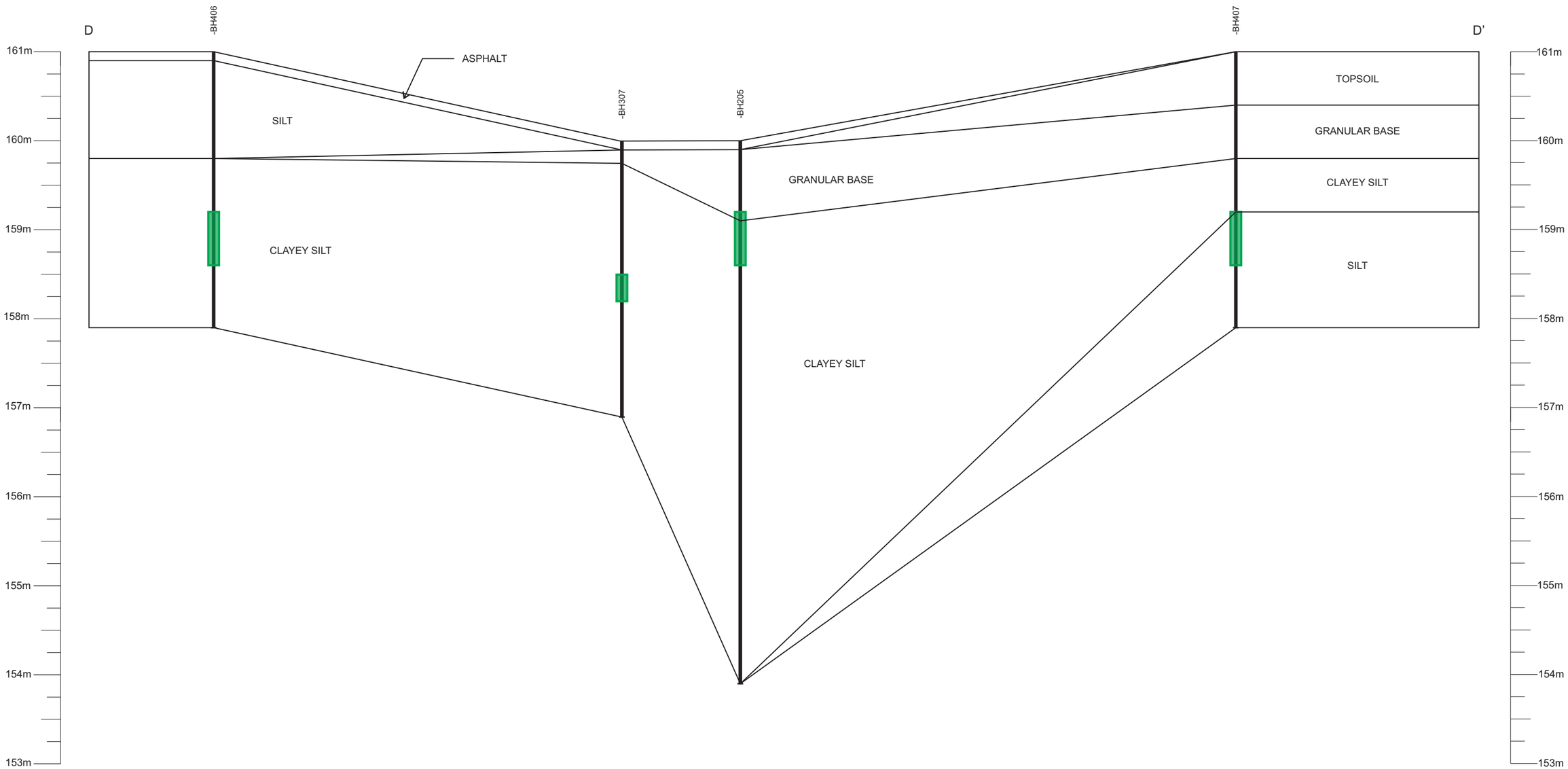
CROSS SECTION D-D' - SOIL ANALYTICAL RESULTS - METALS

120, 128, 142, 148, 154, 158 QUEEN STREET SOUTH & 169 CRUMBIE STREET
MISSISSAUGA, ONTARIO

CLIENT

DE ZEN REALTY COMPANY LIMITED

LOOKING NORTH



LEGEND

- MONITORING WELL
- SCREENED LEVEL
- BOREHOLE

SOIL ANALYSIS INFORMATION

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

SCS (Site Conditions Standards) refer to Standards from Table 3 of April 15, 2011 *Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act*; Residential / Parkland / Institutional land use, medium and fine textured soil

VERTICAL SCALE: 0 1m 2m

HORIZONTAL SCALE: 0 5m 10m

	CH244.00
SCALE	AS SHOWN
DATE	DECEMBER 2023
DRAWN	AB
CHECKED	
DRAWING #	FIGURE 47

TERRAPEX

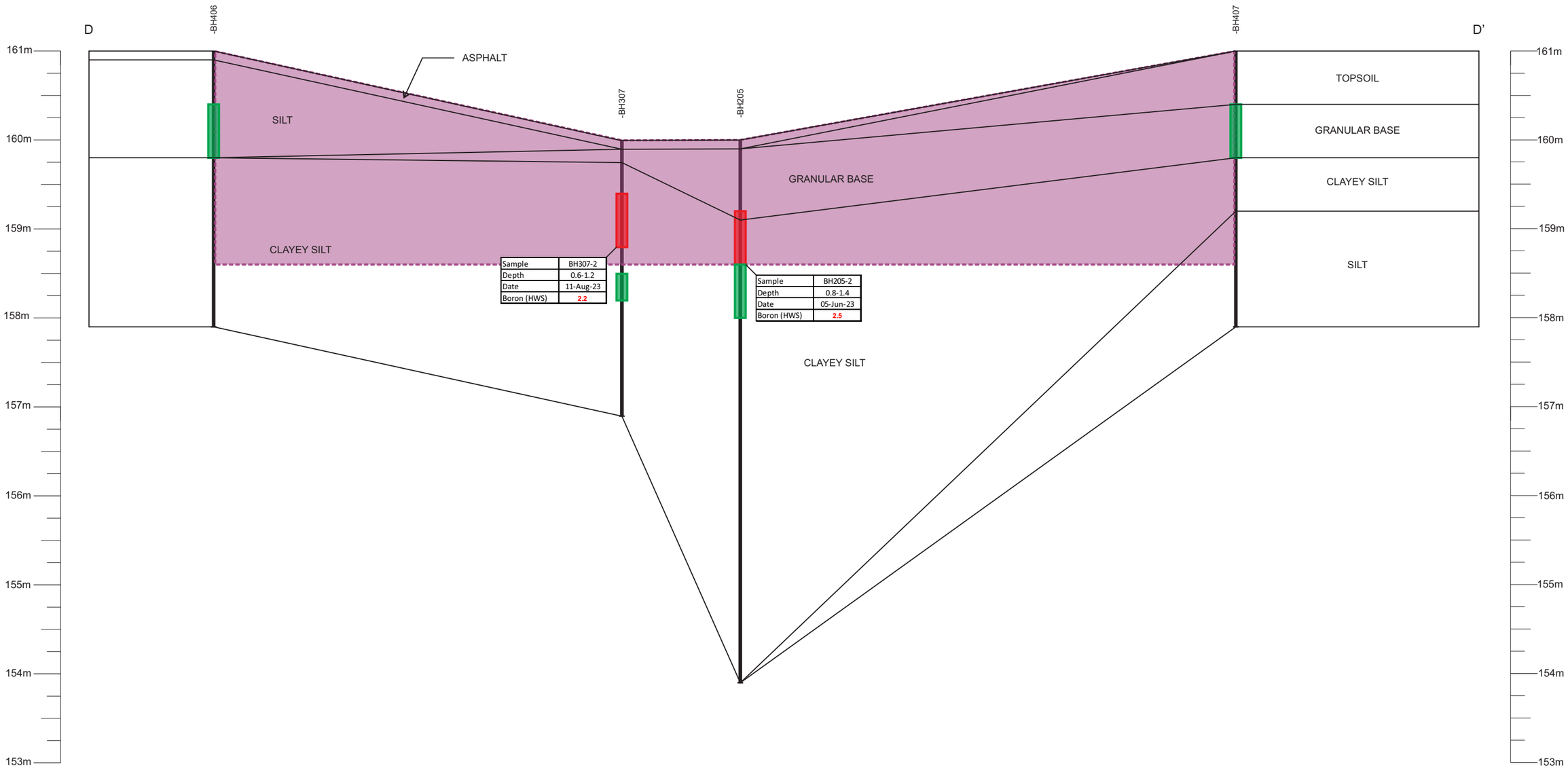
CROSS SECTION D-D' - SOIL ANALYTICAL RESULTS - OTHER REGULATED PARAMETERS

120, 128, 142, 148, 154, 158 QUEEN STREET SOUTH & 169 CRUMBIE STREET
MISSISSAUGA, ONTARIO

CLIENT

DE ZEN REALTY COMPANY LIMITED

LOOKING NORTH



LEGEND

- MONITORING WELL
- SCREENED LEVEL
- BOREHOLE

SOIL ANALYSIS INFORMATION

- Less than or equal to Table 3 SCS
- Greater than Table 3 SCS
- EXTENT OF IMPACTS IN SOIL

Sample I.D. — Sample depth		TABLE 3 SCS
BH103-4 – (depth)		
PARAMETERS	µg/g	
BORON (HWS)		1.5

Concentration

SCS (Site Conditions Standards) refer to Standards from Table 3 of April 15, 2011 *Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act*; Residential / Parkland / Institutional land use, medium and fine textured soil

VERTICAL SCALE: 0 — 1m — 2m

HORIZONTAL SCALE: 0 — 5m — 10m

CH244.00

SCALE: AS SHOWN

DATE: DECEMBER 2023

DRAWN: AB | CHECKED:

DRAWING #

FIGURE 48

TERRAPEX

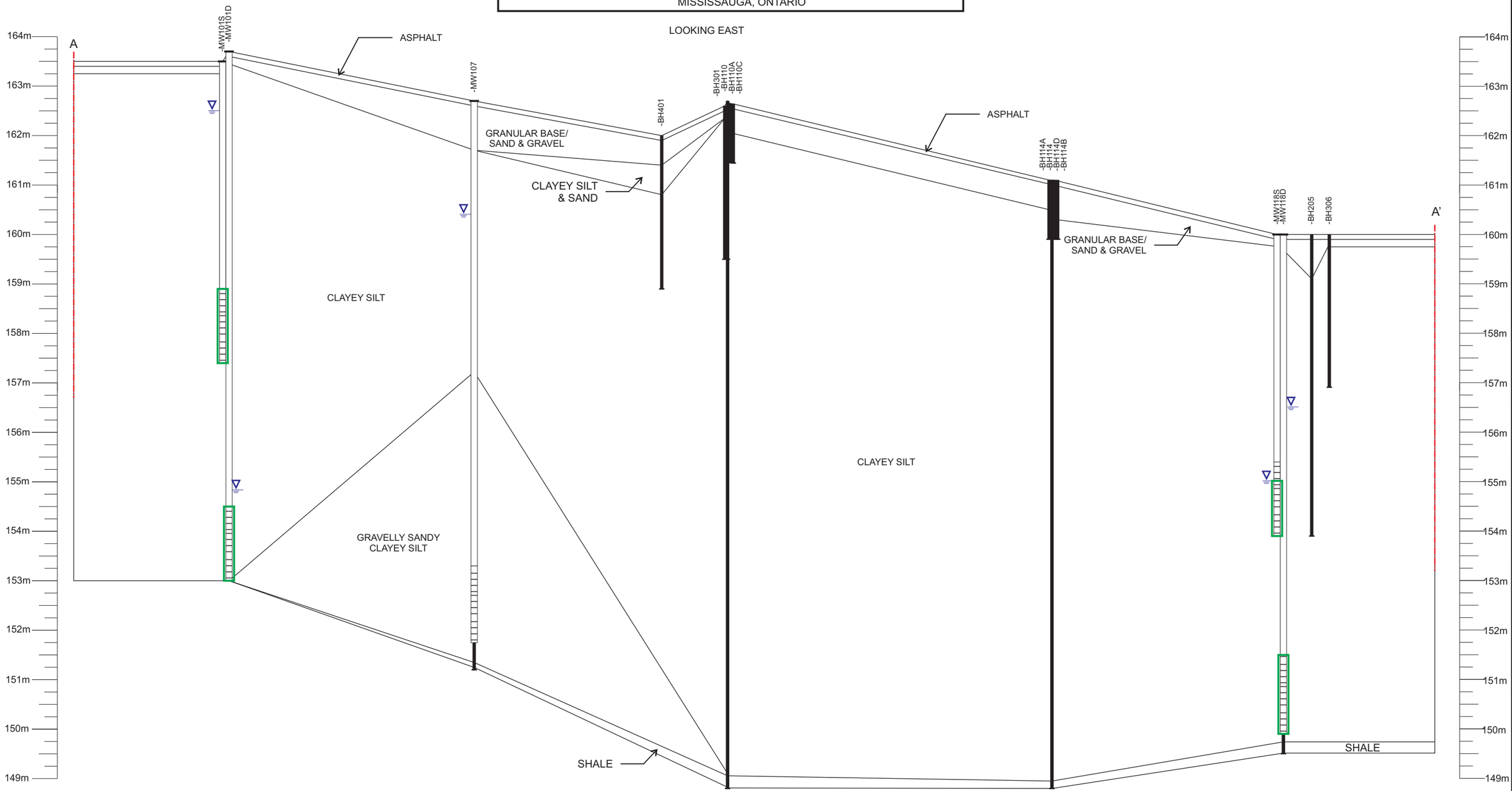
CROSS SECTION A-A' - GROUNDWATER ANALYTICAL RESULTS - BTEX

120, 128, 142, 148, 154, 158 QUEEN STREET SOUTH & 169 CRUMBIE STREET
MISSISSAUGA, ONTARIO

CLIENT

DE ZEN REALTY COMPANY LIMITED

LOOKING EAST



LEGEND

- MONITORING WELL
- SCREENED LEVEL
- BOREHOLE
- GROUNDWATER LEVEL (AS OF MARCH 15, 2023)
- INFERRED GROUNDWATER LEVEL

SOIL ANALYSIS INFORMATION

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

SCS (Site Conditions Standards) refer to Standards from Table 3 of April 15, 2011 *Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act*; Residential / Parkland / Institutional land use, medium and fine textured soil

VERTICAL SCALE: 0 — 2m — 4m

HORIZONTAL SCALE: 0 — 25m — 50m

CH244.00

SCALE: AS SHOWN

DATE: DECEMBER 2023

DRAWN: AB | CHECKED:

DRAWING #

FIGURE 49

TERRAPEX

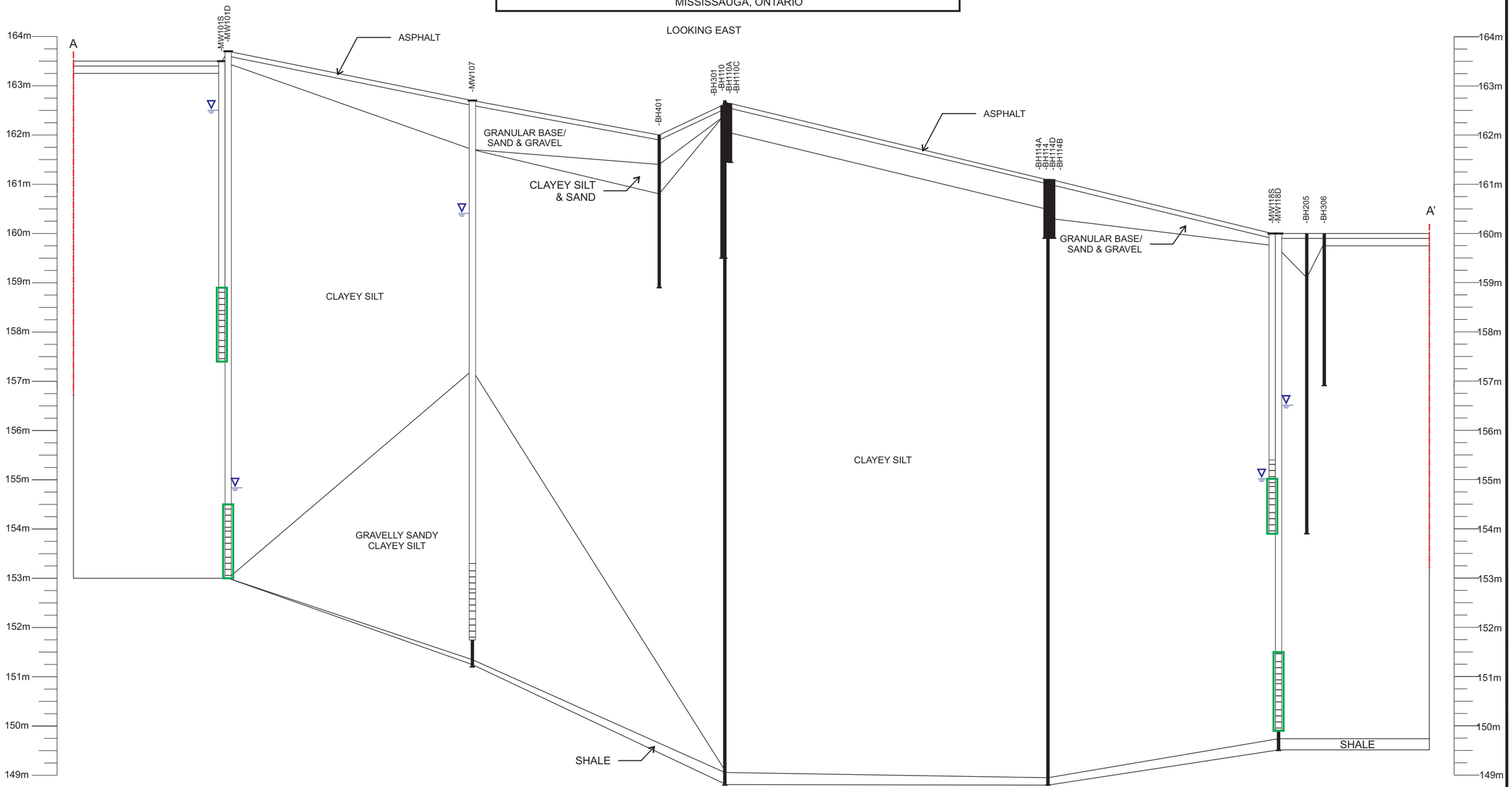
CROSS SECTION A-A' - GROUNDWATER ANALYTICAL RESULTS - PHCs

120, 128, 142, 148, 154, 158 QUEEN STREET SOUTH & 169 CRUMBIE STREET
MISSISSAUGA, ONTARIO

CLIENT

DE ZEN REALTY COMPANY LIMITED

LOOKING EAST



LEGEND

- MONITORING WELL
- SCREENED LEVEL
- BOREHOLE
- GROUNDWATER LEVEL (AS OF MARCH 15, 2023)
- INFERRED GROUNDWATER LEVEL

SOIL ANALYSIS INFORMATION

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

SCS (Site Conditions Standards) refer to Standards from Table 3 of April 15, 2011 *Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act*; Residential / Parkland / Institutional land use, medium and fine textured soil

VERTICAL SCALE: 0 — 2m — 4m

HORIZONTAL SCALE: 0 — 25m — 50m

	CH244.00
SCALE	AS SHOWN
DATE	DECEMBER 2023
DRAWN	AB
CHECKED	
DRAWING #	FIGURE 50

TERRAPEX

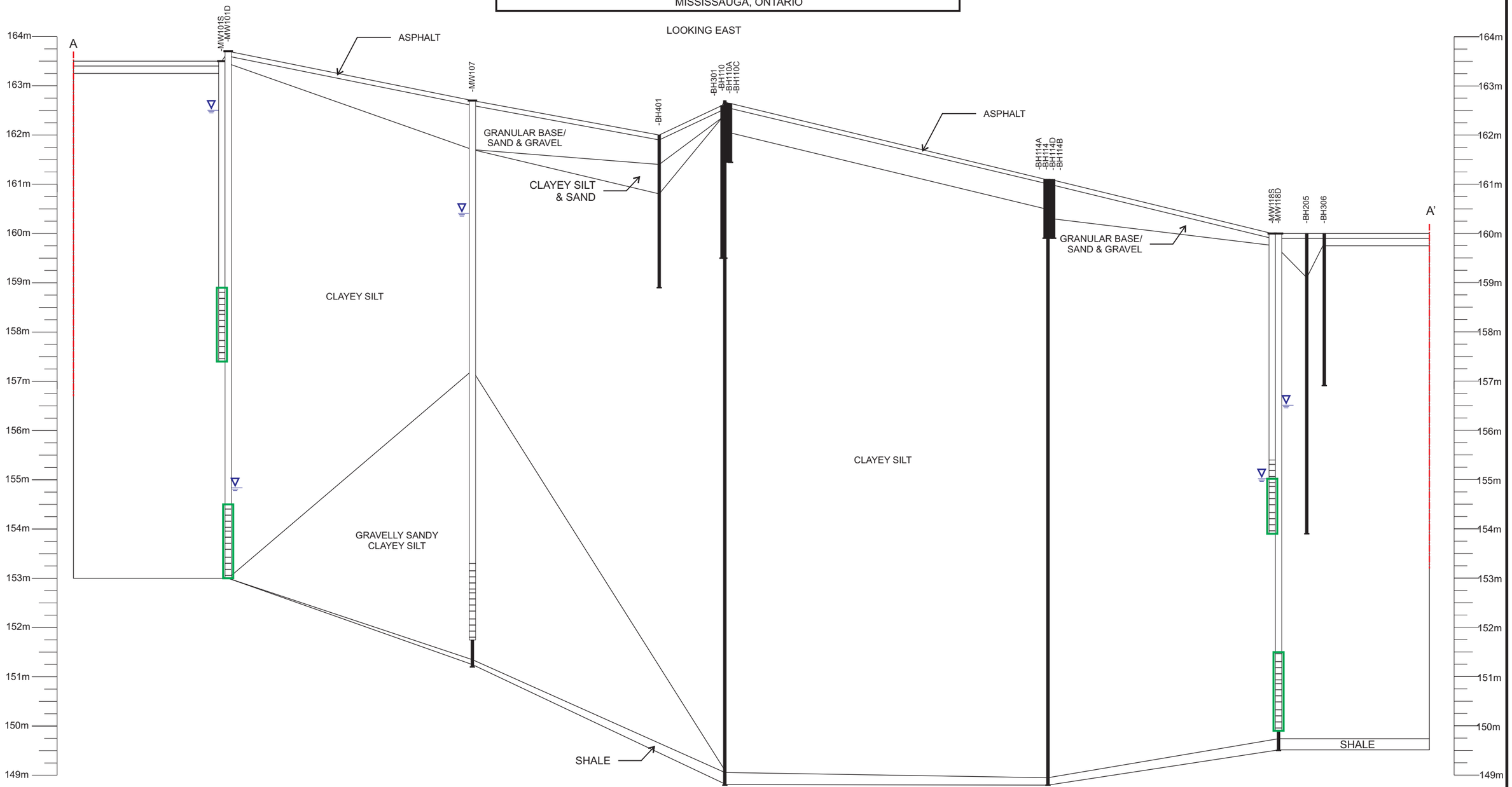
CROSS SECTION A-A' - GROUNDWATER ANALYTICAL RESULTS - VOCs

120, 128, 142, 148, 154, 158 QUEEN STREET SOUTH & 169 CRUMBIE STREET
MISSISSAUGA, ONTARIO

CLIENT

DE ZEN REALTY COMPANY LIMITED

LOOKING EAST



LEGEND

- MONITORING WELL
- SCREENED LEVEL
- BOREHOLE
- GROUNDWATER LEVEL (AS OF MARCH 15, 2023)
- INFERRED GROUNDWATER LEVEL

SOIL ANALYSIS INFORMATION

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

SCS (Site Conditions Standards) refer to Standards from Table 3 of April 15, 2011 *Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act*; Residential / Parkland / Institutional land use, medium and fine textured soil

VERTICAL SCALE: 0 2m 4m

HORIZONTAL SCALE: 0 25m 50m

	CH244.00
SCALE	AS SHOWN
DATE	DECEMBER 2023
DRAWN	AB
CHECKED	
DRAWING #	FIGURE 51

TERRAPEX

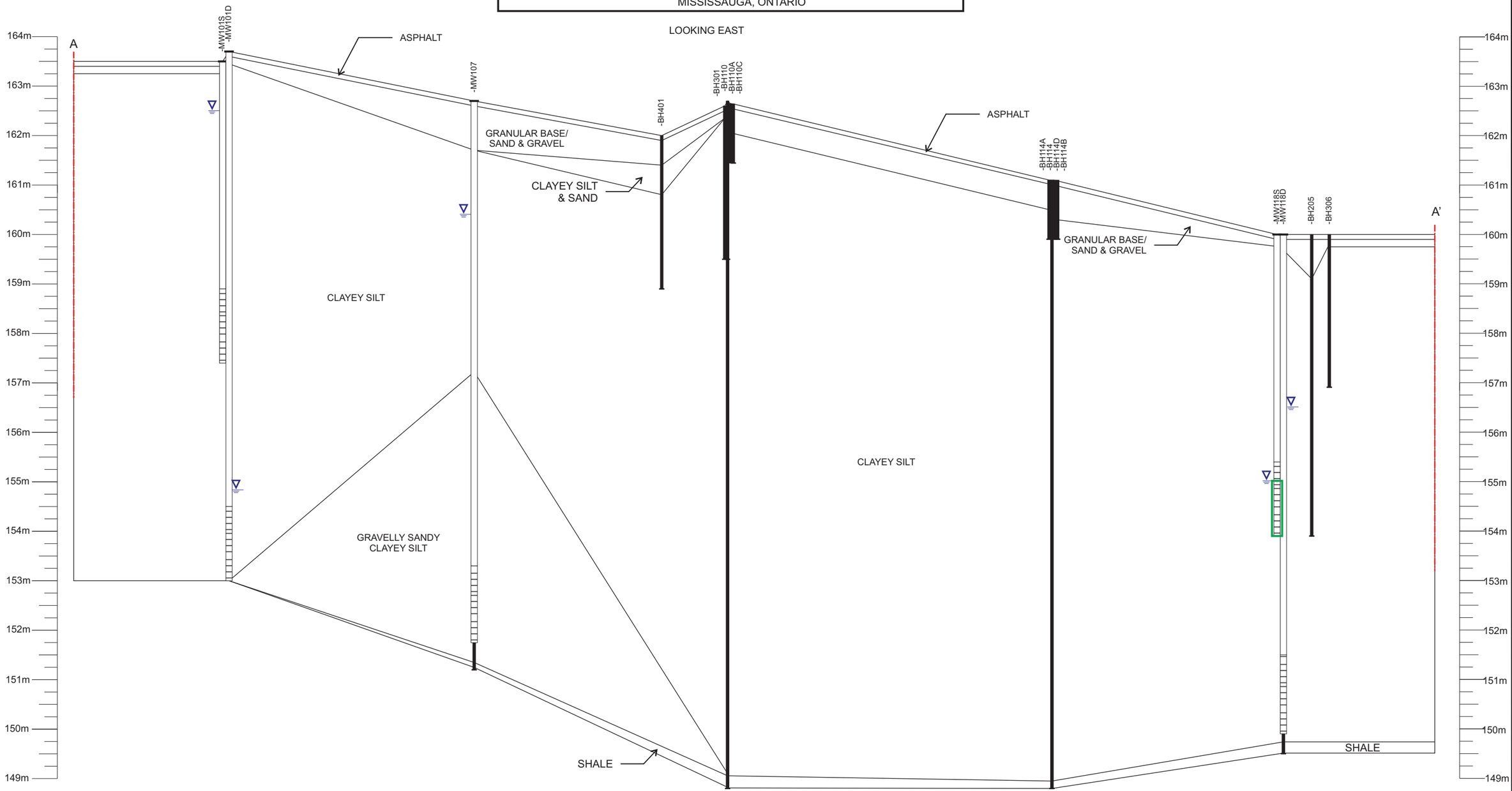
CROSS SECTION A-A' - GROUNDWATER ANALYTICAL RESULTS - PAHs

120, 128, 142, 148, 154, 158 QUEEN STREET SOUTH & 169 CRUMBIE STREET
MISSISSAUGA, ONTARIO

CLIENT

DE ZEN REALTY COMPANY LIMITED

LOOKING EAST



LEGEND

- MONITORING WELL
- SCREENED LEVEL
- BOREHOLE
- GROUNDWATER LEVEL (AS OF MARCH 15, 2023)
- INFERRED GROUNDWATER LEVEL

SOIL ANALYSIS INFORMATION

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

SCS (Site Conditions Standards) refer to Standards from Table 3 of April 15, 2011 *Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act*; Residential / Parkland / Institutional land use, medium and fine textured soil

VERTICAL SCALE: 0 — 2m — 4m

HORIZONTAL SCALE: 0 — 25m — 50m

CH244.00

SCALE: AS SHOWN

DATE: DECEMBER 2023

DRAWN: AB | CHECKED:

DRAWING #

FIGURE 52

TERRAPEX

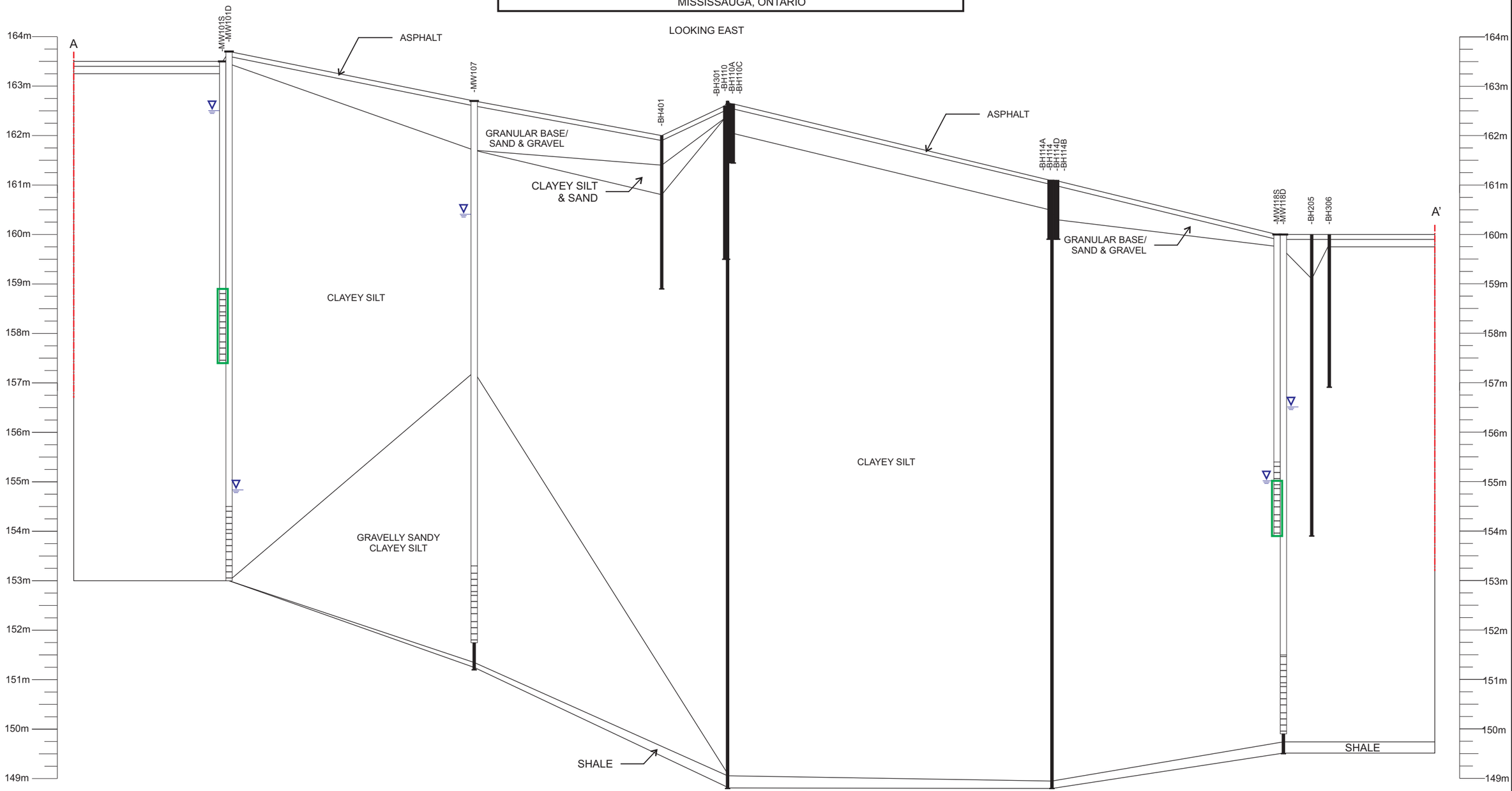
CROSS SECTION A-A' - GROUNDWATER ANALYTICAL RESULTS - METALS

120, 128, 142, 148, 154, 158 QUEEN STREET SOUTH & 169 CRUMBIE STREET
MISSISSAUGA, ONTARIO

CLIENT

DE ZEN REALTY COMPANY LIMITED

LOOKING EAST



LEGEND

- MONITORING WELL
- SCREENED LEVEL
- BOREHOLE
- GROUNDWATER LEVEL (AS OF MARCH 15, 2023)
- INFERRED GROUNDWATER LEVEL

SOIL ANALYSIS INFORMATION

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

SCS (Site Conditions Standards) refer to Standards from Table 3 of April 15, 2011 *Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act*; Residential / Parkland / Institutional land use, medium and fine textured soil

VERTICAL SCALE: 0 — 2m — 4m

HORIZONTAL SCALE: 0 — 25m — 50m

	CH244.00
SCALE	AS SHOWN
DATE	DECEMBER 2023
DRAWN	AB
CHECKED	
DRAWING #	FIGURE 53

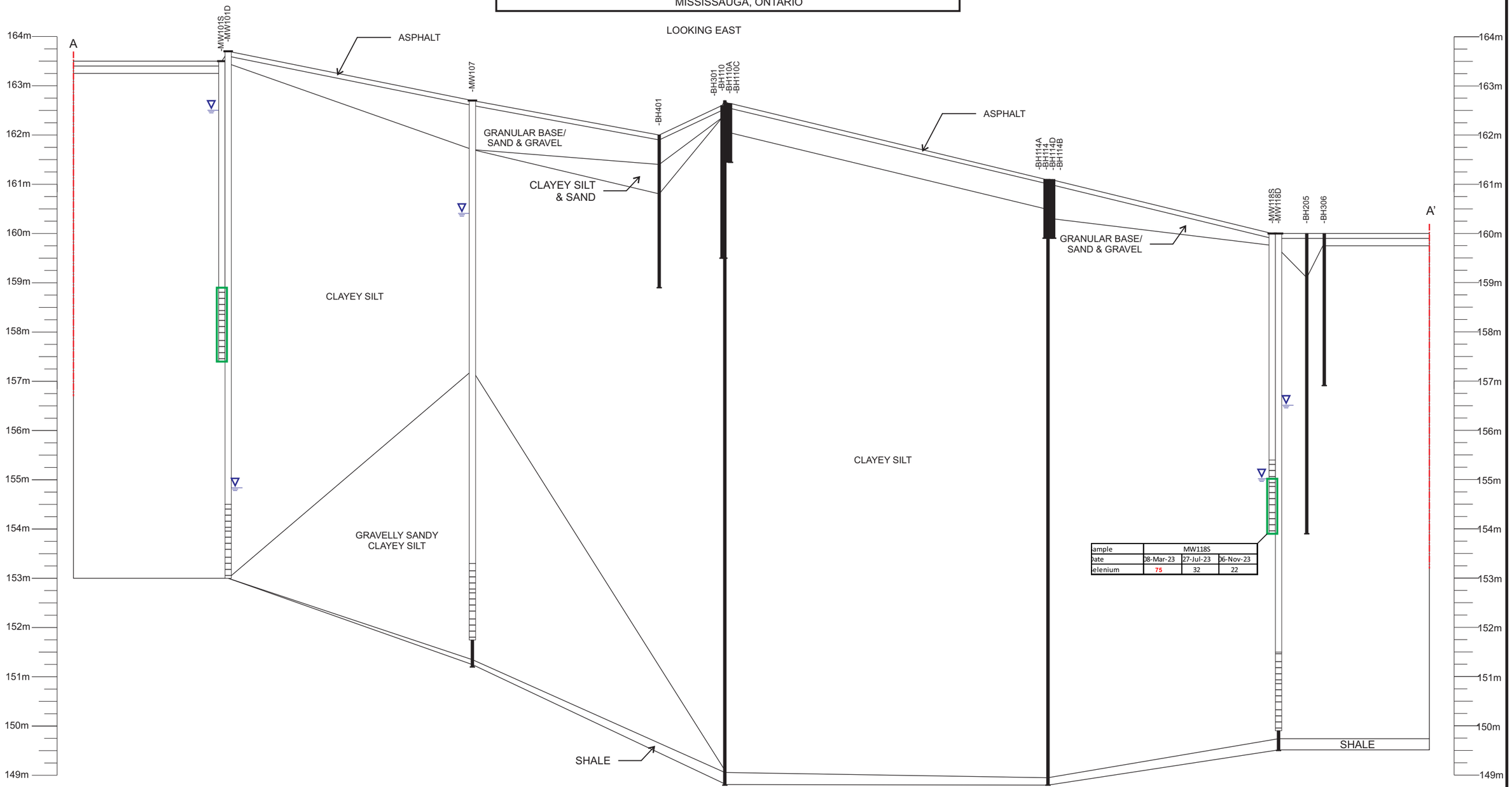
TERRAPEX

CROSS SECTION A-A' - GROUNDWATER ANALYTICAL RESULTS - HYDRIDE-FORMING METALS

120, 128, 142, 148, 154, 158 QUEEN STREET SOUTH & 169 CRUMBIE STREET
MISSISSAUGA, ONTARIO

CLIENT

DE ZEN REALTY COMPANY LIMITED



Sample	MW118S		
Date	08-Mar-23	27-Jul-23	06-Nov-23
Selenium	75	32	22

LEGEND

- MONITORING WELL
- SCREENED LEVEL
- BOREHOLE
- GROUNDWATER LEVEL (AS OF MARCH 15, 2023)
- INFERRED GROUNDWATER LEVEL

SOIL ANALYSIS INFORMATION

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

SCS (Site Conditions Standards) refer to Standards from Table 3 of April 15, 2011 *Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act*; Residential / Parkland / Institutional land use, medium and fine textured soil

Sample I.D. — Sample date

BH103-4 – (date)		TABLE 3 SCS
PARAMETERS	µg/L	
Selenium		63

Concentration

VERTICAL SCALE: 0 — 2m — 4m

HORIZONTAL SCALE: 0 — 25m — 50m

CH244.00

SCALE: AS SHOWN

DATE: DECEMBER 2023

DRAWN: AB | CHECKED:

DRAWING #

FIGURE 54

TERRAPEX

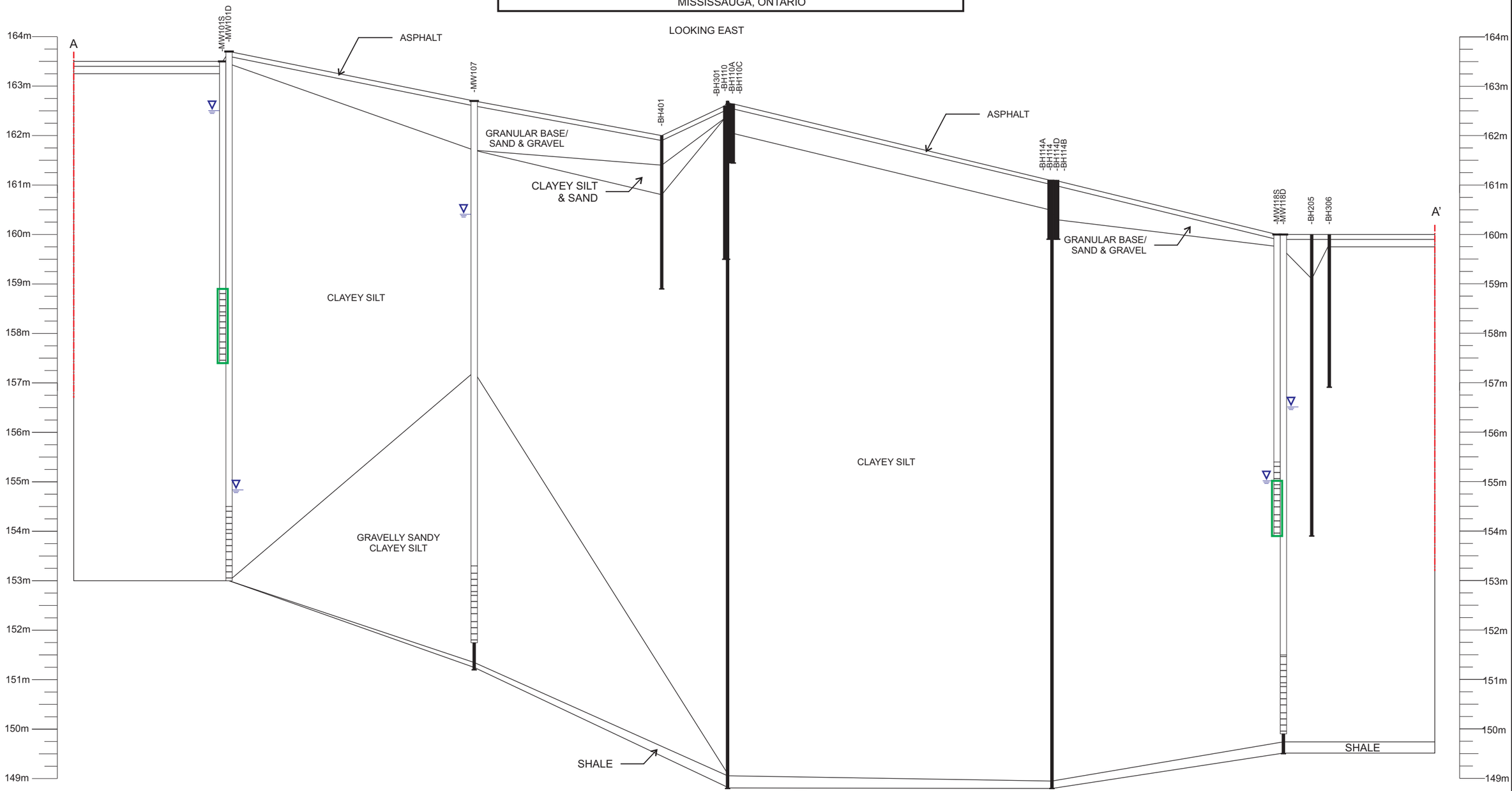
CROSS SECTION A-A' - GROUNDWATER ANALYTICAL RESULTS - OTHER REGULATED PARAMETERS

120, 128, 142, 148, 154, 158 QUEEN STREET SOUTH & 169 CRUMBIE STREET
MISSISSAUGA, ONTARIO

CLIENT

DE ZEN REALTY COMPANY LIMITED

LOOKING EAST



LEGEND

- MONITORING WELL
- SCREENED LEVEL
- BOREHOLE
- GROUNDWATER LEVEL (AS OF MARCH 15, 2023)
- INFERRED GROUNDWATER LEVEL

SOIL ANALYSIS INFORMATION

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

SCS (Site Conditions Standards) refer to Standards from Table 3 of April 15, 2011 *Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act*; Residential / Parkland / Institutional land use, medium and fine textured soil

VERTICAL SCALE: 0 2m 4m

HORIZONTAL SCALE: 0 25m 50m

	CH244.00
SCALE	AS SHOWN
DATE	DECEMBER 2023
DRAWN	AB
CHECKED	
DRAWING #	FIGURE 55

TERRAPEX

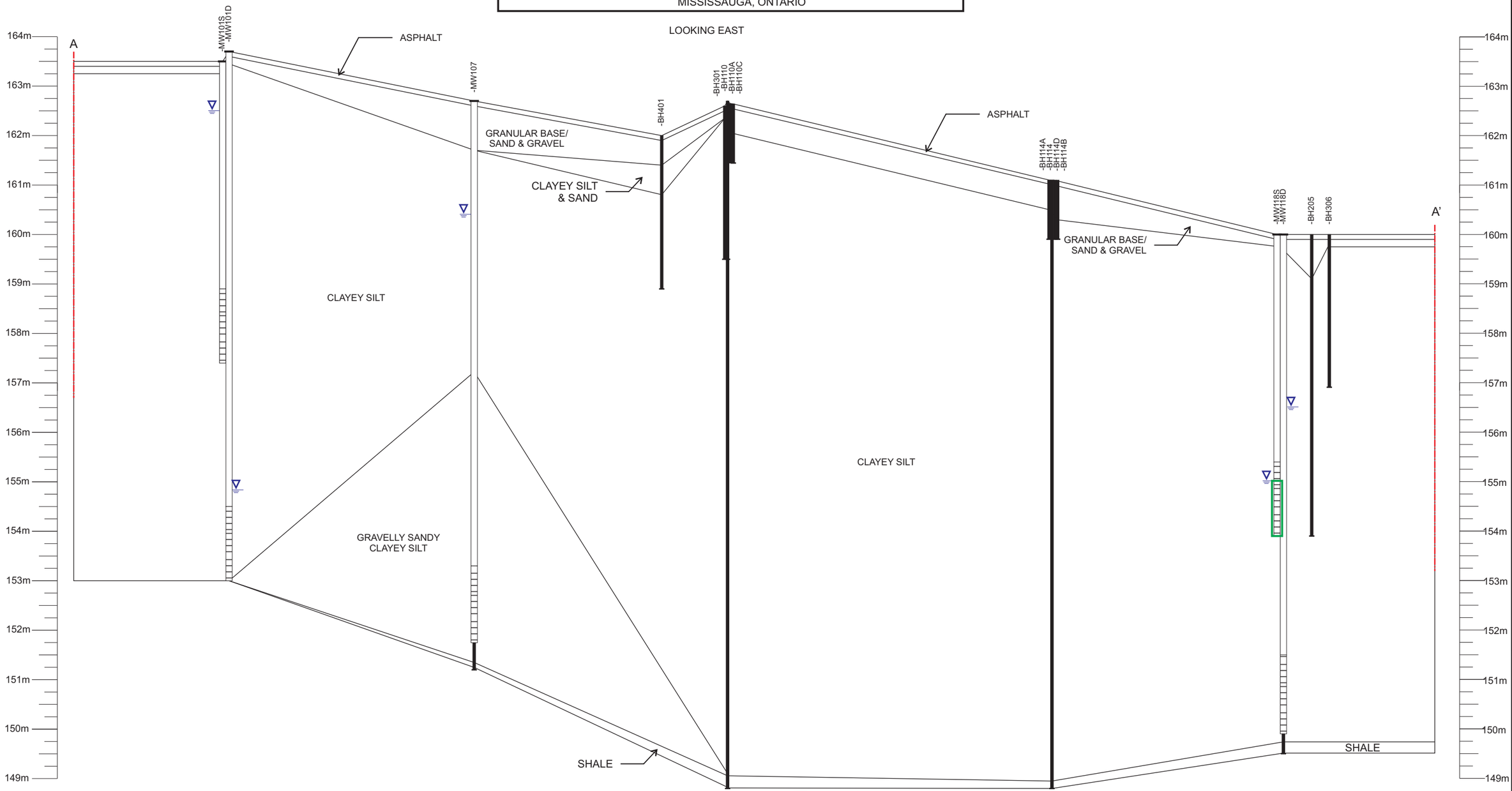
CROSS SECTION A-A' - GROUNDWATER ANALYTICAL RESULTS - ABNs

120, 128, 142, 148, 154, 158 QUEEN STREET SOUTH & 169 CRUMBIE STREET
MISSISSAUGA, ONTARIO

CLIENT

DE ZEN REALTY COMPANY LIMITED

LOOKING EAST



LEGEND

- MONITORING WELL
- SCREENED LEVEL
- BOREHOLE
- GROUNDWATER LEVEL (AS OF MARCH 15, 2023)
- INFERRED GROUNDWATER LEVEL

SOIL ANALYSIS INFORMATION

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

SCS (Site Conditions Standards) refer to Standards from Table 3 of April 15, 2011 *Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act*; Residential / Parkland / Institutional land use, medium and fine textured soil

VERTICAL SCALE: 0 2m 4m

HORIZONTAL SCALE: 0 25m 50m

	CH244.00
SCALE	AS SHOWN
DATE	DECEMBER 2023
DRAWN	AB
CHECKED	
DRAWING #	FIGURE 56

TERRAPEX

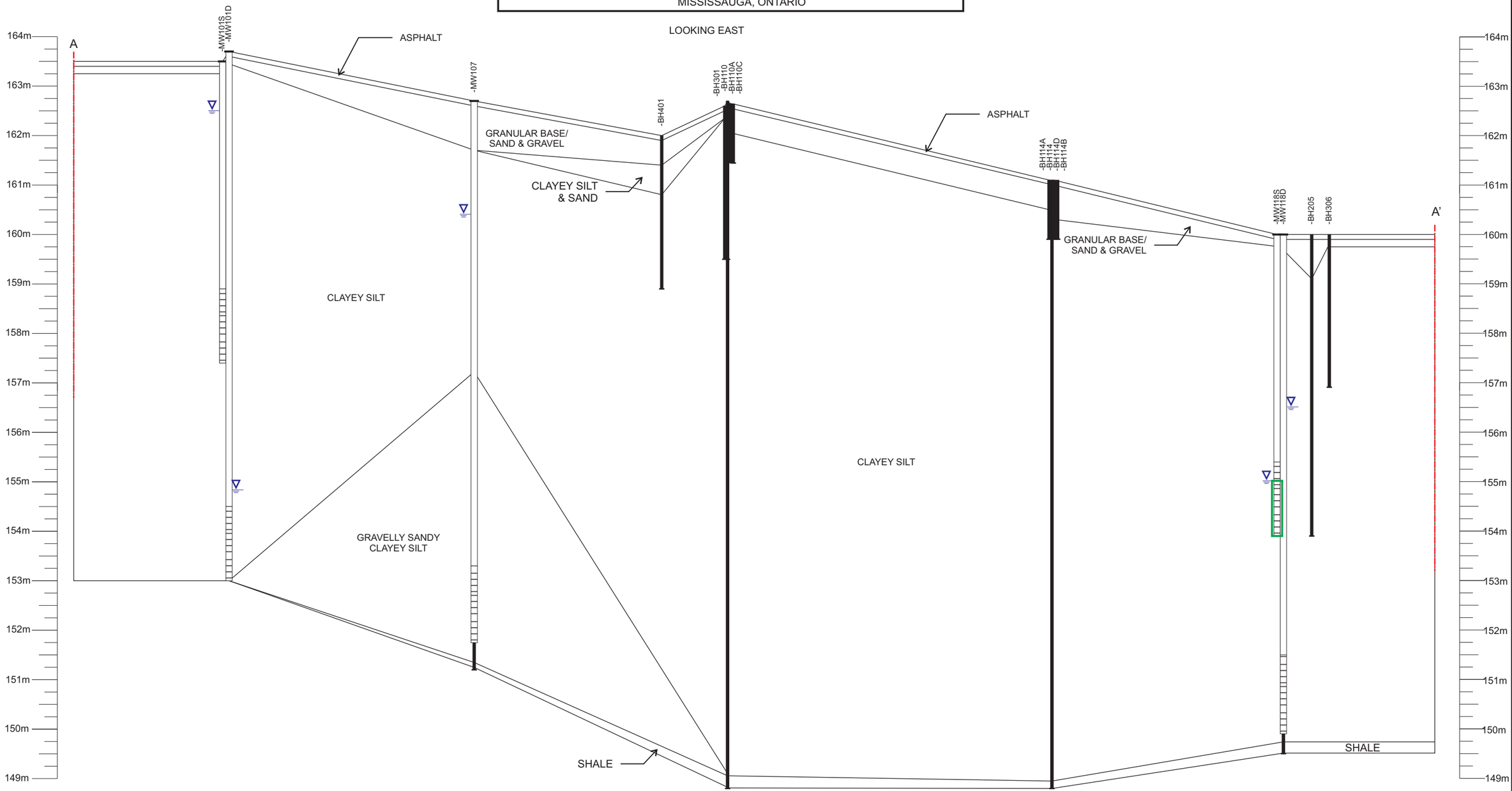
CROSS SECTION A-A' - GROUNDWATER ANALYTICAL RESULTS - CPs

120, 128, 142, 148, 154, 158 QUEEN STREET SOUTH & 169 CRUMBIE STREET
MISSISSAUGA, ONTARIO

CLIENT

DE ZEN REALTY COMPANY LIMITED

LOOKING EAST



LEGEND

- MONITORING WELL
- SCREENED LEVEL
- BOREHOLE
- GROUNDWATER LEVEL (AS OF MARCH 15, 2023)
- INFERRED GROUNDWATER LEVEL

SOIL ANALYSIS INFORMATION

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

SCS (Site Conditions Standards) refer to Standards from Table 3 of April 15, 2011 *Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act*; Residential / Parkland / Institutional land use, medium and fine textured soil

VERTICAL SCALE: 0 — 2m — 4m

HORIZONTAL SCALE: 0 — 25m — 50m

	CH244.00
SCALE	AS SHOWN
DATE	DECEMBER 2023
DRAWN	AB
CHECKED	
DRAWING #	FIGURE 57

TERRAPEX

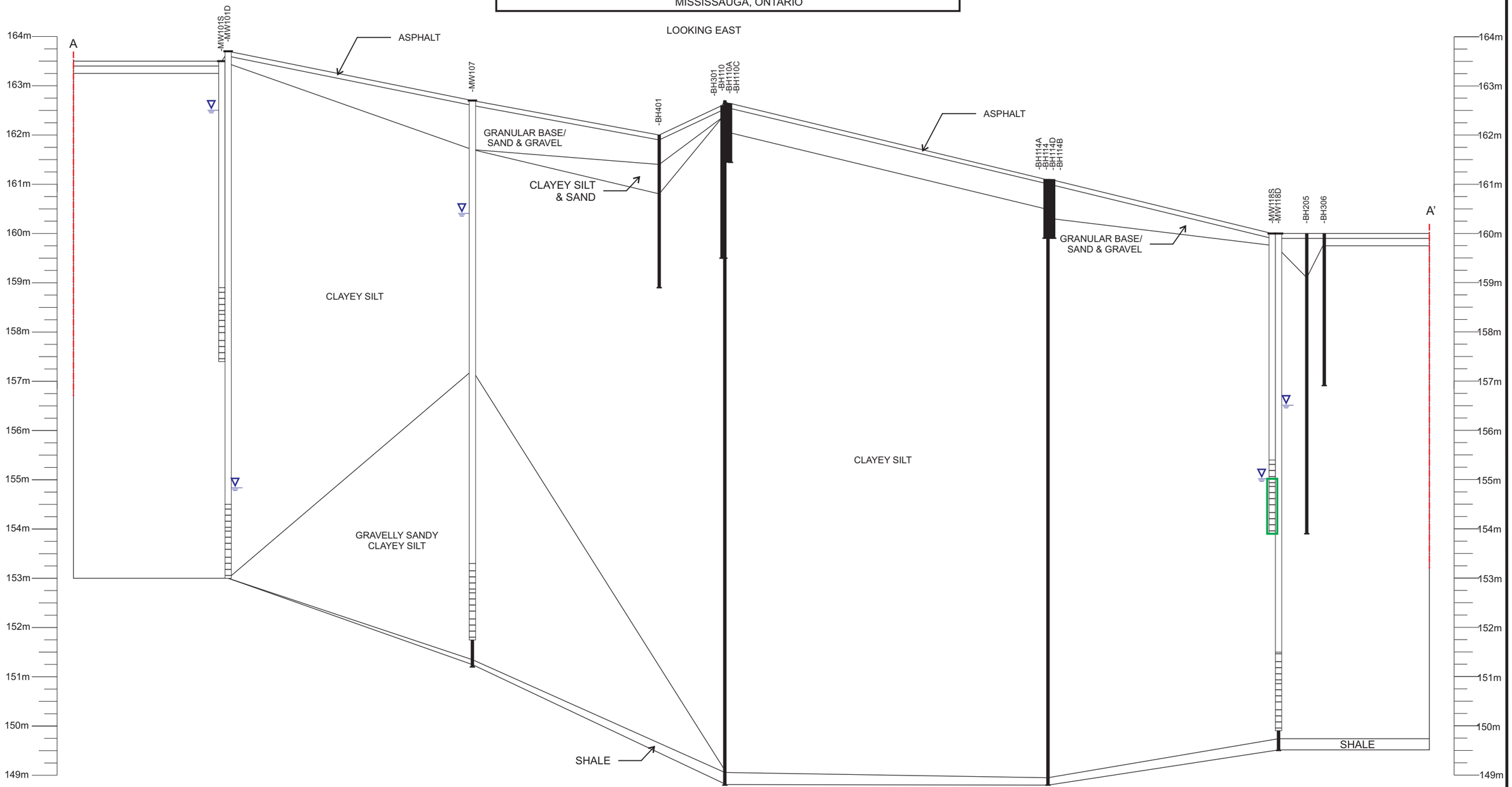
CROSS SECTION A-A' - GROUNDWATER ANALYTICAL RESULTS - PCBs

120, 128, 142, 148, 154, 158 QUEEN STREET SOUTH & 169 CRUMBIE STREET
MISSISSAUGA, ONTARIO

CLIENT

DE ZEN REALTY COMPANY LIMITED

LOOKING EAST



LEGEND

- MONITORING WELL
- SCREENED LEVEL
- BOREHOLE
- GROUNDWATER LEVEL (AS OF MARCH 15, 2023)
- INFERRED GROUNDWATER LEVEL

SOIL ANALYSIS INFORMATION

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

SCS (Site Conditions Standards) refer to Standards from Table 3 of April 15, 2011 *Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act*; Residential / Parkland / Institutional land use, medium and fine textured soil

VERTICAL SCALE: 0 2m 4m

HORIZONTAL SCALE: 0 25m 50m

	CH244.00
SCALE	AS SHOWN
DATE	DECEMBER 2023
DRAWN	AB
CHECKED	
DRAWING #	FIGURE 58

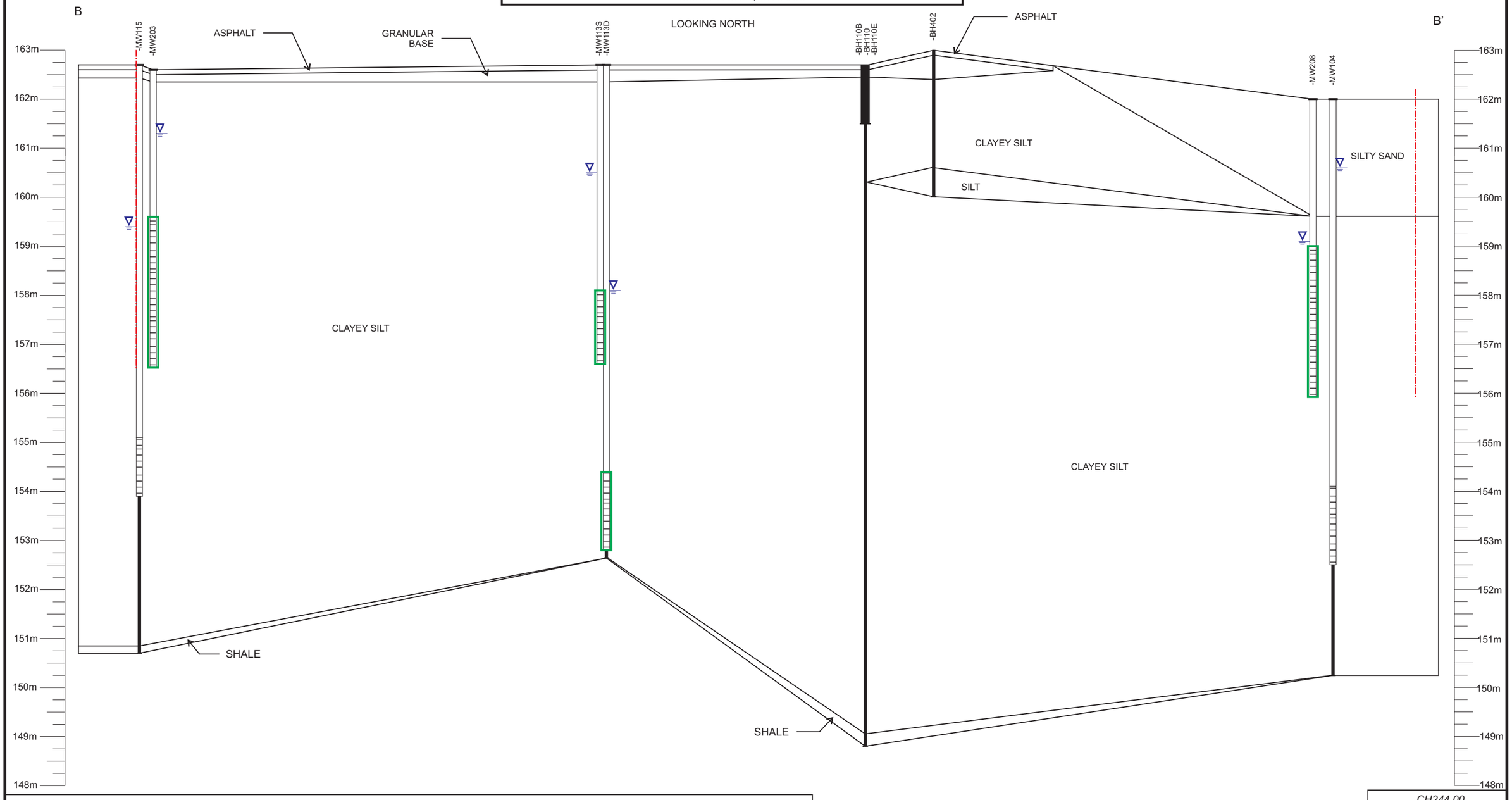
TERRAPEX

CROSS SECTION B-B' - GROUNDWATER ANALYTICAL RESULTS - BTEX

120, 128, 142, 148, 154, 158 QUEEN STREET SOUTH & 169 CRUMBIE STREET
MISSISSAUGA, ONTARIO

CLIENT

DE ZEN REALTY COMPANY LIMITED



LEGEND

- MONITORING WELL
- SCREENED LEVEL
- BOREHOLE
- GROUNDWATER LEVEL (AS OF MARCH 15, 2023)
- INFERRED GROUNDWATER LEVEL

SOIL ANALYSIS INFORMATION

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

SCS (Site Conditions Standards) refer to Standards from Table 3 of April 15, 2011 *Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act*; Residential / Parkland / Institutional land use, medium and fine textured soil

VERTICAL SCALE: 0 2m 4m

HORIZONTAL SCALE: 0 25m 50m

CH244.00

SCALE: AS SHOWN

DATE: DECEMBER 2023

DRAWN: AB | CHECKED:

DRAWING #

FIGURE 59

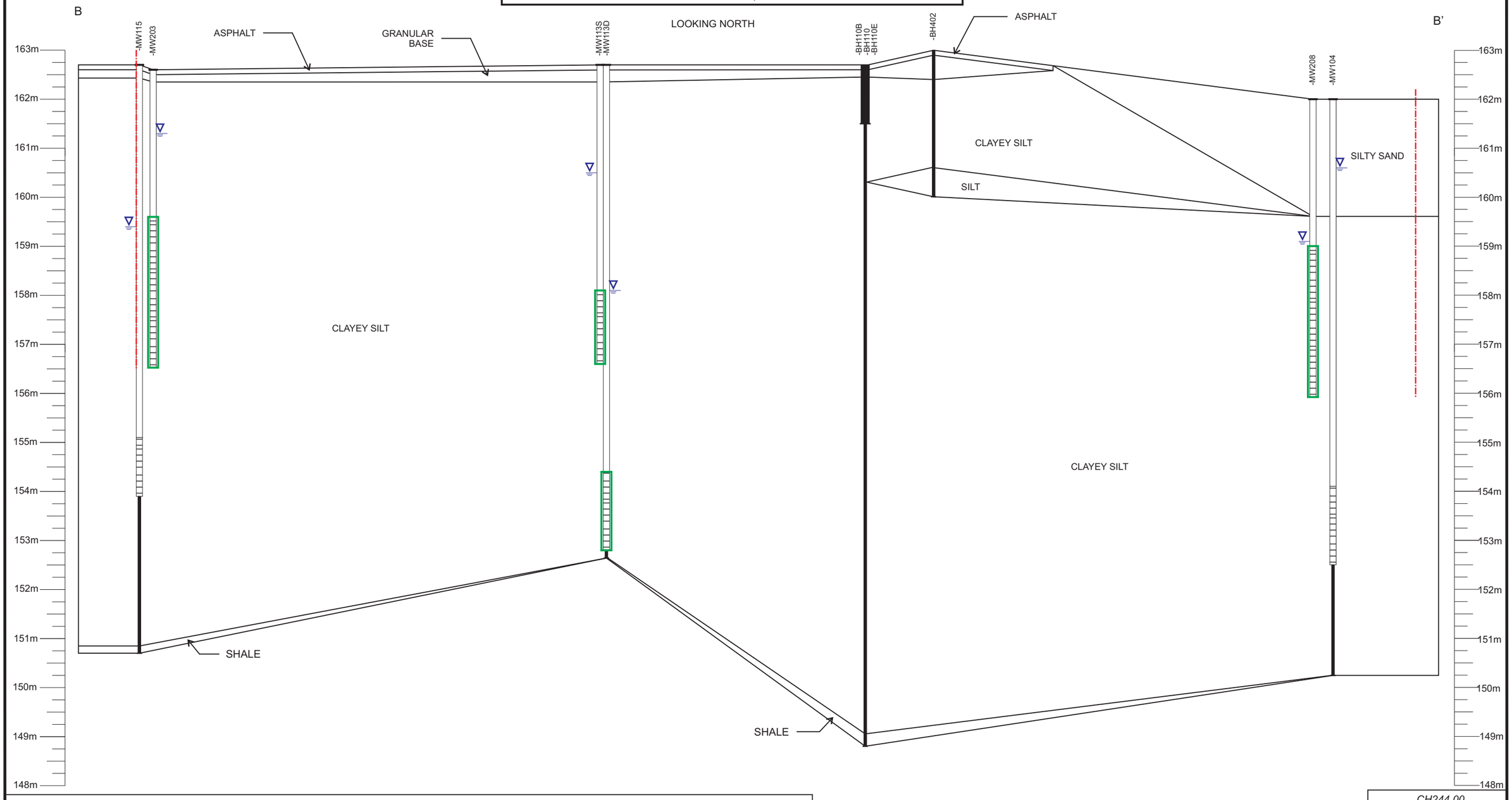
TERRAPEX

CROSS SECTION B-B' - GROUNDWATER ANALYTICAL RESULTS - PHCs

120, 128, 142, 148, 154, 158 QUEEN STREET SOUTH & 169 CRUMBIE STREET
MISSISSAUGA, ONTARIO

CLIENT

DE ZEN REALTY COMPANY LIMITED



LEGEND

- MONITORING WELL
- SCREENED LEVEL
- BOREHOLE
- GROUNDWATER LEVEL (AS OF MARCH 15, 2023)
- INFERRED GROUNDWATER LEVEL

SOIL ANALYSIS INFORMATION

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

SCS (Site Conditions Standards) refer to Standards from Table 3 of April 15, 2011 *Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act*; Residential / Parkland / Institutional land use, medium and fine textured soil

VERTICAL SCALE: 0 2m 4m

HORIZONTAL SCALE: 0 25m 50m

CH244.00

SCALE: AS SHOWN

DATE: DECEMBER 2023

DRAWN: AB | CHECKED:

DRAWING #

FIGURE 60

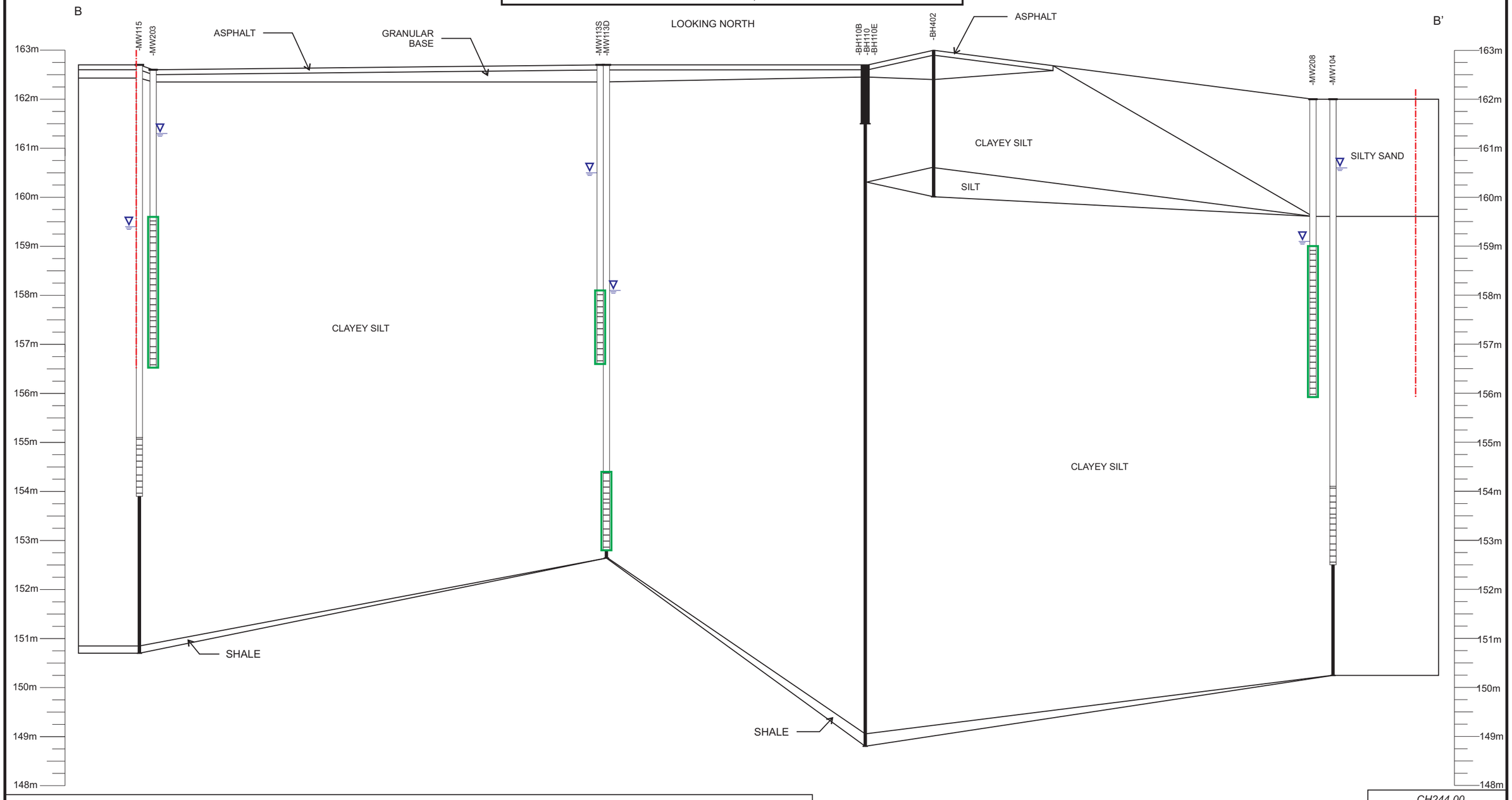
TERRAPEX

CROSS SECTION B-B' - GROUNDWATER ANALYTICAL RESULTS - VOCs

120, 128, 142, 148, 154, 158 QUEEN STREET SOUTH & 169 CRUMBIE STREET
MISSISSAUGA, ONTARIO

CLIENT

DE ZEN REALTY COMPANY LIMITED



LEGEND

- MONITORING WELL
- SCREENED LEVEL
- BOREHOLE
- GROUNDWATER LEVEL (AS OF MARCH 15, 2023)
- INFERRED GROUNDWATER LEVEL

SOIL ANALYSIS INFORMATION

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

SCS (Site Conditions Standards) refer to Standards from Table 3 of April 15, 2011 *Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act*; Residential / Parkland / Institutional land use, medium and fine textured soil

VERTICAL SCALE: 0 2m 4m

HORIZONTAL SCALE: 0 25m 50m

	CH244.00
SCALE	AS SHOWN
DATE	DECEMBER 2023
DRAWN	AB
CHECKED	
DRAWING #	FIGURE 61

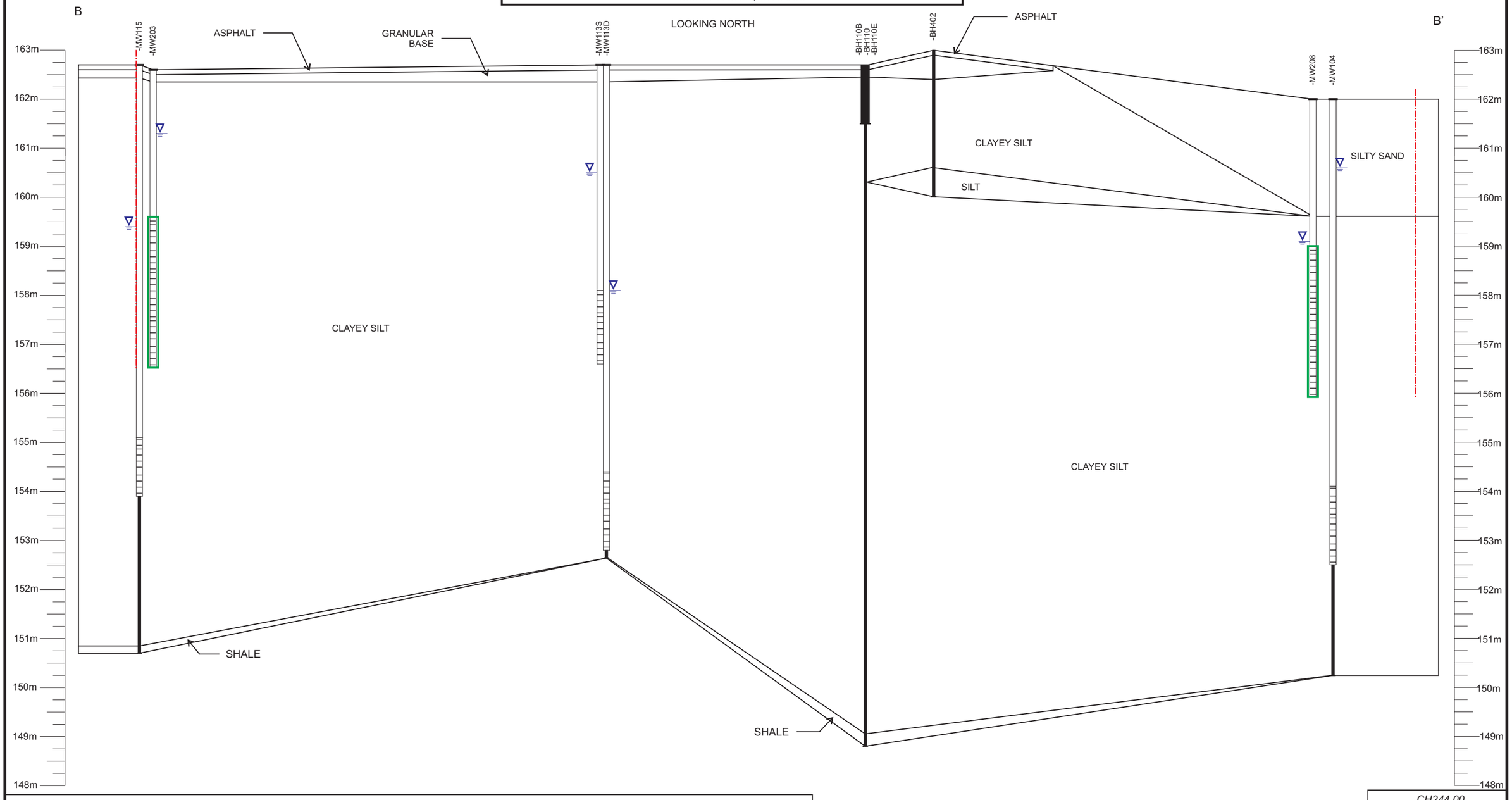
TERRAPEX

CROSS SECTION B-B' - GROUNDWATER ANALYTICAL RESULTS - PAHs

120, 128, 142, 148, 154, 158 QUEEN STREET SOUTH & 169 CRUMBIE STREET
MISSISSAUGA, ONTARIO

CLIENT

DE ZEN REALTY COMPANY LIMITED



LEGEND

- MONITORING WELL
- SCREENED LEVEL
- BOREHOLE
- GROUNDWATER LEVEL (AS OF MARCH 15, 2023)
- INFERRED GROUNDWATER LEVEL

SOIL ANALYSIS INFORMATION

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

SCS (Site Conditions Standards) refer to Standards from Table 3 of April 15, 2011 *Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act*; Residential / Parkland / Institutional land use, medium and fine textured soil

VERTICAL SCALE: 0 2m 4m

HORIZONTAL SCALE: 0 25m 50m

	CH244.00
SCALE	AS SHOWN
DATE	DECEMBER 2023
DRAWN	AB
CHECKED	
DRAWING #	FIGURE 62

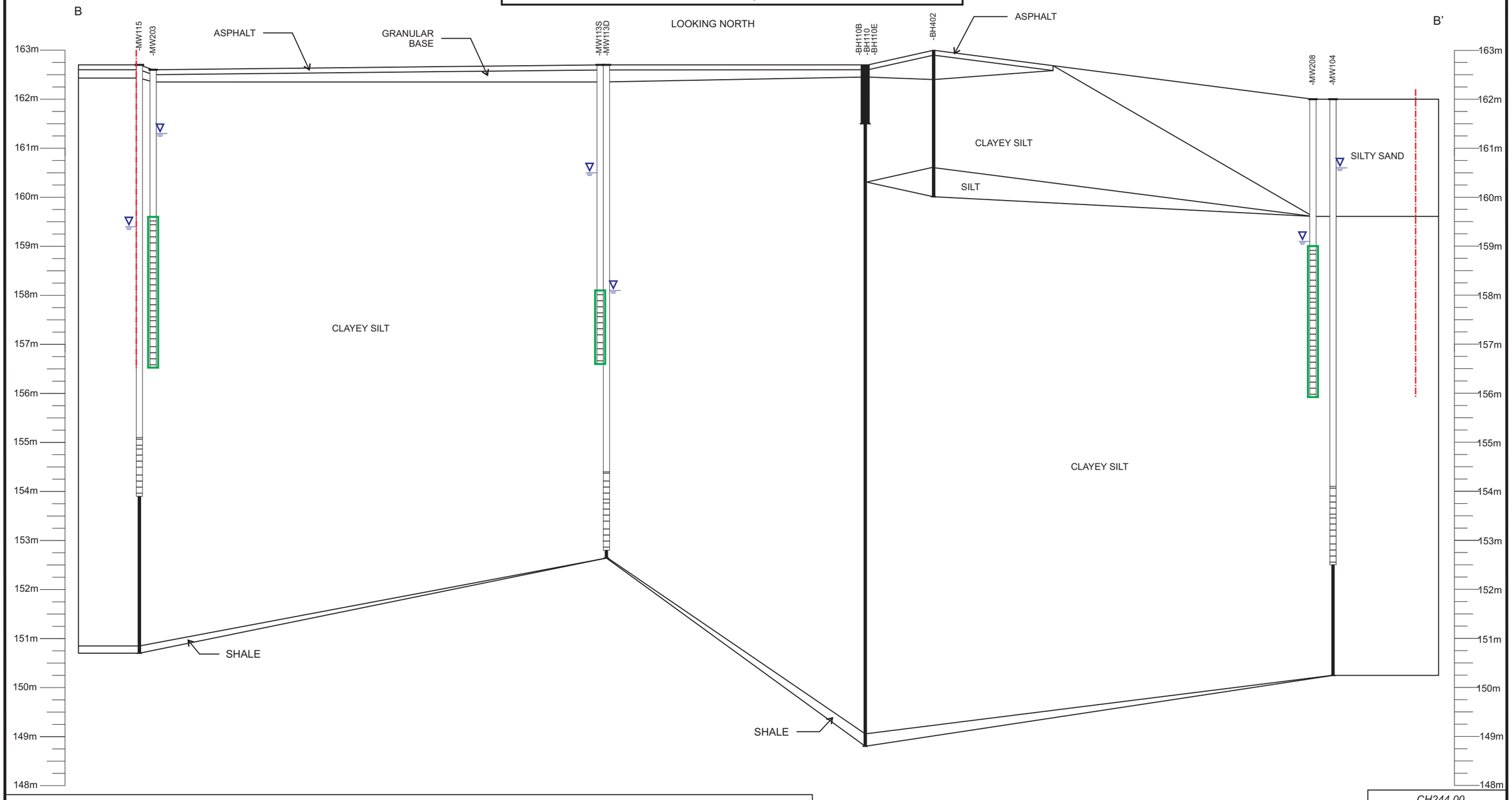
TERRAPEX

CROSS SECTION B-B' - GROUNDWATER ANALYTICAL RESULTS - METALS

120, 128, 142, 148, 154, 158 QUEEN STREET SOUTH & 169 CRUMBIE STREET
MISSISSAUGA, ONTARIO

CLIENT

DE ZEN REALTY COMPANY LIMITED



LEGEND

- MONITORING WELL
- SCREENED LEVEL
- BOREHOLE
- GROUNDWATER LEVEL (AS OF MARCH 15, 2023)
- INFERRED GROUNDWATER LEVEL

SOIL ANALYSIS INFORMATION

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

SCS (Site Conditions Standards) refer to Standards from Table 3 of April 15, 2011 *Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act*; Residential / Parkland / Institutional land use, medium and fine textured soil

VERTICAL SCALE: 0 2m 4m

HORIZONTAL SCALE: 0 25m 50m

CH244.00

SCALE: AS SHOWN

DATE: DECEMBER 2023

DRAWN: AB | CHECKED:

DRAWING #

FIGURE 63

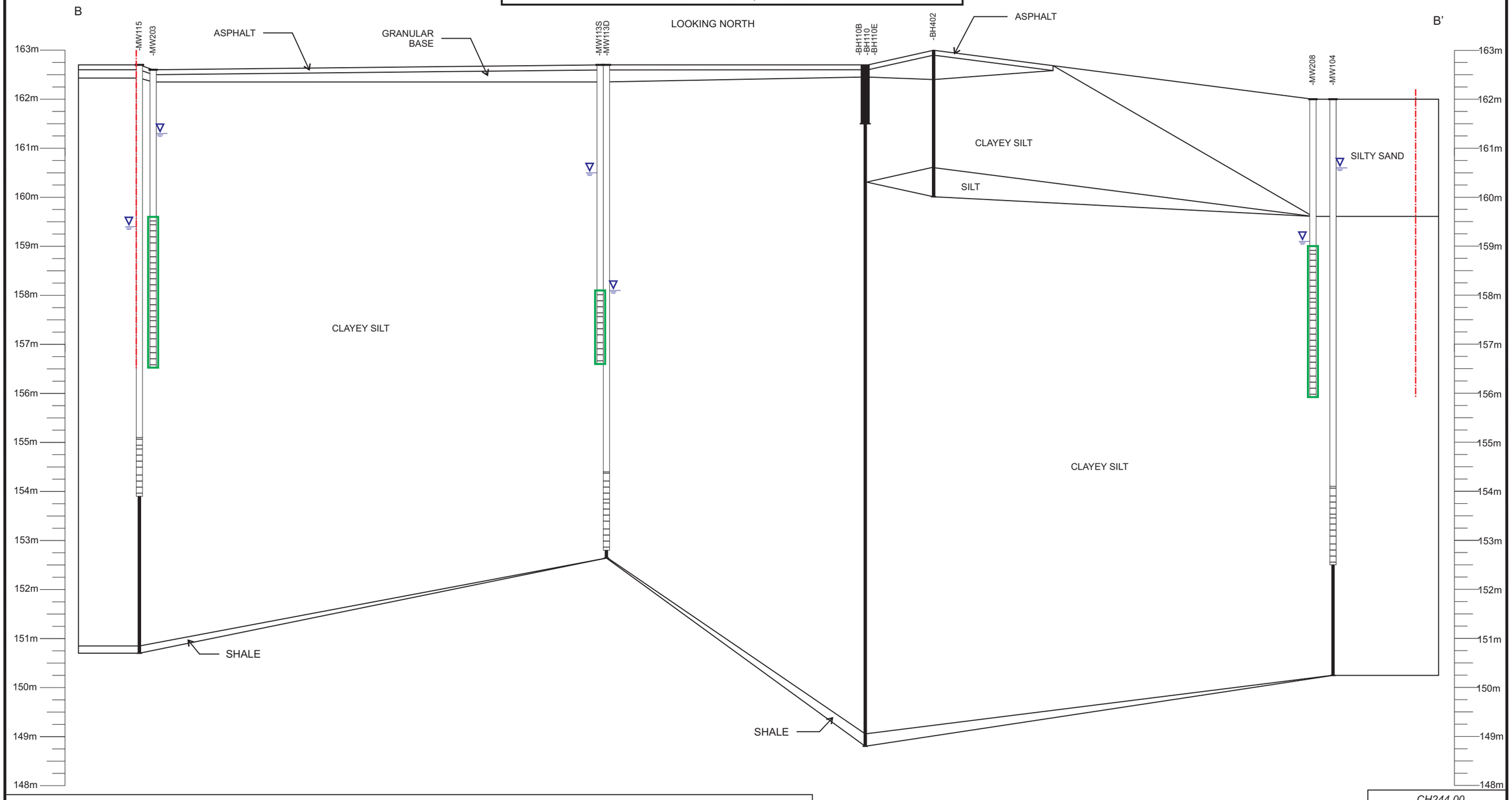
TERRAPEX

CROSS SECTION B-B' - GROUNDWATER ANALYTICAL RESULTS - HYDRIDE-FORMING METALS

120, 128, 142, 148, 154, 158 QUEEN STREET SOUTH & 169 CRUMBIE STREET
MISSISSAUGA, ONTARIO

CLIENT

DE ZEN REALTY COMPANY LIMITED



LEGEND

- MONITORING WELL
- SCREENED LEVEL
- BOREHOLE
- GROUNDWATER LEVEL (AS OF MARCH 15, 2023)
- INFERRED GROUNDWATER LEVEL

SOIL ANALYSIS INFORMATION

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

SCS (Site Conditions Standards) refer to Standards from Table 3 of April 15, 2011 *Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act*; Residential / Parkland / Institutional land use, medium and fine textured soil

VERTICAL SCALE: 0 2m 4m

HORIZONTAL SCALE: 0 25m 50m

	CH244.00
SCALE	AS SHOWN
DATE	DECEMBER 2023
DRAWN	AB
CHECKED	
DRAWING #	FIGURE 64

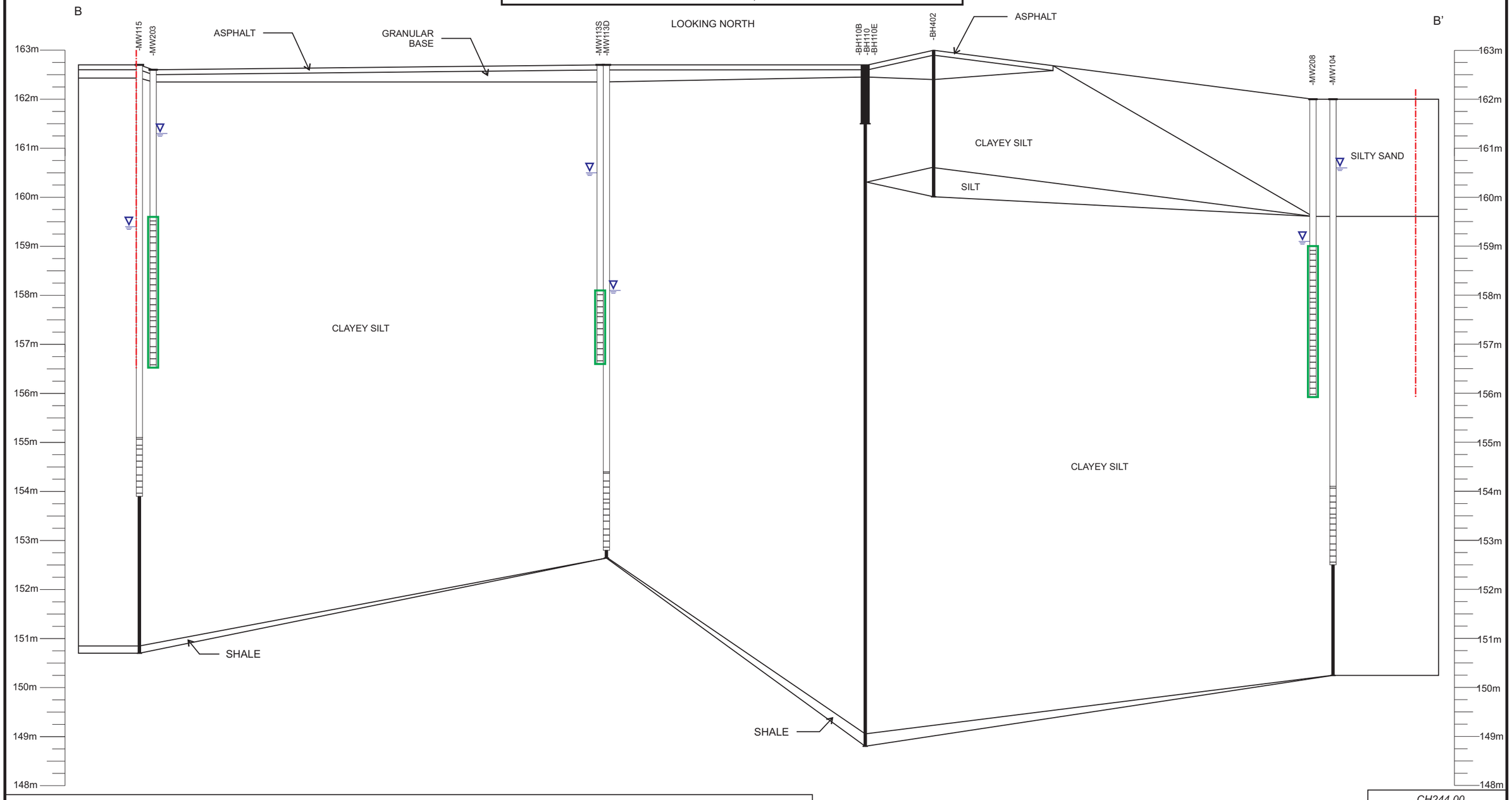
TERRAPEX

CROSS SECTION B-B' - GROUNDWATER ANALYTICAL RESULTS - ORPs

120, 128, 142, 148, 154, 158 QUEEN STREET SOUTH & 169 CRUMBIE STREET
MISSISSAUGA, ONTARIO

CLIENT

DE ZEN REALTY COMPANY LIMITED



LEGEND

- MONITORING WELL
- SCREENED LEVEL
- BOREHOLE
- GROUNDWATER LEVEL (AS OF MARCH 15, 2023)
- INFERRED GROUNDWATER LEVEL

SOIL ANALYSIS INFORMATION

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

SCS (Site Conditions Standards) refer to Standards from Table 3 of April 15, 2011 *Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act*; Residential / Parkland / Institutional land use, medium and fine textured soil

VERTICAL SCALE: 0 2m 4m

HORIZONTAL SCALE: 0 25m 50m

	CH244.00
SCALE	AS SHOWN
DATE	DECEMBER 2023
DRAWN	AB
CHECKED	
DRAWING #	FIGURE 65

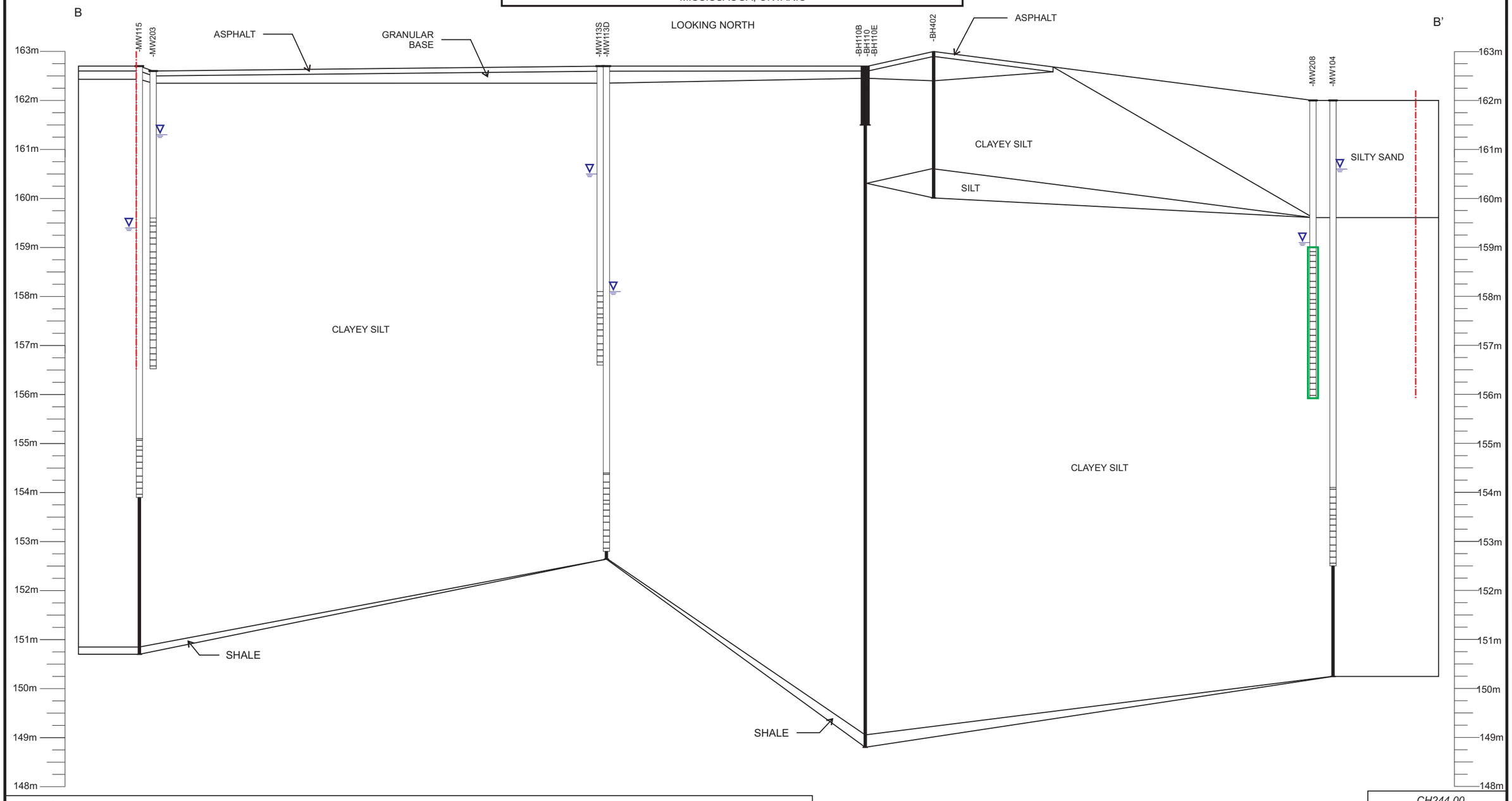
TERRAPEX

CROSS SECTION B-B' - GROUNDWATER ANALYTICAL RESULTS - PCBs

120, 128, 142, 148, 154, 158 QUEEN STREET SOUTH & 169 CRUMBIE STREET
MISSISSAUGA, ONTARIO

CLIENT

DE ZEN REALTY COMPANY LIMITED



LEGEND

- MONITORING WELL
- SCREENED LEVEL
- BOREHOLE
- GROUNDWATER LEVEL (AS OF MARCH 15, 2023)
- INFERRED GROUNDWATER LEVEL

SOIL ANALYSIS INFORMATION

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

SCS (Site Conditions Standards) refer to Standards from Table 3 of April 15, 2011 *Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act*; Residential / Parkland / Institutional land use, medium and fine textured soil

VERTICAL SCALE: 0 2m 4m

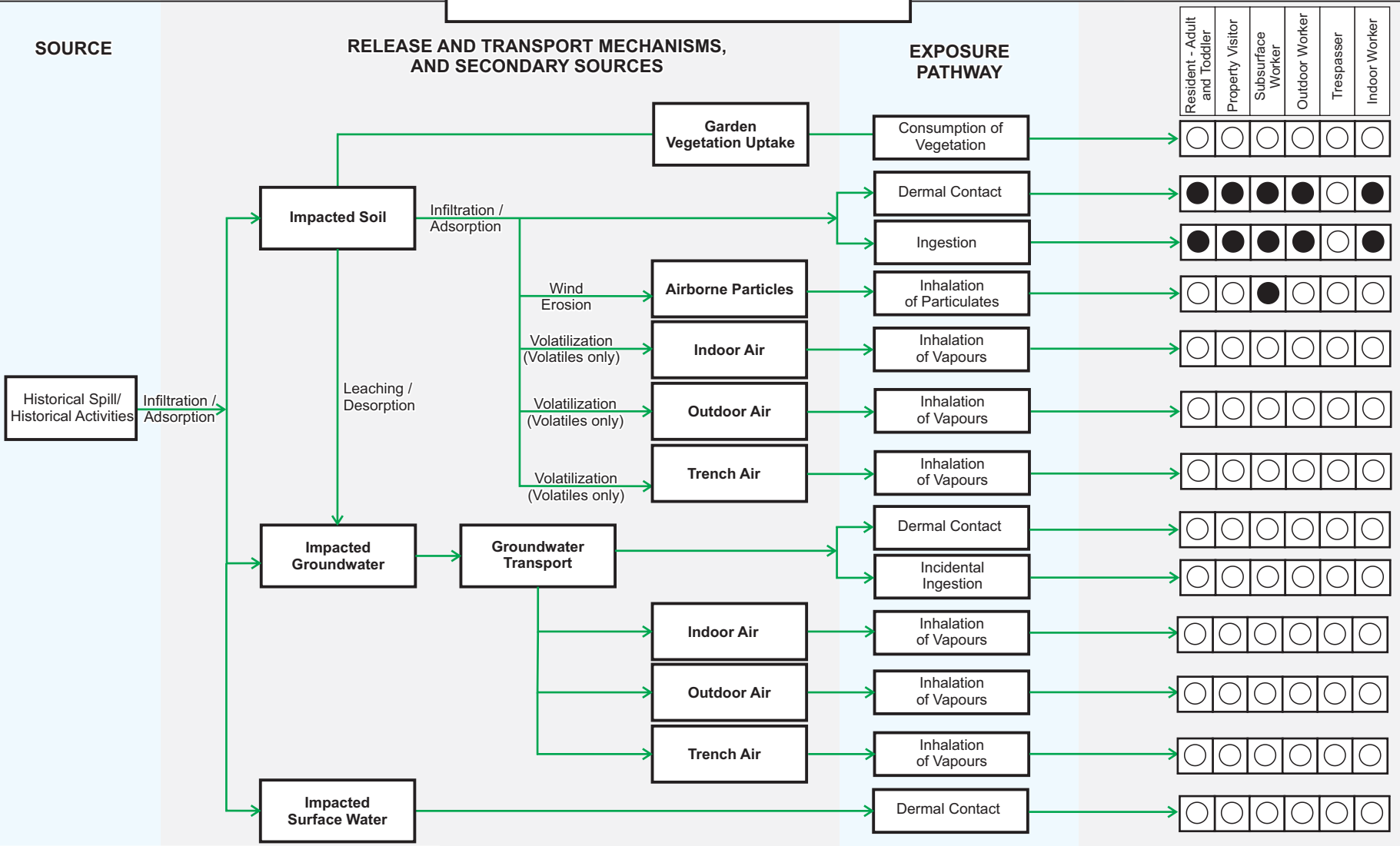
HORIZONTAL SCALE: 0 25m 50m

	CH244.00
SCALE	AS SHOWN
DATE	DECEMBER 2023
DRAWN	AB
CHECKED	
DRAWING #	FIGURE 66

TERRAPEX

CONCEPTUAL MODEL FOR HUMAN HEALTH EXPOSURE

DE ZEN REALTY COMPANY LIMITED



LEGEND

- ● Receptor present or anticipated, and exposure pathway is considered complete
- ○ No receptor present or anticipated, and exposure pathway is considered incomplete

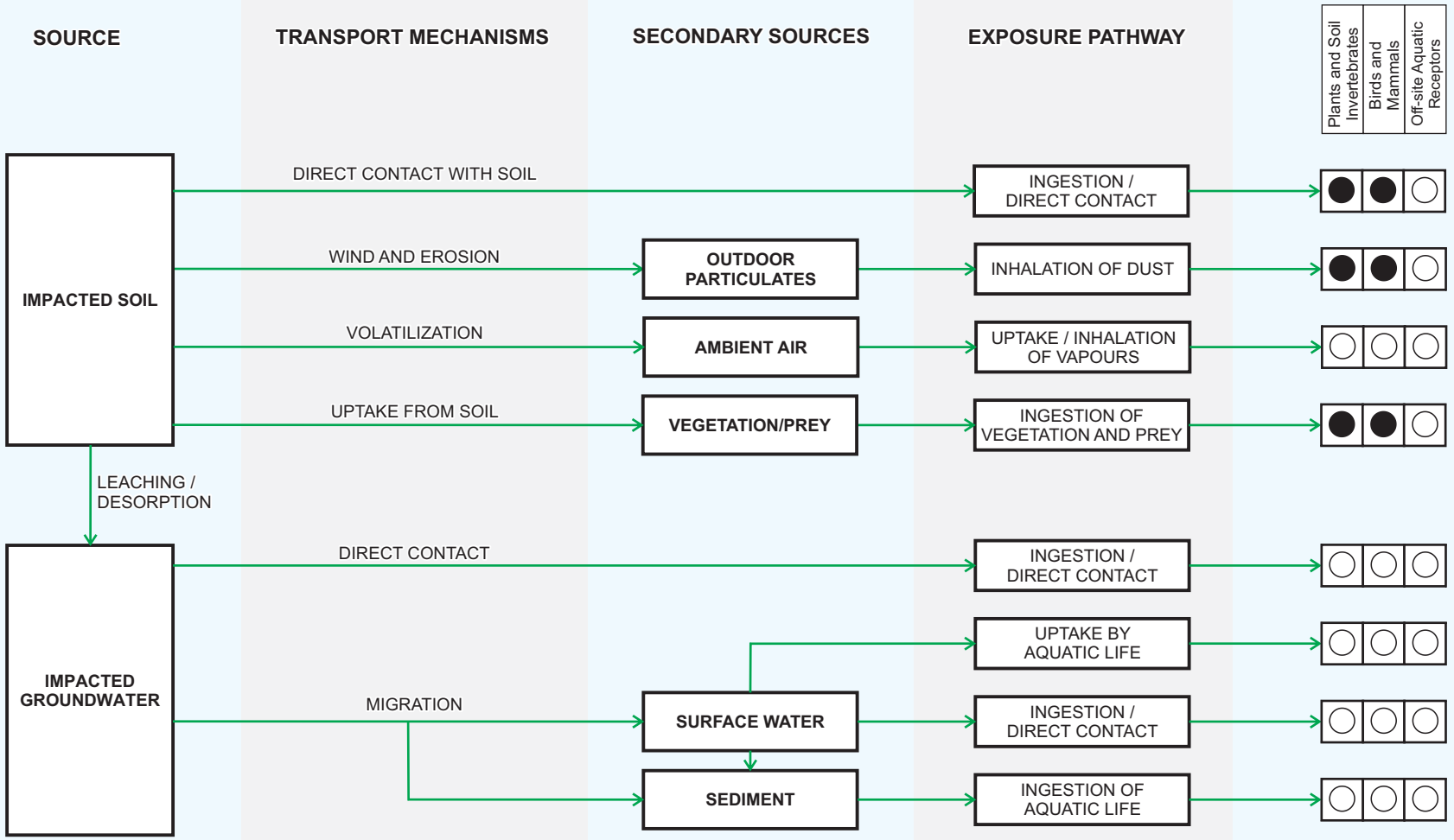
PROJECT #	CH244.00
DATE	DECEMBER 2023
DRAWN	AB
CHECKED	
DRAWING #	FIGURE 67

TERRAPEX

CONCEPTUAL MODEL FOR ECOLOGICAL EXPOSURE

CLIENT

DE ZEN REALTY COMPANY LIMITED



LEGEND

- ● Exposure pathway is considered complete
- ○ Exposure pathway is considered incomplete

PROJECT #	CH244.00
DATE	DECEMBER 2023
DRAWN	AB
CHECKED	
DRAWING #	FIGURE 68

TABLES

TABLE 1 GROUNDWATER MONITORING DATA

120-158 Queen Street South & 169 Crumbie Street, Mississauga, 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)
MW101S	08-Mar-23	163.52	163.36	3.05	157.26	<5 ppm	1.48	1.63	161.89	None
	15-Mar-23					-	0.84	0.99	162.53	None
	18-Apr-23					-	0.61	0.77	162.75	None
MW101D	08-Mar-23	163.71	163.12	3.05	152.45	105 ppm	9.57	10.16	153.55	None
	15-Mar-23					-	8.36	8.94	154.76	None
	18-Apr-23					-	2.77	3.36	160.35	None
MW102	08-Mar-23	162.79	162.63	3.05	152.27	57% LEL	0.26	0.41	162.37	None
	15-Mar-23					-	0.19	0.35	162.44	None
	18-Apr-23					-	2.34	2.50	160.29	None
MW103S	08-Mar-23	161.14	161.96	1.52	157.39	<5 ppm	4.70	3.88	157.26	None
	15-Mar-23					-	4.46	3.64	157.50	None
	18-Apr-23					-	1.98	1.16	159.98	None
MW103D	08-Mar-23	161.17	162.15	1.52	150.87	210 ppm	4.88	3.90	157.27	None
	15-Mar-23					-	4.78	3.79	157.38	None
	18-Apr-23					-	4.64	3.65	157.51	None
MW104	08-Mar-23	161.99	162.92	1.52	153.47	15% LEL	2.31	1.38	160.61	None
	15-Mar-23					-	2.31	1.38	160.61	None
	18-Apr-23					-	2.33	1.40	160.59	None
MW105	08-Mar-23	161.76	161.67	1.52	151.00	19% LEL	5.69	5.77	155.98	None
	15-Mar-23					-	5.25	5.34	156.42	None
	18-Apr-23					-	4.57	4.65	157.10	None
MW106	08-Mar-23	163.25	163.16	3.05	153.41	56% LEL	2.39	2.48	160.77	None
	15-Mar-23					-	1.62	1.70	161.54	None
	18-Apr-23					-	3.79	3.88	159.37	None
MW107	08-Mar-23	162.73	162.64	1.52	151.67	350 ppm	2.09	2.18	160.55	None
	15-Mar-23					-	2.19	2.29	160.45	None
	18-Apr-23					-	2.27	2.36	160.37	None
MW108	08-Mar-23	161.40	161.30	3.05	150.02	>100% LEL	5.15	5.26	156.14	None
	15-Mar-23					-	5.26	5.36	156.04	None
	18-Apr-23					-	5.01	5.11	156.29	None
MW112	08-Mar-23	162.93	162.86	1.52	152.50	390 ppm	2.67	2.74	160.19	None
	15-Mar-23					-	2.63	2.70	160.24	None
	18-Apr-23					-	2.68	2.75	160.18	None
MW113S	08-Mar-23	162.70	162.62	1.52	156.52	<5 ppm	4.88	4.97	157.73	None
	15-Mar-23					-	2.13	2.21	160.49	None
	18-Apr-23					-	1.77	1.85	160.85	None

TABLE 1 GROUNDWATER MONITORING DATA

120-158 Queen Street South & 169 Crumbie Street, Mississauga, 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)
MW113D	08-Mar-23	162.74	162.65	1.52	152.75	<5 ppm	7.17	7.26	155.48	None
	15-Mar-23					-	4.46	4.56	158.19	None
	18-Apr-23					-	2.72	2.82	159.93	None
MW115	08-Mar-23	162.72	162.64	1.21	153.81	440 ppm	3.22	3.30	159.42	None
	15-Mar-23					-	3.21	3.30	159.43	None
	18-Apr-23					-	3.22	3.30	159.42	None
MW116	08-Mar-23	162.07	161.99	1.52	151.93	-	-	-	-	-
	15-Mar-23					-	4.16	4.24	157.83	None
	18-Apr-23					-	4.22	4.30	157.77	None
MW118S	08-Mar-23	160.00	159.90	1.52	153.80	9% LEL	5.05	5.15	154.84	None
	15-Mar-23					-	4.87	4.97	155.03	None
	18-Apr-23					-	2.00	2.10	157.90	None
	16-Jun-23					<5 ppm	1.57	1.67	158.33	None
	26-Jul-23					<5 ppm	1.03	1.13	158.87	None
	06-Nov-23					<5 ppm	1.42	1.52	158.48	None
MW118D	08-Mar-23	159.99	159.91	1.60	149.81	60% LEL	3.38	3.46	156.53	None
	15-Mar-23					-	3.42	3.50	156.50	None
	18-Apr-23					-	3.27	3.35	156.64	None
MW201	16-Jun-23	162.77	162.72	3.05	156.62	<5 ppm	1.13	1.18	161.59	None
MW202	16-Jun-23	163.22	163.18	3.05	157.08	<5 ppm	0.55	0.58	162.63	None
MW203	16-Jun-23	162.65	162.57	3.05	156.47	500 ppm	1.30	1.38	161.27	None
MW204	16-Jun-23	162.02	161.89	3.05	155.79	480 ppm	DRY	-	-	-
MW206	16-Jun-23	-	-	3.05	-	<5 ppm	2.54	-	-	None
MW207	16-Jun-23	161.72	161.64	3.05	155.54	40 ppm	3.62	3.69	158.03	None
MW208	16-Jun-23	162.02	163.04	3.05	156.94	<5 ppm	2.90	1.88	160.15	None

[1] Elevation of ground surface at well location, relative to site benchmark

[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

- Not surveyed, not monitored

TABLE 2 SOIL ANALYTICAL RESULTS BTEX/PHCs
120-158 Queen Street South & 169 Crumbie Street
Mississauga, Ontario

Sample Name	Units	STANDARDS Table 3 R/P/I fine/medium	MW101-9	MW102-9	MW103-7	MW103-9	MW104-9	MW105-9	MW106-8	MW9106-8 Field Duplicate of MW106-8
Vapour Reading	see note	-	<5 ppm	<5 ppm	<5 ppm	<5 ppm	<5 ppm	<5 ppm	<5 ppm	-
Sample Depth	m bg	-	7.6 - 8.2	7.6 - 8.2	4.6 - 5.2	7.6 - 8.2	7.6 - 8.2	7.6 - 8.2	6.1 - 6.7	6.1 - 6.7
Sampling Date	dd-mmm-yy	-	19-Jan-23	9-Feb-23	7-Feb-23	7-Feb-23	7-Feb-23	1-Feb-23	20-Jan-23	20-Jan-23
Analysis Date (on or before)	dd-mmm-yy	-	30-Jan-23	17-Feb-23	17-Feb-23	17-Feb-23	17-Feb-23	13-Feb-23	3-Feb-23	3-Feb-23
Certificate of Analysis No.	-	-	C321247	C340981	C340981	C340981	C340981	C333819	C326614	C326614
Benzene	ug/g	0.17	<0.0060	<0.0060	<0.020	<0.0060	<0.020	<0.020	<0.020	<0.020
Toluene	ug/g	6.0	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020
Ethylbenzene	ug/g	15	<0.010	<0.010	<0.020	<0.010	<0.020	<0.020	<0.020	<0.020
Xylene Mixture	ug/g	25	0.028	<0.020	<0.040	<0.020	<0.040	<0.040	<0.040	<0.040
Petroleum Hydrocarbons F1[1]	ug/g	65	<10	<10	<10	-	<10	<10	<10	<10
Petroleum Hydrocarbons F2	ug/g	150	<10	<10	<10	-	<10	<10	15	<10
Petroleum Hydrocarbons F3	ug/g	1,300	<50	<50	<50	-	<50	<50	<50	<50
Petroleum Hydrocarbons F4	ug/g	5,600	<50	<50	<50	-	<50	<50	<50	<50
Petroleum Hydrocarbons F4G	ug/g	5,600	-	-	-	-	-	-	-	-

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
Residential/Parkland/Institutional 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 2 SOIL ANALYTICAL RESULTS BTEX/PHCs

120-158 Queen Street South & 169 Crumbie Street

Mississauga, Ontario

Sample Name	Units	STANDARDS Table 3 R/P/I fine/medium	MW108-8	BH109-8	BH110-8	BH111-9	MW113-7A	MW113-10	BH114-7	MW115-9
Vapour Reading	see note	-	<5 ppm	<5 ppm	<5 ppm	<5 ppm	<5 ppm	<5 ppm	<5 ppm	<5 ppm
Sample Depth	m bg	-	6.1 - 6.7	6.1 - 6.6	6.1 - 6.6	7.6 - 8.2	4.6 -5.2	9.2 - 9.8	4.6 - 5.2	7.6 - 8.2
Sampling Date	dd-mmm-yy	-	2-Feb-23	17-Jan-23	6-Feb-23	30-Jan-23	16-Jan-23	16-Jan-23	31-Jan-23	23-Jan-23
Analysis Date (on or before)	dd-mmm-yy	-	13-Feb-23	30-Jan-23	17-Feb-23	13-Feb-23	30-Jan-23	30-Jan-23	13-Feb-23	3-Feb-23
Certificate of Analysis No.	-	-	C333819	C321247	C340981	C333819	C321247	C321247	C333819	C326614
Benzene	ug/g	0.17	<0.020	<0.0060	<0.020	<0.0060	<0.020	<0.0060	<0.020	<0.0060
Toluene	ug/g	6.0	<0.020	<0.020	<0.020	0.023	<0.020	<0.020	<0.020	<0.020
Ethylbenzene	ug/g	15	<0.020	<0.010	<0.020	<0.010	<0.020	<0.010	<0.020	<0.010
Xylene Mixture	ug/g	25	<0.040	<0.020	<0.040	<0.020	<0.040	<0.020	<0.040	<0.020
Petroleum Hydrocarbons F1[1]	ug/g	65	<10	<10	<10	<10	<10	-	<10	<10
Petroleum Hydrocarbons F2	ug/g	150	<10	<10	<10	13	<10	-	<10	<10
Petroleum Hydrocarbons F3	ug/g	1,300	<50	<50	<50	63	<50	-	<50	<50
Petroleum Hydrocarbons F4	ug/g	5,600	<50	<50	<50	<50	<50	-	<50	<50
Petroleum Hydrocarbons F4G	ug/g	5,600	-	-	-	-	-	-	-	-

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
Residential/Parkland/Institutional 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 2 SOIL ANALYTICAL RESULTS BTEX/PHCs

120-158 Queen Street South & 169 Crumbie Street

Mississauga, Ontario

Sample Name	Units	STANDARDS Table 3 R/P/I fine/medium	MW116-9	BH117-9	MW118-9	BH205-7	MW206-6	MW906-6 Field Duplicate of MW206-6	METHANOL
Vapour Reading	see note	-	<5 ppm	<5 ppm	<5 ppm	<5 ppm	<5 ppm	-	-
Sample Depth	m bg	-	7.6 - 8.2	7.6 - 8.2	7.6 - 8.2	4.6 - 5.2	3.8 - 4.4	3.8 - 4.4	-
Sampling Date	dd-mmm-yy	-	25-Jan-23	26-Jan-23	27-Jan-23	5-Jun-23	9-Jun-23	9-Jun-23	-
Analysis Date (on or before)	dd-mmm-yy	-	3-Feb-23	3-Feb-23	13-Feb-23	16-Jun-23	21-Jun-23	21-Jun-23	28-Mar-23
Certificate of Analysis No.	-	-	C326614	C326614	C333819	C3G2781	C3H2595	C3H2595	C340981
Benzene	ug/g	0.17	<0.020	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060
Toluene	ug/g	6.0	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020
Ethylbenzene	ug/g	15	<0.020	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Xylene Mixture	ug/g	25	<0.040	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020
Petroleum Hydrocarbons F1[1]	ug/g	65	<10	<10	<10	<10	<10	<10	-
Petroleum Hydrocarbons F2	ug/g	150	11	10	<10	<10	<10	<10	-
Petroleum Hydrocarbons F3	ug/g	1,300	<50	<50	<50	87	<50	<50	-
Petroleum Hydrocarbons F4	ug/g	5,600	<50	<50	<50	64	<50	<50	-
Petroleum Hydrocarbons F4G	ug/g	5,600	-	-	-	-	-	-	-

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
Residential/Parkland/Institutional 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

120-158 Queen Street South & 169 Crumbie Street

Mississauga, Ontario

Sample Name	Units	STANDARDS Table 3 R/P/I fine/medium	MW101-9	MW102-9	MW103-9	BH109-8	BH111-9	MW113-10	MW115-9	BH117-9	MW118-9	BH205-7
Vapour Reading	see note	-	<5 ppm	<5 ppm	<5 ppm	<5 ppm	<5 ppm	<5 ppm	<5 ppm	<5 ppm	<5 ppm	<5 ppm
Sample Depth	m bg	-	7.6 - 8.2	7.6 - 8.2	7.6 - 8.2	6.1 - 6.6	7.6 - 8.2	9.2 - 9.8	7.6 - 8.2	7.6 - 8.2	7.6 - 8.2	4.6 - 5.2
Sampling Date	dd-mmm-yy	-	19-Jan-23	9-Feb-23	7-Feb-23	17-Jan-23	30-Jan-23	16-Jan-23	23-Jan-23	26-Jan-23	27-Jan-23	5-Jun-23
Analysis Date (on or before)	dd-mmm-yy	-	30-Jan-23	17-Feb-23	17-Feb-23	30-Jan-23	13-Feb-23	30-Jan-23	3-Feb-23	3-Feb-23	13-Feb-23	16-Jun-23
Certificate of Analysis No.	-	-	C321247	C340981	C340981	C321247	C333819	C321247	C326614	C326614	C333819	C3G2781
Acetone	ug/g	28	<0.49	<0.49	<0.49	<0.49	<0.49	<0.49	<0.49	<0.49	<0.49	<0.49
Bromodichloromethane	ug/g	13	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040
Bromoform	ug/g	0.26	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040
Bromomethane	ug/g	0.050	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040
Carbon Tetrachloride	ug/g	0.12	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040
Chlorobenzene	ug/g	2.7	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040
Chloroform	ug/g	0.18	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040
Dibromochloromethane	ug/g	9.4	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040
Dichlorobenzene, 1,2-	ug/g	4.3	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040
Dichlorobenzene, 1,3-	ug/g	6.0	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040
Dichlorobenzene, 1,4-	ug/g	0.097	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040
Dichlorodifluoromethane	ug/g	25	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040
Dichloroethane, 1,1-	ug/g	11	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040
Dichloroethane, 1,2-	ug/g	0.050	<0.049	<0.049	<0.049	<0.049	<0.049	<0.049	<0.049	<0.049	<0.049	<0.049
Dichloroethylene, 1,1-	ug/g	0.050	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040
Dichloroethylene, 1,2-cis-	ug/g	30	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040
Dichloroethylene, 1,2-trans-	ug/g	0.75	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040
Dichloropropane, 1,2-	ug/g	0.085	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040
Dichloropropene,1,3-	ug/g	0.083	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Ethylene dibromide	ug/g	0.050	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040
Hexane (n)	ug/g	34	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040
Methyl Ethyl Ketone	ug/g	44	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40
Methyl Isobutyl Ketone	ug/g	4.3	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40
Methyl tert-Butyl Ether (MTBE)	ug/g	1.4	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040
Methylene Chloride	ug/g	0.96	<0.049	<0.049	<0.049	<0.049	<0.049	<0.049	<0.049	<0.049	<0.049	<0.049
Styrene	ug/g	2.2	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040
Tetrachloroethane, 1,1,1,2-	ug/g	0.050	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040
Tetrachloroethane, 1,1,2,2-	ug/g	0.050	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040
Tetrachloroethylene	ug/g	2.3	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040
Trichloroethane, 1,1,1-	ug/g	3.4	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040
Trichloroethane, 1,1,2-	ug/g	0.050	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040
Trichloroethylene	ug/g	0.52	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Trichlorofluoromethane	ug/g	5.8	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040
Vinyl Chloride	ug/g	0.022	<0.019	<0.019	<0.019	<0.019	<0.019	<0.019	<0.019	<0.019	<0.019	<0.019

Standards from Soil, Ground Water and Sediment Standards for Use Under Part XV.1
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Table 3: Full Depth Generic SCS in a Non-Potable Ground Water Condition
Residential/Parkland/Institutional 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
Value Exceeds standard
Value Detection limit exceeds standard

TABLE 3 SOIL ANALYTICAL RESULTS VOCs

120-158 Queen Street South & 169 Crumbie Street

Mississauga, Ontario

Sample Name	Units	STANDARDS Table 3 R/P/I fine/medium	MW206-6	MW906-6 Field Duplicate of MW206-6	METHANOL
Vapour Reading	see note	-	<5 ppm	-	-
Sample Depth	m bg	-	3.8 - 4.4	3.8 - 4.4	-
Sampling Date	dd-mmm-yy	-	9-Jun-23	9-Jun-23	-
Analysis Date (on or before)	dd-mmm-yy	-	21-Jun-23	21-Jun-23	28-Mar-23
Certificate of Analysis No.	-	-	C3H2595	C3H2595	C340981
Acetone	ug/g	28	<0.49	<0.49	<0.49
Bromodichloromethane	ug/g	13	<0.040	<0.040	<0.040
Bromoform	ug/g	0.26	<0.040	<0.040	<0.040
Bromomethane	ug/g	0.050	<0.040	<0.040	<0.040
Carbon Tetrachloride	ug/g	0.12	<0.040	<0.040	<0.040
Chlorobenzene	ug/g	2.7	<0.040	<0.040	<0.040
Chloroform	ug/g	0.18	<0.040	<0.040	<0.040
Dibromochloromethane	ug/g	9.4	<0.040	<0.040	<0.040
Dichlorobenzene, 1,2-	ug/g	4.3	<0.040	<0.040	<0.040
Dichlorobenzene, 1,3-	ug/g	6.0	<0.040	<0.040	<0.040
Dichlorobenzene, 1,4-	ug/g	0.097	<0.040	<0.040	<0.040
Dichlorodifluoromethane	ug/g	25	<0.040	<0.040	<0.040
Dichloroethane, 1,1-	ug/g	11	<0.040	<0.040	<0.040
Dichloroethane, 1,2-	ug/g	0.050	<0.049	<0.049	<0.049
Dichloroethylene, 1,1-	ug/g	0.050	<0.040	<0.040	<0.040
Dichloroethylene, 1,2-cis-	ug/g	30	<0.040	<0.040	<0.040
Dichloroethylene, 1,2-trans-	ug/g	0.75	<0.040	<0.040	<0.040
Dichloropropane, 1,2-	ug/g	0.085	<0.040	<0.040	<0.040
Dichloropropene,1,3-	ug/g	0.083	<0.050	<0.050	<0.050
Ethylene dibromide	ug/g	0.050	<0.040	<0.040	<0.040
Hexane (n)	ug/g	34	<0.040	<0.040	<0.040
Methyl Ethyl Ketone	ug/g	44	<0.40	<0.40	<0.40
Methyl Isobutyl Ketone	ug/g	4.3	<0.40	<0.40	<0.40
Methyl tert-Butyl Ether (MTBE)	ug/g	1.4	<0.040	<0.040	<0.040
Methylene Chloride	ug/g	0.96	<0.049	<0.049	<0.049
Styrene	ug/g	2.2	<0.040	<0.040	<0.040
Tetrachloroethane, 1,1,1,2-	ug/g	0.050	<0.040	<0.040	<0.040
Tetrachloroethane, 1,1,2,2-	ug/g	0.050	<0.040	<0.040	<0.040
Tetrachloroethylene	ug/g	2.3	<0.040	<0.040	<0.040
Trichloroethane, 1,1,1-	ug/g	3.4	<0.040	<0.040	<0.040
Trichloroethane, 1,1,2-	ug/g	0.050	<0.040	<0.040	<0.040
Trichloroethylene	ug/g	0.52	<0.010	<0.010	<0.010
Trichlorofluoromethane	ug/g	5.8	<0.040	<0.040	<0.040
Vinyl Chloride	ug/g	0.022	<0.019	<0.019	<0.019

Standards from Soil, Ground Water and Sediment Standards for Use Under Part XV.1
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Table 3: Full Depth Generic SCS in a Non-Potable Ground Water Condition
Residential/Parkland/Institutional 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
Value	Exceeds standard
Value	Detection limit exceeds standard

TABLE 4 SOIL ANALYTICAL RESULTS PAHs
120-158 Queen Street South & 169 Crumbie Street
Mississauga, Ontario

Sample Name	Units	STANDARDS Table 3 R/P/I fine/medium	MW103-7	MW105-1	BH111-2	MW115-3	MW116-2	BH117-3	BH9117-3 Field Duplicate of BH117-3	MW118-2
Vapour Reading	see note	-	<5 ppm	<5 ppm	<5 ppm	<5 ppm	<5 ppm	<5 ppm	-	<5 ppm
Sample Depth	m bg	-	4.6 - 5.2	0 - 0.6	0.8 - 1.4	1.5 - 2.1	0.8 - 1.4	1.5 - 2.1	1.5 - 2.1	0.8 - 1.4
Sampling Date	dd-mmm-yy	-	7-Feb-23	1-Feb-23	30-Jan-23	20-Jan-23	23-Jan-23	26-Jan-23	26-Jan-23	27-Jan-23
Analysis Date (on or before)	dd-mmm-yy	-	17-Feb-23	13-Feb-23	13-Feb-23	3-Feb-23	3-Feb-23	3-Feb-23	3-Feb-23	13-Feb-23
Certificate of Analysis No.	-	-	C340981	C333819	C333819	C326614	C326614	C326614	C326614	C333819
Acenaphthene	ug/g	58	<0.0050	<0.050	<0.0050	<0.050	<0.0050	<0.0050	<0.0050	<0.0050
Acenaphthylene	ug/g	0.17	<0.0050	<0.050	<0.0050	<0.050	<0.0050	<0.0050	<0.0050	<0.0050
Anthracene	ug/g	0.74	<0.0050	<0.050	<0.0050	<0.050	<0.0050	<0.0050	<0.0050	<0.0050
Benz[a]anthracene	ug/g	0.63	<0.0050	<0.050	<0.0050	<0.050	<0.0050	<0.0050	<0.0050	<0.0050
Benzo[a]pyrene	ug/g	0.30	<0.0050	<0.050	<0.0050	<0.050	0.006	<0.0050	<0.0050	<0.0050
Benzo[b]fluoranthene	ug/g	0.78	<0.0050	<0.050	<0.0050	<0.050	0.010	<0.0050	<0.0050	<0.0050
Benzo[ghi]perylene	ug/g	7.8	<0.0050	0.087	<0.0050	<0.050	0.0097	<0.0050	<0.0050	<0.0050
Benzo[k]fluoranthene	ug/g	0.78	<0.0050	<0.050	<0.0050	<0.050	<0.0050	<0.0050	<0.0050	<0.0050
Chrysene	ug/g	7.8	<0.0050	<0.050	<0.0050	<0.050	0.0073	<0.0050	<0.0050	<0.0050
Dibenz[a h]anthracene	ug/g	0.10	<0.0050	<0.050	<0.0050	<0.050	<0.0050	<0.0050	<0.0050	<0.0050
Fluoranthene	ug/g	0.69	<0.0050	<0.050	<0.0050	<0.050	0.012	<0.0050	<0.0050	0.0063
Fluorene	ug/g	69	<0.0050	<0.050	<0.0050	<0.050	<0.0050	<0.0050	<0.0050	<0.0050
Indeno[1 2 3-cd]pyrene	ug/g	0.48	<0.0050	<0.050	<0.0050	<0.050	0.006	<0.0050	<0.0050	<0.0050
Methlynaphthalene, 2-(1-)[1]	ug/g	3.4	<0.0050	<0.050	<0.0050	<0.050	0.0082	<0.0050	<0.0050	<0.0050
Naphthalene	ug/g	0.75	<0.0050	<0.050	<0.0050	<0.050	0.0057	<0.0050	<0.0050	<0.0050
Phenanthrene	ug/g	7.8	0.0077	<0.050	<0.0050	<0.050	0.011	<0.0050	<0.0050	<0.0050
Pyrene	ug/g	78	<0.0050	<0.050	<0.0050	<0.050	0.011	<0.0050	<0.0050	<0.0050

Standards from Soil, Ground Water and Sediment Standards for Use Under Part XV.1
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Table 3: Full Depth Generic SCS in a Non-Potable Ground Water Condition
Residential/Parkland/Institutional 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] the sum of 1-methylnaphthalene and 2- methylnaphthalene.

TABLE 4 SOIL ANALYTICAL RESULTS PAHs
120-158 Queen Street South & 169 Crumbie Street
Mississauga, Ontario

Sample Name	Units	STANDARDS Table 3 R/P/I fine/medium	BH205-2	MW206-1	MW906-1 Field Duplicate of MW206-1
Vapour Reading	see note	-	<5 ppm	10 ppm	-
Sample Depth	m bg	-	0.8 - 1.4	0 - 0.6	0 - 0.6
Sampling Date	dd-mmm-yy	-	5-Jun-23	9-Jun-23	9-Jun-23
Analysis Date (on or before)	dd-mmm-yy	-	16-Jun-23	21-Jun-23	21-Jun-23
Certificate of Analysis No.	-	-	C3G2781	C3H2595	C3H2595
Acenaphthene	ug/g	58	<0.03	<0.0050	<0.0050
Acenaphthylene	ug/g	0.17	<0.05	<0.0050	<0.0050
Anthracene	ug/g	0.74	0.03	0.0051	<0.0050
Benz[a]anthracene	ug/g	0.63	0.08	0.012	0.010
Benzo[a]pyrene	ug/g	0.30	0.05	0.01	0.0079
Benzo[b]fluoranthene	ug/g	0.78	<0.1	0.014	0.010
Benzo[ghi]perylene	ug/g	7.8	<0.1	0.0057	<0.0050
Benzo[k]fluoranthene	ug/g	0.78	<0.03	0.0052	<0.0050
Chrysene	ug/g	7.8	0.07	0.01	0.008
Dibenz[a h]anthracene	ug/g	0.10	<0.05	<0.0050	<0.0050
Fluoranthene	ug/g	0.69	0.17	0.031	0.023
Fluorene	ug/g	69	<0.03	<0.0050	<0.0050
Indeno[1 2 3-cd]pyrene	ug/g	0.48	<0.08	0.0062	<0.0050
Methlynaphthalene, 2-(1-)[1]	ug/g	3.4	<0.03	<0.0050	<0.0050
Naphthalene	ug/g	0.75	<0.03	<0.0050	<0.0050
Phenanthrene	ug/g	7.8	0.19	0.027	0.022
Pyrene	ug/g	78	0.14	0.024	0.017

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Table 3: Full Depth Generic SCS in a Non-Potable Ground Water Condition
Residential/Parkland/Institutional 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]	the sum of 1-methylnaphthalene and 2- methylnaphthalene.

TABLE 5 SOIL ANALYTICAL RESULTS INORGANICS
120-158 Queen Street South & 169 Crumbie Street
Mississauga, Ontario

Sample Name	Units	STANDARDS Table 3 R/P/I fine/medium	MW101-2	MW102-2	MW103-2	MW104-2	MW105-2	MW106-1	MW107-2A	MW108-2
Vapour Reading	see note	-	<5 ppm	<5 ppm	<5 ppm	<5 ppm	<5 ppm	<5 ppm	<5 ppm	<5 ppm
Sample Depth	m bg	-	0.8 - 1.4	0.8 - 1.4	0.8 - 1.4	0.8 - 1.4	0.8 - 1.4	0 - 0.6	0.8 - 1.1	0.8 - 1.4
Sampling Date	dd-mmm-yy	-	18-Jan-23	8-Feb-23	7-Feb-23	6-Feb-23	1-Feb-23	19-Jan-23	18-Jan-23	2-Feb-23
Analysis Date (on or before)	dd-mmm-yy	-	30-Jan-23	17-Feb-23	17-Feb-23	17-Feb-23	13-Feb-23	3-Feb-23	30-Jan-23	13-Feb-23
Certificate of Analysis No.	-	-	C321247	C340981	C340981	C340981	C333819	C326614	C321247	C333819
pH	pH	NV	7.76	7.69	7.71	7.67	7.93	7.73	7.77	7.89
Antimony	ug/g	7.5	<0.20	<0.20	0.2	<0.20	0.27	0.37	<0.20	<0.20
Arsenic	ug/g	18	3.9	4.4	4.5	3.2	5.1	4.7	4.9	4.7
Barium	ug/g	390	68	85	84	43	97	77	45	66
Beryllium	ug/g	5.0	0.69	0.74	0.68	0.22	0.77	0.66	0.39	0.69
Boron (total)	ug/g	120	8.5	11	10	<5.0	12	12	8.5	7.3
Boron (Hot Water Soluble)[1]	ug/g	1.5	0.091	0.22	0.085	0.17	1.1	0.38	0.43	0.32
Cadmium	ug/g	1.2	0.14	0.11	<0.10	0.2	0.23	0.14	0.25	0.17
Chromium Total	ug/g	160	21	24	21	8.2	24	22	31	24
Chromium VI	ug/g	10	<0.18	<0.18	<0.18	<0.18	<0.18	<0.18	<0.18	<0.18
Cobalt	ug/g	22	12	12	13	3.4	13	10	6.7	11
Copper	ug/g	180	27	28	32	28	31	25	18	30
Cyanide (CN-)	ug/g	0.051	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Lead	ug/g	120	12	10	10	46	39	19	21	12
Mercury	ug/g	1.8	<0.050	<0.050	<0.050	<0.050	0.075	<0.050	<0.050	<0.050
Molybdenum	ug/g	6.9	<0.50	<0.50	<0.50	<0.50	<0.50	0.63	1.2	0.56
Nickel	ug/g	130	24	26	28	8.4	27	22	15	25
Selenium	ug/g	2.4	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Silver	ug/g	25	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Thallium	ug/g	1.0	0.14	0.15	0.17	0.092	0.16	0.15	0.1	0.15
Uranium	ug/g	23	0.58	0.7	0.63	0.33	0.64	0.62	0.44	0.5
Vanadium	ug/g	86	29	32	29	9	33	29	25	34
Zinc	ug/g	340	54	63	61	55	73	74	86	65
Electrical Conductivity (mS/cm)	mS/cm	0.70	**2.2**	**1.6**	0.28	0.17	**7.3**	**1.8**	**3.3**	**3**
Sodium Adsorption Ratio	N/A	5.0	**18**	**13**	0.42	0.28	**49**	**11**	**16**	**18**

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Residential/Parkland/Institutional 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] Hot water soluble boron applies to surface soils (<1.5 m bg).
[2] Analysis for methyl mercury only applies when mercury standard is exceeded.

TABLE 5 SOIL ANALYTICAL RESULTS INORGANICS
120-158 Queen Street South & 169 Crumbie Street
Mississauga, Ontario

Sample Name	Units	STANDARDS Table 3 R/P/I fine/medium	BH109-2A	BH110-2	BH9110-2 Field Duplicate of BH110-2	BH110A-2	BH110B-2	BH110C-2	BH110D-2	BH110E-2
Vapour Reading	see note	-	<5 ppm	<5 ppm	-	<5 ppm	<5 ppm	<5 ppm	<5 ppm	<5 ppm
Sample Depth	m bg	-	0.8 - 1.2	0.8 - 1.4	0.8 - 1.4	0.6 - 1.2	0.6 - 1.2	0.6 - 1.2	0.6 - 1.2	0.6 - 1.2
Sampling Date	dd-mmm-yy	-	17-Jan-23	6-Feb-23	6-Feb-23	20-Jun-23	20-Jun-23	20-Jun-23	20-Jun-23	20-Jun-23
Analysis Date (on or before)	dd-mmm-yy	-	30-Jan-23	17-Feb-23	17-Feb-23	27-Jun-23	27-Jun-23	27-Jun-23	27-Jun-23	27-Jun-23
Certificate of Analysis No.	-	-	C321247	C340981	C340981	C3I3867	C3I3867	C3I3867	C3I3867	C3I3867
pH	pH	NV	7.68	7.43	7.38	-	-	-	-	-
Antimony	ug/g	7.5	<0.20	0.29	0.31	-	-	-	-	-
Arsenic	ug/g	18	3.1	4.4	6.4	-	-	-	-	-
Barium	ug/g	390	90	84	73	-	-	-	-	-
Beryllium	ug/g	5.0	0.58	0.72	0.55	-	-	-	-	-
Boron (total)	ug/g	120	8.0	11	11	-	-	-	-	-
Boron (Hot Water Soluble)[1]	ug/g	1.5	0.14	**2.3**	1.4	**2.5**	1.3	1.4	**3.1**	**2.0**
Cadmium	ug/g	1.2	0.12	0.35	0.23	-	-	-	-	-
Chromium Total	ug/g	160	22	24	51	-	-	-	-	-
Chromium VI	ug/g	10	<0.18	<0.18	<0.18	-	-	-	-	-
Cobalt	ug/g	22	10	11	10	-	-	-	-	-
Copper	ug/g	180	25	25	28	-	-	-	-	-
Cyanide (CN-)	ug/g	0.051	<0.01	0.01	<0.01	-	-	-	-	-
Lead	ug/g	120	8.6	30	19	-	-	-	-	-
Mercury	ug/g	1.8	<0.050	<0.050	<0.050	-	-	-	-	-
Molybdenum	ug/g	6.9	<0.50	0.61	1.9	-	-	-	-	-
Nickel	ug/g	130	21	23	19	-	-	-	-	-
Selenium	ug/g	2.4	<0.50	<0.50	<0.50	-	-	-	-	-
Silver	ug/g	25	<0.20	<0.20	<0.20	-	-	-	-	-
Thallium	ug/g	1.0	0.17	0.16	0.12	-	-	-	-	-
Uranium	ug/g	23	0.61	0.78	0.58	-	-	-	-	-
Vanadium	ug/g	86	33	33	25	-	-	-	-	-
Zinc	ug/g	340	55	94	68	-	-	-	-	-
Electrical Conductivity (mS/cm)	mS/cm	0.70	**5.8**	**2.3**	**2.3**	-	-	-	-	-
Sodium Adsorption Ratio	N/A	5.0	**17**	**9.2**	**16**	-	-	-	-	-

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
Residential/Parkland/Institutional 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] Hot water soluble boron applies to surface soils (<1.5 m bg).
[2] Analysis for methyl mercury only applies when mercury standard is exceeded.

TABLE 5 SOIL ANALYTICAL RESULTS INORGANICS
120-158 Queen Street South & 169 Crumbie Street
Mississauga, Ontario

Sample Name	Units	STANDARDS Table 3 R/P/I fine/medium	BH110F-2	BH110-3	BH110-4	BH111-1	MW113-2	BH114-2	BH114A-2	BH114A-92 Field Duplicate of BH114A-2
Vapour Reading	see note	-	<5 ppm	<5 ppm	<5 ppm	<5 ppm	<5 ppm	<5 ppm	<5 ppm	-
Sample Depth	m bg	-	0.6 - 1.2	1.5 - 2.1	2.3 - 2.9	0 - 0.6	0.8 - 1.4	0.8 - 1.4	0.6 - 1.2	0.6 - 1.2
Sampling Date	dd-mmm-yy	-	20-Jun-23	6-Feb-23	6-Feb-23	30-Jan-23	16-Jan-23	31-Jan-23	20-Jun-23	20-Jun-23
Analysis Date (on or before)	dd-mmm-yy	-	27-Jun-23	21-Jul-23	21-Jul-23	13-Feb-23	30-Jan-23	13-Feb-23	27-Jun-23	27-Jun-23
Certificate of Analysis No.	-	-	C3I3867	C3L1448	C3L1448	C333819	C321247	C333819	C3I3867	C3I3867
pH	pH	NV	-	-	-	10.8	7.38	7.52	-	-
Antimony	ug/g	7.5	-	-	-	0.25	<0.20	0.24	-	-
Arsenic	ug/g	18	-	-	-	4.3	5.1	4.4	-	-
Barium	ug/g	390	-	-	-	91	80	55	-	-
Beryllium	ug/g	5.0	-	-	-	0.82	0.82	0.44	-	-
Boron (total)	ug/g	120	-	-	-	10	9.5	12	-	-
Boron (Hot Water Soluble)[1]	ug/g	1.5	0.40	0.10	0.11	0.75	0.25	**2.3**	1.1	0.74
Cadmium	ug/g	1.2	-	-	-	0.19	0.14	0.26	-	-
Chromium Total	ug/g	160	-	-	-	26	29	16	-	-
Chromium VI	ug/g	10	-	-	-	<0.18	<0.18	<0.18	-	-
Cobalt	ug/g	22	-	-	-	13	13	15	-	-
Copper	ug/g	180	-	-	-	29	39	20	-	-
Cyanide (CN-)	ug/g	0.051	-	-	-	<0.01	<0.01	<0.01	-	-
Lead	ug/g	120	-	-	-	17	14	21	-	-
Mercury	ug/g	1.8	-	-	-	<0.050	<0.050	<0.050	-	-
Molybdenum	ug/g	6.9	-	-	-	1.1	1.9	0.98	-	-
Nickel	ug/g	130	-	-	-	25	30	20	-	-
Selenium	ug/g	2.4	-	-	-	<0.50	<0.50	<0.50	-	-
Silver	ug/g	25	-	-	-	<0.20	<0.20	<0.20	-	-
Thallium	ug/g	1.0	-	-	-	0.15	0.15	0.19	-	-
Uranium	ug/g	23	-	-	-	0.58	0.69	0.47	-	-
Vanadium	ug/g	86	-	-	-	34	35	21	-	-
Zinc	ug/g	340	-	-	-	85	69	110	-	-
Electrical Conductivity (mS/cm)	mS/cm	0.70	-	-	-	**5.2**	**5.6**	**1.4**	-	-
Sodium Adsorption Ratio	N/A	5.0	-	-	-	**17**	**22**	**6.3**	-	-

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
Residential/Parkland/Institutional 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] Hot water soluble boron applies to surface soils (<1.5 m bg).
[2] Analysis for methyl mercury only applies when mercury standard is exceeded.

TABLE 5 SOIL ANALYTICAL RESULTS INORGANICS
120-158 Queen Street South & 169 Crumbie Street
Mississauga, Ontario

Sample Name	Units	STANDARDS Table 3 R/P/I fine/medium	BH114B-2	BH114C-2	BH114D-2	BH114E-2	BH114F-2	BH114-3	BH114-4	MW115-3
Vapour Reading	see note	-	<5 ppm	<5 ppm	<5 ppm	<5 ppm	<5 ppm	<5 ppm	<5 ppm	<5 ppm
Sample Depth	m bg	-	0.6 - 1.2	0.6 - 1.2	0.6 - 1.2	0.6 - 1.2	0.6 - 1.2	1.5 - 2.1	2.3 - 2.9	1.5 - 2.1
Sampling Date	dd-mmm-yy	-	20-Jun-23	20-Jun-23	20-Jun-23	20-Jun-23	20-Jun-23	31-Jan-23	31-Jan-23	20-Jan-23
Analysis Date (on or before)	dd-mmm-yy	-	27-Jun-23	27-Jun-23	27-Jun-23	27-Jun-23	27-Jun-23	21-Jul-23	21-Jul-23	3-Feb-23
Certificate of Analysis No.	-	-	C3I3867	C3I3867	C3I3867	C3I3867	C3I3867	C3L1448	C3L1448	C326614
pH	pH	NV	-	-	-	-	-	-	-	7.15
Antimony	ug/g	7.5	-	-	-	-	-	-	-	<0.20
Arsenic	ug/g	18	-	-	-	-	-	-	-	4.4
Barium	ug/g	390	-	-	-	-	-	-	-	93
Beryllium	ug/g	5.0	-	-	-	-	-	-	-	1
Boron (total)	ug/g	120	-	-	-	-	-	-	-	8.0
Boron (Hot Water Soluble)[1]	ug/g	1.5	1.2	**3.9**	**3.7**	0.59	**4.4**	0.57	0.16	1.3
Cadmium	ug/g	1.2	-	-	-	-	-	-	-	0.21
Chromium Total	ug/g	160	-	-	-	-	-	-	-	26
Chromium VI	ug/g	10	-	-	-	-	-	-	-	<0.18
Cobalt	ug/g	22	-	-	-	-	-	-	-	12
Copper	ug/g	180	-	-	-	-	-	-	-	27
Cyanide (CN-)	ug/g	0.051	-	-	-	-	-	-	-	<0.01
Lead	ug/g	120	-	-	-	-	-	-	-	15
Mercury	ug/g	1.8	-	-	-	-	-	-	-	<0.050
Molybdenum	ug/g	6.9	-	-	-	-	-	-	-	<0.50
Nickel	ug/g	130	-	-	-	-	-	-	-	25
Selenium	ug/g	2.4	-	-	-	-	-	-	-	<0.50
Silver	ug/g	25	-	-	-	-	-	-	-	<0.20
Thallium	ug/g	1.0	-	-	-	-	-	-	-	0.16
Uranium	ug/g	23	-	-	-	-	-	-	-	0.9
Vanadium	ug/g	86	-	-	-	-	-	-	-	38
Zinc	ug/g	340	-	-	-	-	-	-	-	72
Electrical Conductivity (mS/cm)	mS/cm	0.70	-	-	-	-	-	-	-	**3.5**
Sodium Adsorption Ratio	N/A	5.0	-	-	-	-	-	-	-	**12**

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
Residential/Parkland/Institutional 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] Hot water soluble boron applies to surface soils (<1.5 m bg).
[2] Analysis for methyl mercury only applies when mercury standard is exceeded.

TABLE 5 SOIL ANALYTICAL RESULTS INORGANICS
120-158 Queen Street South & 169 Crumbie Street
Mississauga, Ontario

Sample Name	Units	STANDARDS Table 3 R/P/I fine/medium	MW116-2	BH117-2	BH9117-2 Field Duplicate of BH117-2	MW118-2	BH205-2	BH205-3	MW206-1	MW906-1 Field Duplicate of MW206-1
Vapour Reading	see note	-	<5 ppm	<5 ppm	-	<5 ppm	<5 ppm	<5 ppm	10 ppm	-
Sample Depth	m bg	-	0.8 - 1.4	0.8 - 1.4	0.8 - 1.4	0.8 - 1.4	0.8 - 1.4	1.5 - 2.1	0 - 0.6	0 - 0.6
Sampling Date	dd-mmm-yy	-	23-Jan-23	26-Jan-23	26-Jan-23	27-Jan-23	5-Jun-23	5-Jun-23	9-Jun-23	9-Jun-23
Analysis Date (on or before)	dd-mmm-yy	-	3-Feb-23	3-Feb-23	3-Feb-23	13-Feb-23	16-Jun-23	20-Jul-23	21-Jun-23	21-Jun-23
Certificate of Analysis No.	-	-	C326614	C326614	C326614	C333819	C3G2781	C3L1872	C3H2595	C3H2595
pH	pH	NV	7.68	7.76	7.78	7.8	7.84	-	7.75	7.73
Antimony	ug/g	7.5	<0.20	<0.20	<0.20	<0.20	0.28	-	<0.20	<0.20
Arsenic	ug/g	18	4.7	2.5	2.3	4.4	4.1	-	1.3	1.2
Barium	ug/g	390	88	28	31	83	85	-	15	17
Beryllium	ug/g	5.0	0.79	0.32	0.35	0.77	0.69	-	<0.20	<0.20
Boron (total)	ug/g	120	12	6.0	5.9	13	8.0	-	<5.0	<5.0
Boron (Hot Water Soluble)[1]	ug/g	1.5	0.29	0.42	0.21	1.5	**2.5**	0.78	0.26	0.25
Cadmium	ug/g	1.2	0.12	<0.10	<0.10	0.16	0.23	-	<0.10	<0.10
Chromium Total	ug/g	160	26	13	13	24	23	-	6.2	6.6
Chromium VI	ug/g	10	<0.18	<0.18	<0.18	<0.18	<0.18	-	<0.18	<0.18
Cobalt	ug/g	22	12	5.2	5.8	12	12	-	2.4	2.6
Copper	ug/g	180	30	15	16	33	19	-	9.1	9.1
Cyanide (CN-)	ug/g	0.051	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	<0.01
Lead	ug/g	120	10	5.6	5.6	11	20	-	3.4	3.6
Mercury	ug/g	1.8	<0.050	<0.050	<0.050	<0.050	0.059	-	<0.050	<0.050
Molybdenum	ug/g	6.9	0.52	<0.50	<0.50	<0.50	0.61	-	<0.50	<0.50
Nickel	ug/g	130	27	10	11	27	21	-	4.4	4.5
Selenium	ug/g	2.4	<0.50	<0.50	<0.50	<0.50	<0.50	-	<0.50	<0.50
Silver	ug/g	25	<0.20	<0.20	<0.20	<0.20	<0.20	-	<0.20	<0.20
Thallium	ug/g	1.0	0.15	0.073	0.079	0.16	0.14	-	<0.050	<0.050
Uranium	ug/g	23	0.66	0.44	0.49	0.62	0.54	-	0.28	0.66
Vanadium	ug/g	86	33	22	22	31	34	-	15	16
Zinc	ug/g	340	67	30	30	65	70	-	31	30
Electrical Conductivity (mS/cm)	mS/cm	0.70	**0.82**	**2.1**	**1.9**	**5.2**	**5.5**	-	0.17	0.17
Sodium Adsorption Ratio	N/A	5.0	2	**14**	**8.8**	0.44	**76**	-	1	1

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
Residential/Parkland/Institutional 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] Hot water soluble boron applies to surface soils (<1.5 m bg).
[2] Analysis for methyl mercury only applies when mercury standard is exceeded.

TABLE 5 SOIL ANALYTICAL RESULTS INORGANICS
120-158 Queen Street South & 169 Crumbie Street
Mississauga, Ontario

Sample Name	Units	STANDARDS Table 3 R/P/I fine/medium	BH301-2	BH301-3	BH302-2	BH302-3	BH3003 Field Duplicate of BH302-3	BH303-2	BH303-3	BH304-2
Vapour Reading	see note	-	<5 ppm	<5 ppm	<5 ppm	<5 ppm	-	<5 ppm	<5 ppm	<5 ppm
Sample Depth	m bg	-	0.6 - 1.2	1.5 - 1.8	0.6 - 1.2	1.5 - 1.8	1.5 - 1.8	0.6 - 1.2	1.5 - 1.8	0.6 - 1.2
Sampling Date	dd-mmm-yy	-	11-Aug-23	11-Aug-23	11-Aug-23	11-Aug-23	11-Aug-23	11-Aug-23	11-Aug-23	11-Aug-23
Analysis Date (on or before)	dd-mmm-yy	-	29-Aug-23	29-Aug-23	29-Aug-23	29-Aug-23	29-Aug-23	29-Aug-23	29-Aug-23	29-Aug-23
Certificate of Analysis No.	-	-	C3O6894	C3O6894	C3O6894	C3O6894	C3O6894	C3O6894	C3O6894	C3O6894
pH	pH	NV	-	-	-	-	-	-	-	-
Antimony	ug/g	7.5	-	-	-	-	-	-	-	-
Arsenic	ug/g	18	-	-	-	-	-	-	-	-
Barium	ug/g	390	-	-	-	-	-	-	-	-
Beryllium	ug/g	5.0	-	-	-	-	-	-	-	-
Boron (total)	ug/g	120	-	9.7	-	<5.0	-	-	11	-
Boron (Hot Water Soluble)[1]	ug/g	1.5	**3.7**	0.23	0.57	0.16	0.43	1.5	1.1	0.90
Cadmium	ug/g	1.2	-	-	-	-	-	-	-	-
Chromium Total	ug/g	160	-	-	-	-	-	-	-	-
Chromium VI	ug/g	10	-	-	-	-	-	-	-	-
Cobalt	ug/g	22	-	-	-	-	-	-	-	-
Copper	ug/g	180	-	-	-	-	-	-	-	-
Cyanide (CN-)	ug/g	0.051	-	-	-	-	-	-	-	-
Lead	ug/g	120	-	-	-	-	-	-	-	-
Mercury	ug/g	1.8	-	-	-	-	-	-	-	-
Molybdenum	ug/g	6.9	-	-	-	-	-	-	-	-
Nickel	ug/g	130	-	-	-	-	-	-	-	-
Selenium	ug/g	2.4	-	-	-	-	-	-	-	-
Silver	ug/g	25	-	-	-	-	-	-	-	-
Thallium	ug/g	1.0	-	-	-	-	-	-	-	-
Uranium	ug/g	23	-	-	-	-	-	-	-	-
Vanadium	ug/g	86	-	-	-	-	-	-	-	-
Zinc	ug/g	340	-	-	-	-	-	-	-	-
Electrical Conductivity (mS/cm)	mS/cm	0.70	-	-	-	-	-	-	-	-
Sodium Adsorption Ratio	N/A	5.0	-	-	-	-	-	-	-	-

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
Residential/Parkland/Institutional 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] Hot water soluble boron applies to surface soils (<1.5 m bg).
[2] Analysis for methyl mercury only applies when mercury standard is exceeded.

TABLE 5 SOIL ANALYTICAL RESULTS INORGANICS
120-158 Queen Street South & 169 Crumbie Street
Mississauga, Ontario

Sample Name	Units	STANDARDS Table 3 R/P/I fine/medium	BH304-3	BH305-2	BH305-3	BH306-2	BH306-3	BH307-2	BH307-3	BH401-2
Vapour Reading	see note	-	<5 ppm	<5 ppm	<5 ppm	<5 ppm	<5 ppm	<5 ppm	<5 ppm	<5 ppm
Sample Depth	m bg	-	1.5 - 1.8	0.6 - 1.2	1.5 - 1.8	0.6 - 1.2	1.5 - 1.8	0.6 - 1.2	1.5 - 1.8	0.6 - 1.2
Sampling Date	dd-mmm-yy	-	11-Aug-23	11-Aug-23	11-Aug-23	11-Aug-23	11-Aug-23	11-Aug-23	11-Aug-23	6-Oct-23
Analysis Date (on or before)	dd-mmm-yy	-	29-Aug-23	29-Aug-23	29-Aug-23	29-Aug-23	29-Aug-23	29-Aug-23	29-Aug-23	17-Oct-23
Certificate of Analysis No.	-	-	C3O6894	C3O6894	C3O6894	C3O6894	C3O6894	C3O6894	C3O6894	C3V6275
pH	pH	NV	-	-	-	-	-	-	-	-
Antimony	ug/g	7.5	-	-	-	-	-	-	-	-
Arsenic	ug/g	18	-	-	-	-	-	-	-	-
Barium	ug/g	390	-	-	-	-	-	-	-	-
Beryllium	ug/g	5.0	-	-	-	-	-	-	-	-
Boron (total)	ug/g	120	9.6	-	13	-	8.8	-	8.9	-
Boron (Hot Water Soluble)[1]	ug/g	1.5	0.43	**3.3**	**2.0**	0.58	**4.2**	**2.2**	1.1	0.46
Cadmium	ug/g	1.2	-	-	-	-	-	-	-	-
Chromium Total	ug/g	160	-	-	-	-	-	-	-	-
Chromium VI	ug/g	10	-	-	-	-	-	-	-	-
Cobalt	ug/g	22	-	-	-	-	-	-	-	-
Copper	ug/g	180	-	-	-	-	-	-	-	-
Cyanide (CN-)	ug/g	0.051	-	-	-	-	-	-	-	-
Lead	ug/g	120	-	-	-	-	-	-	-	-
Mercury	ug/g	1.8	-	-	-	-	-	-	-	-
Molybdenum	ug/g	6.9	-	-	-	-	-	-	-	-
Nickel	ug/g	130	-	-	-	-	-	-	-	-
Selenium	ug/g	2.4	-	-	-	-	-	-	-	-
Silver	ug/g	25	-	-	-	-	-	-	-	-
Thallium	ug/g	1.0	-	-	-	-	-	-	-	-
Uranium	ug/g	23	-	-	-	-	-	-	-	-
Vanadium	ug/g	86	-	-	-	-	-	-	-	-
Zinc	ug/g	340	-	-	-	-	-	-	-	-
Electrical Conductivity (mS/cm)	mS/cm	0.70	-	-	-	-	-	-	-	-
Sodium Adsorption Ratio	N/A	5.0	-	-	-	-	-	-	-	-

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
Residential/Parkland/Institutional 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] Hot water soluble boron applies to surface soils (<1.5 m bg).
[2] Analysis for methyl mercury only applies when mercury standard is exceeded.

TABLE 5 SOIL ANALYTICAL RESULTS INORGANICS
120-158 Queen Street South & 169 Crumbie Street
Mississauga, Ontario

Sample Name	Units	STANDARDS Table 3 R/P/I fine/medium	BH401-4	BH402-2	BH402-4	BH406-2	BH406-4	BH407-2	BH4100-2 Field Duplicate of BH407-2	BH407-4
Vapour Reading	see note	-	<5 ppm	<5 ppm	<5 ppm	<5 ppm	<5 ppm	<5 ppm	-	<5 ppm
Sample Depth	m bg	-	1.8 - 2.4	0.6 - 1.2	1.8 - 2.4	0.6 - 1.2	1.8 - 2.4	0.6 - 1.2	0.6 - 1.2	1.8 - 2.4
Sampling Date	dd-mmm-yy	-	6-Oct-23	6-Oct-23	6-Oct-23	6-Oct-23	6-Oct-23	6-Oct-23	6-Oct-23	6-Oct-23
Analysis Date (on or before)	dd-mmm-yy	-	17-Oct-23	17-Oct-23	17-Oct-23	17-Oct-23	17-Oct-23	17-Oct-23	17-Oct-23	17-Oct-23
Certificate of Analysis No.	-	-	C3V6275	C3V6275	C3V6275	C3V6275	C3V6275	C3V6275	C3V6275	C3V6275
pH	pH	NV	-	-	-	-	-	-	-	-
Antimony	ug/g	7.5	-	-	-	-	-	-	-	-
Arsenic	ug/g	18	-	-	-	-	-	-	-	-
Barium	ug/g	390	-	-	-	-	-	-	-	-
Beryllium	ug/g	5.0	-	-	-	-	-	-	-	-
Boron (total)	ug/g	120	9.5	-	9.0	-	11	-	-	11
Boron (Hot Water Soluble)[1]	ug/g	1.5	-	0.90	-	0.82	-	0.71	0.84	-
Cadmium	ug/g	1.2	-	-	-	-	-	-	-	-
Chromium Total	ug/g	160	-	-	-	-	-	-	-	-
Chromium VI	ug/g	10	-	-	-	-	-	-	-	-
Cobalt	ug/g	22	-	-	-	-	-	-	-	-
Copper	ug/g	180	-	-	-	-	-	-	-	-
Cyanide (CN-)	ug/g	0.051	-	-	-	-	-	-	-	-
Lead	ug/g	120	-	-	-	-	-	-	-	-
Mercury	ug/g	1.8	-	-	-	-	-	-	-	-
Molybdenum	ug/g	6.9	-	-	-	-	-	-	-	-
Nickel	ug/g	130	-	-	-	-	-	-	-	-
Selenium	ug/g	2.4	-	-	-	-	-	-	-	-
Silver	ug/g	25	-	-	-	-	-	-	-	-
Thallium	ug/g	1.0	-	-	-	-	-	-	-	-
Uranium	ug/g	23	-	-	-	-	-	-	-	-
Vanadium	ug/g	86	-	-	-	-	-	-	-	-
Zinc	ug/g	340	-	-	-	-	-	-	-	-
Electrical Conductivity (mS/cm)	mS/cm	0.70	-	-	-	-	-	-	-	-
Sodium Adsorption Ratio	N/A	5.0	-	-	-	-	-	-	-	-

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
Residential/Parkland/Institutional 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] Hot water soluble boron applies to surface soils (<1.5 m bg).
[2] Analysis for methyl mercury only applies when mercury standard is exceeded.

TABLE 5 SOIL ANALYTICAL RESULTS INORGANICS

120-158 Queen Street South & 169 Crumbie Street

Mississauga, Ontario

Sample Name	Units	STANDARDS Table 3 R/P/I fine/medium	BH4100-4 Field Duplicate of BH407-4
Vapour Reading	see note	-	-
Sample Depth	m bg	-	1.8 - 2.4
Sampling Date	dd-mmm-yy	-	6-Oct-23
Analysis Date (on or before)	dd-mmm-yy	-	17-Oct-23
Certificate of Analysis No.	-	-	C3V6275
pH	pH	NV	-
Antimony	ug/g	7.5	-
Arsenic	ug/g	18	-
Barium	ug/g	390	-
Beryllium	ug/g	5.0	-
Boron (total)	ug/g	120	11
Boron (Hot Water Soluble)[1]	ug/g	1.5	-
Cadmium	ug/g	1.2	-
Chromium Total	ug/g	160	-
Chromium VI	ug/g	10	-
Cobalt	ug/g	22	-
Copper	ug/g	180	-
Cyanide (CN-)	ug/g	0.051	-
Lead	ug/g	120	-
Mercury	ug/g	1.8	-
Molybdenum	ug/g	6.9	-
Nickel	ug/g	130	-
Selenium	ug/g	2.4	-
Silver	ug/g	25	-
Thallium	ug/g	1.0	-
Uranium	ug/g	23	-
Vanadium	ug/g	86	-
Zinc	ug/g	340	-
Electrical Conductivity (mS/cm)	mS/cm	0.70	-
Sodium Adsorption Ratio	N/A	5.0	-

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

Residential/Parkland/Institutional 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]	Hot water soluble boron applies to surface soils (<1.5 m bg).
[2]	Analysis for methyl mercury only applies when mercury standard is exceeded.

TABLE 6 SOIL ANALYTICAL RESULTS ABNs

120-158 Queen Street South & 169 Crumbie Street

Mississauga, Ontario

Sample Name	Units	STANDARDS Table 3 R/P/I fine/medium	BH205-2
Vapour Reading	see note	-	<5 ppm
Sample Depth	m bg	-	0.8 - 1.4
Sampling Date	dd-mmm-yy	-	5-Jun-23
Analysis Date (on or before)	dd-mmm-yy	-	16-Jun-23
Certificate of Analysis No.	-	-	C3G2781
Biphenyl 1,1'-	ug/g	1.1	<0.05
Bis(2-chloroethyl)ether	ug/g	0.50	<0.2
Bis(2-chloroisopropyl)ether	ug/g	1.8	<0.1
Bis(2-ethylhexyl)phthalate	ug/g	5.0	<1
Chloroaniline p-	ug/g	0.53	<0.2
Dichlorobenzidine, 3,3'-	ug/g	1.0	<0.5
Diethyl Phthalate	ug/g	0.50	<0.2
Dimethylphenol, 2,4-	ug/g	420	<0.2
Dimethylphthalate	ug/g	0.50	<0.2
Dinitrophenol, 2,4-	ug/g	38	<0.5
Dinitrotoluene, 2,4 & 2,6-	ug/g	0.92	<0.14
Dioxane, 1,4	ug/g	1.8	-
Phenol	ug/g	9.4	<0.09
Trichlorobenzene, 1,2,4-	ug/g	1.4	<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

Residential/Parkland/Institutional 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

TABLE 7 SOIL ANALYTICAL RESULTS CPs

120-158 Queen Street South & 169 Crumbie Street

Mississauga, Ontario

Sample Name	Units	STANDARDS Table 3 R/P/I fine/medium	BH205-2
Vapour Reading	see note	-	<5 ppm
Sample Depth	m bg	-	0.8 - 1.4
Sampling Date	dd-mmm-yy	-	5-Jun-23
Analysis Date (on or before)	dd-mmm-yy	-	16-Jun-23
Certificate of Analysis No.	-	-	C3G2781
Chlorophenol, 2-	ug/g	2.0	<0.08
Dichlorophenol, 2,4-	ug/g	2.1	<0.1
Pentachlorophenol	ug/g	0.10	<0.1
Trichlorophenol, 2,4,5-	ug/g	5.5	<0.08
Trichlorophenol, 2,4,6-	ug/g	4.2	<0.1

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

Residential/Parkland/Institutional 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

TABLE 8 SOIL ANALYTICAL RESULTS PCBs

120-158 Queen Street South & 169 Crumbie Street

Mississauga, Ontario

Sample Name	Units	STANDARDS Table 3 R/P/I fine/medium	BH205-2
Vapour Reading	see note	-	<5 ppm
Sample Depth	m bg	-	0.8 - 1.4
Sampling Date	dd-mmm-yy	-	5-Jun-23
Analysis Date (on or before)	dd-mmm-yy	-	16-Jun-23
Certificate of Analysis No.	-	-	C3G2781
Polychlorinated Biphenyls	ug/g	0.35	<0.010

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

Residential/Parkland/Institutional 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

TABLE 9 GROUNDWATER ANALYTICAL RESULTS BTEX/PHCs

120-158 Queen Street South & 169 Crumbie Street

Mississauga, Ontario

Sample Name	Units	STANDARDS Table 3 fine/medium	MW101S	MW101D	MW103S	MW103D	MW113S	MW1000 Field Duplicate of MW113S	MW113D	MW118S
Vapour Reading	see note	-	<5 ppm	105 ppm	<5 ppm	210 ppm	<5 ppm	-	<5 ppm	9% LEL
Sampling Date	dd-mmm-yy	-	8-Mar-23	8-Mar-23	8-Mar-23	8-Mar-23	8-Mar-23	8-Mar-23	8-Mar-23	8-Mar-23
Analysis Date (on or before)	dd-mmm-yy	-	13-Mar-23	13-Mar-23	13-Mar-23	13-Mar-23	13-Mar-23	13-Mar-23	13-Mar-23	13-Mar-23
Certificate of Analysis No.	-	-	C367634	C367634	C367634	C367634	C367634	C367634	C367634	C367634
Benzene	ug/L	430	<0.17	0.22	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17
Toluene	ug/L	18,000	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Ethylbenzene	ug/L	2,300	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Xylene Mixture	ug/L	4,200	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Petroleum Hydrocarbons F1[1]	ug/L	750	<25	<25	<25	<25	<25	<25	<25	<25
Petroleum Hydrocarbons F2	ug/L	150	<100	<100	<100	<100	<100	<100	<100	<100
Petroleum Hydrocarbons F3	ug/L	500	<200	<200	320	<200	<200	<200	<200	<200
Petroleum Hydrocarbons F4	ug/L	500	<200	<200	<200	<200	<200	<200	<200	<200
Petroleum Hydrocarbons F4G	-	500	-	-	-	-	-	-	-	-

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 9 GROUNDWATER ANALYTICAL RESULTS BTEX/PHCs

120-158 Queen Street South & 169 Crumbie Street

Mississauga, Ontario

Sample Name	Units	STANDARDS Table 3 fine/medium	MW118D	MW201	MW202	MW203	MW1000 Field Duplicate of MW203	MW206	MW207	MW208
Vapour Reading	see note	-	60% LEL	<5 ppm	<5 ppm	500 ppm	-	<5 ppm	40 ppm	<5 ppm
Sampling Date	dd-mmm-yy	-	8-Mar-23	16-Jun-23	16-Jun-23	16-Jun-23	16-Jun-23	16-Jun-23	16-Jun-23	16-Jun-23
Analysis Date (on or before)	dd-mmm-yy	-	13-Mar-23	27-Jun-23	27-Jun-23	27-Jun-23	27-Jun-23	27-Jun-23	27-Jun-23	27-Jun-23
Certificate of Analysis No.	-	-	C367634	C3I0354	C3I0354	C3I0354	C3I0354	C3I0354	C3I0354	C3I0354
Benzene	ug/L	430	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17
Toluene	ug/L	18,000	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	0.24
Ethylbenzene	ug/L	2,300	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Xylene Mixture	ug/L	4,200	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Petroleum Hydrocarbons F1[1]	ug/L	750	<25	<25	<25	<25	<25	<25	<25	<25
Petroleum Hydrocarbons F2	ug/L	150	<100	<100	<100	<100	<100	<100	<100	<100
Petroleum Hydrocarbons F3	ug/L	500	<200	<200	<200	<200	<200	<200	<200	<200
Petroleum Hydrocarbons F4	ug/L	500	<200	<200	<200	<200	<200	<200	<200	<200
Petroleum Hydrocarbons F4G	-	500	-	-	-	-	-	-	-	-

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 9 GROUNDWATER ANALYTICAL RESULTS BTEX/PHCs
120-158 Queen Street South & 169 Crumbie Street
Mississauga, Ontario

Sample Name	Units	STANDARDS Table 3 fine/medium	TBLK Trip Blank
Vapour Reading	see note	-	-
Sampling Date	dd-mmm-yy	-	8-Mar-23
Analysis Date (on or before)	dd-mmm-yy	-	13-Mar-23
Certificate of Analysis No.	-	-	C367634
Benzene	ug/L	430	<0.20
Toluene	ug/L	18,000	<0.20
Ethylbenzene	ug/L	2,300	<0.20
Xylene Mixture	ug/L	4,200	<0.20
Petroleum Hydrocarbons F1[1]	ug/L	750	-
Petroleum Hydrocarbons F2	ug/L	150	-
Petroleum Hydrocarbons F3	ug/L	500	-
Petroleum Hydrocarbons F4	ug/L	500	-
Petroleum Hydrocarbons F4G	-	500	-

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 10 GROUNDWATER ANALYTICAL RESULTS VOCs
120-158 Queen Street South & 169 Crumbie Street
Mississauga, Ontario

Sample Name	Units	STANDARDS Table 3 fine/medium	MW101S	MW101D	MW103S	MW103D	MW113S	MW1000 Field Duplicate of MW113S	MW113D	MW118S	MW118D	MW201
Vapour Reading	see note	-	<5 ppm	105 ppm	<5 ppm	210 ppm	<5 ppm	-	<5 ppm	9% LEL	60% LEL	<5 ppm
Sampling Date	dd-mmm-yy	-	8-Mar-23	8-Mar-23	8-Mar-23	8-Mar-23	8-Mar-23	8-Mar-23	8-Mar-23	8-Mar-23	8-Mar-23	16-Jun-23
Analysis Date (on or before)	dd-mmm-yy	-	13-Mar-23	13-Mar-23	13-Mar-23	13-Mar-23	13-Mar-23	13-Mar-23	13-Mar-23	13-Mar-23	13-Mar-23	27-Jun-23
Certificate of Analysis No.	-	-	C367634	C367634	C367634	C367634	C367634	C367634	C367634	C367634	C367634	C3I0354
Acetone	ug/L	130,000	<10	<10	16	<10	<10	<10	<10	<10	<10	<10
Bromodichloromethane	ug/L	85,000	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Bromoform	ug/L	770	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Bromomethane	ug/L	56	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Carbon Tetrachloride	ug/L	8.4	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Chlorobenzene	ug/L	630	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Chloroform	ug/L	22	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Dibromochloromethane	ug/L	82,000	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Dichlorobenzene, 1,2-	ug/L	9,600	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Dichlorobenzene, 1,3-	ug/L	9,600	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Dichlorobenzene, 1,4-	ug/L	67	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Dichlorodifluoromethane	ug/L	4,400	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Dichloroethane, 1,1-	ug/L	3,100	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Dichloroethane, 1,2-	ug/L	12	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Dichloroethylene, 1,1-	ug/L	17	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Dichloroethylene, 1,2-cis-	ug/L	17	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Dichloroethylene, 1,2-trans-	ug/L	17	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Dichloropropane, 1,2-	ug/L	140	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Dichloropropene,1,3-	ug/L	45	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Ethylene dibromide	ug/L	0.83	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Hexane (n)	ug/L	520	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Methyl Ethyl Ketone	ug/L	1,500,000	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Methyl Isobutyl Ketone	ug/L	580,000	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
Methyl tert-Butyl Ether (MTBE)	ug/L	1,400	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Methylene Chloride	ug/L	5,500	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Styrene	ug/L	9,100	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Tetrachloroethane, 1,1,1,2-	ug/L	28	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Tetrachloroethane, 1,1,2,2-	ug/L	15	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Tetrachloroethylene	ug/L	17	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Trichloroethane, 1,1,1-	ug/L	6,700	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Trichloroethane, 1,1,2-	ug/L	30	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Trichloroethylene	ug/L	17	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Trichlorofluoromethane	ug/L	2,500	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Vinyl Chloride	ug/L	1.7	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20

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

TABLE 10 GROUNDWATER ANALYTICAL RESULTS VOCs
120-158 Queen Street South & 169 Crumbie Street
Mississauga, Ontario

Sample Name	Units	STANDARDS Table 3 fine/medium	MW202	MW203	MW1000 Field Duplicate of MW203	MW206	MW207	MW208	TBLK Trip Blank
Vapour Reading	see note	-	<5 ppm	500 ppm	-	<5 ppm	40 ppm	<5 ppm	-
Sampling Date	dd-mmm-yy	-	16-Jun-23	16-Jun-23	16-Jun-23	16-Jun-23	16-Jun-23	16-Jun-23	8-Mar-23
Analysis Date (on or before)	dd-mmm-yy	-	27-Jun-23	27-Jun-23	27-Jun-23	27-Jun-23	27-Jun-23	27-Jun-23	13-Mar-23
Certificate of Analysis No.	-	-	C3I0354	C3I0354	C3I0354	C3I0354	C3I0354	C3I0354	C367634
Acetone	ug/L	130,000	<10	<10	<10	<10	<10	<10	<10
Bromodichloromethane	ug/L	85,000	<0.50	<0.50	<0.50	0.99	<0.50	<0.50	<0.50
Bromoform	ug/L	770	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Bromomethane	ug/L	56	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Carbon Tetrachloride	ug/L	8.4	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.19
Chlorobenzene	ug/L	630	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Chloroform	ug/L	22	<0.20	<0.20	<0.20	2.4	<0.20	<0.20	<0.20
Dibromochloromethane	ug/L	82,000	<0.50	<0.50	<0.50	0.54	<0.50	<0.50	<0.50
Dichlorobenzene, 1,2-	ug/L	9,600	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.40
Dichlorobenzene, 1,3-	ug/L	9,600	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.40
Dichlorobenzene, 1,4-	ug/L	67	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.40
Dichlorodifluoromethane	ug/L	4,400	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Dichloroethane, 1,1-	ug/L	3,100	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Dichloroethane, 1,2-	ug/L	12	<0.50	<0.50	<0.50	<0.50	<0.50	0.71	<0.49
Dichloroethylene, 1,1-	ug/L	17	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Dichloroethylene, 1,2-cis-	ug/L	17	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Dichloroethylene, 1,2-trans-	ug/L	17	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Dichloropropane, 1,2-	ug/L	140	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Dichloropropene,1,3-	ug/L	45	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Ethylene dibromide	ug/L	0.83	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.19
Hexane (n)	ug/L	520	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Methyl Ethyl Ketone	ug/L	1,500,000	<10	<10	<10	<10	<10	<10	<10
Methyl Isobutyl Ketone	ug/L	580,000	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
Methyl tert-Butyl Ether (MTBE)	ug/L	1,400	<0.50	<0.50	<0.50	<0.50	<0.50	2.2	<0.50
Methylene Chloride	ug/L	5,500	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Styrene	ug/L	9,100	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.40
Tetrachloroethane, 1,1,1,2-	ug/L	28	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Tetrachloroethane, 1,1,2,2-	ug/L	15	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.40
Tetrachloroethylene	ug/L	17	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Trichloroethane, 1,1,1-	ug/L	6,700	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Trichloroethane, 1,1,2-	ug/L	30	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.40
Trichloroethylene	ug/L	17	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Trichlorofluoromethane	ug/L	2,500	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Vinyl Chloride	ug/L	1.7	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20

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

TABLE 11 GROUNDWATER ANALYTICAL RESULTS PAHs

120-158 Queen Street South & 169 Crumbie Street

Mississauga, Ontario

Sample Name	Units	STANDARDS Table 3 fine/medium	MW118S	MW201	MW202	MW203	MW1000 Field Duplicate of MW203	MW206	MW207	MW208
Vapour Reading	see note	-	<5 ppm	<5 ppm	<5 ppm	500 ppm	-	<5 ppm	40 ppm	<5 ppm
Sampling Date	dd-mmm-yy	-	16-Jun-23	16-Jun-23	16-Jun-23	16-Jun-23	16-Jun-23	16-Jun-23	16-Jun-23	16-Jun-23
Analysis Date (on or before)	dd-mmm-yy	-	27-Jun-23	27-Jun-23	27-Jun-23	27-Jun-23	27-Jun-23	27-Jun-23	27-Jun-23	27-Jun-23
Certificate of Analysis No.	-	-	C3I0354	C3I0354	C3I0354	C3I0354	C3I0354	C3I0354	C3I0354	C3I0354
Acenaphthene	ug/L	1,700	<0.2	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Acenaphthylene	ug/L	1.8	<0.2	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Anthracene	ug/L	2.4	<0.05	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Benz[a]anthracene	ug/L	4.7	<0.05	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Benzo[a]pyrene	ug/L	0.81	<0.01	<0.0090	<0.0090	<0.0090	<0.0090	<0.0090	<0.0090	<0.0090
Benzo[b]fluoranthene	ug/L	0.75	<0.05	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Benzo[ghi]perylene	ug/L	0.20	<0.05	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Benzo[k]fluoranthene	ug/L	0.40	<0.05	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Chrysene	ug/L	1.0	<0.05	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Dibenz[a h]anthracene	ug/L	0.52	<0.1	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Fluoranthene	ug/L	130	<0.2	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Fluorene	ug/L	400	<0.2	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Indeno[1 2 3-cd]pyrene	ug/L	0.20	<0.1	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Methlynaphthalene, 2-(1-)[1]	ug/L	1,800	<0.28	<0.071	<0.071	<0.071	<0.071	<0.071	<0.071	<0.071
Naphthalene	ug/L	6,400	<0.2	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Phenanthrene	ug/L	580	<0.1	0.032	0.051	<0.030	<0.030	<0.030	<0.030	<0.030
Pyrene	ug/L	68	<0.05	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050

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] the sum of 1-methylnaphthalene and 2- methylnaphthalene.

TABLE 12 GROUNDWATER ANALYTICAL RESULTS INORGANICS

120-158 Queen Street South & 169 Crumbie Street

Mississauga, Ontario

Sample Name	Units	STANDARDS Table 3 fine/medium	MW101S	MW103S	MW113S	MW1000 Field Duplicate of MW113S	MW118S	MW118S	MW118S	MW201
Vapour Reading	see note	-	<5 ppm	<5 ppm	<5 ppm	-	9% LEL	<5 ppm	<5 ppm	<5 ppm
Sampling Date	dd-mmm-yy	-	8-Mar-23	8-Mar-23	8-Mar-23	8-Mar-23	8-Mar-23	27-Jul-23	6-Nov-23	16-Jun-23
Analysis Date (on or before)	dd-mmm-yy	-	13-Mar-23	13-Mar-23	13-Mar-23	13-Mar-23	13-Mar-23	2-Aug-23	10-Nov-23	27-Jun-23
Certificate of Analysis No.	-	-	C367634	C367634	C367634	C367634	C367634	C3M5649	C3Y8843	C3I0354
pH	-	NV	-	-	-	-	-	-	-	-
Antimony	ug/L	20,000	<0.50	<0.50	0.97	0.97	0.74	-	-	<0.50
Arsenic	ug/L	1,900	<1.0	<1.0	2.5	2.4	<1.0	-	-	<1.0
Barium	ug/L	29,000	58	79	140	130	80	-	-	100
Beryllium	ug/L	67	<0.40	<0.40	<0.40	<0.40	<0.40	-	-	<0.40
Boron (total)	ug/L	45,000	430	140	150	150	270	-	-	250
Boron (Hot Water Soluble)[1]	-	NA	-	-	-	-	-	-	-	-
Cadmium	ug/L	2.7	<0.090	<0.090	0.44	0.48	0.48	-	-	<0.090
Chromium Total	ug/L	810	<5.0	<5.0	<5.0	<5.0	<5.0	-	-	<5.0
Chromium VI	ug/L	140	<0.50	<0.50	<0.50	<0.50	<0.50	-	-	<0.50
Cobalt	ug/L	66	<0.50	<0.50	1.9	1.9	5.7	-	-	<0.50
Copper	ug/L	87	<0.90	1.1	1.6	1.5	2.3	-	-	1.2
Cyanide (CN-)	ug/L	66	<1	<1	6	9	<1	-	-	<1
Lead	ug/L	25	<0.50	0.51	0.72	0.75	<0.50	-	-	<0.50
Mercury	ug/L	2.8	<0.10	<0.10	<0.10	<0.10	<0.10	-	-	<0.10
Methyl Mercury[2]	-	0.15	-	-	-	-	-	-	-	-
Molybdenum	ug/L	9,200	4.2	5.2	52	52	93	-	-	2.6
Nickel	ug/L	490	1.4	1.7	3.6	3.6	12	-	-	<1.0
Selenium	ug/L	63	<2.0	4	6.4	6.3	**75**	32	22	<2.0
Silver	ug/L	1.5	<0.090	<0.090	<0.090	<0.090	<0.090	-	-	<0.090
Thallium	ug/L	510	<0.050	<0.050	0.16	0.16	0.25	-	-	<0.050
Uranium	ug/L	420	3.5	5.6	34	34	59	-	-	4.9
Vanadium	ug/L	250	<0.50	<0.50	<0.50	0.51	<0.50	-	-	0.9
Zinc	ug/L	1,100	<5.0	<5.0	<5.0	<5.0	<5.0	-	-	<5.0
Chloride	ug/L	2,300,000	62000	130000	**5800000**	**6200000**	**6300000**	-	-	85000
Sodium	ug/L	2,300,000	100000	51000	**3200000**	**3200000**	**3400000**	-	-	83000

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] Hot water soluble boron applies to surface soils (<1.5 m bg).
[2] Analysis for methyl mercury only applies when mercury standard is exceeded.

TABLE 12 GROUNDWATER ANALYTICAL RESULTS INORGANICS
120-158 Queen Street South & 169 Crumbie Street
Mississauga, Ontario

Sample Name	Units	STANDARDS Table 3 fine/medium	MW202	MW203	MW1000 Field Duplicate of MW203	MW206	MW207	MW208
Vapour Reading	see note	-	<5 ppm	500 ppm	-	<5 ppm	40 ppm	<5 ppm
Sampling Date	dd-mmm-yy	-	16-Jun-23	16-Jun-23	16-Jun-23	16-Jun-23	16-Jun-23	16-Jun-23
Analysis Date (on or before)	dd-mmm-yy	-	27-Jun-23	27-Jun-23	27-Jun-23	27-Jun-23	27-Jun-23	27-Jun-23
Certificate of Analysis No.	-	-	C3I0354	C3I0354	C3I0354	C3I0354	C3I0354	C3I0354
pH	-	NV	-	-	-	-	-	-
Antimony	ug/L	20,000	0.7	<0.50	<0.50	<0.50	0.52	<0.50
Arsenic	ug/L	1,900	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Barium	ug/L	29,000	210	190	190	85	53	92
Beryllium	ug/L	67	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40
Boron (total)	ug/L	45,000	150	170	180	300	350	320
Boron (Hot Water Soluble)[1]	-	NA	-	-	-	-	-	-
Cadmium	ug/L	2.7	<0.090	<0.090	<0.090	<0.090	<0.090	<0.090
Chromium Total	ug/L	810	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
Chromium VI	ug/L	140	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Cobalt	ug/L	66	0.62	2.1	2	1.2	2.2	2.8
Copper	ug/L	87	3.8	2.2	2	3.6	1.4	0.94
Cyanide (CN-)	ug/L	66	<1	<1	<1	<1	<1	<1
Lead	ug/L	25	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Mercury	ug/L	2.8	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Methyl Mercury[2]	-	0.15	-	-	-	-	-	-
Molybdenum	ug/L	9,200	3.5	3.1	3.1	6.3	6.8	4.6
Nickel	ug/L	490	<1.0	2.5	2.5	3.2	3.7	4.1
Selenium	ug/L	63	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Silver	ug/L	1.5	<0.090	<0.090	<0.090	<0.090	<0.090	<0.090
Thallium	ug/L	510	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Uranium	ug/L	420	2.7	5	5	6.7	11	8.2
Vanadium	ug/L	250	0.8	0.72	0.68	0.81	0.7	<0.50
Zinc	ug/L	1,100	<5.0	<5.0	<5.0	5.5	<5.0	<5.0
Chloride	ug/L	2,300,000	540000	1100000	1100000	98000	130000	31000
Sodium	ug/L	2,300,000	130000	290000	290,000	76000	150000	72000

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] Hot water soluble boron applies to surface soils (<1.5 m bg).
[2] Analysis for methyl mercury only applies when mercury standard is exceeded.

TABLE 13 GROUNDWATER ANALYTICAL RESULTS ABNs
120-158 Queen Street South & 169 Crumbie Street
Mississauga, Ontario

Sample Name	Units	STANDARDS Table 3 fine/medium	MW118S
Vapour Reading	see note	-	<5 ppm
Sampling Date	dd-mmm-yy	-	16-Jun-23
Analysis Date (on or before)	dd-mmm-yy	-	27-Jun-23
Certificate of Analysis No.	-	-	C3I0354
Biphenyl 1,1'-	-	2,200	<0.1
Bis(2-chloroethyl)ether	-	300,000	<0.5
Bis(2-chloroisopropyl)ether	-	20,000	<0.5
Bis(2-ethylhexyl)phthalate	-	140	<1
Chloroaniline p-	-	400	<1
Dichlorobenzidine, 3,3'-	-	640	<0.5
Diethyl Phthalate	-	38	<0.1
Dimethylphenol, 2,4-	-	39,000	<0.5
Dimethylphthalate	-	38	<0.1
Dinitrophenol, 2,4-	-	11,000	<2
Dinitrotoluene, 2,4 & 2,6-	-	2,900	<0.35
Dioxane, 1,4	-	7,300,000	-
Phenol	-	12,000	<0.5
Trichlorobenzene, 1,2,4-	-	850	<0.1

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

TABLE 14 GROUNDWATER ANALYTICAL RESULTS CPs

120-158 Queen Street South & 169 Crumbie Street

Mississauga, Ontario

Sample Name	Units	STANDARDS Table 3 fine/medium	MW118S
Vapour Reading	see note	-	<5 ppm
Sampling Date	dd-mmm-yy	-	16-Jun-23
Analysis Date (on or before)	dd-mmm-yy	-	27-Jun-23
Certificate of Analysis No.	-	-	C3I0354
Chlorophenol, 2-	-	3,300	<0.1
Dichlorophenol, 2,4-	-	4,600	<0.1
Pentachlorophenol	-	62	<0.1
Trichlorophenol, 2,4,5-	-	1,600	<0.2
Trichlorophenol, 2,4,6-	-	230	<0.2

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

TABLE 15 GROUNDWATER ANALYTICAL RESULTS PCBs
120-158 Queen Street South & 169 Crumbie Street
Mississauga, Ontario

Sample Name	Units	STANDARDS Table 3 fine/medium	MW118S	MW208	MW2000 Field Duplicate of MW208
Vapour Reading	see note	-	<5 ppm	<5 ppm	-
Sampling Date	dd-mmm-yy	-	16-Jun-23	16-Jun-23	16-Jun-23
Analysis Date (on or before)	dd-mmm-yy	-	27-Jun-23	27-Jun-23	27-Jun-23
Certificate of Analysis No.	-	-	C3I0354	C3I0354	C3I0354
Polychlorinated Biphenyls	-	15	<0.05	<0.05	<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
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

APPENDIX I
PLAN OF SURVEY

I require this plan to be deposited under the Land Titles Act

Date JUNE 20, 2018

ALISTER SAWKEY – O.L.S.

PLAN 43R–38377

Received and deposited

Date June 21, 2018

K. Cochrane

REPRESENTATIVE FOR THE LAND REGISTRAR FOR THE LAND TITLES DIVISION OF PEEL (No. 43)

SCHEDULE

PART	PART OF LOT	REGISTERED PLAN /CONCESSION	PIN
1	1, 2, 3 & 4	5, WEST OF HURONTARIO STREET	
2	4	STR–4	
3	8	5, WEST OF HURONTARIO STREET	
4		STR–4	
5			
6			
7			
8			
9			
10			
11	4	5, WEST OF HURONTARIO STREET	ALL OF 13128–0477(LT)
12			
13			
14			
15			
16			
17			
18	5	STR–4	
19			
20	4	5, WEST OF HURONTARIO STREET	
21			
22			
23			
24	7	STR–4	PART OF 13128–0476(LT)
25			
26			
27			
28			
29			
30			
31			
32			
33	4	5, WEST OF HURONTARIO STREET	PART OF 13128–0442(LT)
34			
35			
36			
37			
38			
39			

PART 2, 20 AND 22 – SUBJECT TO EASEMENT AS IN ST8531

PART 23 – SUBJECT TO EASEMENT AS IN ST8532

PARTS 4, 5, 10, 14, 16, 28 AND 32 – SUBJECT TO EASEMENT AS IN PR617951

PARTS 8, 9, 10, 11, 12 AND PARTS 29 TO 37 (BOTH INCLUSIVE) – SUBJECT TO EASEMENT AS IN PR634714

PARTS 26 TO 39 (BOTH INCLUSIVE) – SUBJECT TO EASEMENT AS IN LT2056896

PARTS 26, 28, 29, 31 TO 35 (BOTH INCLUSIVE) – SUBJECT TO EASEMENT AS IN ST7806

PARTS 27, 34 AND 37 – SUBJECT TO EASEMENT AS IN ST8193

PLAN OF SURVEY OF

PART OF LOT 4, CONCESSION 5 WEST OF HURONTARIO STREET

(GEOGRAPHIC TOWNSHIP OF TORONTO, COUNTY OF PEEL)

AND PART OF LOTS 1, 2, 3, 4, 5, 7 AND 8

(BLOCK 1)

REGISTERED PLAN STR–4

(VILLAGE OF STREETSVILLE)

CITY OF MISSISSAUGA

REGIONAL MUNICIPALITY OF PEEL

SCALE 1: 400

5 0 5 10 15 20 30 40metres

David B. Searles Surveying Ltd.

ONTARIO LAND SURVEYORS

METRIC

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

INTEGRATION DATA

SPECIFIED CONTROL POINTS (SCPs): UTM ZONE 17, NAD83 (ORIGINAL). COORDINATES ARE TO AN URBAN ACCURACY AS PER O. REG. 216/10, s. 14 (2).

SPECIFIED CONTROL POINT No.	NORTHING	EASTING
SCP 07584004 4	4826504.336	603543.668
SCP 07576039 7	4826254.278	603818.766

COORDINATES CANNOT, IN THEMSELVES, BE USED TO RE–ESTABLISH CORNERS OR BOUNDARIES SHOWN ON THIS PLAN.

BEARING NOTE

BEARINGS SHOWN HEREON ARE GRID BEARINGS DERIVED FROM SPECIFIED CONTROL POINTS 07584004 AND 07576039 7 (SEE INTEGRATION DATA TABLE FOR COORDINATES), AND ARE REFERRED TO UTM ZONE 17, NAD83 (ORIGINAL)

DISTANCE NOTE

DISTANCES SHOWN HEREON ARE GROUND DISTANCES AND CAN BE CONVERTED TO GRID DISTANCES BY MULTIPLYING BY A COMBINED SCALE FACTOR OF 0.999713

LEGEND

■	DENOTES	MONUMENT FOUND
□	DENOTES	MONUMENT SET
SIB	DENOTES	STANDARD IRON BAR
SSIB	DENOTES	SHORT STANDARD IRON BAR
IB	DENOTES	IRON BAR
ø	DENOTES	ROUND
CC	DENOTES	CUT CROSS
CP	DENOTES	CONCRETE PIN (1225)
SCP	DENOTES	SPECIFIED CONTROL POINT
WIT	DENOTES	WITNESS
UC	DENOTES	UTILITY UNKNOWN
MISS	DENOTES	CITY OF MISSISSAUGA
B30	DENOTES	E.W. PETZOLD O.L.S
B48	DENOTES	W.B. STARR O.L.S.
B65	DENOTES	D.P. McLEAN O.L.S.
1225	DENOTES	DAVID B. SEARLES SURVEYING LTD. O.L.S.
1370	DENOTES	KIROMAR SURVEYING LTD. O.L.S.
1345	DENOTES	GUIDO PAPA O.L.S.
1672	DENOTES	TONY STAUSKAS SURVEYING INC. O.L.S.
BF	DENOTES	BOARD FENCE
CDBF	DENOTES	DOUBLE BOARD FENCE
CLF	DENOTES	CHAIN LINK FENCE
HW	DENOTES	HEADWALL
BW	DENOTES	BRICK WALL
WF	DENOTES	WROUGHT IRON FENCE
PWF	DENOTES	POST AND WIRE FENCE
RIP	DENOTES	RAIL IRON IN CONCRETE POSITION
CBRT	DENOTES	CONCRETE BLOCK RETAINING WALL
P	DENOTES	PLAN 43R–34575
P1	DENOTES	PLAN 43R–36206

NOTE

PROPERTY LIMITS ARE NOT FENCED UNLESS NOTED OTHERWISE ON THE FACE OF THE PLAN.

ALL BEARINGS AND DISTANCES AGREE WITH PLAN 43R–34575 UNLESS NOTED OTHERWISE ON THE FACE OF AS PLAN.

ALL FOUND MONUMENTS ARE 1225 (DAVID B. SEARLES SURVEYING LTD. O.L.S.) UNLESS NOTED OTHERWISE ON THE FACE OF THE PLAN.

SURVEYOR'S CERTIFICATE

I CERTIFY THAT :

1. THIS SURVEY AND PLAN ARE CORRECT AND IN ACCORDANCE WITH THE *SURVEYS ACT*, THE *SURVEYORS ACT*, AND THE *LAND TITLES ACT* AND THE REGULATIONS MADE UNDER THEM.
2. THE SURVEY WAS COMPLETED ON THE 7TH DAY OF JUNE, 2018.

JUNE 20, 2018

DATE

ALISTER SAWKEY

ONTARIO LAND SURVEYOR

David B. Searles Surveying Ltd.

ONTARIO LAND SURVEYORS

4255 Sherwoodtowne Blvd., Suite 206, Mississauga, Ontario L4Z 1Y5

Tel: (905) 273–6840 Fax: (905) 896–4410

Email: info@dbsurveys.ca

Calculator	Draftsperson
AS	PG
Editor	Plan Index No.
AS/BJ	M 15
Calculation File	Drawing File	File No.
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64–2–12CAL.DWG	64–2–12.DWG	64–2–12

APPENDIX II
SAMPLING AND ANALYSIS PLAN

PROPOSED SAMPLING PLAN AND RATIONALE
120, 128, 142, 148, 154, 158 Queen Street South and 169 Crumbie Street, Mississauga, Ontario

Borehole No.	Location	APEC	Depth Env/Geo (m)	Rationale	Soil									Groundwater							
					Soil Sampling Depth Interval/Technique	Soil Sample Submission	Analysis							Screened Inteval	Sampling Method/Depth	Analysis						
							F1-F4	BTEX	VOCs	Inorg.	PAHs	sVOCs	PCBs			F1-F4	BTEX	VOCs	Inorg.	PAHs	sVOCs	PCBs
MW101S	Northeast portion of site, 120 Queen St S	1,14,19, 20,22	6.1 m	Confirm the absence or presence of COCs in groundwater										3.05 m of screen - straddle the groundwater table	Low-flow sampling using peristaltic pump, 1.0 m below the water table	1	1	1	1			
MW101D	Northeast portion of site, 120 Queen St S	1,14,19, 20,22	10.9 m	Confirm the absence or presence of COCs in soil and groundwater	Entire length of borehole, split-spoon sampler every 0.75 m	From worst case vapours, water table, or fill material	1	1	1	1				1.52 m of screen	Low-flow sampling using peristaltic pump, 1.0 m below the water table	1	1	1				
MW102	East portion of site	1,19,20, 22,23	12.1 m	Confirm the absence or presence of COCs in soil	0 to 6 m of the borehole only, split-spoon sampler every 0.75 m	From worst case vapours, water table, or fill material	1	1		1				3.05 m of screen -straddle the groundwater table	Low-flow sampling using peristaltic pump, 1.0 m below the water table							
MW103S	East portion of site, 142 Queen St S	1,10,21,2 3,24 25	4.6 m	Confirm the absence or presence of COCs in groundwater										3.05 m of screen -straddle the groundwater table	Low-flow sampling using peristaltic pump, 1.0 m below the water table	1	1	1	1			
MW103D	East portion of site, 142 Queen St S	1,10,21,2 3,24 25	11.6 m	Confirm the absence or presence of COCs in soil and groundwater	0 to 6 m of the borehole only, split-spoon sampler every 0.75 m	From worst case vapours, water table, or fill material	1	1	1	1	1			1.52 m of screen	Low-flow sampling using peristaltic pump, 1.0 m below the water table	1	1	1				
MW104	East portion of site, 148 Queen St S	1,11A, 11B,21, 24,25	11.8 m	Confirm the absence or presence of COCs in soil	0 to 6 m of the borehole only, split-spoon sampler every 0.75 m	From worst case vapours, water table, or fill material	1	1		1				3.05 m of screen -straddle the groundwater table	Low-flow sampling using peristaltic pump, 1.0 m below the water table							
MW105	Southeast portion of site	1,26,27,2 8	11.6 m	Confirm the absence or presence of COCs in soil	0 to 6 m of the borehole only, split-spoon sampler every 0.75 m	From worst case vapours, water table, or fill material	1	1		1	1			3.05 m of screen -straddle the groundwater table	Low-flow sampling using peristaltic pump, 1.0 m below the water table							
MW106	North portion of site, 128 Queen St S	1-3,5-9	10.0 m	Confirm the absence or presence of COCs in soil	Entire length of borehole, split-spoon sampler every 0.75 m	From worst case vapours, water table, or fill material	1	1		1				3.05 m of screen -straddle the groundwater table	Low-flow sampling using peristaltic pump, 1.0 m below the water table							
MW107	Central portion of site, 128 Queen St S	1	11.6 m	Confirm the absence or presence of COCs in soil	Entire length of borehole, split-spoon sampler every 0.75 m	From worst case vapours, water table, or fill material				1				1.52 m of screen	Low-flow sampling using peristaltic pump, 1.0 m below the water table							
MW108	Central portion of site, 128 Queen St S	1	11.6 m	Confirm the absence or presence of COCs in soil	Entire length of borehole, split-spoon sampler every 0.75 m	From worst case vapours, water table, or fill material	1	1		1				3.05 m of screen -straddle the groundwater table	Low-flow sampling using peristaltic pump, 1.0 m below the water table							
BH109	North portion of site, 128 Queen St S	1-3,5-9	11.7 m	Confirm the absence or presence of COCs in soil	Entire length of borehole, split-spoon sampler every 0.75 m	From worst case vapours, water table, or fill material	1	1	1	1												
BH110	Central portion of site, 128 Queen St S	1	13.9 m	Confirm the absence or presence of COCs in soil	Entire length of borehole, split-spoon sampler every 0.75 m	From worst case vapours, water table, or fill material				1	1											
BH111	South protion of site, 169 Crumbie St	1,12,13,1 5-17, 19,20	12.3 m	Confirm the absence or presence of COCs in soil	Entire length of borehole, split-spoon sampler every 0.75 m	From worst case vapours, water table, or fill material	1	1	1	1	1											
MW113S	North portion of site, 128 Queen St S	1-3,5-9	6.1 m	Confirm the absence or presence of COCs in groundwater										3.05 m of screen -straddle the groundwater table	Low-flow sampling using peristaltic pump, 1.0 m below the water table	1	1	1	1			
MW113D	North portion of site, 128 Queen St S	1-3,5-9	10.1 m	Confirm the absence or presence of COCs in soil and groundwater	Entire length of borehole, split-spoon sampler every 0.75 m	From worst case vapours, water table, or fill material	1	1	1	1				1.52 m of screen	Low-flow sampling using peristaltic pump, 1.0 m below the water table	1	1	1				
BH114	North of 169 Crumibe St building	1-3,5-9 12,13, 15-17	12.3 m	Confirm the absence or presence of COCs in soil	Entire length of borehole, split-spoon sampler every 0.75 m	From worst case vapours, water table, or fill material	1	1		1												
MW115	Northwest portion of site, 128 Queen St S	1-3,5-9,18	12.0 m	Confirm the absence or presence of COCs in soil	Entire length of borehole, split-spoon sampler every 0.75 m	From worst case vapours, water table, or fill material	1	1	1	1	1			3.05 m of screen -straddle the groundwater table	Low-flow sampling using peristaltic pump, 1.0 m below the water table							
MW116	West portion of site, 128 Queen St S	1-3,5-9,18	11.7 m	Confirm the absence or presence of COCs in soil	Entire length of borehole, split-spoon sampler every 0.75 m	From worst case vapours, water table, or fill material	1	1		1	1			3.05 m of screen -straddle the groundwater table	Low-flow sampling using peristaltic pump, 1.0 m below the water table							
BH117	West portion of site, 128 Queen St S	1-3,5-9,18	11.1 m	Confirm the absence or presence of COCs in soil	Entire length of borehole, split-spoon sampler every 0.75 m	From worst case vapours, water table, or fill material	1	1	1	1	1											
MW118S	Southwest portion of site, 169 Crumbie St	1,4, 12,13, 15-18, 29,30	6.1 m	Confirm the absence or presence of COCs in groundwater										3.05 m of screen -straddle the groundwater table	Low-flow sampling using peristaltic pump, 1.0 m below the water table	1	1	1	1		1	1
MW118D	Southwest portion of site, 169 Crumbie St	1,4,12,13, 15-18, 29,30	10.5 m	Confirm the absence or presence of COCs in soil and groundwater	Entire length of borehole, split-spoon sampler every 0.75 m	From worst case vapours, water table, or fill material	1	1	1	1	1			3.05 m of screen -straddle the groundwater table	Low-flow sampling using peristaltic pump, 1.0 m below the water table	1	1	1				
MW201	East portion of site	1,19,20, 22,23	6.1 m	Confirm the absence or presence of COCs in groundwater										3.05 m of screen -straddle the groundwater table	Low-flow sampling using peristaltic pump, 1.0 m below the water table	1	1	1	1			
MW202	North portion of site, 128 Queen St S	1-3,5-9	6.1 m	Confirm the absence or presence of COCs in groundwater										3.05 m of screen -straddle the groundwater table	Low-flow sampling using peristaltic pump, 1.0 m below the water table	1	1	1	1			
MW203	Northwest portion of site, 128 Queen St S	1-3,5-9,18	6.1 m	Confirm the absence or presence of COCs in groundwater										3.05 m of screen -straddle the groundwater table	Low-flow sampling using peristaltic pump, 1.0 m below the water table	1	1	1	1			
MW204	West portion of site, 128 Queen St S	1-3,5-9,18	6.1 m	Confirm the absence or presence of COCs in groundwater										3.05 m of screen -straddle the groundwater table	Low-flow sampling using peristaltic pump, 1.0 m below the water table	1	1	1	1			
BH205	Southwest portion of site, 169 Crumbie St	4	6.1 m	Confirm the absence or presence of COCs in soil	Entire length of borehole, split-spoon sampler every 0.75 m	From worst case vapours, water table, or fill material	1	1	1	1	1	1	1									
MW206	Southwest portion of site, 169 Crumbie St	1,12,13, 15-18, 29,30	4.7 m	Confirm the absence or presence of COCs in soil and groundwater	Entire length of borehole, split-spoon sampler every 0.75 m	From worst case vapours, water table, or fill material	1	1	1	1	1			3.05 m of screen -straddle the groundwater table	Low-flow sampling using peristaltic pump, 1.0 m below the water table	1	1	1	1			
MW207	Southeast portion of site	1,26,27,2 8	6.1 m	Confirm the absence or presence of COCs in groundwater										3.05 m of screen -straddle the groundwater table	Low-flow sampling using peristaltic pump, 1.0 m below the water table	1	1	1	1			
MW208	East portion of site, 142 Queen St S	1,11A, 11B,21, 23,24,25	6.1 m	Confirm the absence or presence of COCs in groundwater										3.05 m of screen -straddle the groundwater table	Low-flow sampling using peristaltic pump, 1.0 m below the water table	1	1	1	1			1
Total Before QA/QC Samples							**17**	**17**	**10**	**19**	**10**		**1**			**15**	**15**	**15**	**11**	**0**		**2**
QA/QC field duplicate				One duplicate per 10 samples			2	2	2	2	1					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													
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							**19**	**20**	**13**	**21**	**11**		**1**			**16**	**17**	**17**	**12**	**0**		**3**

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)
sVOCs = semi-volatile organic compounds, including acid/base/neutral compounds and chlorophenols
PCBs = polychlorinated biphenyls

APPENDIX III
STANDARD OPERATING PROCEDURES

SAMPLING AND ANALYSIS PLAN

DATA QUALITY OBJECTIVES

Data quality objectives for the Phase Two ESA are to assess the soil and groundwater conditions beneath the Phase Two property with respect to contaminants of potential concern identified through the Phase One ESA, if any, 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.

STANDARD OPERATING PROCEDURES

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

SOP E01.00 – Field Meter Calibration
SOP E03.00 – Borehole Advancement Using Rotary Auger
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 E11.01 – Measuring and Surveying Using Total Station
SOP E12.00 – Field Program Quality Assurance & Quality Control

The SOP corresponding to the field task is to be followed whenever work is being performed on site. Any deviation to the SOPs is to be appropriately annotated on field notes/log sheets.

PHYSICAL IMPEDIMENTS

Physical impediments that could interfere with the Sampling and Analysis Plan include, but are not limited to:

- Restricted access on the site; and,
- Proximity to the property lines and off-site infrastructure.

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 ROTARY AUGER

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 rotary auger drilling rigs employing 5 ft (approximately 1.5 m) long continuous flight hollow stem augers or solid stem augers. 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 vapour meter (e.g., Gastech™ 1238ME), calibrated and charged
- □ Vapour meter field calibration kit, if applicable
- □ tape measure with weighted end
- □ sampling equipment (gloves, bags, permanent marker)
- □ bucket for washing split spoon samplers
- □ 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 (e.g., 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, Ahand dig only@ areas) are to be strictly adhered to.

NOMENCLATURE

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

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 ABH201@ and ABH301@, 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 rotary auger drilling, 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 borehole number followed by a dash as a prefix, (e.g., sample ABH101-4", indicating the fourth sample from borehole BH101). Subdivided samples should be labelled with alphabetical suffixes from the top of the sample (e.g., ABH101-4A@ and ABH101-4B@, with the later sample located at the greater depth).

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

FIELD PROCEDURES

Sampling

Split spoons are to be advanced, where possible, 2 ft. (approx. 61 cm) below the end of the augers at regular 2.5 ft. intervals (e.g. 0 ft., 2.5 ft., 5 ft., etc.), beginning at ground surface, and at regular 2.5 ft. intervals thereafter (i.e. 2.5 ft., 5 ft., 7.5 ft., etc.). Standard penetration tests should be conducted to advance the spoon, and the number of blows required to drive the spoon each 6 in. (approx. 150 mm) interval recorded.

For boreholes advanced in areas of asphalt, concrete, or crushed stone surfacing, the initial spoon should be advanced starting at the base of the surfacing, and to a depth no greater than 2.5 ft. to permit subsequent spoons to be advanced at regular intervals beginning at 2.5 ft. (e.g. 2.5 ft., 5 ft., 7.5 ft., etc.). The thickness and type of the Aunsampled@ surfacing material is to be measured and recorded on the borehole log.

Split spoon advancement should be abandoned at Arefusal@. ARefusal@ includes greater than 50 blows to drive a spoon 6 in. (150 mm) or less.

Where significant Acaving@ or Aslough@ occurs, or may occur, between sample intervals, hollow stem augers should be used to advance the borehole and to facilitate the installation of a monitoring well (if applicable) in the completed boring. Sand traps may be used to improve sample recovery, where necessary, when advancing split spoons into wet, non-cohesive soils (e.g. sands and gravels).

Split spoon samples 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 AA@ to the sub-sample at the top of the spoon (the sample first collected), then AB@, AC@, etc.

Boreholes are to be advanced to <u>at least</u> the maximum anticipated depth of potential impact (e.g., <u>at least</u> 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 Aclean@ sample should be obtained from the base of the borehole).

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. Note the outer diameter of augers. It is a good practice to supplement written field notes with pictures, especially of recovered soil cores to illustrate structure (layers, banding), staining, and similar features.

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 split spoon was driven, not the length of the spoon (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 <u>not</u> start a new set of numbers if you change collection methods. Do <u>not</u> use depth intervals for the sample name (e.g. 10'-12').

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

$$\% \text{ recovery} = (\text{Quantity of soil recovered})/(\text{distance spoon was driven}) \times 100\%$$

For example, if the spoon was driven 60 cm (2 ft), and 20 cm (8") of soil was recovered, % recovery = (20 cm / 60 cm) x 100% = 33.33%, rounded to 35%.

Record blow counts based on Standard Penetration Test (blows to drive the split spoon 6 inches). If it takes more than 50 blows to drive the spoon less than 6 inches, record as 50/x@, where x is the number of inches the spoon was actually driven, and terminate the test.

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 Asand@;
- 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 split spoons (e.g., located within sampling intervals). If there are distinct layers within a split spoon, the samples 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
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 <u>at its highest point</u>, 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 TOTAL STATION

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 total station survey instrument. 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 Rod and Level survey instruments.

EQUIPMENT

The following list details the standard equipment necessary for surveying using a Total Station. Specific sites may require additional or specialized equipment.

- □ total station
- □ tripod
- □ survey rod
- □ prism
- □ field notebook
- □ 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

Occupy Point: The point on which the total station is setup is generally given the coordinates

N: 1000.000

E: 1000.000

Z: 100.000

Height of Instrument: is measured rather than calculated when using the total station. The height of instrument is measured by placing a tape on the occupying point – this is not necessarily the ground elevation. For example a nail may be used in a grassy area that is left above grade to make it easier to find, the height of instrument must be measured relative to the nail and not the ground.

Site Benchmark: semi-permanent structure or point of known or assumed elevation. Examples include:

- Fire hydrant shoulder joints (top bolt should not be used)
- Centre of a catch basin
- Concrete pad of a hydro vault

- The base of a sign

It is preferable to use an existing geodetic benchmark so that elevations can be reported in meters above mean sea level (m amsl). Locations of geodetic benchmarks can be obtained from the municipality or from *Control Survey Information Exchange (COSINE)*.

If the elevation of the benchmark is assumed the total station will assign an elevation relative to the elevation assigned to the occupy point (i.e., the benchmark coordinates will be calculated automatically based on the instrument being at the coordinates 1000.000, 1000.000, 100.000).

Turning Points/ Control Points: a temporary point used to move around line of site obstructions. Typically a nail is installed and painted to mark the control point. The point number and coordinates for all control points should be recorded in the surveyor's field book for future reference.

Back Sights: a known point used to orient the total station after moving to a control point (typically another control point).

Fore sight/ side shot: a shot taken on any point where coordinates are required. Called an intermediate site in level rod surveys, in the total station software they are called side shots.

FIELD PROCEDURES

Basic Survey

Planning: It is essential to plan your survey before you begin.

1. Locate your Site Benchmark (can be a known geodetic point such as a brass cap, a former temporary site benchmark such as a fire hydrant or a new point of your choice if the site has not been surveyed previously). The site benchmark must be documented clearly in your field notes such that another tech is able to locate and use the same point that you did with confidence.
    a. All surveys begin with the benchmark so its location is important when planning the remainder of the survey.
2. Walk the site, locate all wells and features that are required for the survey. Pay attention to site lines and potential locations for turning points.
3. Establish your starting point (where the total station will be set up first ensuring that you can see the site benchmark).

Equipment Setup: Setup the total station.

**If you are setting up on an arbitrary point (i.e., a point that does not have known coordinates) you do not need to use the laser level however the leveling process is the same.*

1. Setup the total station
    a. Extend the tripod
    b. Screw the total station onto the tripod – one hand must be kept on the total station at all times until it is fastened to the base and the legs are spread such that the instrument will not fall over
    c. [*If setting up on an arbitrary point skip to step e]*Turn on the laser plummet (the laser plummet shows a small red dot on the ground to show where the station is centered.
        i. Turn on the total station
        ii. Hit the menu button
        iii. Scroll through and select *Laser Plummet*, Select 'On'

            -You should see a red dot on the ground. In some lighting conditions it can be challenging to see. If you cannot see it move your boot through the air under the total station until you see it on your boot and track it down from there. Alternatively you can shade the area with your leg to make the laser more pronounced in very sunny conditions.
    d. Place the laser on top of the point.
    e. Step down on all three the legs. DO NOT STOMP, stand and use all of your body weight to set the leg but do not stomp it with the total station attached.
    f. Recenter the laser on the point using the thumb screws.
    g. Rough level (disc/bubble level). This rough leveling should begin with the legs, unclamp one leg at a time and adjust its height to move the bubble. Repeat until the bubble is in the middle of the disc and the laser is on the point. You can loosen the screw holding the total station to the base plate and slide it to move the laser onto the point.
    h. Fine level (vial level – located just above the display screen). This process is very tedious:
        i. Rotate the total station so that the screen is resting above two of the thumb screws. Use only these two screws to place the bubble in the middle of the vial.
        ii. Turn the station so that it is at 90^0 from the first face. One side of the screen should be above the third screw and the other between the first two screws. Using only the screw that was not used adjust the level.

iii. Repeat this step until the station is level regardless of which way you turn it and the laser is directly on the point.

iv. Once level and over the point turn off the laser plummet.

i. Measure the height of the total station (HI) from the top of the point you are set up on to the marks on the side of the instrument. There is a line --o-- on both sides of the instrument, the height of instrument is measured to this line. Record the HI in your field book.

Survey Setup: Now that the total station is ready it is time to setup the survey on the onboard software.

4. Input job number:
    a. Hit the 'Menu' button
    b. Select 'Data Collect' → Input; input your project number
5. Input starting coordinates:
    a. Hit the Esc button to return to main screen
    b. Hit 'Menu' button
    c. Select 'Programs' → Z COORD. → DON'T USE → OCC PT INPUT → INPUT
        i. Input the following coordinates

        N: 1000.000

        E: 1000.000

        Z: 100.000
    d. ENTER
    e. Input the instrument height measured previously: INS. HT: ____
    f. Return to main menu by pressing ESC
6. Survey setup:
    a. Occupation Point:
        i. Hit 'Menu' button
        ii. DATA COLLECT your job number should be there, select it
        iii. OCC. PT# INPUT → PT# _____ ← 1 (your first point)

        ID: _____ ← ST (Start)

        INS. HT: ____ ← previously input double check it is your HI
        iv. Once all data is input hit 'REC' to save your occupation point coordinates

b. Backsight:

i. Select BACKSIGHT from main menu

BS# :_____ ← 2 (second point)

P.CODE :_____ ← BS (backsight)

R. HT :_____ ← Rod Height (default is 1.650m – double check!

ii. Rod person now places the rod on the selected Site Benchmark

iii. Surveyor sites the prism (aligning the crosshairs in the total station with the crows feet on the top and side of the prism) and hits MEAS → NEZ

1. Record values in field book – you will need the coordinates to close the survey (they can be accessed from another menu so don't panic when they flash quickly and disappear from the screen).

7. Tie in points: Your survey is now ready to go. You can begin shooting wells, buildings, etc…

a. Select FS/SS:

PT# :____ ← Next point is 3

P.CODE:____ ← whatever you are shooting (list to follow)

R. HT :____ ← Height of rod, can be changed to see over/below obstructions but must be changed here to the same as the rod.

i. This is the menu that you will shoot your points in.

1. Once all data is complete and the target is sited hit MEAS. → NEZ

b. Search for Point Data:

i. Select FS/SS

ii. SRCH; you will have a couple of options depending on what you need:

1. Last data: Takes you directly to the most recent point shot

2. First data: Takes you directly to the first point

3. Point #: Input the point number to be taken to its data

8. Close the survey:

a. While in the FS/SS mode shoot the backsight. Compare the coordinates from when you shot it at the outset of the survey. A vertical error (Z) of 3 mm is acceptable for total station surveys.

Turning Points

Turning points are required to maneuver the total station around line of sight obstructions. The procedure below illustrates how to do this.

1. Select the location for your Turning Point. Mark your turning point in a stable manner using a nail and paint is the ideal method however on sidewalks or inside buildings this is not possible. A paint dot with a cross carved into the paint suffices or a target drawn with permanent marker.
2. Select another location and mark it as well, this second location must be visible from both the current setup and turning point and will serve as the backsight for the total station once you have moved.
3. Shoot both locations, record the point numbers and coordinates in your field book for future reference.
4. Shoot your original backsight again to close this portion of the survey.
5. Move the total station to the desired turning point. Follow the setup procedure outlined above to level the total station directly over the point.
6. From the main menu select OCC. PT# INPUT → update the HI → OCNEZ → Input the point number that you are on
    a. Double check the coordinates with your field book to ensure you are at the right point
7. Return to the main Menu and select BACKSIGHT → confirm that the rod height is correct → BS → select your backsight point
    a. This point will serve as the benchmark for this portion of the survey
    b. Once you have input a point number double check that the coordinates are correct. You will then site the rod person at this point and measure it (option provided after selecting this point → MEAS?)
        i. Record the coordinates, they should be within 3 mm from the original coordinates. If not check that the total station and rod are both level and shoot again.
8. You can now continue your survey as normal.

To close a turning point simply shoot back to the point that you used as a backsight and compare to the coordinates recorded in your field book. 3mm is the acceptable error.

Known Benchmark

Using a benchmark of known elevation allows the surveyor to survey new points in relation to existing points. This process can also be used to start a survey on a geodetic benchmark so that elevations are reported accurately as elevation above sea level rather than relative to an arbitrary elevation (generally 100.000).

1. Follow equipment setup procedure outlined above.
2. Select PROGRAMS → Z. COORD → DON'T USE → OCC. PT INPUT

   N: 1000.000

   E: 1000.000

   Z: 100.000
3. Escape to the plain screen (no menus) and press the *3 ARROW BUTTON* on the right side of the total station display face
   a. Record the coordinates in your field book
4. Select PROGRAMS → Z. COORD → DON'T USE → REF MEAS
   a. Input the coordinates that you obtained from the previous step and the elevation of your benchmark

      N: Coordinate from step 3

      E: Coordinate from Step 3

      Z: Elevation of your benchmark
   b. Press ENT
   c. > Sight ? → YES
   d. Select the following: CALC → BS → SET → YES
5. Select DATA COLLECT → OCC. PT# INPUT
   a. Setup like normal (PT#1, PCODE: ST)
   b. REC

      N: 1000.000

      E: 1000.000

      Z: CALCULATED → This value was calculated in step 4.D and will appear automatically – it is the calculated elevation of the occupied point based on the elevation of the benchmark.
6. Select BACKSIGHT
   a. Setup like normal (PT# 2, PCODE: BM)
   b. Select MEAS. → NEZ

      N: Same as values input in step 4

      E: Same as values input in step 4

      Z: Same as values input in step 4

      i. Ensure that the elevation value is the same (+/- 3mm as your known benchmark elevation)

You can now proceed with your survey as normal. Procedures for shooting new points, turning points and closing the survey all remain the same.

P.CODE List: A list of appropriate codes for common site features:

DESCRIPTION	P.CODE
Start Point	ST
Back Sight	BS
Turning Point	TP
Control Point	CP
Check	CHCK
SITE FEATURES	P.CODE
Monitoring Well Ground Shot	MW***G
Monitoring Well Top of Pipe	MW***T
Borehole	BH***
Catch Basin	CB
Manhole	MH
Fire Hydrant	HYD
Building	BLDG

Other features can be described by typing the full name or an abbreviation of your choice so long as the P.CODE is recorded in your field book for future reference.

Downloading Survey Data:

In order to use the data collected while total station surveying you must download the data. This is accomplished using the surveying laptop. *It is important to keep up with your labels during these stages – ensure that downloaded and converted files are going into known locations – the software is not forgiving if you assume that it is going where you want it to.*

1. Connect the total station to the laptop using the USB cable found in the laptop bag.
2. Turn on the total station → Memory Manager → Data Transfer → Send Data → Mes. Data
3. Open SurveyLink on the laptop → Transfer → Send/Receive → Receive
    a. Output = RAW DATA
    b. A red dot should move between the computer and total station icons if things have been set up correctly
4. The base file has now been downloaded but needs to be converted into usable formats

Converting File Formats:

1. In SurveyLink click “Conversions” → “Convert File Formats” (a pop up window will appear)
2. Select Raw Data File → Topcon GTS210/310 Raw Data (format from the total station)
    a. Ensure that the input file name is the correct data
    b. Output Type: TDS Raw Data
        i. Ensure that the output file is in the same folder as your input
3. Click “Convert”
    a. The program will ask you for your starting coordinates – typically 1000.000, 1000.000, 100.000 but could change depending on the nature of the survey. This should have been recorded in your field notes.
4. The file format is now .rw5.
5. The next conversion is Raw Data File → TDS Raw Data and it gets converted to TDS Coordinates (sequential)
    a. The same process applies – make sure to keep track of where you are saving your files!
6. Next conversion is Coordinate File → TDS Coodinates to AutoCAD DXF
7. Put the folder containing all of the file formats onto a USB drive.

Generating the Coordinate Report:

The next step requires the use of ForeSight DXM – surveying software to generate the coordinate report.

1. Open your TDS Coordinate file (.cr5) from the conversions – it will open automatically with ForeSight DXM.
2. Highlight all wells/ points on the screen (click and drag) – points that have been selected will be highlighted yellow in the textbox below the screen.
3. Right click on the highlighted text and select ‘coordinate reports…’
4. On the left side of the screen click “View Report”
5. Right click the report and click ‘report’ – this will generate a text file
6. Save the text file as the CTxxx.xx Coordinate Report

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*

TERRAPEX STANDARD OPERATING PROCEDURE
HYDRAULIC CONDUCTIVITY SLUG TESTING

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 procedures to be used during the completion of slug testing (i.e., the charting of the return to static conditions following an instantaneous change in the water level within a monitoring well) to estimate the average horizontal hydraulic conductivity (*K*) over the screened interval of a monitoring well.

In common parlance, "slug" testing is often used in reference to testing procedures involving an instantaneous increase in the water levels within a well (a falling head test), whereas "bail" testing is used in reference to testing procedures involving an instantaneous decrease in water levels (a rising head test). However, for the purposes of this SOP, a "bail" test is simply a negative slug test (i.e., an instantaneous negative increase in water level). The procedures described herein apply to both falling head and rising head testing.

This SOP does not describe procedures for the installation or the development of monitoring wells; refer to SOP E04.00, *Monitoring Well Installation*, and SOP E05.00, *Monitoring Well Development*, respectively.

EQUIPMENT

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

☐ Water level meter or equivalent (e.g., interface probe, data logger / water pressure transducer)

☐ Stopwatch or similar timing device

☐ bucket for decontaminating down-hole field equipment

☐ detergent solution in spray bottle

☐ distilled/clean water in spray bottle

☐ Solid Slug

☐ tape measure (preferably weighted flexible tape)

☐ field notebook

☐ Hydraulic conductivity slug testing record sheet (form F017)

☐ Borehole logs

☐ Monitoring well keys

☐ Monitoring well access tools (socket set, wrench, screw driver)

☐ site plan

☐ scope of work/field work instructions, if available

☐ site-specific health and safety plan

☐ Personal Protective Equipment (hard hat, vest, safety glasses, respirator, steel toe boots)

☐ Camera

PREPARATION

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

SPECIAL PLANNING AND PREPARATION REQUIREMENTS

Hydraulic conductivity slug testing should only be completed on wells that have been developed (refer to SOP E05.00, *Monitoring Well Development*), and that generally yield sediment-free water when subjected to a moderate extraction rate. Hydraulic conductivity estimates from tests completed in poorly developed or undeveloped wells may be significantly biased due to the presence of "drilling debris", "skin effects", or other disturbances within the well screen filter pack and/or adjacent formation materials.

As hydraulic conductivity slug testing will yield an estimate of the <u>average</u> horizontal hydraulic conductivity over the screened interval of the well, testing should be completed on wells screened across a single formation / stratigraphy only.

It should be noted that the well screen filter pack may act as an initial yield of water (rising head test) or an initial storage of water (falling head test). For this reason, the nature of the slug testing (i.e., falling head versus rising head) must be recorded on the testing sheet for use in interpreting field data. Potential filter pack effects should be considered when completing the analysis of slug testing data.

Traffic control and, flag persons, and/or spotters should be employed when groundwater hydraulic conductivity testing 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.

FIELD PROCEDURES

Initial activities

- Ensure all down hole equipment (e.g., slug, water level probe) has been cleaned using soapy water and a fresh water rinse prior to use.
- Measure the depth to water; if possible, verify apparent static conditions in the well through comparison to available historical groundwater monitoring data.
- Measure the depth to the bottom of well (verify with borehole log information).
- Measure and calculate the slug volume $V_s = \pi\, r_s^2\, L$ *where r_s is the slug radius*
- Calculate the expected initial displacement $H_\Delta = V_s / \pi r_w^2$ *where r_w is the well standpipe radius*
- Calculate the length (height) of the initial water column in the well.

Falling Head Slug Test

A falling head slug test involves the instantaneous injection of a known volume (or slug) of water and charting the recovery of groundwater levels within the well to static conditions. Typically, rather than attempting to add water to a well, a solid cylinder of known volume (refer to V_s, above) is used to displace water within the well, effectively causing an instantaneous increase in the water level.

The initial water level elevation (H_i) in the well is measured in the field, and the water level elevation (H_0) at the test "starting" conditions (at time t_0 , t = 0 seconds) are calculated as the initial water level plus H_Δ as outlined above.

Procedure, Falling Head Test:

1. If a data logger / water pressure transducer is being used to record water level information, it should be installed at the desired depth and the water level within the well should be allowed to equilibrate (e.g., the water level should have returned to the elevation measured during the Initial Activities) before proceeding further.

2. Record the starting time of the test in the field notes.

3. Lower the slug into the well and place the slug just above the water level.

4. Simultaneously start the stopwatch and quickly lower the slug so that it is completely submerged below the water level in the well. It is important to insert the slug as quickly as possible, without unduly agitating water within the well, as data analysis is based on an assumed "instantaneous" change in water levels.

   If necessary, secure the slug to ensure that it does not move or change position and can be recovered from the well at the conclusion of the test.

5. If using a water level meter or interface probe, measure the depth to water within the well at periodic intervals, and record this information along with the corresponding elapsed test time on the field record form (form F017).

   Water levels within the well and the corresponding elapsed test times should be measured as often as possible for the first two minutes of the test, or until approximately 90% of the water level increase within the well (i.e., H_{Δ}) has recovered, whichever occurs first. An appropriate time interval for measuring water levels should be established and adjusted as necessary after the first two minutes of testing.

   Testing should continue until water levels within the well have returned to static levels (e.g., the elevation has returned to the elevation measured during the Initial Activities), or a total test time of one hour has been reached, whichever occurs first.

6. Record the finishing time of the test in the field notes.

Rising Head Slug Test

A rising head slug test involves the instantaneous removal of a known volume (or slug) of water and charting the recovery of groundwater levels within the well to static conditions. Typically, rather than attempting to "instantly" purge water from a well, a solid cylinder of known volume (refer to V_s in Initial Activities, above) is placed in the well, water levels are allowed to equilibrate, and the slug is then removed, effectively causing an instantaneous decrease in the water level.

The initial water level elevation (H_i) in the well is measured in the field, and the water level elevation (H_0) at the test "starting" conditions (at time t_0, t = 0 seconds) are calculated as the initial water level minus H_Δ as outlined above (Initial Activities).

Procedure, Rising Head Test:

1. If a data logger / water pressure transducer is being used to record water level information, it should be installed at the desired depth.

2. Lower the slug into the well so that it is completely submerged. If necessary, secure the slug to ensure that it does not move or change position and that it can be removed from the well at the start of the test.

3. The water level within the well should be allowed to equilibrate (e.g., the water level returns to the elevation measured during the Initial Activities).

4. Record the starting time of the test in the field notes.

5. Simultaneously start the stopwatch and quickly remove the slug from the well. It is important to remove the slug as quickly as possible, without unduly agitating water within the well, as data analysis is based on an assumed "instantaneous" change in water levels.

6. If using a water level meter or interface probe, measure the depth to water within the well at periodic intervals, and record this information along with the corresponding elapsed test time on the field record form (form F017).

   Water levels within the well and the corresponding elapsed test times should be measured as often as possible for the first two minutes of the test, or until approximately 90% of the water level drop within the well (i.e., H_Δ) has recovered, whichever occurs first. An appropriate time interval for measuring water levels should be established and adjusted as necessary after the first two minutes of testing.

   Testing should continue until water levels within the well have returned to static levels (e.g., the elevation has returned to the elevation measured during the Initial Activities), or a total test time of one hour has been reached, whichever occurs first.

7. Record the finishing time of the test in the field notes.

Note Taking

When filling out the slug test monitoring form indicate, the Project Location, Date, Project Number, well #, volume purged, well depth, water meter, and Technician at top of each page. Fill in the remainder of the log as follows:

Time: Record the time intervals in which the depth to water is recorded.

Depth to water: Record the measured depth to water at each interval.

Comments: Record specific observation on each well as well as the actual time the observations were recorded.

Include other observations in your field notes such as:

- Site observations including potential sources of contamination, nearest watercourses, etc.;
- Surrounding land uses and off-site concerns; and,
- Times of arrival on-site and any site visitors.

Prior to Leaving Site

- Check the scope of work to ensure you have completed project objectives;
- Ensure monitoring wells are properly closed and the site is sufficiently restored;
- Clean up any garbage or debris and leave the site the way you found it (or better); and,
- Call the project manager to ensure there is nothing else required, summarizing findings and results**.**

UPON RETURN TO OFFICE

- Clean and sign in all equipment used;
- Complete equipment and supply form;
- Complete field package (Photocopy and scan field notes and place them in the project file folder); and,
- Submit site drawing depicting where the slug tests were performed to drafting.

DATA INTERPRETATION

Hvorslev Method

There are a number of methods of interpreting monitoring well recovery. The simplest method is that of Hvorslev (1951), based on a homogenous, isotropic medium in which soil and water are incompressible.

The basic Hvorslev expression for hydraulic conductivity is:

$$K = \frac{{r_w}^2 \ln(\frac{L}{r_{bh}})}{2\,L\,T_\theta} \quad where\ \frac{L}{r_{bh}} > 8$$

and,

K	= hydraulic conductivity (m/s)
r_w	= standpipe (well) radius (m)
L	= length of screen (m)
r_{bh}	= filter pack (borehole) radius (m)
T_θ	= basic time lag (s), value of t on a semi-logarithmic plot of $(H_i - H)/(H_i - H_0)$ vs. t where $(H_i - H)/(H_i - H_0) = 0.37$
H_i	= initial water level prior to start of test (m)
H_0	= water level at $t = 0$ (calculated, refer to Field Procedures, above) (m)
H	= recorded water level at $t > 0$ (m)

It should be noted that the Hvorslev methodology was initially developed for confined aquifers. The methodology may be adopted for unconfined aquifers when combined with an appropriate shape factor (refer to Hvorslev, 1951). It should be noted that the Hvorslev methodology has only been demonstrated to provide reasonable estimates of hydraulic conductivity in an unconfined aquifer situation when the tested well does not penetrate the entire thickness of the aquifer (i.e., partially penetrating well), and the water table is not close to the well screen (Brown et al., 1995).

Bouwer and Rice Method

Research has concluded that the Bouwer and Rice solution (1980) generally yields superior estimates of hydraulic conductivity when compared to the Hvorslev methodology, or other common methodologies for analyzing single well response tests. Although the Bouwer and Rice methodology was developed for an unconfined aquifer situation, the methodology has been demonstrated to yield reasonable hydraulic conductivity estimates in confined aquifer situations, provided the top of the well screen is not close to the bottom of the upper confining layer (Bouwer, 1989).

Moreover, research has also demonstrated that the general superiority of hydraulic conductivity estimates developed using the Bouwer and Rice methodology over the Hvorslev methodology is not limited to unconfined aquifers (for which the Bouwer and Rice methodology was developed, and Hvorslev methodology not), but extends to partially penetrating wells in a confined aquifer situation (Butler, 1998).

Accordingly, it is generally preferable to analyze hydraulic conductivity slug testing data using the Bouwer and Rice methodology. Terrapex has purchased *AquiferTest Pro* software to facilitate the application of the Bouwer and Rice methodology during our projects.

The basic Bouwer and Rice expression for hydraulic conductivity is:

$$K = \frac{{r_w}^2 \ln(\frac{R_e}{r_{bh}})}{2L} \frac{1}{t} \ln(\frac{h_0}{h})$$

where,

	K	= hydraulic conductivity (m/s)
	r_w	= standpipe (well) radius (m)
	r_{bh}	= filter pack (borehole) radius (m)
	R_e	= radial distance over which head is dissipated (m)
	L	= length of screen (m)
	t	= time since $h = h_0$ (s)
	h_0	= drawdown at $t = 0$ (calculated as H_Δ, refer to Field Procedures, above) (m)
	h	= recorded water level at $t > 0$ (m)

The $\ln(\frac{R_e}{r_{bh}})$ term is estimated depending on well geometry and whether the well is fully or partially penetrating. Refer to the AquiferTest Pro documentation and/or the Bouwer and Rice (1980) paper for more details.

GENERAL TESTING PRACTICE GUIDELINES

It is preferable to run tests to near complete recovery, as this allows data to be analyzed using more sophisticated methods which can provide insights into impact of anisotropy, double porosity behavior, and insufficient well development.

When well recovery timeframes permit, ideally a minimum of two tests should be completed within each well (each testing location), with each test using approximately the same initial displacements (e.g., the same slug volume). From a practical standpoint, this is usually accomplished by completing a falling head test (adding a slug to a well), immediately followed by a rising head test (by removing the slug from the well at the conclusion of the falling head test). This does require that the falling head test be run to complete recovery, however.

If significant variance is noted between the overall time required to reach full recovery in each test, additional testing should be completed to assist in addressing potential anomalous testing data.

It should be noted that in some instances estimated hydraulic conductivity values derived between falling head and rising head testing approaches can vary up to nearly two orders of magnitude, with falling head test results typically being larger than rising head results. Milligan (1975) suggests that the "best" hydraulic conductivity estimate based on the two values from a single well is obtained from:

$$K = \sqrt{K_{FH}\, K_{RH}}$$

where, K_{FH} = hydraulic conductivity estimate from falling head test

K_{RH} = hydraulic conductivity estimate from rising head test

At a minimum, the estimation of overall hydraulic conductivity for a site should generally be determined using a minimum of three testing locations to permit an assessment of potentially anomalous data and/or variances in hydraulic conductivity within the aquifer / stratigraphy in question. The number of testing locations should be increased in the case of larger study areas, or where a significant variance (range) in estimated hydraulic conductivities is observed across the site.

REFERENCES

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Bouwer, H., 1989. "The Bouwer and Rice slug test - an update", Ground Water, Vol. 27, No. 3, pp. 304-309.

Butler, J. J., Jr., 1998. *The Design, Performance, and Analysis of Slug Tests*, Lewis Publishers, New York, 252p.

Hvorslev, M. J., 1951. "Time Lag and Soil Permeability in Groundwater Observations", Bulletin No. 36, Waterways Experiment Station, Corps of Engineers, U. S. Army, Vicksburg, Mississippi.

Milligan, V., 1975. "Field Measurements of Permeability in Soil and Rock", Proceeding on Conference on In-Situ Measurement of Soil Properties, American Society of Civil Engineers.

APPENDIX IV
BOREHOLE/MONITORING WELL LOGS

CLIENT: De Zen Realty Company Ltd.	PROJECT NO.: CH244.00	**RECORD OF: MW101S**
ADDRESS: 120, 128, 142, 154, 158 Queen Street South,	STATION:	
CITY/PROVINCE: Mississauga, ON	NORTHING (m): 4826412.61	EASTING (m): 603609.85 ELEV. (m) 163.52
CONTRACTOR: Profile Drilling Inc.	METHOD: Hollow Stem Auger	
BOREHOLE DIAMETER (cm): 20	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 (%)	SV/TOV (ppm or %LEL)	LABORATORY TESTING	WELL INSTALLATION	REMARKS
		Straight drilled to 6.1 mbg to install monitoring well	0	163.5								Bentonite	
			0.5	163									50 mm monitoring well was installed. Water level measured on March 15, 2023: 0.99 mbg
			1	162.5									
			1.5	162									
			2	161.5									
			2.5	161									
			3	160.5									
			3.5	160									
			4	159.5								Sand	
			4.5	159								Screen + Sand	
			5	158.5									
			5.5	158									
			6	157.5									
		END OF BOREHOLE											

TERRAPEX

LOGGED BY: JD	DRILLING DATE: 19-Jan-23
INPUT BY: EMZ	MONITORING DATE: 15-Mar-23
REVIEWED BY: KC	PAGE 1 OF 1

CLIENT: De Zen Realty Company Ltd.	PROJECT NO.: CH244.00	**RECORD OF: MW101**
ADDRESS: 120, 128, 142, 154, 158 Queen Street South,	STATION:	
CITY/PROVINCE: Mississauga, ON	NORTHING (m): 4826412.07	EASTING (m): 603610.52 ELEV. (m) 163.71
CONTRACTOR: Profile Drilling Inc.	METHOD: Hollow Stem Auger + Split Spoon Sampling	
BOREHOLE DIAMETER (cm): 20	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) / N-VALUE (Blows/300mm)	WATER CONTENT (%) PL W.C. LL	SAMPLE NO.	SAMPLE TYPE	RECOVERY (%)	SV/TOV (ppm or %LEL)	LABORATORY TESTING	WELL INSTALLATION	REMARKS
		asphaltic concrete (110 mm) granular base (150 mm) stiff to very stiff, moist CLAYEY SILT trace gravel, trace to some sand (TILL)	0 0.5 1 1.5 2 2.5 3 3.5 4 4.5 5 5.5 6 6.5 7 7.5 8 8.5 9	163.5 163 162.5 162 161.5 161 160.5 160 159.5 159 158.5 158 157.5 157 156.5 156 155.5 155 154.5	11 8 18 21 21 13 17 18 21		1A 1B 2 3 4 5 6 7 8 9		58 79 88 63 75 83 79 67 67	<5 <5 <5 <5 <5 <5 <5 <5 <5	M+I BTEX, PHCs, VOCs	Bentonite Sand Screen + Sand	50 mm monitoring well was installed. Water level measured on March 15, 2023: 8.94 mbg
		brown grey very stiff to hard, very moist, grey CLAYEY SILT some gravel to gravelly some sand to sandy (TILL)											

72/225

TERRAPEX

LOGGED BY: JD	DRILLING DATE: 18 & 19-Jan-23
INPUT BY: EMZ	MONITORING DATE: 15-Mar-23
REVIEWED BY: KC	PAGE 1 OF 2

CLIENT: De Zen Realty Company Ltd.	PROJECT NO.: CH244.00	**RECORD OF: MW101**
ADDRESS: 120, 128, 142, 154, 158 Queen Street South,	STATION:	
CITY/PROVINCE: Mississauga, ON	NORTHING (m): 4826412.07	EASTING (m): 603610.52 ELEV. (m) 163.71
CONTRACTOR: Profile Drilling Inc.	METHOD: Hollow Stem Auger + Split Spoon Sampling	
BOREHOLE DIAMETER (cm): 20	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 (%)	SV/TOV (ppm or %LEL)	LABORATORY TESTING	WELL INSTALLATION	REMARKS
		hard, very moist, grey to reddish grey CLAYEY SILT some gravel to gravelly some sand to sandy (TILL)	9.5	154			10		70	<5			
			10	153.5									
			10.5	153	87/200		11		70				
					50/50		12		0				
		END OF BOREHOLE											

TERRAPEX

LOGGED BY: JD	DRILLING DATE: 18 & 19-Jan-23
INPUT BY: EMZ	MONITORING DATE: 15-Mar-23
REVIEWED BY: KC	PAGE 2 OF 2

CLIENT: De Zen Realty Company Ltd.	PROJECT NO.: CH244.00	**RECORD OF: MW102**
ADDRESS: 120, 128, 142, 154, 158 Queen Street South,	STATION:	
CITY/PROVINCE: Mississauga, ON	NORTHING (m): 4826382.20	EASTING (m): 603659.25 ELEV. (m) 162.79
CONTRACTOR: Profile Drilling Inc.	METHOD: Hollow Stem Auger + Split Spoon Sampling	
BOREHOLE DIAMETER (cm): 20	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) / N-VALUE (Blows/300mm)	WATER CONTENT (%) PL W.C. LL	SAMPLE NO.	SAMPLE TYPE	RECOVERY (%)	SV/TOV (ppm or %LEL)	LABORATORY TESTING	WELL INSTALLATION	REMARKS
		asphaltic concrete (100 mm) granular base (135 mm) FILL firm, very moist, dark brown clayey silt some gravel, some sand	0 0.5 1	162.5 162	4 14		1 2		21 88	<5 <5	M+I	Bentonite	50 mm monitoring well was installed. Water level measured on March 15, 2023: 0.35 mbg
		stiff to very stiff CLAYEY SILT trace gravel, trace to some sand (TILL)	1.5 2	161.5 161	19		3		88	<5			
		moist brown	2.5 3	160.5 160	19		4		79	<5			
			3.5 4	159.5 159	21 12		5 6		83 88	<5 <5			
			4.5 5	158.5 158	8		7		70				
			5.5 6	157.5 157	129								
		moist to very moist grey	6.5 7	156.5 156	11		8		92	<5			
			7.5 8	155.5 155	16		9		88	<5	BTEX, PHC, VOCs	Sand Screen + Sand	
		hard, wet, grey CLAYEY SILT some gravel to gravelly some sand to sandy (TILL)	8.5 9	154.5 154									
				153.5	88/225		10		44	<5			

TERRAPEX

LOGGED BY: JD	DRILLING DATE: 08 & 09-Feb-23
INPUT BY: EMZ	MONITORING DATE: 15-Mar-23
REVIEWED BY: KC	PAGE 1 OF 2

CLIENT: De Zen Realty Company Ltd.	PROJECT NO.: CH244.00	**RECORD OF: MW102**
ADDRESS: 120, 128, 142, 154, 158 Queen Street South,	STATION:	
CITY/PROVINCE: Mississauga, ON	NORTHING (m): 4826382.20	EASTING (m): 603659.25 ELEV. (m) 162.79
CONTRACTOR: Profile Drilling Inc.	METHOD: Hollow Stem Auger + Split Spoon Sampling	
BOREHOLE DIAMETER (cm): 20	WELL DIAMETER (cm): 5	SCREEN SLOT #: 10 SAND TYPE: 2 SEALANT TYPE: Bentonite

SAMPLE TYPE: AUGER | DRIVEN | CORING | DYNAMIC CONE | SHELBY | SPLIT SPOON

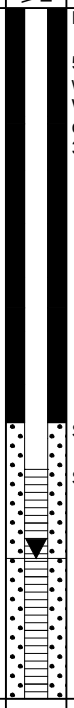
GWL (m)	SOIL SYMBOL	SOIL DESCRIPTION	DEPTH (m)	ELEVATION (m)	SHEAR STRENGTH (kPa) 40 80 120 160 / N-VALUE (Blows/300mm) 20 40 60 80	WATER CONTENT (%) PL W.C. LL 20 40 60 80	SAMPLE NO.	SAMPLE TYPE	RECOVERY (%)	SV/TOV (ppm or %LEL)	LABORATORY TESTING	WELL INSTALLATION	REMARKS
		hard, wet, grey CLAYEY SILT some gravel to gravelly some sand to sandy (TILL)	9.5	153									
			10										
				152.5									
			10.5										
				152	94/225		11		70				
			11										
				151.5									
			11.5										
				151									
			12		50/50		12		70				
		weathered SHALE											
		END OF BOREHOLE											

TERRAPEX

LOGGED BY: JD	DRILLING DATE: 08 & 09-Feb-23
INPUT BY: EMZ	MONITORING DATE: 15-Mar-23
REVIEWED BY: KC	PAGE 2 OF 2

CLIENT: De Zen Realty Company Ltd.	PROJECT NO.: CH244.00	**RECORD OF: MW103S**
ADDRESS: 120, 128, 142, 154, 158 Queen Street South,	STATION:	
CITY/PROVINCE: Mississauga, ON	NORTHING (m): 4826346.47	EASTING (m): 603680.73 ELEV. (m) 161.14
CONTRACTOR: Profile Drilling Inc.	METHOD: Hollow Stem Auger	
BOREHOLE DIAMETER (cm): 20	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 (%)	SV/TOV (ppm or %LEL)	LABORATORY TESTING	WELL INSTALLATION	REMARKS
		Straight drilled to 4.6 mbg to install monitoring well	0 0.5 1 1.5 2 2.5 3 3.5 4 4.5	161 160.5 160 159.5 159 158.5 158 157.5 157									Bentonite 50 mm monitoring well was installed. Water level measured on March 15, 2023: 3.64 mbg Sand Screen + Sand
		END OF BOREHOLE											

TERRAPEX

LOGGED BY: JD	DRILLING DATE: 09-Feb-23
INPUT BY: EMZ	MONITORING DATE: 15-Mar-23
REVIEWED BY: KC	PAGE 1 OF 1

CLIENT: De Zen Realty Company Ltd.	PROJECT NO.: CH244.00	**RECORD OF: MW103**
ADDRESS: 120, 128, 142, 154, 158 Queen Street South,	STATION:	
CITY/PROVINCE: Mississauga, ON	NORTHING (m): 4826345.91	EASTING (m): 603681.44 ELEV. (m) 161.17
CONTRACTOR: Profile Drilling Inc.	METHOD: Hollow Stem Auger + Split Spoon Sampling	
BOREHOLE DIAMETER (cm): 20	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) / N-VALUE (Blows/300mm)	WATER CONTENT (%) PL W.C. LL	SAMPLE NO.	SAMPLE TYPE	RECOVERY (%)	SV/TOV (ppm or %LEL)	LABORATORY TESTING	WELL INSTALLATION	REMARKS
		FILL firm, moist, brown/dark brown clayey silt trace gravel, trace sand, trace brick	0	161	6		1		58	<5		Bentonite	Bentonite 50 mm monitoring well was installed. Water level measured on March 15, 2023: 3.79 mbg
		very stiff, moist, brown CLAYEY SILT trace gravel, some sand (TILL)	0.5	160.5									
			1	160	21		2		92	<5	M+I		
			1.5	159.5	20		3		75	<5			
			2	159									
			2.5	158.5	21		4		79	<5			
			3	158									
			3.5	157.5	22		5		83	<5			
			4	157	22		6		79	<5			
		stiff to hard, very moist to moist CLAYEY SILT some gravel to gravelly some sand to sandy (TILL)	4.5	156.5	12		7		79	<5	BTEX, PHCs, PAHs		
			5	156									
			5.5	155.5									
			6	155									
			6.5	154.5	53		8		63	<5			
		grey	7	154									
			7.5	153.5									
			8	153	41		9		83	<5	VOCs		
		----------	8.5	152.5									
		reddish grey	9	152	50/75		10		100	<5			

TERRAPEX

LOGGED BY: JD	DRILLING DATE: 07 & 08-Feb-23
INPUT BY: EMZ	MONITORING DATE: 15-Mar-23
REVIEWED BY: KC	PAGE 1 OF 2

CLIENT: De Zen Realty Company Ltd.	PROJECT NO.: CH244.00	**RECORD OF: MW103**
ADDRESS: 120, 128, 142, 154, 158 Queen Street South,	STATION:	
CITY/PROVINCE: Mississauga, ON	NORTHING (m): 4826345.91	EASTING (m): 603681.44 ELEV. (m) 161.17
CONTRACTOR: Profile Drilling Inc.	METHOD: Hollow Stem Auger + Split Spoon Sampling	
BOREHOLE DIAMETER (cm): 20	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 (%)	SV/TOV (ppm or %LEL)	LABORATORY TESTING	WELL INSTALLATION	REMARKS
		hard, moist, reddish grey CLAYEY SILT some gravel to gravelly some sand to sandy (TILL)	9.5	151.5								Sand	
			10	151									Screen + Sand
			10.5	150.5	83/250		11		88	<5			
			11	150									
		weathered SHALE	11.5		50/125		12		80				
		END OF BOREHOLE											

TERRAPEX

LOGGED BY: JD	DRILLING DATE: 07 & 08-Feb-23
INPUT BY: EMZ	MONITORING DATE: 15-Mar-23
REVIEWED BY: KC	PAGE 2 OF 2

CLIENT: De Zen Realty Company Ltd.	PROJECT NO.: CH244.00	**RECORD OF: MW104**
ADDRESS: 120, 128, 142, 154, 158 Queen Street South,	STATION:	
CITY/PROVINCE: Mississauga, ON	NORTHING (m): 4826323.02	EASTING (m): 603714.35 ELEV. (m) 161.99
CONTRACTOR: Profile Drilling Inc.	METHOD: Hollow Stem Auger + Split Spoon Sampling	
BOREHOLE DIAMETER (cm): 20	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 (%)	SV/TOV (ppm or %LEL)	LABORATORY TESTING	WELL INSTALLATION	REMARKS
		FILL compact, moist, dark brown to brown gravelly silty sand trace clay, some organics	0 0.5	161.5	11		1		58	<5			Bentonite 50 mm monitoring well was installed. Water level measured on March 15, 2023: 1.38 mbg
			1	161	13		2		58	<5	M+I		
			1.5	160.5	10		3A		0	<5			
			2	160			3B						
		FILL very stiff, wet, brown clayey silt trace gravel, some sand	2.5	159.5	18		4		17	<5			
		very stiff to stiff, very moist to moist CLAYEY SILT trace gravel, trace to some sand (TILL)	3	159									
			3.5	158.5	21		5		88	<5			
		brown	4	158	25		6		50	<5			
			4.5	157.5									
			5	157	12		7		75	<5			
		----------	5.5	156.5									
			6	156									
		grey	6.5	155.5	15		8		67	<5			
		hard, moist to very moist, grey CLAYEY SILT some gravel to gravelly some sand to sandy (TILL)	7	155									
			7.5	154.5									
			8	154	56		9		67		BTEX, PHCs		Sand Screen + Sand
			8.5	153.5									
			9	153	50/50		10		75				

TERRAPEX

LOGGED BY: JD	DRILLING DATE: 06 & 07-Feb-23
INPUT BY: EMZ	MONITORING DATE: 15-Mar-23
REVIEWED BY: KC	PAGE 1 OF 2

CLIENT: De Zen Realty Company Ltd.	PROJECT NO.: CH244.00	**RECORD OF: MW104**
ADDRESS: 120, 128, 142, 154, 158 Queen Street South,	STATION:	
CITY/PROVINCE: Mississauga, ON	NORTHING (m): 4826323.02	EASTING (m): 603714.35 ELEV. (m) 161.99
CONTRACTOR: Profile Drilling Inc.	METHOD: Hollow Stem Auger + Split Spoon Sampling	
BOREHOLE DIAMETER (cm): 20	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 (%)	SV/TOV (ppm or %LEL)	LABORATORY TESTING	WELL INSTALLATION	REMARKS
		hard, very moist, grey to reddish grey CLAYEY SILT some gravel to gravelly some sand to sandy (TILL)	9.5	152.5									
			10	152									
			10.5	151.5	50/50 ▲		11		100				
			11	151									
			11.5	150.5	50/75 ▲		12		100				
		END OF BOREHOLE											

TERRAPEX

LOGGED BY: JD	DRILLING DATE: 06 & 07-Feb-23
INPUT BY: EMZ	MONITORING DATE: 15-Mar-23
REVIEWED BY: KC	PAGE 2 OF 2

CLIENT: De Zen Realty Company Ltd.	PROJECT NO.: CH244.00	**RECORD OF: MW105**
ADDRESS: 120, 128, 142, 154, 158 Queen Street South,	STATION:	
CITY/PROVINCE: Mississauga, ON	NORTHING (m): 4826283.69	EASTING (m): 603728.19 ELEV. (m) 161.76
CONTRACTOR: Profile Drilling Inc.	METHOD: Hollow Stem Auger + Split Spoon Sampling	
BOREHOLE DIAMETER (cm): 20	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) / N-VALUE (Blows/300mm)	WATER CONTENT (%) PL W.C. LL	SAMPLE NO.	SAMPLE TYPE	RECOVERY (%)	SV/TOV (ppm or %LEL)	LABORATORY TESTING	WELL INSTALLATION	REMARKS
		asphaltic concrete (100 mm) granular base (150 mm) FILL firm, moist, dark brown sandy clayey silt trace gravel, trace organics	0 0.5 1	161.5 161	5 4	4 28	1 2		46 50	<5 <5	PAHs M+I	Bentonite	Bentonite 50 mm monitoring well was installed. Water level measured on March 15, 2023: 5.34 mbg
		very stiff, moist CLAYEY SILT trace gravel, trace to some sand (TILL)	1.5 2 2.5	160 159.5	15 20	16 16	3 4		83 83	<5 <5			
		brown	3 3.5	159 158.5	19	15	5		83	<5			
			4	158	29	12	6		75	<5			
		grey	4.5 5 5.5 6	157.5 157 156.5 156	25	14	7		67	<5			
		hard, moist, grey CLAYEY SILT some gravel to gravelly some sand to sandy (TILL)	6.5 7 7.5	155.5 155 154.5	26	11	8		79	<5			
			8 8.5	154 153.5	35	9	9		83	<5	BTEX, PHCs	Sand Screen + Sand	
			9	153 152.5									

TERRAPEX

LOGGED BY: JD	DRILLING DATE: 31-Jan-23
INPUT BY: EMZ	MONITORING DATE: 15-Mar-23
REVIEWED BY: KC	PAGE 1 OF 2

CLIENT: De Zen Realty Company Ltd.	PROJECT NO.: CH244.00	**RECORD OF: MW105**
ADDRESS: 120, 128, 142, 154, 158 Queen Street South,	STATION:	
CITY/PROVINCE: Mississauga, ON	NORTHING (m): 4826283.69	EASTING (m): 603728.19 ELEV. (m) 161.76
CONTRACTOR: Profile Drilling Inc.	METHOD: Hollow Stem Auger + Split Spoon Sampling	
BOREHOLE DIAMETER (cm): 20	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 (%)	SV/TOV (ppm or %LEL)	LABORATORY TESTING	WELL INSTALLATION	REMARKS
		hard, moist, grey CLAYEY SILT some gravel to gravelly some sand to sandy (TILL)	9.5	152	75/275	9	10		76	<5			
			10	151.5									
			10.5	151	72/275	11	11		59				
			11	150.5									
		weathered SHALE	11.5		50/100	8	12		100				
		END OF BOREHOLE											

TERRAPEX

LOGGED BY: JD	DRILLING DATE: 31-Jan-23
INPUT BY: EMZ	MONITORING DATE: 15-Mar-23
REVIEWED BY: KC	PAGE 2 OF 2

CLIENT: De Zen Realty Company Ltd.	PROJECT NO.: CH244.00	**RECORD OF: MW106**
ADDRESS: 120, 128, 142, 154, 158 Queen Street South,	STATION:	
CITY/PROVINCE: Mississauga, ON	NORTHING (m): 4826420.37	EASTING (m): 603551.08 ELEV. (m) 163.25
CONTRACTOR: Profile Drilling Inc.	METHOD: Hollow Stem Auger + Split Spoon Sampling	
BOREHOLE DIAMETER (cm): 20	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) / N-VALUE (Blows/300mm)	WATER CONTENT (%) PL W.C. LL	SAMPLE NO.	SAMPLE TYPE	RECOVERY (%)	SV/TOV (ppm or %LEL)	LABORATORY TESTING	WELL INSTALLATION	REMARKS
		asphaltic concrete (110 mm) granular base (150 mm) FILL compact, moist, brown sand and gravel	0	163	11	3	1		58	<5	M+I	Bentonite	50 mm monitoring well was installed. Water level measured on March 15, 2023: 1.70 mbg
		stiff to hard, moist, brown CLAYEY SILT trace gravel, trace to some sand (TILL)	0.5	162.5									
			1	162	10	18	2		63	<5			
			1.5	161.5	18	16	3		67	<5			
			2	161									
			2.5	160.5	20	16	4		83	<5			
			3	160	32	16	5		58	<5			
			3.5	159.5									
			4	159	19	18	6		75	<5			
			4.5	158.5	19	18	7		75	<5			
			5	158									
		very stiff to hard, moist, grey CLAYEY SILT some gravel to gravelly some sand to sandy (TILL)	5.5	157.5									
			6	157	18	11	8		79	<5	BTEX, PHCs	Sand	
			6.5	156.5								Screen + Sand	
			7	156									
			7.5	155.5	42	8	9		75	<5			
			8	155									
			8.5	154.5									
			9	154									

TERRAPEX

LOGGED BY: JD	DRILLING DATE: 19 & 20-Jan-23
INPUT BY: EMZ	MONITORING DATE: 15-Mar-23
REVIEWED BY: KC	PAGE 1 OF 2

CLIENT: De Zen Realty Company Ltd.	PROJECT NO.: CH244.00	**RECORD OF: MW106**
ADDRESS: 120, 128, 142, 154, 158 Queen Street South,	STATION:	
CITY/PROVINCE: Mississauga, ON	NORTHING (m): 4826420.37	EASTING (m): 603551.08 ELEV. (m) 163.25
CONTRACTOR: Profile Drilling Inc.	METHOD: Hollow Stem Auger + Split Spoon Sampling	
BOREHOLE DIAMETER (cm): 20	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 (%)	SV/TOV (ppm or %LEL)	LABORATORY TESTING	WELL INSTALLATION	REMARKS
		hard, moist, grey CLAYEY SILT some gravel to gravelly some sand to sandy (TILL)	9.5	153.5	65	8	10		59	<5			
		hard, moist, reddish grey GRAVELLY SANDY CLAYEY SILT	10	153									
			10.5	152.5	50/125	7	11		72				
		weathered SHALE											
		END OF BOREHOLE											

TERRAPEX

LOGGED BY: JD	DRILLING DATE: 19 & 20-Jan-23
INPUT BY: EMZ	MONITORING DATE: 15-Mar-23
REVIEWED BY: KC	PAGE 2 OF 2

CLIENT: De Zen Realty Company Ltd.	PROJECT NO.: CH244.00	**RECORD OF: MW107**
ADDRESS: 120, 128, 142, 154, 158 Queen Street South,	STATION:	
CITY/PROVINCE: Mississauga, ON	NORTHING (m): 4826361.49	EASTING (m): 603608.34 ELEV. (m) 162.73
CONTRACTOR: Profile Drilling Inc.	METHOD: Hollow Stem Auger + Split Spoon Sampling	
BOREHOLE DIAMETER (cm): 20	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) / N-VALUE (Blows/300mm)	WATER CONTENT (%) PL W.C. LL	SAMPLE NO.	SAMPLE TYPE	RECOVERY (%)	SV/TOV (ppm or %LEL)	LABORATORY TESTING	WELL INSTALLATION	REMARKS
		asphaltic concrete (125 mm) granular base (160 mm) FILL compact,moist, brown sand and gravel	0 0.5	162.5	10	11	1		63	<5		Bentonite	50 mm monitoring well was installed. Water level measured on March 15, 2023: 2.29 mbg
		FILL stiff, moist, brown clayey silt trace gravel, trace sand	1 1.5	162 161.5	9	5 21	2A 2B		67	<5	M+I		
		very stiff, moist, brown CLAYEY SILT trace gravel, trace to some sand (TILL)	2 2.5 3 3.5	161 160.5 160 159.5	22 21 21	15 17	3 4 5		83 83 83	<5 <5 <5			
			4	159	18	14	6A		75	<5			
			4.5 5 5.5	158.5 158	17	17 19	6B 7		83	<5			
		stiff to hard, moist, grey CLAYEY SILT some gravel to gravelly some sand to sandy (TILL)	6 6.5	157.5 157 156.5	10	11	8		83	<5			
			7 7.5	156 155.5	51	2	9A		58	<5			
		hard, moist, reddish brown GRAVELLY SANDY CLAYEY SILT (TILL)	8 8.5 9	155 154.5 154 153.5		7	9B					Sand	

TERRAPEX

LOGGED BY: JD	DRILLING DATE: 18-Jan-23
INPUT BY: EMZ	MONITORING DATE: 15-Mar-23
REVIEWED BY: KC	PAGE 1 OF 2

CLIENT: De Zen Realty Company Ltd.	PROJECT NO.: CH244.00	**RECORD OF: MW107**
ADDRESS: 120, 128, 142, 154, 158 Queen Street South,	STATION:	
CITY/PROVINCE: Mississauga, ON	NORTHING (m): 4826361.49	EASTING (m): 603608.34 ELEV. (m) 162.73
CONTRACTOR: Profile Drilling Inc.	METHOD: Hollow Stem Auger + Split Spoon Sampling	
BOREHOLE DIAMETER (cm): 20	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 (%)	SV/TOV (ppm or %LEL)	LABORATORY TESTING	WELL INSTALLATION	REMARKS
		hard, moist, reddish brown GRAVELLY SANDY CLAYEY SILT (TILL)	9.5	153	90/250	8	10		38	<5			Screen + Sand
		rock fragments	10	152.5									
			10.5	152	81/250	5	11		63	<5			
			11	151.5									
		weathered SHALE	11.5		50/100	6	12		100				
		END OF BOREHOLE											

TERRAPEX

LOGGED BY: JD	DRILLING DATE: 18-Jan-23
INPUT BY: EMZ	MONITORING DATE: 15-Mar-23
REVIEWED BY: KC	PAGE 2 OF 2

CLIENT: De Zen Realty Company Ltd.	PROJECT NO.: CH244.00	**RECORD OF: MW108**
ADDRESS: 120, 128, 142, 154, 158 Queen Street South,	STATION:	
CITY/PROVINCE: Mississauga, ON	NORTHING (m): 4826287.11	EASTING (m): 603654.86 ELEV. (m) 161.39
CONTRACTOR: Profile Drilling Inc.	METHOD: Hollow Stem Auger + Split Spoon Sampling	
BOREHOLE DIAMETER (cm): 20	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 (%)	SV/TOV (ppm or %LEL)	LABORATORY TESTING	WELL INSTALLATION	REMARKS
		asphaltic concrete (100 mm) granular base (150 mm) FILL loose, moist, brown sand and gravel, mixed with clayey silt FILL stiff, moist, dark brown clayey silt trace gravel, trace sand	0 0.5 1 1.5	161 160.5 160	9 10		1 2		50 58	<5 <5	M+I		Bentonite 50 mm monitoring well was installed. Water level measured on March 15, 2023: 5.36 mbg
		very stiff to hard, moist, brown CLAYEY SILT trace gravel, trace to some sand (TILL)	2 2.5 3 3.5 4 4.5	159.5 159 158.5 158 157.5 157	24 48 24 22		3 4 5 6		83 38 79 75	<5 <5 <5 <5			
		hard, moist, grey CLAYEY SILT some gravel to gravelly some sand to sandy (TILL)	5 5.5 6 6.5 7 7.5 8 8.5 9	156.5 156 155.5 155 154.5 154 153.5 153 152.5	24 58 58 60		7 8 9 10A		79 79 83 79	<5 <5 <5 <5	BYEX, PHCs		Sand Screen + Sand

TERRAPEX

LOGGED BY: JD	DRILLING DATE: 02-Feb-23
INPUT BY: EMZ	MONITORING DATE: 15-Mar-23
REVIEWED BY: KC	PAGE 1 OF 2

CLIENT: De Zen Realty Company Ltd.	PROJECT NO.: CH244.00	**RECORD OF: MW108**
ADDRESS: 120, 128, 142, 154, 158 Queen Street South,	STATION:	
CITY/PROVINCE: Mississauga, ON	NORTHING (m): 4826287.11	EASTING (m): 603654.86 ELEV. (m) 161.39
CONTRACTOR: Profile Drilling Inc.	METHOD: Hollow Stem Auger + Split Spoon Sampling	
BOREHOLE DIAMETER (cm): 20	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 (%)	SV/TOV (ppm or %LEL)	LABORATORY TESTING	WELL INSTALLATION	REMARKS
		hard, moist, reddish grey CLAYEY SILT some gravel to gravelly some sand to sandy (TILL)	9.5	152			10B						
		hard, wet, reddish grey GRAVELLY SANDY CLAYEY SILT (TILL)	10	151.5									
			10.5	151	50/75 ▲		11A 11B		100				
			11	150.5									
		weathered SHALE	11.5	150	50/25 ▲		12		0				
		END OF BOREHOLE											

TERRAPEX

LOGGED BY: JD	DRILLING DATE: 02-Feb-23
INPUT BY: EMZ	MONITORING DATE: 15-Mar-23
REVIEWED BY: KC	PAGE 2 OF 2

CLIENT: De Zen Realty Company Ltd.	PROJECT NO.: CH244.00	**RECORD OF: BH109**
ADDRESS: 120, 128, 142, 154, 158 Queen Street South,	STATION:	
CITY/PROVINCE: Mississauga, ON	NORTHING (m): 4826366.57	EASTING (m): 603557.00 ELEV. (m) 162.83
CONTRACTOR: Profile Drilling Inc.	METHOD: Hollow Stem Auger + Split Spoon Sampling	
BOREHOLE DIAMETER (cm): 20	WELL DIAMETER (cm):	SCREEN SLOT #: SAND TYPE: 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) / N-VALUE (Blows/300mm)	WATER CONTENT (%) PL W.C. LL	SAMPLE NO.	SAMPLE TYPE	RECOVERY (%)	SV/TOV (ppm or %LEL)	LABORATORY TESTING	WELL INSTALLATION	REMARKS
		asphaltic concrete (120 mm) granular base (220 mm) FILL stiff to very stiff, moist, dark brown clayey silt trace gravel, trace sand	0 – 1	162.5 – 162	10, 17		1, 2A, 2B		50, 88	<5	M+I		Borehole caved at 11.0 mbg and water level at 11.4 mbg upon completion
		very stiff to stiff, moist, brown CLAYEY SILT trace gravel, trace to some sand (TILL)	1 – 4.5	161.5 – 159	21, 25, 17, 12		3, 4, 5, 6		92, 63, 75, 79	<5			
		firm, moist, brown CLAYEY SILT	4.5 – 5.5	158.5 – 157.5	7		7		75	<5			
		very stiff to hard, moist, grey CLAYEY SILT some gravel to gravelly some sand to sandy (TILL)	5.5 – 9	157 – 153.5	21, 28		8, 9A, 9B		100, 67	<5	BTEX, PHCs, VOCs		

TERRAPEX

LOGGED BY: JD	DRILLING DATE: 17-Jan-23
INPUT BY: EMZ	MONITORING DATE:
REVIEWED BY: KC	PAGE 1 OF 2

CLIENT: De Zen Realty Company Ltd.	PROJECT NO.: CH244.00	**RECORD OF: BH109**
ADDRESS: 120, 128, 142, 154, 158 Queen Street South,	STATION:	
CITY/PROVINCE: Mississauga, ON	NORTHING (m): 4826366.57	EASTING (m): 603557.00 ELEV. (m) 162.83
CONTRACTOR: Profile Drilling Inc.	METHOD: Hollow Stem Auger + Split Spoon Sampling	
BOREHOLE DIAMETER (cm): 20	WELL DIAMETER (cm):	SCREEN SLOT #: SAND TYPE: 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 (%)	SV/TOV (ppm or %LEL)	LABORATORY TESTING	WELL INSTALLATION	REMARKS
		hard, moist, grey CLAYEY SILT some gravel to gravelly some sand to sandy (TILL)	9.5	153	60		10		71	<5			
		hard, moist, grey GRAVELLY SANDY CLAYEY SILT (TILL)	10	152.5									
			10.5	152	52		11		78	<5			
			11	151.5									
		weathered SHALE	11.5		50/75		12		67	<5			
		END OF BOREHOLE			50/75		13		100	<5			

TERRAPEX

LOGGED BY: JD	DRILLING DATE: 17-Jan-23
INPUT BY: EMZ	MONITORING DATE:
REVIEWED BY: KC	PAGE 2 OF 2

CLIENT: De Zen Realty Company Ltd.	PROJECT NO.: CH244.00	**RECORD OF: BH110**
ADDRESS: 120, 128, 142, 154, 158 Queen Street South,	STATION:	
CITY/PROVINCE: Mississauga, ON	NORTHING (m): 4826309.76	EASTING (m): 603617.01 ELEV. (m) 162.65
CONTRACTOR: Profile Drilling Inc.	METHOD: Solid Stem Auger + Split Spoon Sampling	
BOREHOLE DIAMETER (cm): 20	WELL DIAMETER (cm):	SCREEN SLOT #: SAND TYPE: 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) / N-VALUE (Blows/300mm)	WATER CONTENT (%) PL W.C. LL	SAMPLE NO.	SAMPLE TYPE	RECOVERY (%)	SV/TOV (ppm or %LEL)	LABORATORY TESTING	WELL INSTALLATION	REMARKS
		asphaltic concrete (100 mm) granular base (140 mm) FILL stiff, moist, brown/grey sandy clayey silt some gravel, trace organics	0 0.5 1 1.5	162.5 162 161.5	10 10	10 16	1 2		50 25	<5 <5	M+I		
		stiff to very stiff, moist, brown CLAYEY SILT trace gravel, trace to some sand (TILL)	2 2.5 3 3.5	161 160.5 160 159.5 159	13 27 21	12 16 17	3 4 5		79 83 88	<5 <5 <5	HWS B HWS B		
		hard, moist, grey CLAYEY SILT some gravel to gravelly some sand to sandy (TILL)	4 4.5 5 5.5 6 6.5	158.5 158 157.5 157 156.5 156	17 12 32	17 18 11	6 7 8		92 83 83	<5 <5 <5	BTEX, PHCs		
			7 7.5 8 8.5 9	155.5 155 154.5 154 153.5	50/75	8	9		100	<5			

TERRAPEX	LOGGED BY: JD	DRILLING DATE: 06-Feb-23
	INPUT BY: EMZ	MONITORING DATE:
	REVIEWED BY: KC	PAGE 1 OF 2

CLIENT: De Zen Realty Company Ltd.	PROJECT NO.: CH244.00	**RECORD OF: BH110**
ADDRESS: 120, 128, 142, 154, 158 Queen Street South,	STATION:	
CITY/PROVINCE: Mississauga, ON	NORTHING (m): 4826309.76	EASTING (m): 603617.01 ELEV. (m) 162.65
CONTRACTOR: Profile Drilling Inc.	METHOD: Solid Stem Auger + Split Spoon Sampling	
BOREHOLE DIAMETER (cm): 20	WELL DIAMETER (cm):	SCREEN SLOT #: SAND TYPE: 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 (%)	SV/TOV (ppm or %LEL)	LABORATORY TESTING	WELL INSTALLATION	REMARKS
		hard, moist, grey CLAYEY SILT some gravel to gravelly some sand to sandy (TILL)	9.5	153	46	7	10		67	<5			
			10	152.5									
			10.5	152	77/250	9	11		75	<5			
			11	151.5									
		---	11.5	151									
			12	150.5	50/100	5	12		100				
		rock fragments	12.5	150									
			13	149.5									
			13.5	149	50/125	4	13		80				
		weathered SHALE											
		END OF BOREHOLE											

TERRAPEX

LOGGED BY: JD	DRILLING DATE: 06-Feb-23
INPUT BY: EMZ	MONITORING DATE:
REVIEWED BY: KC	PAGE 2 OF 2

CLIENT: De Zen Realty Company Ltd.	PROJECT NO.: CH244.00	**RECORD OF: BH110A**
ADDRESS: 120, 128, 142, 154, 158 Queen Street South,	STATION:	
CITY/PROVINCE: Mississauga, ON	NORTHING (m): / EASTING (m):	ELEV. (m) 162.65
CONTRACTOR: Geo-Environmental Drilling Inc.	METHOD: Split Spoon	
BOREHOLE DIAMETER (cm):	WELL DIAMETER (cm): / SCREEN SLOT #:	SAND TYPE: SILICA / 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 (%)	SV/TOV (ppm or %LEL)	LABORATORY TESTING	WELL INSTALLATION	REMARKS
		aspahltic concrete (100 mm)	0	162.5									
		FILL brown sand and gravel	0.5	162	14		1		50	<5			
		FILL brown sandy clayey silt some gravel	1	161.5	13		2		60	<5	HWS B		
		END OF BOREHOLE											

TERRAPEX

LOGGED BY: KP	DRILLING DATE: 20-JUN-23
INPUT BY: AB	MONITORING DATE:
REVIEWED BY: GL	PAGE 1 OF 1

CLIENT: De Zen Realty Company Ltd.	PROJECT NO.: CH244.00	**RECORD OF: BH110B**
ADDRESS: 120, 128, 142, 154, 158 Queen Street South,	STATION:	
CITY/PROVINCE: Mississauga, ON	NORTHING (m):	EASTING (m): ELEV. (m) 162.65
CONTRACTOR: Geo-Environmental Drilling Inc.	METHOD: Split Spoon	
BOREHOLE DIAMETER (cm):	WELL DIAMETER (cm):	SCREEN SLOT #: SAND TYPE: SILICA 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 (%)	SV/TOV (ppm or %LEL)	LABORATORY TESTING	WELL INSTALLATION	REMARKS
		asphaltic concrete (100 mm)	0	162.5									
		FILL brown sand and gravel	0.5	162	23		1		50	5			
		FILL brown sandy clayey silt some gravel	1	161.5	13		2		70	<5	HWS B		
		END OF BOREHOLE											

TERRAPEX

LOGGED BY: KP	DRILLING DATE: 20-JUN-23
INPUT BY: AB	MONITORING DATE:
REVIEWED BY: GL	PAGE 1 OF 1

CLIENT: De Zen Realty Company Ltd.	PROJECT NO.: CH244.00	**RECORD OF: BH110C**
ADDRESS: 120, 128, 142, 154, 158 Queen Street South,	STATION:	
CITY/PROVINCE: Mississauga, ON	NORTHING (m):	EASTING (m):	ELEV. (m) 162.65
CONTRACTOR: Geo-Environmental Drilling Inc.	METHOD: Split Spoon	
BOREHOLE DIAMETER (cm):	WELL DIAMETER (cm):	SCREEN SLOT #:	SAND TYPE: SILICA	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 (%)	SV/TOV (ppm or %LEL)	LABORATORY TESTING	WELL INSTALLATION	REMARKS
		asphaltic concrete (100 mm) granular base (150 mm) FILL brown sandy clayey silt some gravel	0 0.5 1	162.5 162 161.5	12 12		1 2		0 60	<5	HWS B		
		END OF BOREHOLE											

TERRAPEX	LOGGED BY: KP	DRILLING DATE: 20-JUN-23
	INPUT BY: AB	MONITORING DATE:
	REVIEWED BY: GL	PAGE 1 OF 1

CLIENT: De Zen Realty Company Ltd.	PROJECT NO.: CH244.00	**RECORD OF: BH110D**
ADDRESS: 120, 128, 142, 154, 158 Queen Street South,	STATION:	
CITY/PROVINCE: Mississauga, ON	NORTHING (m):	EASTING (m): ELEV. (m) 162.65
CONTRACTOR: Geo-Environmental Drilling Inc.	METHOD: Split Spoon	
BOREHOLE DIAMETER (cm):	WELL DIAMETER (cm):	SCREEN SLOT #: SAND TYPE: SILICA 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 (%)	SV/TOV (ppm or %LEL)	LABORATORY TESTING	WELL INSTALLATION	REMARKS
		asphaltic concrete (100 mm)	0	162.5	11		1		50	<5			
		FILL brown sand and gravel	0.5	162									
		FILL brown sandy clayey silt some gravel	1	161.5	11		2		70	<5	HWS B		
		END OF BOREHOLE											

TERRAPEX

LOGGED BY: KP	DRILLING DATE: 20-JUN-23
INPUT BY: AB	MONITORING DATE:
REVIEWED BY: GL	PAGE 1 OF 1

CLIENT: De Zen Realty Company Ltd.	PROJECT NO.: CH244.00	**RECORD OF: BH110E**
ADDRESS: 120, 128, 142, 154, 158 Queen Street South,	STATION:	
CITY/PROVINCE: Mississauga, ON	NORTHING (m):	EASTING (m): ELEV. (m) 162.65
CONTRACTOR: Geo-Environmental Drilling Inc.	METHOD: Split Spoon	
BOREHOLE DIAMETER (cm):	WELL DIAMETER (cm):	SCREEN SLOT #: SAND TYPE: SILICA 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 (%)	SV/TOV (ppm or %LEL)	LABORATORY TESTING	WELL INSTALLATION	REMARKS
		asphaltic concrete (100 mm)	0	162.5									
		FILL brown sand and gravel	0.5	162	18		1		60	<5			
		FILL brown sandy clayey silt some gravel	1	161.5	17		2		70	<5	HWS B		
		END OF BOREHOLE											

TERRAPEX

LOGGED BY: KP	DRILLING DATE: 20-JUN-23
INPUT BY: AB	MONITORING DATE:
REVIEWED BY: GL	PAGE 1 OF 1

CLIENT: De Zen Realty Company Ltd.	PROJECT NO.: CH244.00	**RECORD OF: BH110F**
ADDRESS: 120, 128, 142, 154, 158 Queen Street South,	STATION:	
CITY/PROVINCE: Mississauga, ON	NORTHING (m):	EASTING (m): ELEV. (m) 162.65
CONTRACTOR: Geo-Environmental Drilling Inc.	METHOD: Split Spoon	
BOREHOLE DIAMETER (cm):	WELL DIAMETER (cm):	SCREEN SLOT #: SAND TYPE: SILICA 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 (%)	SV/TOV (ppm or %LEL)	LABORATORY TESTING	WELL INSTALLATION	REMARKS
		asphaltic concrete (100 mm)	0	162.5									
		FILL brown sand and gravel	0.5	162	10		1		60	<5			
		FILL brown sandy clayey silt some gravel	1	161.5	11		2		80	5	HWS B		
		END OF BOREHOLE											

TERRAPEX

LOGGED BY: KP	DRILLING DATE: 20-JUN-23
INPUT BY: AB	MONITORING DATE:
REVIEWED BY: GL	PAGE 1 OF 1

CLIENT: De Zen Realty Company Ltd.	PROJECT NO.: CH244.00	**RECORD OF: BH111**
ADDRESS: 120, 128, 142, 154, 158 Queen Street South,	STATION:	
CITY/PROVINCE: Mississauga, ON	NORTHING (m): 4826224.05	EASTING (m): 603671.39 ELEV. (m) 161.04
CONTRACTOR: Profile Drilling Inc.	METHOD: Solid Stem Auger + Split Spoon Sampling	
BOREHOLE DIAMETER (cm): 20	WELL DIAMETER (cm):	SCREEN SLOT #: SAND TYPE: 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) / N-VALUE (Blows/300mm)	WATER CONTENT (%) PL W.C. LL	SAMPLE NO.	SAMPLE TYPE	RECOVERY (%)	SV/TOV (ppm or %LEL)	LABORATORY TESTING	WELL INSTALLATION	REMARKS
		asphaltic concrete (100 mm) granular base (150 mm) FILL stiff to very stiff, moist, brown clayey silt	0 0.5	161 160.5	8		1		33	<5	M+I		
		very stiff to stiff, moist CLAYEY SILT trace gravel, trace to some sand (TILL)	1 1.5	160 159.5	20		2		75	<5	PAHs		
			2	159	18		3		75	<5			
			2.5	158.5	18		4		83	<5			
		brown	3	158									
			3.5	157.5	20		5		75	<5			
			4	157	14		6		83	<5			
			4.5	156.5									
			5	156	14		7		67	<5			
		----------	5.5	155.5									
		grey	6	155									
			6.5	154.5	24		8		71	<5			
		hard, grey, moist CLAYEY SILT some gravel to gravelly some sand to sandy (TILL)	7 7.5	154 153.5									
			8	153	55		9		75	<5	BTEX, PHCs, VOCs		
			8.5	152.5									
			9	152									

TERRAPEX

LOGGED BY: JD	DRILLING DATE: 30 & 31-Jan-23
INPUT BY: EMZ	MONITORING DATE:
REVIEWED BY: KC	PAGE 1 OF 2

CLIENT: De Zen Realty Company Ltd.	PROJECT NO.: CH244.00	**RECORD OF: BH111**
ADDRESS: 120, 128, 142, 154, 158 Queen Street South,	STATION:	
CITY/PROVINCE: Mississauga, ON	NORTHING (m): 4826224.05	EASTING (m): 603671.39 ELEV. (m) 161.04
CONTRACTOR: Profile Drilling Inc.	METHOD: Solid Stem Auger + Split Spoon Sampling	
BOREHOLE DIAMETER (cm): 20	WELL DIAMETER (cm):	SCREEN SLOT #: SAND TYPE: 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 (%)	SV/TOV (ppm or %LEL)	LABORATORY TESTING	WELL INSTALLATION	REMARKS
		hard, grey, moist CLAYEY SILT some gravel to gravelly some sand to sandy (TILL)	9.5	151.5	60		10		71	<5			
			10	151									
			10.5	150.5	50/100		11		60	<5			
		---------- rock fragments	11	150									
			11.5	149.5	50/75		12		100				
		weathered SHALE	12	149	50/50		13		100				
		END OF BOREHOLE											

TERRAPEX

LOGGED BY: JD	DRILLING DATE: 30 & 31-Jan-23
INPUT BY: EMZ	MONITORING DATE:
REVIEWED BY: KC	PAGE 2 OF 2

CLIENT: De Zen Realty Company Ltd.	PROJECT NO.: CH244.00	**RECORD OF: MW112**
ADDRESS: 120, 128, 142, 154, 158 Queen Street South,	STATION:	
CITY/PROVINCE: Mississauga, ON	NORTHING (m): 4826378.03	EASTING (m): 603505.26 ELEV. (m) 162.93
CONTRACTOR: Profile Drilling Inc.	METHOD: Solid Stem Auger + Split Spoon Sampling	
BOREHOLE DIAMETER (cm): 20	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) / N-VALUE (Blows/300mm)	WATER CONTENT (%) PL W.C. LL	SAMPLE NO.	SAMPLE TYPE	RECOVERY (%)	SV/TOV (ppm or %LEL)	LABORATORY TESTING	WELL INSTALLATION	REMARKS
		asphaltic concrete (100 mm) granular base (150 mm) FILL compact, moist, brown sandy silt	0 0.5	162.5	10		1		63	<5		Bentonite	50 mm monitoring well was installed. Water level measured on March 15, 2023: 2.70 mbg
		very stiff to stiff, moist CLAYEY SILT trace gravel, trace to some sand (TILL)	1 1.5	162 161.5	26 23		2 3		63 75	<5 <5			
		brown	2	161									
			2.5	160.5	24		4		83	<5			
			3	160									
			3.5	159.5	29		5		83	<5			
		----------	4	159	14		6		88	<5			
		grey	4.5	158.5									
			5	158	14		7		88	<5			
		very stiff to hard, moist, grey CLAYEY SILT some gravel to gravelly some sand to sandy (TILL)	5.5 6	157.5 157									
			6.5	156.5	28		8		83	<5			
			7	156									
			7.5	155.5									
			8	155	60		9		100	<5			
			8.5	154.5									
		hard, moist, grey	9	154								Sand Screen + Sand	

TERRAPEX

LOGGED BY: JD	DRILLING DATE: 24 & 25-Jan-23
INPUT BY: EMZ	MONITORING DATE: 15-Mar-23
REVIEWED BY: KC	PAGE 1 OF 2

CLIENT: De Zen Realty Company Ltd.	PROJECT NO.: CH244.00	**RECORD OF: MW112**
ADDRESS: 120, 128, 142, 154, 158 Queen Street South,	STATION:	
CITY/PROVINCE: Mississauga, ON	NORTHING (m): 4826378.03	EASTING (m): 603505.26 ELEV. (m) 162.93
CONTRACTOR: Profile Drilling Inc.	METHOD: Solid Stem Auger + Split Spoon Sampling	
BOREHOLE DIAMETER (cm): 20	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 (%)	SV/TOV (ppm or %LEL)	LABORATORY TESTING	WELL INSTALLATION	REMARKS
		CLAYEY SILT some gravel to gravelly some sand to sandy (TILL)	9.5	153.5	58		10		100	<5			
			10	153									
			10.5	152.5									
		rock fragments			50/50		11		100				
			11	152									
			11.5	151.5									
			12	151									
					50/75 50/25		12 13		67 0				
		END OF BOREHOLE											

TERRAPEX

LOGGED BY: JD	DRILLING DATE: 24 & 25-Jan-23
INPUT BY: EMZ	MONITORING DATE: 15-Mar-23
REVIEWED BY: KC	PAGE 2 OF 2

CLIENT: De Zen Realty Company Ltd.	PROJECT NO.: CH244.00	**RECORD OF: MW113S**
ADDRESS: 120, 128, 142, 154, 158 Queen Street South,	STATION:	
CITY/PROVINCE: Mississauga, ON	NORTHING (m): 4826315.53	EASTING (m): 603561.43 ELEV. (m) 162.69
CONTRACTOR: Profile Drilling Inc.	METHOD: Hollow Stem Auger	
BOREHOLE DIAMETER (cm): 20	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 (%)	SV/TOV (ppm or %LEL)	LABORATORY TESTING	WELL INSTALLATION	REMARKS
		Straight drilled to 6.1 mbg to install monitoring well	0 0.5 1 1.5 2 2.5 3 3.5 4 4.5 5 5.5 6	162.5 162 161.5 161 160.5 160 159.5 159 158.5 158 157.5 157								Bentonite; Sand; Screen + Sand	Bentonite 50 mm monitoring well was installed. Water level measured on March 15, 2023: 2.21 mbg
		END OF BOREHOLE											

TERRAPEX

LOGGED BY: JD	DRILLING DATE: 31-Jan-23
INPUT BY: EMZ	MONITORING DATE: 15-Mar-23
REVIEWED BY: KC	PAGE 1 OF 1

CLIENT: De Zen Realty Company Ltd.	PROJECT NO.: CH244.00	**RECORD OF: MW113**
ADDRESS: 120, 128, 142, 154, 158 Queen Street South,	STATION:	
CITY/PROVINCE: Mississauga, ON	NORTHING (m): 4826314.80	EASTING (m): 603562.21 ELEV. (m) 162.74
CONTRACTOR: Profile Drilling Inc.	METHOD: Hollow Stem Auger + Split Spoon Sampling	
BOREHOLE DIAMETER (cm): 20	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) / N-VALUE (Blows/300mm)	WATER CONTENT (%) PL W.C. LL	SAMPLE NO.	SAMPLE TYPE	RECOVERY (%)	SV/TOV (ppm or %LEL)	LABORATORY TESTING	WELL INSTALLATION	REMARKS
		asphaltic concrete (120 mm) granular base (250 mm) FILL stiff, moist, dark brown clayey silt trace gravel, trace sand	0 – 1.5	162.5 – 161	12, 10, 20		1, 2, 3		75, 50, 92	<5	M+I	Bentonite	50 mm monitoring well was installed. Water level measured on March 15, 2023: 4.56 mbg
		very stiff, moist, brown CLAYEY SILT trace gravel, trace to some sand (TILL)	1.5 – 5.5	161 – 158.5	20, 19, 19, 22, 17		3, 4, 5, 6, 7		92, 79, 83, 75, 75	<5	BTEX, PHCs		
		very stiff to hard, moist, grey CLAYEY SILT some gravel to gravelly some sand to sandy (TILL)	5.5 – 9	158.5 – 153.5	17, 18, 50/125		7, 8, 9		75, 83, 27	<5		Sand Screen + Sand	

TERRAPEX

LOGGED BY: JD	DRILLING DATE: 16-Jan-23
INPUT BY: EMZ	MONITORING DATE: 15-Mar-23
REVIEWED BY: KC	PAGE 1 OF 2

CLIENT: De Zen Realty Company Ltd.	PROJECT NO.: CH244.00	**RECORD OF: MW113**
ADDRESS: 120, 128, 142, 154, 158 Queen Street South,	STATION:	
CITY/PROVINCE: Mississauga, ON	NORTHING (m): 4826314.80	EASTING (m): 603562.21 ELEV. (m) 162.74
CONTRACTOR: Profile Drilling Inc.	METHOD: Hollow Stem Auger + Split Spoon Sampling	
BOREHOLE DIAMETER (cm): 20	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 (%)	SV/TOV (ppm or %LEL)	LABORATORY TESTING	WELL INSTALLATION	REMARKS
		very stiff to hard, moist, grey CLAYEY SILT some gravel to gravelly some sand to sandy (TILL)	9.5	153	48 ▲		10		79	<5	VOCs		
			10		50/50 ▲		11		0				
		END OF BOREHOLE											

TERRAPEX

LOGGED BY: JD	DRILLING DATE: 16-Jan-23
INPUT BY: EMZ	MONITORING DATE: 15-Mar-23
REVIEWED BY: KC	PAGE 2 OF 2

CLIENT: De Zen Realty Company Ltd.	PROJECT NO.: CH244.00	**RECORD OF: BH114**
ADDRESS: 120, 128, 142, 154, 158 Queen Street South,	STATION:	
CITY/PROVINCE: Mississauga, ON	NORTHING (m): 4826240.47	EASTING (m): 603613.77 ELEV. (m) 161.11
CONTRACTOR: Profile Drilling Inc.	METHOD: Solid Stem Auger + Split Spoon Sampling	
BOREHOLE DIAMETER (cm): 20	WELL DIAMETER (cm):	SCREEN SLOT #: SAND TYPE: 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) / N-VALUE (Blows/300mm)	WATER CONTENT (%) PL W.C. LL	SAMPLE NO.	SAMPLE TYPE	RECOVERY (%)	SV/TOV (ppm or %LEL)	LABORATORY TESTING	WELL INSTALLATION	REMARKS
		asphaltic concrete (100 mm) granular base (170 mm) FILL firm, moist, dark brown clayey silt trace gravel, some sand, some organics	0 0.5 1	161 160.5 160	6 8		1 2		42 46	<5 <5	M+I		
		stiff to very stiff, moist CLAYEY SILT trace gravel, trace to some sand (TILL)	1.5 2 2.5	159.5 159 158.5	23 18		3 4		67 71	<5 <5	HWS B HWS B		
		brown	3 3.5	158 157.5	18		5		67	<5			
			4	157	12		6		63	<5			
			4.5 5	156.5 156	12		7		67	<5	BTEx, PHCs		
		----------	5.5	155.5									
		grey	6 6.5	155 154.5	16		8		67	<5			
		hard, moist, grey CLAYEY SILT some gravel to gravelly some sand to sandy (TILL)	7 7.5 8	154 153.5 153	53		9		75	<5			
			8.5 9	152.5 152	50/75		10		67	<5			

TERRAPEX

LOGGED BY: JD	DRILLING DATE: 31-Jan-23
INPUT BY: EMZ	MONITORING DATE:
REVIEWED BY: KC	PAGE 1 OF 2

CLIENT: De Zen Realty Company Ltd.	PROJECT NO.: CH244.00	**RECORD OF: BH114**
ADDRESS: 120, 128, 142, 154, 158 Queen Street South,	STATION:	
CITY/PROVINCE: Mississauga, ON	NORTHING (m): 4826240.47	EASTING (m): 603613.77 ELEV. (m) 161.11
CONTRACTOR: Profile Drilling Inc.	METHOD: Solid Stem Auger + Split Spoon Sampling	
BOREHOLE DIAMETER (cm): 20	WELL DIAMETER (cm):	SCREEN SLOT #: SAND TYPE: 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 (%)	SV/TOV (ppm or %LEL)	LABORATORY TESTING	WELL INSTALLATION	REMARKS
		hard, moist, grey CLAYEY SILT some gravel to gravelly some sand to sandy (TILL)	9.5	151.5									
		----------	10	151									
			10.5	150.5	50/100 ▲		11		100				
		rock fragments	11	150									
			11.5	149.5									
			12	149	50/50 ▲		12		100				
		weathered SHALE											
		END OF BOREHOLE											

TERRAPEX

LOGGED BY: JD	DRILLING DATE: 31-Jan-23
INPUT BY: EMZ	MONITORING DATE:
REVIEWED BY: KC	PAGE 2 OF 2

CLIENT: De Zen Realty Company Ltd.	PROJECT NO.: CH244.00	**RECORD OF: BH114A**
ADDRESS: 120, 128, 142, 154, 158 Queen Street South,	STATION:	
CITY/PROVINCE: Mississauga, ON	NORTHING (m): / EASTING (m):	ELEV. (m) 161.11
CONTRACTOR: Geo-Environmental Drilling Inc.	METHOD: Split Spoon	
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 (%)	SV/TOV (ppm or %LEL)	LABORATORY TESTING	WELL INSTALLATION	REMARKS
		asphaltic concrete (100 mm)	0	161									
		FILL grey sand and gravel	0.5	160.5	8		1		50	<5			
		grey brown CLAYEY SILT trace gravel, trace to some sand	1	160	13		2		60	<5	HWS B		
		END OF BOREHOLE											

TERRAPEX

LOGGED BY: KP	DRILLING DATE: 20-JUN-23
INPUT BY: AB	MONITORING DATE:
REVIEWED BY: GL	PAGE 1 OF 1

CLIENT: De Zen Realty Company Ltd.	PROJECT NO.: CH244.00	**RECORD OF: BH114B**
ADDRESS: 120, 128, 142, 154, 158 Queen Street South,	STATION:	
CITY/PROVINCE: Mississauga, ON	NORTHING (m): / EASTING (m):	ELEV. (m) 161.11
CONTRACTOR: Geo-Environmental Drilling Inc.	METHOD: Split Spoon	
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 (%)	SV/TOV (ppm or %LEL)	LABORATORY TESTING	WELL INSTALLATION	REMARKS
		asphaltic concrete (100 mm)	0	161									
		FILL black sand and gravel	0.5	160.5	12		1		60	5			
		grey brown CLAYEY SILT trace gravel, trace to some sand	1	160	8		2		30	<5	HWS B		
		END OF BOREHOLE											

TERRAPEX

LOGGED BY: KP	DRILLING DATE: 20-JUN-23
INPUT BY: AB	MONITORING DATE:
REVIEWED BY: GL	PAGE 1 OF 1

CLIENT: De Zen Realty Company Ltd.	PROJECT NO.: CH244.00	**RECORD OF: BH114C**
ADDRESS: 120, 128, 142, 154, 158 Queen Street South,	STATION:	
CITY/PROVINCE: Mississauga, ON	NORTHING (m): / EASTING (m):	ELEV. (m) 161.11
CONTRACTOR: Geo-Environmental Drilling Inc.	METHOD: Split Spoon	
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 (%)	SV/TOV (ppm or %LEL)	LABORATORY TESTING	WELL INSTALLATION	REMARKS
		asphaltic concrete (100 mm)	0	161									
		FILL grey sand and gravel	0.5	160.5	7		1		50	<5			
		grey brown CLAYEY SILT trace gravel, trace to some sand	1	160	8		2		60	<5	HWS B		
		END OF BOREHOLE											

TERRAPEX

LOGGED BY: KP	DRILLING DATE: 20-JUN-23
INPUT BY: AB	MONITORING DATE:
REVIEWED BY: GL	PAGE 1 OF 1

CLIENT: De Zen Realty Company Ltd.	PROJECT NO.: CH244.00	**RECORD OF: BH114D**
ADDRESS: 120, 128, 142, 154, 158 Queen Street South,	STATION:	
CITY/PROVINCE: Mississauga, ON	NORTHING (m):	EASTING (m):	ELEV. (m) 161.11
CONTRACTOR: Geo-Environmental Drilling Inc.	METHOD: Split Spoon	
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 (%)	SV/TOV (ppm or %LEL)	LABORATORY TESTING	WELL INSTALLATION	REMARKS
		asphaltic concrete (100 mm)	0	161									
		FILL brown, grey sand and gravel	0.5	160.5	7		1		60	<5			
		dark grey CLAYEY SILT trace gravel, trace to some sand	1	160	9		2		60	<5	HWS B		
		END OF BOREHOLE											

TERRAPEX

LOGGED BY: KP	DRILLING DATE: 20-JUN-23
INPUT BY: AB	MONITORING DATE:
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CLIENT: De Zen Realty Company Ltd.	PROJECT NO.: CH244.00	**RECORD OF: BH114E**
ADDRESS: 120, 128, 142, 154, 158 Queen Street South,	STATION:	
CITY/PROVINCE: Mississauga, ON	NORTHING (m): / EASTING (m):	ELEV. (m) 161.11
CONTRACTOR: Geo-Environmental Drilling Inc.	METHOD: Split Spoon	
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 (%)	SV/TOV (ppm or %LEL)	LABORATORY TESTING	WELL INSTALLATION	REMARKS
		asphaltic concrete (100 mm)	0	161									
		FILL brown sand and gravel	0.5	160.5	9		1		30	<5			
		brown CLAYEY SILT trace gravel, trace to some sand	1	160	14		2		20	<5	HWS B		
		END OF BOREHOLE											

TERRAPEX

LOGGED BY: KP	DRILLING DATE: 20-JUN-23
INPUT BY: AB	MONITORING DATE:
REVIEWED BY: GL	PAGE 1 OF 1

CLIENT: De Zen Realty Company Ltd.	PROJECT NO.: CH244.00	**RECORD OF: BH114F**
ADDRESS: 120, 128, 142, 154, 158 Queen Street South,	STATION:	
CITY/PROVINCE: Mississauga, ON	NORTHING (m): / EASTING (m):	ELEV. (m) 161.11
CONTRACTOR: Geo-Environmental Drilling Inc.	METHOD: Split Spoon	
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 (%)	SV/TOV (ppm or %LEL)	LABORATORY TESTING	WELL INSTALLATION	REMARKS
		asphaltic concrete (100 mm)	0	161									
		FILL moist, brown sand and gravel	0.5	160.5	10		1		30	<5			
		grey brown, moist CLAYEY SILT trace gravel	1	160	6		2		20	<5	HWS B		
		END OF BOREHOLE											

TERRAPEX

LOGGED BY: KP	DRILLING DATE: 20-JUN-23
INPUT BY: AB	MONITORING DATE:
REVIEWED BY: GL	PAGE 1 OF 1

CLIENT: De Zen Realty Company Ltd.	PROJECT NO.: CH244.00	**RECORD OF: MW115**
ADDRESS: 120, 128, 142, 154, 158 Queen Street South,	STATION:	
CITY/PROVINCE: Mississauga, ON	NORTHING (m): 4826332.43	EASTING (m): 603464.51 ELEV. (m) 162.72
CONTRACTOR: Profile Drilling Inc.	METHOD: Hollow Stem Auger + Split Spoon Sampling	
BOREHOLE DIAMETER (cm): 20	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) / N-VALUE (Blows/300mm)	WATER CONTENT (%) PL W.C. LL	SAMPLE NO.	SAMPLE TYPE	RECOVERY (%)	SV/TOV (ppm or %LEL)	LABORATORY TESTING	WELL INSTALLATION	REMARKS
		asphaltic concrete (120 mm) granular base (170 mm) FILL firm, moist, brown/dark brown clayey silt trace gravel, some sand	0 0.5 1 1.5 2	162.5 162 161.5 161	7 6 4	5 14 18 18 22	1A 1B 1C 2 3		33 67 63	<5 <5 <5	M+I, PAHs	Bentonite 50 mm monitoring well was installed. Water level measured on March 15, 2023: 3.30 mbg	
		stiff to hard, moist, brown CLAYEY SILT trace gravel, trace to some sand (TILL)	2.5 3 3.5 4 4.5	160.5 160 159.5 159 158.5	8 20 30	20 16 15	4 5 6		67 63 58	<5 <5 <5			
		hard, grey CLAYEY SILT some gravel to gravelly some sand to sandy (TILL)	5 5.5 6 6.5 7 7.5 8 8.5 9	158 157.5 157 156.5 156 155.5 155 154.5 154 153.5	40 33 30 50/25	15 10 14 5	7 8 9 10		50 63 77 100	<5 <5 <5	BTEX, PHCs, VOCs	Sand Screen + Sand	

moist

wet

TERRAPEX

LOGGED BY: JD	DRILLING DATE: 20 & 24-Jan-23
INPUT BY: EMZ	MONITORING DATE: 15-Mar-23
REVIEWED BY: KC	PAGE 1 OF 2

CLIENT: De Zen Realty Company Ltd.	PROJECT NO.: CH244.00	**RECORD OF: MW115**
ADDRESS: 120, 128, 142, 154, 158 Queen Street South,	STATION:	
CITY/PROVINCE: Mississauga, ON	NORTHING (m): 4826332.43	EASTING (m): 603464.51 ELEV. (m) 162.72
CONTRACTOR: Profile Drilling Inc.	METHOD: Hollow Stem Auger + Split Spoon Sampling	
BOREHOLE DIAMETER (cm): 20	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 (%)	SV/TOV (ppm or %LEL)	LABORATORY TESTING	WELL INSTALLATION	REMARKS
		hard, moist, grey GRAVELLY SANDY CLAYEY SILT (TILL)	9.5	153	90	8	11		63				
			10	152.5	63	9	12		90				
			10.5	152	50/125	7	13		100				
			11	151.5		5	14		100				
			11.5	151	50/100								
		weathered SHALE	12		50/125	4	15		80				
		END OF BOREHOLE											

TERRAPEX

LOGGED BY: JD	DRILLING DATE: 20 & 24-Jan-23
INPUT BY: EMZ	MONITORING DATE: 15-Mar-23
REVIEWED BY: KC	PAGE 2 OF 2

CLIENT: De Zen Realty Company Ltd.	PROJECT NO.: CH244.00	**RECORD OF: MW116**
ADDRESS: 120, 128, 142, 154, 158 Queen Street South,	STATION:	
CITY/PROVINCE: Mississauga, ON	NORTHING (m): 4826285.16	EASTING (m): 603512.35 ELEV. (m) 162.07
CONTRACTOR: Profile Drilling Inc.	METHOD: Hollow Stem Auger + Split Spoon Sampling	
BOREHOLE DIAMETER (cm): 20	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) / N-VALUE (Blows/300mm)	WATER CONTENT (%) PL W.C. LL	SAMPLE NO.	SAMPLE TYPE	RECOVERY (%)	SV/TOV (ppm or %LEL)	LABORATORY TESTING	WELL INSTALLATION	REMARKS
		asphaltic concrete (120 mm) granular base (150 mm) FILL stiff to firm, moist, brown/black clayey silt trace gravel, trace sand, trace organics	0 0.5 1 1.5 2	162 161.5 161 160.5 160	13 9 5		1 2 3		63 67 63	<5 <5 <5	M+I, PAHs		Bentonite 50 mm monitoring well was installed. Water level measured on March 15, 2023: 4.24 mbg
		very stiff to hard, moist, brown CLAYEY SILT trace gravel, trace to some sand (TILL)	2.5 3 3.5 4 4.5 5 5.5	159.5 159 158.5 158 157.5 157 156.5	17 20 22 35		4 5 6 7		75 75 88 83	<5 <5 <5 <5			
		very stiff to hard, moist, grey CLAYEY SILT some gravel to gravelly some sand to sandy (TILL)	6 6.5 7 7.5 8 8.5 9	156 155.5 155 154.5 154 153.5 153	26 55 50/125		8 9 10		75 75 45	<5 <5	BTEX, PHCs	Sand Screen + Sand	

TERRAPEX

LOGGED BY: JD	DRILLING DATE: 25 & 26-Jan-23
INPUT BY: EMZ	MONITORING DATE: 15-Mar-23
REVIEWED BY: KC	PAGE 1 OF 2

CLIENT: De Zen Realty Company Ltd.	PROJECT NO.: CH244.00	**RECORD OF: MW116**
ADDRESS: 120, 128, 142, 154, 158 Queen Street South,	STATION:	
CITY/PROVINCE: Mississauga, ON	NORTHING (m): 4826285.16	EASTING (m): 603512.35 ELEV. (m) 162.07
CONTRACTOR: Profile Drilling Inc.	METHOD: Hollow Stem Auger + Split Spoon Sampling	
BOREHOLE DIAMETER (cm): 20	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 (%)	SV/TOV (ppm or %LEL)	LABORATORY TESTING	WELL INSTALLATION	REMARKS
		hard, moist, grey CLAYEY SILT some gravel to gravelly some sand to sandy (TILL)	9.5	152.5									
		----------	10	152	50/100 ▲		11		100				
		rock fragments	10.5	151.5									
			11	151									
		weathered SHALE	11.5	150.5	50/75 ▲		12		100				
		END OF BOREHOLE											

TERRAPEX

LOGGED BY: JD	DRILLING DATE: 25 & 26-Jan-23
INPUT BY: EMZ	MONITORING DATE: 15-Mar-23
REVIEWED BY: KC	PAGE 2 OF 2

CLIENT: De Zen Realty Company Ltd.	PROJECT NO.: CH244.00	**RECORD OF: BH117**
ADDRESS: 120, 128, 142, 154, 158 Queen Street South,	STATION:	
CITY/PROVINCE: Mississauga, ON	NORTHING (m): 4826249.77	EASTING (m): 603550.62 ELEV. (m) 162.01
CONTRACTOR: Profile Drilling Inc.	METHOD: Solid Stem Auger + Split Spoon Sampling	
BOREHOLE DIAMETER (cm): 20	WELL DIAMETER (cm):	SCREEN SLOT #: SAND TYPE: 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) / N-VALUE (Blows/300mm)	WATER CONTENT (%) PL W.C. LL	SAMPLE NO.	SAMPLE TYPE	RECOVERY (%)	SV/TOV (ppm or %LEL)	LABORATORY TESTING	WELL INSTALLATION	REMARKS
		asphaltic concrete (100 mm) granular base (150 mm) FILL very stiff to firm, moist, brown clayey silt trace gravel, trace sand	0 0.5 1 1.5	162 161.5 161 160.5	15 9 7		1 2A 2B 3A 3B		67 67 65	<5 <5 <5	M+I PAHs		
		very stiff to hard, moist, brown CLAYEY SILT trace gravel, trace to some sand (TILL)	2 2.5 3 3.5 4 4.5	160 159.5 159 158.5 158 157.5	19 21 31		4A 4B 5 6		65 58 71	<5 <5 <5			
		very stiff to hard, moist, grey CLAYEY SILT some gravel to gravelly some sand to sandy (TILL)	5 5.5 6 6.5 7 7.5 8 8.5 9	157 156.5 156 155.5 155 154.5 154 153.5 153	40 22 50 50/125		7 8 9 10		75 83 75 100	<5 <5 <5 <5	BTEX, PHCs, VOCs		

TERRAPEX	LOGGED BY: JD	DRILLING DATE: 26-Jan-23
	INPUT BY: EMZ	MONITORING DATE:
	REVIEWED BY: KC	PAGE 1 OF 2

CLIENT: De Zen Realty Company Ltd.	PROJECT NO.: CH244.00	**RECORD OF: BH117**
ADDRESS: 120, 128, 142, 154, 158 Queen Street South,	STATION:	
CITY/PROVINCE: Mississauga, ON	NORTHING (m): 4826249.77	EASTING (m): 603550.62 ELEV. (m) 162.01
CONTRACTOR: Profile Drilling Inc.	METHOD: Solid Stem Auger + Split Spoon Sampling	
BOREHOLE DIAMETER (cm): 20	WELL DIAMETER (cm):	SCREEN SLOT #: SAND TYPE: 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 (%)	SV/TOV (ppm or %LEL)	LABORATORY TESTING	WELL INSTALLATION	REMARKS
		hard, moist, grey CLAYEY SILT some gravel to gravelly some sand to sandy (TILL)	9.5	152.5									
		----------	10	152									
		rock fragments	10.5	151.5									
			11	151	71/225 ▲		11		100	<5			
		weathered SHALE											
		END OF BOREHOLE											

TERRAPEX

LOGGED BY: JD	DRILLING DATE: 26-Jan-23
INPUT BY: EMZ	MONITORING DATE:
REVIEWED BY: KC	PAGE 2 OF 2

CLIENT: De Zen Realty Company Ltd.	PROJECT NO.: CH244.00	**RECORD OF: MW118S**
ADDRESS: 120, 128, 142, 154, 158 Queen Street South,	STATION:	
CITY/PROVINCE: Mississauga, ON	NORTHING (m): 4826197.19	EASTING (m): 603626.22 ELEV. (m) 159.99
CONTRACTOR: Profile Drilling Inc.	METHOD: Hollow Stem Auger	
BOREHOLE DIAMETER (cm): 20	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 (%)	SV/TOV (ppm or %LEL)	LABORATORY TESTING	WELL INSTALLATION	REMARKS
		Straight drilled to 6.1 mbg to install monitoring well	0	159.5								Bentonite	50 mm monitoring well was installed. Water level measured on March 15, 2023: 4.97 mbg
			1	159									
			1.5	158.5									
			2	158									
			2.5	157.5									
			3	157									
			3.5	156.5									
			4	156									
			4.5	155.5								Sand	
			5	155								Screen + Sand	
			5.5	154.5									
			6	154									
		END OF BOREHOLE											

TERRAPEX

LOGGED BY: JD	DRILLING DATE: 27-Jan-23
INPUT BY: EMZ	MONITORING DATE: 15-Mar-23
REVIEWED BY: KC	PAGE 1 OF 1

CLIENT: De Zen Realty Company Ltd.	PROJECT NO.: CH244.00	**RECORD OF: MW118**
ADDRESS: 120, 128, 142, 154, 158 Queen Street South,	STATION:	
CITY/PROVINCE: Mississauga, ON	NORTHING (m): 4826196.62	EASTING (m): 603626.89 ELEV. (m) 159.99
CONTRACTOR: Profile Drilling Inc.	METHOD: Hollow Stem Auger + Split Spoon Sampling	
BOREHOLE DIAMETER (cm): 20	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) / N-VALUE (Blows/300mm)	WATER CONTENT (%) PL W.C. LL	SAMPLE NO.	SAMPLE TYPE	RECOVERY (%)	SV/TOV (ppm or %LEL)	LABORATORY TESTING	WELL INSTALLATION	REMARKS
		asphaltic concrete (100 mm) granular base (150 mm) FILL firm, moist, grey/black clayey silt trace gravel, trace sand some organics	0 0.5 1 1.5	159.5 159 158.5	6 6 13	5 13 11 22	1A 1B 2 3		42 63 83	<5 <5 <5	M+I, PAHs	Bentonite 50 mm monitoring well was installed. Water level measured on March 15, 2023: 3.50 mbg
		stiff to very stiff, moist, brown CLAYEY SILT trace gravel, trace to some sand (TILL)	2 2.5 3 3.5 4 4.5	158 157.5 157 156.5 156 155.5	25 22 22 17	15 16 14 14	4 5 6 7		88 83 88 88	<5 <5 <5 <5		
		very stiff to hard, moist, grey CLAYEY SILT some gravel to gravelly some sand to sandy (TILL)	5 5.5 6 6.5 7 7.5 8	155 154.5 154 153.5 153 152.5 152	23 43	11 12	8 9		92 75	<5 <5	BTEX, PHCs, VOCs	Sand Screen + Sand
		---------- rock fragments	8.5 9	151.5 151									

TERRAPEX

LOGGED BY: JD	DRILLING DATE: 27-Jan-23
INPUT BY: EMZ	MONITORING DATE: 15-Mar-23
REVIEWED BY: KC	PAGE 1 OF 2

CLIENT: De Zen Realty Company Ltd.	PROJECT NO.: CH244.00	**RECORD OF: MW118**
ADDRESS: 120, 128, 142, 154, 158 Queen Street South,	STATION:	
CITY/PROVINCE: Mississauga, ON	NORTHING (m): 4826196.62	EASTING (m): 603626.89 ELEV. (m) 159.99
CONTRACTOR: Profile Drilling Inc.	METHOD: Hollow Stem Auger + Split Spoon Sampling	
BOREHOLE DIAMETER (cm): 20	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 (%)	SV/TOV (ppm or %LEL)	LABORATORY TESTING	WELL INSTALLATION	REMARKS
		hard, moist, grey CLAYEY SILT some gravel to gravelly some sand to sandy with rock fragments (TILL)	9.5	150.5	66	6	10		86	<5			
		weathered SHALE	10	150	50/75	1	11		100				
		END OF BOREHOLE											

TERRAPEX

LOGGED BY: JD	DRILLING DATE: 27-Jan-23
INPUT BY: EMZ	MONITORING DATE: 15-Mar-23
REVIEWED BY: KC	PAGE 2 OF 2

CLIENT: De Zen Realty Company Ltd.	PROJECT NO.: CH244.00	**RECORD OF: MW201**
ADDRESS: 120, 128, 142, 154, 158 Queen Street South,	STATION:	
CITY/PROVINCE: Mississauga, ON	NORTHING (m): 4826381.810	EASTING (m): 603657.734 ELEV. (m) 162.768
CONTRACTOR: Pontil Drilling Services Inc.	METHOD: 8" Hollow Stem	
BOREHOLE DIAMETER (cm): 20	WELL DIAMETER (cm): 5	SCREEN SLOT #: 10 SAND TYPE: SILICA 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 (%)	SV/TOV (ppm or %LEL)	LABORATORY TESTING	WELL INSTALLATION	REMARKS
		asphaltic concrete (100 mm) granular base (150 mm) brown CLAYEY SILTY some sand, trace gravel	0 0.5 1 1.5 2 2.5 3 3.5 4 4.5 5 5.5 6	162.5 162 161.5 161 160.5 160 159.5 159 158.5 158 157.5 157									Straight drilled to 6.1 mbg to install monitoring well Water level measured on June 16, 2023: 1.13 mTOP
		moist, dark brown											
		END OF BOREHOLE											

TERRAPEX

LOGGED BY: KP	DRILLING DATE: 5-Jun-23
INPUT BY: SW	MONITORING DATE: 16-Jun-23
REVIEWED BY:	PAGE 1 OF 1

CLIENT: De Zen Realty Company Ltd.	PROJECT NO.: CH244.00	**RECORD OF: MW202**
ADDRESS: 120, 128, 142, 154, 158 Queen Street South,	STATION:	
CITY/PROVINCE: Mississauga, ON	NORTHING (m): 4826419.196	EASTING (m): 603550.673 ELEV. (m) 163.217
CONTRACTOR: Pontil Drilling Services Inc.	METHOD: 8" Hollow Stem	
BOREHOLE DIAMETER (cm): 20	WELL DIAMETER (cm): 5	SCREEN SLOT #: 10 SAND TYPE: SILICA 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 (%)	SV/TOV (ppm or %LEL)	LABORATORY TESTING	WELL INSTALLATION	REMARKS
		asphaltic concrete (100 mm) granular base (150 mm) brown CLAYEY SILTY some sand, trace gravel	0 0.5 1 1.5 2 2.5 3 3.5 4 4.5 5 5.5 6	163 162.5 162 161.5 161 160.5 160 159.5 159 158.5 158 157.5									Straight drilled to 6.1 mbg to install monitoring well Water level measured on June 16, 2023: 0.55 mTOP
		moist, greyish brown											
		END OF BOREHOLE											

TERRAPEX

LOGGED BY: KP	DRILLING DATE: 5-Jun-23
INPUT BY: SW	MONITORING DATE: 16-Jun-23
REVIEWED BY:	PAGE 1 OF 1

CLIENT: De Zen Realty Company Ltd.	PROJECT NO.: CH244.00	**RECORD OF: MW203**
ADDRESS: 120, 128, 142, 154, 158 Queen Street South,	STATION:	
CITY/PROVINCE: Mississauga, ON	NORTHING (m): 4826332.552	EASTING (m): 603466.012 ELEV. (m) 162.648
CONTRACTOR: Pontil Drilling Services Inc.D	METHOD: 8" Hollow Stem	
BOREHOLE DIAMETER (cm): 20	WELL DIAMETER (cm): 5	SCREEN SLOT #: 10 SAND TYPE: SILICA SEALANT TYPE: BENTONITE

SAMPLE TYPE: AUGER | DRIVEN | CORING | DYNAMIC CONE | SHELBY | SPLIT SPOON

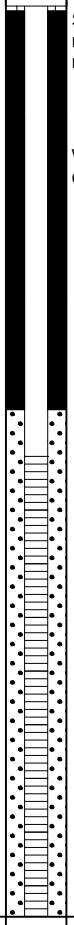
GWL (m)	SOIL SYMBOL	SOIL DESCRIPTION	DEPTH (m)	ELEVATION (m)	SHEAR STRENGTH (kPa) ● 40 80 120 160 / N-VALUE (Blows/300mm) ▲ 20 40 60 80	WATER CONTENT (%) PL W.C. LL 20 40 60 80	SAMPLE NO.	SAMPLE TYPE	RECOVERY (%)	SV/TOV (ppm or %LEL)	LABORATORY TESTING	WELL INSTALLATION	REMARKS
		asphaltic concrete (100 mm) granular base (150 mm) brown CLAYEY SILT some sand, trace gravel	0 0.5 1 1.5	162.5 162 161.5 161									Straight drilled to 6.1 mbg to install monitoring well Water level measured on June 16, 2023: 1.30 mTOP
		greyish brown	2 2.5	160.5 160									
		brown	3 3.5	159.5 159									
		some sand greyish	4 4.5	158.5 158									
			5 5.5	157.5 157									
			6										
		END OF BOREHOLE											

TERRAPEX

LOGGED BY: KP	DRILLING DATE: 2-Jun-23
INPUT BY: SW	MONITORING DATE: 16-Jun-23
REVIEWED BY:	PAGE 1 OF 1

CLIENT: De Zen Realty Company Ltd.	PROJECT NO.: CH244.00	**RECORD OF: MW204**
ADDRESS: 120, 128, 142, 154, 158 Queen Street South,	STATION:	
CITY/PROVINCE: Mississauga, ON	NORTHING (m): 4826251.248	EASTING (m): 603549.160 ELEV. (m) 162.015
CONTRACTOR: Pontil Drilling Services Inc.	METHOD: 8" Hollow Stem	
BOREHOLE DIAMETER (cm): 20	WELL DIAMETER (cm): 5	SCREEN SLOT #: 10 SAND TYPE: SILICA 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 (%)	SV/TOV (ppm or %LEL)	LABORATORY TESTING	WELL INSTALLATION	REMARKS
		asphaltic concrete (100 mm) granular base (150 mm) brown CLAYEY SILT trace gravel	0 0.5 1 1.5 2 2.5 3 3.5 4 4.5 5 5.5 6	162 161.5 161 160.5 160 159.5 159 158.5 158 157.5 157 156.5 156									Straight drilled to 6.1 mbg to install monitoring well Water level measured on June 16, 2023: dry
		END OF BOREHOLE											

TERRAPEX

LOGGED BY: KP	DRILLING DATE: 12-Jun-23
INPUT BY: SW	MONITORING DATE: 16-Jun-23
REVIEWED BY:	PAGE 1 OF 1

CLIENT: De Zen Realty Company Ltd.	PROJECT NO.: CH244.00	**RECORD OF: BH205**
ADDRESS: 120, 128, 142, 154, 158 Queen Street South,	STATION:	
CITY/PROVINCE: Mississauga, ON	NORTHING (m): 4826195.267	EASTING (m): 603627.178 ELEV. (m) 160.008
CONTRACTOR: Pontil Drilling Services Inc.	METHOD: 8" Hollow Stem + Split Spoon	
BOREHOLE DIAMETER (cm): 20	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 (%)	SV/TOV (ppm or %LEL)	LABORATORY TESTING	WELL INSTALLATION	REMARKS
		asphaltic concrete (100 mm)	0	160									
		FILL loose, brown sand and gravel	0.5	159.5			1		30	<5			
		greyish brown, stiff CLAYEY SILT trace sand, gravel	1	159	9		2		40	<5	M+I, PAHs, ABNs, CPs, PCBs		
		very stiff brown	1.5	158.5									
			2	158	16		3		50	<5			
			2.5	157.5	27		4		60	<5			
		hard moist	3	157									
			3.5	156.5	32		5		60	<5			
			4	156	>50		6		5	<5			
		very stiff	4.5	155.5									
			5	155	22		7		60	<5	BTEX, PHCs, VOCs		
		hard	5.5	154.5	>50		8		5	<5			
			6	154									
		END OF BOREHOLE											

TERRAPEX

LOGGED BY: KP	DRILLING DATE: 2-JUN-23
INPUT BY: SW	MONITORING DATE: -
REVIEWED BY:	PAGE 1 OF 1

CLIENT: De Zen Realty Company Ltd.	PROJECT NO.: CH244.00	**RECORD OF: MW206**
ADDRESS: 120, 128, 142, 154, 158 Queen Street South,	STATION:	
CITY/PROVINCE: Mississauga, ON	NORTHING (m): / EASTING (m): / ELEV. (m)	
CONTRACTOR: Pontil Drilling Services Inc.	METHOD: 8" Hollow Stem + Split Spoon	
BOREHOLE DIAMETER (cm): 20	WELL DIAMETER (cm): 5	SCREEN SLOT #: 10 / SAND TYPE: SILICA / 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) / N-VALUE (Blows/300mm)	WATER CONTENT (%) PL W.C. LL	SAMPLE NO.	SAMPLE TYPE	RECOVERY (%)	SV/TOV (ppm or %LEL)	LABORATORY TESTING	WELL INSTALLATION	REMARKS
		concrete (100 mm)	0										
		FILL very loose, brown sand trace gravel	0.5				1		30	10	M&I, PAHs		
		FILL very loose, brown clayey sand trace gravel	1		3		2		60	<5			Water level measured on June 16, 2023: 2.54 mTOP
		loose	1.5										
		wet, brown	2		10		3		60	<5			
			2.5		7		4		70	<5			
		hard, wet, brown CLAYEY SILT trace sand, gravel	3		35		5		90	<5			
		very stiff	3.5										
			4		27		6		90	<5	BTEX, PHCs, VOCs		
		greyish	4.5										
			5		20		7		40	<5			
		END OF BOREHOLE											

TERRAPEX

LOGGED BY: KP	DRILLING DATE: 9-JUN-23
INPUT BY: SW	MONITORING DATE: 16-Jun-23
REVIEWED BY:	PAGE 1 OF 1

CLIENT: De Zen Realty Company Ltd.	PROJECT NO.: CH244.00	**RECORD OF: MW207**
ADDRESS: 120, 128, 142, 154, 158 Queen Street South,	STATION:	
CITY/PROVINCE: Mississauga, ON	NORTHING (m): 4826282.607	EASTING (m): 603727.176 ELEV. (m) 161.721
CONTRACTOR: Pontil Drilling Services Inc.	METHOD: 8" Hollow Stem	
BOREHOLE DIAMETER (cm): 20	WELL DIAMETER (cm): 5	SCREEN SLOT #: 10 SAND TYPE: SILICA 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 (%)	SV/TOV (ppm or %LEL)	LABORATORY TESTING	WELL INSTALLATION	REMARKS
		asphaltic concrete (100 mm) granular base (150 mm) brown CLAYEY SILTY some sand, trace gravel	0 0.5 1 1.5 2 2.5 3 3.5 4 4.5 5 5.5 6	161.5 161 160.5 160 159.5 159 158.5 158 157.5 157 156.5 156									Straight drilled to 6.1 mbg to install monitoring well Water level measured on June 16, 2023: 3.62 mTOP
		END OF BOREHOLE											

TERRAPEX

LOGGED BY: KP	DRILLING DATE: 6-Jun-23
INPUT BY: SW	MONITORING DATE: 16-Jun-23
REVIEWED BY:	PAGE 1 OF 1

CLIENT: De Zen Realty Company Ltd.	PROJECT NO.: CH244.00	**RECORD OF: MW208**
ADDRESS: 120, 128, 142, 154, 158 Queen Street South,	STATION:	
CITY/PROVINCE: Mississauga, ON	NORTHING (m): 4826324.591	EASTING (m): 603712.957 ELEV. (m) 162.024
CONTRACTOR: Pontil Drilling Services Inc.	METHOD: 8" Hollow Stem	
BOREHOLE DIAMETER (cm): 20	WELL DIAMETER (cm): 5	SCREEN SLOT #: 10 SAND TYPE: SILICA 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 (%)	SV/TOV (ppm or %LEL)	LABORATORY TESTING	WELL INSTALLATION	REMARKS
		FILL moist, brown silty sand some clay, trace gravel	0 0.5 1 1.5 2	162 161.5 161 160.5 160									Straight drilled to 6.1 mbg to install monitoring well
		moist, brown CLAYEY SILT	2.5 3 3.5 4 4.5 5 5.5	159.5 159 158.5 158 157.5 157 156.5									Water level measured on June 16, 2023: 2.90 mTOP
		END OF BOREHOLE	6	156									

TERRAPEX

LOGGED BY: KP	DRILLING DATE: 6-Jun-23
INPUT BY: SW	MONITORING DATE: 16-Jun-23
REVIEWED BY:	PAGE 1 OF 1

CLIENT: De Zen Realty Company Ltd.	PROJECT NO.: CH244.00	**RECORD OF: BH301**
ADDRESS: 120, 128, 142, 154, 158 Queen Street South,	STATION:	
CITY/PROVINCE: Mississauga, ON	NORTHING (m): 4826313.883	EASTING (m): 603619.899 ELEV. (m) 162.602
CONTRACTOR: Profile Drilling Inc.	METHOD: Direct Push	
BOREHOLE DIAMETER (cm):	WELL DIAMETER (cm): 5	SCREEN SLOT #: 10 SAND TYPE: SILICA 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 (%)	SV/TOV (ppm or %LEL)	LABORATORY TESTING	WELL INSTALLATION	REMARKS
		asphaltic concrete (100 mm) granular base (150 mm) moist, brown CLAYEY SILT some sand	0 0.5 1 1.5	162.5 162 161.5 161			1 2 3			<5 <5 <5	HWS B HWS B, Total B		
		trace sand grey brown	2	160.5			4			<5			
		brown	2.5 3	160			5			<5			
		END OF BOREHOLE											

TERRAPEX

LOGGED BY: WA	DRILLING DATE: 11-AUG-23
INPUT BY: AB	MONITORING DATE:
REVIEWED BY: GL	PAGE 1 OF 1

CLIENT: De Zen Realty Company Ltd.	PROJECT NO.: CH244.00	**RECORD OF: BH302**
ADDRESS: 120, 128, 142, 154, 158 Queen Street South,	STATION:	
CITY/PROVINCE: Mississauga, ON	NORTHING (m): 4826306.541	EASTING (m): 603620.213 ELEV. (m) 162.596
CONTRACTOR: Profile Drilling Inc.	METHOD: Direct Push	
BOREHOLE DIAMETER (cm):	WELL DIAMETER (cm): 5	SCREEN SLOT #: 10 SAND TYPE: SILICA 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 (%)	SV/TOV (ppm or %LEL)	LABORATORY TESTING	WELL INSTALLATION	REMARKS
		asphaltic concrete (100 mm)	0	162.5									
		FILL moist, light brown sand and gravel	0.5	162			1			<5			
		moist, dark brown CLAYEY SILT	1	161.5			2			<5	HWS B		
			1.5	161			3			<5	HWS B, Total B		
		trace sand grey brown	2	160.5			4			<5			
		brown	2.5	160			5			<5			
			3										
		END OF BOREHOLE											

TERRAPEX

LOGGED BY: WA	DRILLING DATE: 11-AUG-23
INPUT BY: AB	MONITORING DATE:
REVIEWED BY: GL	PAGE 1 OF 1

CLIENT: De Zen Realty Company Ltd.	PROJECT NO.: CH244.00	**RECORD OF: BH303**
ADDRESS: 120, 128, 142, 154, 158 Queen Street South,	STATION:	
CITY/PROVINCE: Mississauga, ON	NORTHING (m): 4826243.988	EASTING (m): 603610.054 ELEV. (m) 161.372
CONTRACTOR: Profile Drilling Inc.	METHOD: Direct Push	
BOREHOLE DIAMETER (cm):	WELL DIAMETER (cm): 5	SCREEN SLOT #: 10 SAND TYPE: SILICA 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 (%)	SV/TOV (ppm or %LEL)	LABORATORY TESTING	WELL INSTALLATION	REMARKS
		asphaltic concrete (100 mm)	0	161			1			<5			
		FILL moist, light brown sand and gravel	0.5										
		moist, dark brown CLAYEY SILT	1	160.5			2			<5	HWS B		
			1.5	160			3			<5	HWS B, Total B		
		trace sand grey brown	2	159.5			4			<5			
		brown	2.5	159			5			<5			
			3	158.5									
		END OF BOREHOLE											

TERRAPEX

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INPUT BY: AB	MONITORING DATE:
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CLIENT: De Zen Realty Company Ltd.	PROJECT NO.: CH244.00	**RECORD OF: BH304**
ADDRESS: 120, 128, 142, 154, 158 Queen Street South,	STATION:	
CITY/PROVINCE: Mississauga, ON	NORTHING (m): 4826237.418	EASTING (m): 603618.163 ELEV. (m) 160.773
CONTRACTOR: Profile Drilling Inc.	METHOD: Direct Push	
BOREHOLE DIAMETER (cm):	WELL DIAMETER (cm): 5	SCREEN SLOT #: 10 SAND TYPE: SILICA 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 (%)	SV/TOV (ppm or %LEL)	LABORATORY TESTING	WELL INSTALLATION	REMARKS
		asphaltic concrete (100 mm) granular base (150 mm) moist, brown CLAYEY SILT trace gravel	0 0.5 1 1.5 2 2.5 3	160.5 160 159.5 159 158.5 158			1 2 3 4 5			<5 <5 <5 <5 <5	HWS B HWS B, Total B		
		END OF BOREHOLE											

TERRAPEX

LOGGED BY: WA	DRILLING DATE: 11-AUG-23
INPUT BY: AB	MONITORING DATE:
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CLIENT: De Zen Realty Company Ltd.	PROJECT NO.: CH244.00	**RECORD OF:** **BH305**
ADDRESS: 120, 128, 142, 154, 158 Queen Street South,	STATION:	
CITY/PROVINCE: Mississauga, ON	NORTHING (m): 4826196.010	EASTING (m): 603628.129 ELEV. (m) 159.980
CONTRACTOR: Profile Drilling Inc.	METHOD: Direct Push	
BOREHOLE DIAMETER (cm):	WELL DIAMETER (cm): 5	SCREEN SLOT #: 10 SAND TYPE: SILICA 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 (%)	SV/TOV (ppm or %LEL)	LABORATORY TESTING	WELL INSTALLATION	REMARKS
		asphaltic concrete (100 mm)	0										
		granular base (150 mm)											
		moist, grey brown CLAYEY SILT some gravel	0.5	159.5			1			<5			
			1	159			2			<5	HWS B		
		moist, grey brown CLAYEY SILT	1.5	158.5			3			<5	HWS B, Total B		
		brown	2	158			4			<5			
			2.5	157.5			5			<5			
			3	157									
		END OF BOREHOLE											

TERRAPEX

LOGGED BY: WA	DRILLING DATE: 11-AUG-23
INPUT BY: AB	MONITORING DATE:
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CLIENT: De Zen Realty Company Ltd.	PROJECT NO.: CH244.00	**RECORD OF: BH306**
ADDRESS: 120, 128, 142, 154, 158 Queen Street South,	STATION:	
CITY/PROVINCE: Mississauga, ON	NORTHING (m): 4826193.499	EASTING (m): 603628.925 ELEV. (m) 159.994
CONTRACTOR: Profile Drilling Inc.	METHOD: Direct Push	
BOREHOLE DIAMETER (cm):	WELL DIAMETER (cm): 5	SCREEN SLOT #: 10 SAND TYPE: SILICA 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 (%)	SV/TOV (ppm or %LEL)	LABORATORY TESTING	WELL INSTALLATION	REMARKS
		asphaltic concrete (100 mm) granular base (150 mm) moist, grey CLAYEY SILT some gravel	0 0.5 1	159.5 159			1 2			<5 <5	HWS B		
		saturated brown	1.5 2	158.5 158			3 4			<5 <5	HWS B, Total B		
			2.5 3	157.5 157			5			<5			
		END OF BOREHOLE											

TERRAPEX

LOGGED BY: WA	DRILLING DATE: 11-AUG-23
INPUT BY: AB	MONITORING DATE:
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CLIENT: De Zen Realty Company Ltd.	PROJECT NO.: CH244.00	**RECORD OF: BH307**
ADDRESS: 120, 128, 142, 154, 158 Queen Street South,	STATION:	
CITY/PROVINCE: Mississauga, ON	NORTHING (m): 4826194.392	EASTING (m): 603625.021 ELEV. (m) 160.020
CONTRACTOR: Profile Drilling Inc.	METHOD: Direct Push	
BOREHOLE DIAMETER (cm):	WELL DIAMETER (cm): 5	SCREEN SLOT #: 10 SAND TYPE: SILICA 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 (%)	SV/TOV (ppm or %LEL)	LABORATORY TESTING	WELL INSTALLATION	REMARKS
		asphaltic concrete (100 mm)	0	160									
		granular base (150 mm)											
		moist, brown CLAYEY SILT some gravel	0.5	159.5			1			<5			
		moist, grey CLAYEY SILT trace gravel	1	159			2			<5	HWS B		
			1.5	158.5			3			<5	HWS B. Total B		
		brown	2	158			4			<5			
			2.5	157.5			5			<5			
			3	157									
		END OF BOREHOLE											

TERRAPEX

LOGGED BY: WA	DRILLING DATE: 11-AUG-23
INPUT BY: AB	MONITORING DATE:
REVIEWED BY: GL	PAGE 1 OF 1

CLIENT: De Zen Realty Company Ltd.	PROJECT NO.: CH244.00	**RECORD OF: BH401**
ADDRESS: 120, 128, 142, 154, 158 Queen Street South,	STATION:	
CITY/PROVINCE: Mississauga, ON	NORTHING (m): / EASTING (m):	ELEV. (m) 162
CONTRACTOR: Profile Drilling Inc.	METHOD: Direct Push	
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 (%)	SV/TOV (ppm or %LEL)	LABORATORY TESTING	WELL INSTALLATION	REMARKS
		asphaltic concrete (100 mm)	0	162									
		FILL moist, brown sand and gravel	0.5	161.5			1		80	<5			
		moist, black CLAYEY SILT AND SAND	1	161			2		80	<5	HWS B		
		moist, brown, mottled CLAYEY SILT some gravel	1.5	160.5			3		100	250			
			2	160			4		100	<5	Total B		
		Dry	2.5	159.5			5		100	<5			
			3	159									
		END OF BOREHOLE											

TERRAPEX

LOGGED BY: GS	DRILLING DATE: 6-OCT-23
INPUT BY: AB	MONITORING DATE:
REVIEWED BY: GL	PAGE 1 OF 1

CLIENT: De Zen Realty Company Ltd.	PROJECT NO.: CH244.00	**RECORD OF: BH402**
ADDRESS: 120, 128, 142, 154, 158 Queen Street South,	STATION:	
CITY/PROVINCE: Mississauga, ON	NORTHING (m): / EASTING (m):	ELEV. (m) 162
CONTRACTOR: Profile Drilling Inc.	METHOD: Direct Push	
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 (%)	SV/TOV (ppm or %LEL)	LABORATORY TESTING	WELL INSTALLATION	REMARKS
		asphaltic concrete (100 mm)	0	162									
		FILL moist, brown sand and gravel	0.5	161.5			1		90	<5			
		moist, brown CLAYEY SILT some gravel mottled brown	1	161			2		90	<5	HWS B		
			1.5	160.5			3		95	35			
			2	160			4		95	<5	Total B		
		moist SILT trace gravel	2.5	159.5			5		95	<5			
			3	159									
		END OF BOREHOLE											

TERRAPEX

LOGGED BY: GS	DRILLING DATE: 6-OCT-23
INPUT BY: AB	MONITORING DATE:
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CLIENT: De Zen Realty Company Ltd.	PROJECT NO.: CH244.00	**RECORD OF: BH403**
ADDRESS: 120, 128, 142, 154, 158 Queen Street South,	STATION:	
CITY/PROVINCE: Mississauga, ON	NORTHING (m): / EASTING (m):	ELEV. (m) 162
CONTRACTOR: Profile Drilling Inc.	METHOD: Direct Push	
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 (%)	SV/TOV (ppm or %LEL)	LABORATORY TESTING	WELL INSTALLATION	REMARKS
		asphaltic concrete (100 mm)	0	162									
		FILL coarse, moist, brown sand and gravel	0.5	161.5			1		60	<5			
			1	161			2		60	<5			
		moist, brown CLAYEY SILT some gravel	1.5	160.5			3		95	<5			
			2	160			4		95	<5			
			2.5	159.5			5		95	<5			
			3	159									
		END OF BOREHOLE											

TERRAPEX

LOGGED BY: GS	DRILLING DATE: 6-OCT-23
INPUT BY: AB	MONITORING DATE:
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CLIENT: De Zen Realty Company Ltd.	PROJECT NO.: CH244.00	**RECORD OF: BH404**
ADDRESS: 120, 128, 142, 154, 158 Queen Street South,	STATION:	
CITY/PROVINCE: Mississauga, ON	NORTHING (m): / EASTING (m):	ELEV. (m) 163
CONTRACTOR: Profile Drilling Inc.	METHOD: Direct Push	
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 (%)	SV/TOV (ppm or %LEL)	LABORATORY TESTING	WELL INSTALLATION	REMARKS
		asphaltic concrete (100 mm)	0	163									
		FILL moist, brown sand and gravel	0.5	162.5			1		70	25			
		moist, brown mottled CLAYEY SILT some gravel	1	162			2		70	<5			
			1.5	161.5			3		95	<5			
			2	161			4		95	<5			
		moist, grey CLAYEY SILT brown	2.5	160.5			5		95	13%			
			3	160									
		END OF BOREHOLE											

TERRAPEX

LOGGED BY: GS	DRILLING DATE: 6-OCT-23
INPUT BY: AB	MONITORING DATE:
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CLIENT: De Zen Realty Company Ltd.	PROJECT NO.: CH244.00	**RECORD OF: BH405**
ADDRESS: 120, 128, 142, 154, 158 Queen Street South,	STATION:	
CITY/PROVINCE: Mississauga, ON	NORTHING (m): / EASTING (m):	ELEV. (m) 162
CONTRACTOR: Profile Drilling Inc.	METHOD: Direct Push	
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 (%)	SV/TOV (ppm or %LEL)	LABORATORY TESTING	WELL INSTALLATION	REMARKS
		asphaltic concrete (100 mm)	0	162									
		FILL moist, brown sand and gravel	0.5	161.5			1		56	<5			
		moist to wet, brown CLAYEY SILT trace coarse sand and gravel	1	161			2		56	<5			
		moist, brown mottled CLAYEY SILT trace to some gravel	1.5	160.5			3		95	<5			
			2	160			4		95	<5			
			2.5	159.5			5		95	30			
			3	159									
		END OF BOREHOLE											

TERRAPEX

LOGGED BY: AB	DRILLING DATE: 6-OCT-23
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CLIENT: De Zen Realty Company Ltd.	PROJECT NO.: CH244.00	**RECORD OF: BH406**
ADDRESS: 120, 128, 142, 154, 158 Queen Street South,	STATION:	
CITY/PROVINCE: Mississauga, ON	NORTHING (m): / EASTING (m):	ELEV. (m) 161
CONTRACTOR: Profile Drilling Inc.	METHOD: Direct Push	
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 (%)	SV/TOV (ppm or %LEL)	LABORATORY TESTING	WELL INSTALLATION	REMARKS
		dry, black, grey TOPSOIL some silt and organics	0	161			1		40	<5			
		dry, brown SILT	0.5	160.5			2		40	<5	HWS B		
		moist, brown CLAYEY SILT some gravel	1	160			3		90	<5			
			1.5	159.5			4		90	<5	Total B		
			2	159			5		95	<5			
			2.5	158.5									
		END OF BOREHOLE	3	158									

TERRAPEX

LOGGED BY: GS	DRILLING DATE: 6-OCT-23
INPUT BY: AB	MONITORING DATE:
REVIEWED BY: GL	PAGE 1 OF 1

CLIENT: De Zen Realty Company Ltd.	PROJECT NO.: CH244.00	**RECORD OF: BH407**
ADDRESS: 120, 128, 142, 154, 158 Queen Street South,	STATION:	
CITY/PROVINCE: Mississauga, ON	NORTHING (m): / EASTING (m):	ELEV. (m) 161
CONTRACTOR: Profile Drilling Inc.	METHOD: Direct Push	
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 (%)	SV/TOV (ppm or %LEL)	LABORATORY TESTING	WELL INSTALLATION	REMARKS
		asphaltic concrete (100 mm)	0	161									
		FILL coarse, brown, moist sand AND gravel grey	0.5	160.5			1		35	95			
			1	160			2		35	<5	HWS B		
		moist, grey CLAYEY SILT some gravel	1.5	159.5			3		60	990			
		brown, grey motted,moist SILT some gravel	2	159			4		60	<5	Total B		
			2.5	158.5			5		60	<5			
			3	158									
		END OF BOREHOLE											

TERRAPEX

LOGGED BY: GS	DRILLING DATE: 6-OCT-23
INPUT BY: AB	MONITORING DATE:
REVIEWED BY: GL	PAGE 1 OF 1

CLIENT: De Zen Realty Company Ltd.	PROJECT NO.: CH244.00	**RECORD OF: BH408**
ADDRESS: 120, 128, 142, 154, 158 Queen Street South,	STATION:	
CITY/PROVINCE: Mississauga, ON	NORTHING (m): / EASTING (m):	ELEV. (m) 162
CONTRACTOR: Profile Drilling Inc.	METHOD: Direct Push	
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 (%)	SV/TOV (ppm or %LEL)	LABORATORY TESTING	WELL INSTALLATION	REMARKS
		asphaltic concrete (100 mm)	0	162									
		FILL moist, brown sand and gravel	0.5	161.5			1		100	<5			
		moist, brown CLAYEY SILT some gravel	1	161			2		100	<5			
		brown, grey	1.5	160.5			3		100	<5			
		grey	2	160			4		100	<5			
		trace fine sand	2.5	159.5			5		100	<5			
			3	159									
		END OF BOREHOLE											

TERRAPEX

LOGGED BY: GS	DRILLING DATE: 6-OCT-23
INPUT BY: AB	MONITORING DATE:
REVIEWED BY: GL	PAGE 1 OF 1

APPENDIX V
LABORATORY CERTIFICATES OF ANALYSIS

Your Project #: CH244.00
Site Location: DE ZEN, QUEEN ST, S, MISSISSAUGA
Your C.O.C. #: 866467-13-01

Attention: Geoff Lussier

Terrapex Environmental Ltd
65 Nebo Road
Hamilton, ON
CANADA L8W 2C9

Report Date: 2023/01/30
Report #: R7490707
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C321247
Received: 2023/01/23, 15:30

Sample Matrix: Soil
Samples Received: 8

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Hot Water Extractable Boron	4	2023/01/26	2023/01/26	CAM SOP-00408	R153 Ana. Prot. 2011
1,3-Dichloropropene Sum	1	N/A	2023/01/26		EPA 8260C m
1,3-Dichloropropene Sum	2	N/A	2023/01/28		EPA 8260C m
Free (WAD) Cyanide	4	2023/01/26	2023/01/26	CAM SOP-00457	OMOE E3015 m
Conductivity	4	2023/01/26	2023/01/26	CAM SOP-00414	OMOE E3530 v1 m
Hexavalent Chromium in Soil by IC (1)	4	2023/01/26	2023/01/26	CAM SOP-00436	EPA 3060/7199 m
Petroleum Hydro. CCME F1 & BTEX in Soil (2)	1	N/A	2023/01/25	CAM SOP-00315	CCME PHC-CWS m
Petroleum Hydrocarbons F2-F4 in Soil (3)	3	2023/01/27	2023/01/28	CAM SOP-00316	CCME CWS m
Acid Extractable Metals by ICPMS	4	2023/01/26	2023/01/26	CAM SOP-00447	EPA 6020B m
Moisture	8	N/A	2023/01/25	CAM SOP-00445	Carter 2nd ed 51.2 m
pH CaCl2 EXTRACT	4	2023/01/26	2023/01/26	CAM SOP-00413	EPA 9045 D m
Sodium Adsorption Ratio (SAR)	4	N/A	2023/01/27	CAM SOP-00102	EPA 6010C
Volatile Organic Compounds and F1 PHCs	2	N/A	2023/01/25	CAM SOP-00230	EPA 8260C m
Volatile Organic Compounds in Soil	1	N/A	2023/01/27	CAM SOP-00228	EPA 8260D

Remarks:

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

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

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

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

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

Your Project #: CH244.00
Site Location: DE ZEN, QUEEN ST, S, MISSISSAUGA
Your C.O.C. #: 866467-13-01

Attention: Geoff Lussier

Terrapex Environmental Ltd
65 Nebo Road
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CANADA L8W 2C9

Report Date: 2023/01/30
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Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C321247
Received: 2023/01/23, 15:30

Results relate to samples tested. When sampling is not conducted by Bureau Veritas, results relate to the supplied samples tested.
This Certificate shall not be reproduced except in full, without the written approval of the laboratory.

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

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

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

Encryption Key

Please direct all questions regarding this Certificate of Analysis to:
Kudrat Bajwa, B.Sc., Project Manager
Email: Kudrat.Bajwa@bureauveritas.com
Phone# (905)817-5755

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

O.REG 153 METALS & INORGANICS PKG (SOIL)

Bureau Veritas ID		UWK768	UWK770	UWK772	UWK774		
Sampling Date		2023/01/18 14:10	2023/01/18 13:45	2023/01/17 13:00	2023/01/16 13:15		
COC Number		866467-13-01	866467-13-01	866467-13-01	866467-13-01		
	UNITS	MW101-2	MW107-2A	BH109-2A	MW113-2	RDL	QC Batch
Calculated Parameters							
Sodium Adsorption Ratio	N/A	18	16	17	22		8464385
Inorganics							
Conductivity	mS/cm	2.2	3.3	5.8	5.6	0.002	8470415
Moisture	%	14	18	17	17	1.0	8468378
Available (CaCl2) pH	pH	7.76	7.77	7.68	7.38		8470625
WAD Cyanide (Free)	ug/g	<0.01	<0.01	<0.01	<0.01	0.01	8470083
Chromium (VI)	ug/g	<0.18	<0.18	<0.18	<0.18	0.18	8470139
Metals							
Hot Water Ext. Boron (B)	ug/g	0.091	0.43	0.14	0.25	0.050	8470144
Acid Extractable Antimony (Sb)	ug/g	<0.20	<0.20	<0.20	<0.20	0.20	8470416
Acid Extractable Arsenic (As)	ug/g	3.9	4.9	3.1	5.1	1.0	8470416
Acid Extractable Barium (Ba)	ug/g	68	45	90	80	0.50	8470416
Acid Extractable Beryllium (Be)	ug/g	0.69	0.39	0.58	0.82	0.20	8470416
Acid Extractable Boron (B)	ug/g	8.5	8.5	8.0	9.5	5.0	8470416
Acid Extractable Cadmium (Cd)	ug/g	0.14	0.25	0.12	0.14	0.10	8470416
Acid Extractable Chromium (Cr)	ug/g	21	31	22	29	1.0	8470416
Acid Extractable Cobalt (Co)	ug/g	12	6.7	10	13	0.10	8470416
Acid Extractable Copper (Cu)	ug/g	27	18	25	39	0.50	8470416
Acid Extractable Lead (Pb)	ug/g	12	21	8.6	14	1.0	8470416
Acid Extractable Molybdenum (Mo)	ug/g	<0.50	1.2	<0.50	1.9	0.50	8470416
Acid Extractable Nickel (Ni)	ug/g	24	15	21	30	0.50	8470416
Acid Extractable Selenium (Se)	ug/g	<0.50	<0.50	<0.50	<0.50	0.50	8470416
Acid Extractable Silver (Ag)	ug/g	<0.20	<0.20	<0.20	<0.20	0.20	8470416
Acid Extractable Thallium (Tl)	ug/g	0.14	0.10	0.17	0.15	0.050	8470416
Acid Extractable Uranium (U)	ug/g	0.58	0.44	0.61	0.69	0.050	8470416
Acid Extractable Vanadium (V)	ug/g	29	25	33	35	5.0	8470416
Acid Extractable Zinc (Zn)	ug/g	54	86	55	69	5.0	8470416
Acid Extractable Mercury (Hg)	ug/g	<0.050	<0.050	<0.050	<0.050	0.050	8470416

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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

Bureau Veritas ID		UWK775			UWK775		
Sampling Date		2023/01/16 13:30			2023/01/16 13:30		
COC Number		866467-13-01			866467-13-01		
	UNITS	**MW113-7A**	**RDL**	**QC Batch**	**MW113-7A Lab-Dup**	**RDL**	**QC Batch**
Inorganics							
Moisture	%	15	1.0	8468387	15	1.0	8468387
BTEX & F1 Hydrocarbons							
Benzene	ug/g	<0.020	0.020	8467791			
Toluene	ug/g	<0.020	0.020	8467791			
Ethylbenzene	ug/g	<0.020	0.020	8467791			
o-Xylene	ug/g	<0.020	0.020	8467791			
p+m-Xylene	ug/g	<0.040	0.040	8467791			
Total Xylenes	ug/g	<0.040	0.040	8467791			
F1 (C6-C10)	ug/g	<10	10	8467791			
F1 (C6-C10) - BTEX	ug/g	<10	10	8467791			
F2-F4 Hydrocarbons							
F2 (C10-C16 Hydrocarbons)	ug/g	<10	10	8472365			
F3 (C16-C34 Hydrocarbons)	ug/g	<50	50	8472365			
F4 (C34-C50 Hydrocarbons)	ug/g	<50	50	8472365			
Reached Baseline at C50	ug/g	Yes		8472365			
Surrogate Recovery (%)							
1,4-Difluorobenzene	%	102		8467791			
4-Bromofluorobenzene	%	95		8467791			
D10-o-Xylene	%	103		8467791			
D4-1,2-Dichloroethane	%	108		8467791			
o-Terphenyl	%	108		8472365			

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate

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

Bureau Veritas ID		UWK769	UWK773		
Sampling Date		2023/01/19 14:30	2023/01/17 13:10		
COC Number		866467-13-01	866467-13-01		
	UNITS	MW101-9	BH109-8	RDL	QC Batch
Inorganics					
Moisture	%	11	10	1.0	8468387
Calculated Parameters					
1,3-Dichloropropene (cis+trans)	ug/g	<0.050	<0.050	0.050	8464419
Volatile Organics					
Acetone (2-Propanone)	ug/g	<0.49	<0.49	0.49	8467553
Benzene	ug/g	<0.0060	<0.0060	0.0060	8467553
Bromodichloromethane	ug/g	<0.040	<0.040	0.040	8467553
Bromoform	ug/g	<0.040	<0.040	0.040	8467553
Bromomethane	ug/g	<0.040	<0.040	0.040	8467553
Carbon Tetrachloride	ug/g	<0.040	<0.040	0.040	8467553
Chlorobenzene	ug/g	<0.040	<0.040	0.040	8467553
Chloroform	ug/g	<0.040	<0.040	0.040	8467553
Dibromochloromethane	ug/g	<0.040	<0.040	0.040	8467553
1,2-Dichlorobenzene	ug/g	<0.040	<0.040	0.040	8467553
1,3-Dichlorobenzene	ug/g	<0.040	<0.040	0.040	8467553
1,4-Dichlorobenzene	ug/g	<0.040	<0.040	0.040	8467553
Dichlorodifluoromethane (FREON 12)	ug/g	<0.040	<0.040	0.040	8467553
1,1-Dichloroethane	ug/g	<0.040	<0.040	0.040	8467553
1,2-Dichloroethane	ug/g	<0.049	<0.049	0.049	8467553
1,1-Dichloroethylene	ug/g	<0.040	<0.040	0.040	8467553
cis-1,2-Dichloroethylene	ug/g	<0.040	<0.040	0.040	8467553
trans-1,2-Dichloroethylene	ug/g	<0.040	<0.040	0.040	8467553
1,2-Dichloropropane	ug/g	<0.040	<0.040	0.040	8467553
cis-1,3-Dichloropropene	ug/g	<0.030	<0.030	0.030	8467553
trans-1,3-Dichloropropene	ug/g	<0.040	<0.040	0.040	8467553
Ethylbenzene	ug/g	<0.010	<0.010	0.010	8467553
Ethylene Dibromide	ug/g	<0.040	<0.040	0.040	8467553
Hexane	ug/g	<0.040	<0.040	0.040	8467553
Methylene Chloride(Dichloromethane)	ug/g	<0.049	<0.049	0.049	8467553
Methyl Ethyl Ketone (2-Butanone)	ug/g	<0.40	<0.40	0.40	8467553
Methyl Isobutyl Ketone	ug/g	<0.40	<0.40	0.40	8467553

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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

Bureau Veritas ID		UWK769	UWK773		
Sampling Date		2023/01/19 14:30	2023/01/17 13:10		
COC Number		866467-13-01	866467-13-01		
	UNITS	MW101-9	BH109-8	RDL	QC Batch
Methyl t-butyl ether (MTBE)	ug/g	<0.040	<0.040	0.040	8467553
Styrene	ug/g	<0.040	<0.040	0.040	8467553
1,1,1,2-Tetrachloroethane	ug/g	<0.040	<0.040	0.040	8467553
1,1,2,2-Tetrachloroethane	ug/g	<0.040	<0.040	0.040	8467553
Tetrachloroethylene	ug/g	<0.040	<0.040	0.040	8467553
Toluene	ug/g	<0.020	<0.020	0.020	8467553
1,1,1-Trichloroethane	ug/g	<0.040	<0.040	0.040	8467553
1,1,2-Trichloroethane	ug/g	<0.040	<0.040	0.040	8467553
Trichloroethylene	ug/g	<0.010	<0.010	0.010	8467553
Trichlorofluoromethane (FREON 11)	ug/g	<0.040	<0.040	0.040	8467553
Vinyl Chloride	ug/g	<0.019	<0.019	0.019	8467553
p+m-Xylene	ug/g	0.028	<0.020	0.020	8467553
o-Xylene	ug/g	<0.020	<0.020	0.020	8467553
Total Xylenes	ug/g	0.028	<0.020	0.020	8467553
F1 (C6-C10)	ug/g	<10	<10	10	8467553
F1 (C6-C10) - BTEX	ug/g	<10	<10	10	8467553
F2-F4 Hydrocarbons					
F2 (C10-C16 Hydrocarbons)	ug/g	<10	<10	10	8472365
F3 (C16-C34 Hydrocarbons)	ug/g	<50	<50	50	8472365
F4 (C34-C50 Hydrocarbons)	ug/g	<50	<50	50	8472365
Reached Baseline at C50	ug/g	Yes	Yes		8472365
Surrogate Recovery (%)					
o-Terphenyl	%	108	109		8472365
4-Bromofluorobenzene	%	93	93		8467553
D10-o-Xylene	%	108	95		8467553
D4-1,2-Dichloroethane	%	100	98		8467553
D8-Toluene	%	93	94		8467553

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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O.REG 153 VOCS BY HS (SOIL)

Bureau Veritas ID		UWK776		
Sampling Date		2023/01/16 13:45		
COC Number		866467-13-01		
	UNITS	MW113-10	RDL	QC Batch
Inorganics				
Moisture	%	9.4	1.0	8468006
Calculated Parameters				
1,3-Dichloropropene (cis+trans)	ug/g	<0.050	0.050	8464419
Volatile Organics				
Acetone (2-Propanone)	ug/g	<0.49	0.49	8466701
Benzene	ug/g	<0.0060	0.0060	8466701
Bromodichloromethane	ug/g	<0.040	0.040	8466701
Bromoform	ug/g	<0.040	0.040	8466701
Bromomethane	ug/g	<0.040	0.040	8466701
Carbon Tetrachloride	ug/g	<0.040	0.040	8466701
Chlorobenzene	ug/g	<0.040	0.040	8466701
Chloroform	ug/g	<0.040	0.040	8466701
Dibromochloromethane	ug/g	<0.040	0.040	8466701
1,2-Dichlorobenzene	ug/g	<0.040	0.040	8466701
1,3-Dichlorobenzene	ug/g	<0.040	0.040	8466701
1,4-Dichlorobenzene	ug/g	<0.040	0.040	8466701
Dichlorodifluoromethane (FREON 12)	ug/g	<0.040	0.040	8466701
1,1-Dichloroethane	ug/g	<0.040	0.040	8466701
1,2-Dichloroethane	ug/g	<0.049	0.049	8466701
1,1-Dichloroethylene	ug/g	<0.040	0.040	8466701
cis-1,2-Dichloroethylene	ug/g	<0.040	0.040	8466701
trans-1,2-Dichloroethylene	ug/g	<0.040	0.040	8466701
1,2-Dichloropropane	ug/g	<0.040	0.040	8466701
cis-1,3-Dichloropropene	ug/g	<0.030	0.030	8466701
trans-1,3-Dichloropropene	ug/g	<0.040	0.040	8466701
Ethylbenzene	ug/g	<0.010	0.010	8466701
Ethylene Dibromide	ug/g	<0.040	0.040	8466701
Hexane	ug/g	<0.040	0.040	8466701
Methylene Chloride(Dichloromethane)	ug/g	<0.049	0.049	8466701
Methyl Ethyl Ketone (2-Butanone)	ug/g	<0.40	0.40	8466701
Methyl Isobutyl Ketone	ug/g	<0.40	0.40	8466701

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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O.REG 153 VOCS BY HS (SOIL)

Bureau Veritas ID		UWK776		
Sampling Date		2023/01/16 13:45		
COC Number		866467-13-01		
	UNITS	MW113-10	RDL	QC Batch
Methyl t-butyl ether (MTBE)	ug/g	<0.040	0.040	8466701
Styrene	ug/g	<0.040	0.040	8466701
1,1,1,2-Tetrachloroethane	ug/g	<0.040	0.040	8466701
1,1,2,2-Tetrachloroethane	ug/g	<0.040	0.040	8466701
Tetrachloroethylene	ug/g	<0.040	0.040	8466701
Toluene	ug/g	<0.020	0.020	8466701
1,1,1-Trichloroethane	ug/g	<0.040	0.040	8466701
1,1,2-Trichloroethane	ug/g	<0.040	0.040	8466701
Trichloroethylene	ug/g	<0.010	0.010	8466701
Trichlorofluoromethane (FREON 11)	ug/g	<0.040	0.040	8466701
Vinyl Chloride	ug/g	<0.019	0.019	8466701
p+m-Xylene	ug/g	<0.020	0.020	8466701
o-Xylene	ug/g	<0.020	0.020	8466701
Total Xylenes	ug/g	<0.020	0.020	8466701
Surrogate Recovery (%)				
4-Bromofluorobenzene	%	104		8466701
D10-o-Xylene	%	99		8466701
D4-1,2-Dichloroethane	%	111		8466701
D8-Toluene	%	93		8466701

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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TEST SUMMARY

Bureau Veritas ID: UWK768 **Collected:** 2023/01/18
Sample ID: MW101-2 **Shipped:**
Matrix: Soil **Received:** 2023/01/23

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hot Water Extractable Boron	ICP	8470144	2023/01/26	2023/01/26	Jolly John
Free (WAD) Cyanide	TECH	8470083	2023/01/26	2023/01/26	Kruti Jitesh Patel
Conductivity	AT	8470415	2023/01/26	2023/01/26	Gurparteek KAUR
Hexavalent Chromium in Soil by IC	IC/SPEC	8470139	2023/01/26	2023/01/26	Sousan Besharatlou
Acid Extractable Metals by ICPMS	ICP/MS	8470416	2023/01/26	2023/01/26	Azita Fazaeli
Moisture	BAL	8468378	N/A	2023/01/25	Joe Thomas
pH CaCl2 EXTRACT	AT	8470625	2023/01/26	2023/01/26	Taslima Aktar
Sodium Adsorption Ratio (SAR)	CALC/MET	8464385	N/A	2023/01/27	Automated Statchk

Bureau Veritas ID: UWK769 **Collected:** 2023/01/19
Sample ID: MW101-9 **Shipped:**
Matrix: Soil **Received:** 2023/01/23

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
1,3-Dichloropropene Sum	CALC	8464419	N/A	2023/01/28	Automated Statchk
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	8472365	2023/01/27	2023/01/28	(Kent) Maolin Li
Moisture	BAL	8468387	N/A	2023/01/25	Mathew Bowles
Volatile Organic Compounds and F1 PHCs	GC/MSFD	8467553	N/A	2023/01/25	Denis Reid

Bureau Veritas ID: UWK770 **Collected:** 2023/01/18
Sample ID: MW107-2A **Shipped:**
Matrix: Soil **Received:** 2023/01/23

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hot Water Extractable Boron	ICP	8470144	2023/01/26	2023/01/26	Jolly John
Free (WAD) Cyanide	TECH	8470083	2023/01/26	2023/01/26	Kruti Jitesh Patel
Conductivity	AT	8470415	2023/01/26	2023/01/26	Gurparteek KAUR
Hexavalent Chromium in Soil by IC	IC/SPEC	8470139	2023/01/26	2023/01/26	Sousan Besharatlou
Acid Extractable Metals by ICPMS	ICP/MS	8470416	2023/01/26	2023/01/26	Azita Fazaeli
Moisture	BAL	8468378	N/A	2023/01/25	Joe Thomas
pH CaCl2 EXTRACT	AT	8470625	2023/01/26	2023/01/26	Taslima Aktar
Sodium Adsorption Ratio (SAR)	CALC/MET	8464385	N/A	2023/01/27	Automated Statchk

Bureau Veritas ID: UWK772 **Collected:** 2023/01/17
Sample ID: BH109-2A **Shipped:**
Matrix: Soil **Received:** 2023/01/23

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hot Water Extractable Boron	ICP	8470144	2023/01/26	2023/01/26	Jolly John
Free (WAD) Cyanide	TECH	8470083	2023/01/26	2023/01/26	Kruti Jitesh Patel
Conductivity	AT	8470415	2023/01/26	2023/01/26	Gurparteek KAUR
Hexavalent Chromium in Soil by IC	IC/SPEC	8470139	2023/01/26	2023/01/26	Sousan Besharatlou
Acid Extractable Metals by ICPMS	ICP/MS	8470416	2023/01/26	2023/01/26	Azita Fazaeli
Moisture	BAL	8468378	N/A	2023/01/25	Joe Thomas

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TEST SUMMARY

Bureau Veritas ID: UWK772 **Collected:** 2023/01/17
Sample ID: BH109-2A **Shipped:**
Matrix: Soil **Received:** 2023/01/23

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
pH CaCl2 EXTRACT	AT	8470625	2023/01/26	2023/01/26	Taslima Aktar
Sodium Adsorption Ratio (SAR)	CALC/MET	8464385	N/A	2023/01/27	Automated Statchk

Bureau Veritas ID: UWK773 **Collected:** 2023/01/17
Sample ID: BH109-8 **Shipped:**
Matrix: Soil **Received:** 2023/01/23

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
1,3-Dichloropropene Sum	CALC	8464419	N/A	2023/01/28	Automated Statchk
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	8472365	2023/01/27	2023/01/28	(Kent) Maolin Li
Moisture	BAL	8468387	N/A	2023/01/25	Mathew Bowles
Volatile Organic Compounds and F1 PHCs	GC/MSFD	8467553	N/A	2023/01/25	Denis Reid

Bureau Veritas ID: UWK774 **Collected:** 2023/01/16
Sample ID: MW113-2 **Shipped:**
Matrix: Soil **Received:** 2023/01/23

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hot Water Extractable Boron	ICP	8470144	2023/01/26	2023/01/26	Jolly John
Free (WAD) Cyanide	TECH	8470083	2023/01/26	2023/01/26	Kruti Jitesh Patel
Conductivity	AT	8470415	2023/01/26	2023/01/26	Gurparteek KAUR
Hexavalent Chromium in Soil by IC	IC/SPEC	8470139	2023/01/26	2023/01/26	Sousan Besharatlou
Acid Extractable Metals by ICPMS	ICP/MS	8470416	2023/01/26	2023/01/26	Azita Fazaeli
Moisture	BAL	8468378	N/A	2023/01/25	Joe Thomas
pH CaCl2 EXTRACT	AT	8470625	2023/01/26	2023/01/26	Taslima Aktar
Sodium Adsorption Ratio (SAR)	CALC/MET	8464385	N/A	2023/01/27	Automated Statchk

Bureau Veritas ID: UWK775 **Collected:** 2023/01/16
Sample ID: MW113-7A **Shipped:**
Matrix: Soil **Received:** 2023/01/23

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	8467791	N/A	2023/01/25	Ravinder Gaidhu
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	8472365	2023/01/27	2023/01/28	(Kent) Maolin Li
Moisture	BAL	8468387	N/A	2023/01/25	Mathew Bowles

Bureau Veritas ID: UWK775 Dup **Collected:** 2023/01/16
Sample ID: MW113-7A **Shipped:**
Matrix: Soil **Received:** 2023/01/23

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Moisture	BAL	8468387	N/A	2023/01/25	Mathew Bowles

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Bureau Veritas Job #: C321247
Report Date: 2023/01/30

Terrapex Environmental Ltd
Client Project #: CH244.00
Site Location: DE ZEN, QUEEN ST, S, MISSISSAUGA
Sampler Initials: ID

TEST SUMMARY

Bureau Veritas ID: UWK776
Sample ID: MW113-10
Matrix: Soil

Collected: 2023/01/16
Shipped:
Received: 2023/01/23

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
1,3-Dichloropropene Sum	CALC	8464419	N/A	2023/01/26	Automated Statchk
Moisture	BAL	8468006	N/A	2023/01/25	Joe Thomas
Volatile Organic Compounds in Soil	GC/MS	8466701	N/A	2023/01/27	Skylar Canning

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GENERAL COMMENTS

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

Package 1	4.3°C

Results relate only to the items tested.

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QUALITY ASSURANCE REPORT

			Matrix Spike		SPIKED BLANK		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8466701	4-Bromofluorobenzene	2023/01/24	96	60 - 140	96	60 - 140	96	%		
8466701	D10-o-Xylene	2023/01/24	106	60 - 130	81	60 - 130	92	%		
8466701	D4-1,2-Dichloroethane	2023/01/24	104	60 - 140	106	60 - 140	105	%		
8466701	D8-Toluene	2023/01/24	100	60 - 140	101	60 - 140	99	%		
8467553	4-Bromofluorobenzene	2023/01/25	105	60 - 140	104	60 - 140	92	%		
8467553	D10-o-Xylene	2023/01/25	117	60 - 130	104	60 - 130	97	%		
8467553	D4-1,2-Dichloroethane	2023/01/25	95	60 - 140	104	60 - 140	97	%		
8467553	D8-Toluene	2023/01/25	101	60 - 140	101	60 - 140	95	%		
8467791	1,4-Difluorobenzene	2023/01/25	96	60 - 140	98	60 - 140	101	%		
8467791	4-Bromofluorobenzene	2023/01/25	103	60 - 140	100	60 - 140	93	%		
8467791	D10-o-Xylene	2023/01/25	112	60 - 140	101	60 - 140	96	%		
8467791	D4-1,2-Dichloroethane	2023/01/25	102	60 - 140	104	60 - 140	108	%		
8472365	o-Terphenyl	2023/01/28	103	60 - 130	103	60 - 130	110	%		
8466701	1,1,1,2-Tetrachloroethane	2023/01/24	97	60 - 140	92	60 - 130	<0.040	ug/g	NC	50
8466701	1,1,1-Trichloroethane	2023/01/24	101	60 - 140	90	60 - 130	<0.040	ug/g	NC	50
8466701	1,1,2,2-Tetrachloroethane	2023/01/24	93	60 - 140	96	60 - 130	<0.040	ug/g	NC	50
8466701	1,1,2-Trichloroethane	2023/01/24	98	60 - 140	97	60 - 130	<0.040	ug/g	NC	50
8466701	1,1-Dichloroethane	2023/01/24	93	60 - 140	85	60 - 130	<0.040	ug/g	NC	50
8466701	1,1-Dichloroethylene	2023/01/24	100	60 - 140	88	60 - 130	<0.040	ug/g	NC	50
8466701	1,2-Dichlorobenzene	2023/01/24	95	60 - 140	92	60 - 130	<0.040	ug/g	NC	50
8466701	1,2-Dichloroethane	2023/01/24	96	60 - 140	93	60 - 130	<0.049	ug/g	NC	50
8466701	1,2-Dichloropropane	2023/01/24	94	60 - 140	89	60 - 130	<0.040	ug/g	NC	50
8466701	1,3-Dichlorobenzene	2023/01/24	93	60 - 140	88	60 - 130	<0.040	ug/g	NC	50
8466701	1,4-Dichlorobenzene	2023/01/24	106	60 - 140	101	60 - 130	<0.040	ug/g	NC	50
8466701	Acetone (2-Propanone)	2023/01/24	107	60 - 140	109	60 - 140	<0.49	ug/g	NC	50
8466701	Benzene	2023/01/24	92	60 - 140	83	60 - 130	<0.0060	ug/g	NC	50
8466701	Bromodichloromethane	2023/01/24	97	60 - 140	92	60 - 130	<0.040	ug/g	NC	50
8466701	Bromoform	2023/01/24	96	60 - 140	96	60 - 130	<0.040	ug/g	NC	50
8466701	Bromomethane	2023/01/24	95	60 - 140	86	60 - 140	<0.040	ug/g	NC	50
8466701	Carbon Tetrachloride	2023/01/24	99	60 - 140	87	60 - 130	<0.040	ug/g	NC	50
8466701	Chlorobenzene	2023/01/24	96	60 - 140	89	60 - 130	<0.040	ug/g	NC	50

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QUALITY ASSURANCE REPORT(CONT'D)

			Matrix Spike		SPIKED BLANK		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8466701	Chloroform	2023/01/24	98	60 - 140	90	60 - 130	<0.040	ug/g	NC	50
8466701	cis-1,2-Dichloroethylene	2023/01/24	100	60 - 140	91	60 - 130	<0.040	ug/g	1.2	50
8466701	cis-1,3-Dichloropropene	2023/01/24	94	60 - 140	90	60 - 130	<0.030	ug/g	NC	50
8466701	Dibromochloromethane	2023/01/24	94	60 - 140	93	60 - 130	<0.040	ug/g	NC	50
8466701	Dichlorodifluoromethane (FREON 12)	2023/01/24	92	60 - 140	80	60 - 140	<0.040	ug/g	NC	50
8466701	Ethylbenzene	2023/01/24	91	60 - 140	82	60 - 130	<0.010	ug/g	NC	50
8466701	Ethylene Dibromide	2023/01/24	93	60 - 140	93	60 - 130	<0.040	ug/g	NC	50
8466701	Hexane	2023/01/24	101	60 - 140	87	60 - 130	<0.040	ug/g	NC	50
8466701	Methyl Ethyl Ketone (2-Butanone)	2023/01/24	103	60 - 140	108	60 - 140	<0.40	ug/g	NC	50
8466701	Methyl Isobutyl Ketone	2023/01/24	95	60 - 140	102	60 - 130	<0.40	ug/g	NC	50
8466701	Methyl t-butyl ether (MTBE)	2023/01/24	92	60 - 140	89	60 - 130	<0.040	ug/g	NC	50
8466701	Methylene Chloride(Dichloromethane)	2023/01/24	102	60 - 140	95	60 - 130	<0.049	ug/g	NC	50
8466701	o-Xylene	2023/01/24	91	60 - 140	84	60 - 130	<0.020	ug/g	NC	50
8466701	p+m-Xylene	2023/01/24	93	60 - 140	85	60 - 130	<0.020	ug/g	NC	50
8466701	Styrene	2023/01/24	100	60 - 140	93	60 - 130	<0.040	ug/g	NC	50
8466701	Tetrachloroethylene	2023/01/24	89	60 - 140	80	60 - 130	<0.040	ug/g	NC	50
8466701	Toluene	2023/01/24	94	60 - 140	85	60 - 130	<0.020	ug/g	NC	50
8466701	Total Xylenes	2023/01/24					<0.020	ug/g	NC	50
8466701	trans-1,2-Dichloroethylene	2023/01/24	98	60 - 140	88	60 - 130	<0.040	ug/g	NC	50
8466701	trans-1,3-Dichloropropene	2023/01/24	99	60 - 140	86	60 - 130	<0.040	ug/g	NC	50
8466701	Trichloroethylene	2023/01/24	103	60 - 140	91	60 - 130	<0.010	ug/g	2.7	50
8466701	Trichlorofluoromethane (FREON 11)	2023/01/24	99	60 - 140	86	60 - 130	<0.040	ug/g	NC	50
8466701	Vinyl Chloride	2023/01/24	89	60 - 140	78	60 - 130	<0.019	ug/g	NC	50
8467553	1,1,1,2-Tetrachloroethane	2023/01/25	94	60 - 140	98	60 - 130	<0.040	ug/g	NC	50
8467553	1,1,1-Trichloroethane	2023/01/25	98	60 - 140	101	60 - 130	<0.040	ug/g	NC	50
8467553	1,1,2,2-Tetrachloroethane	2023/01/25	84	60 - 140	95	60 - 130	<0.040	ug/g	NC	50
8467553	1,1,2-Trichloroethane	2023/01/25	89	60 - 140	99	60 - 130	<0.040	ug/g	NC	50
8467553	1,1-Dichloroethane	2023/01/25	89	60 - 140	90	60 - 130	<0.040	ug/g	NC	50
8467553	1,1-Dichloroethylene	2023/01/25	93	60 - 140	98	60 - 130	<0.040	ug/g	NC	50
8467553	1,2-Dichlorobenzene	2023/01/25	90	60 - 140	91	60 - 130	<0.040	ug/g	NC	50
8467553	1,2-Dichloroethane	2023/01/25	86	60 - 140	95	60 - 130	<0.049	ug/g	NC	50

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QUALITY ASSURANCE REPORT(CONT'D)

			Matrix Spike		SPIKED BLANK		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8467553	1,2-Dichloropropane	2023/01/25	91	60 - 140	79	60 - 130	<0.040	ug/g	NC	50
8467553	1,3-Dichlorobenzene	2023/01/25	95	60 - 140	90	60 - 130	<0.040	ug/g	NC	50
8467553	1,4-Dichlorobenzene	2023/01/25	105	60 - 140	99	60 - 130	<0.040	ug/g	NC	50
8467553	Acetone (2-Propanone)	2023/01/25	92	60 - 140	112	60 - 140	<0.49	ug/g	NC	50
8467553	Benzene	2023/01/25	89	60 - 140	92	60 - 130	<0.0060	ug/g	8.1	50
8467553	Bromodichloromethane	2023/01/25	94	60 - 140	102	60 - 130	<0.040	ug/g	NC	50
8467553	Bromoform	2023/01/25	86	60 - 140	101	60 - 130	<0.040	ug/g	NC	50
8467553	Bromomethane	2023/01/25	99	60 - 140	99	60 - 140	<0.040	ug/g	NC	50
8467553	Carbon Tetrachloride	2023/01/25	95	60 - 140	98	60 - 130	<0.040	ug/g	NC	50
8467553	Chlorobenzene	2023/01/25	94	60 - 140	94	60 - 130	<0.040	ug/g	NC	50
8467553	Chloroform	2023/01/25	93	60 - 140	98	60 - 130	<0.040	ug/g	NC	50
8467553	cis-1,2-Dichloroethylene	2023/01/25	96	60 - 140	98	60 - 130	<0.040	ug/g	NC	50
8467553	cis-1,3-Dichloropropene	2023/01/25	99	60 - 140	99	60 - 130	<0.030	ug/g	NC	50
8467553	Dibromochloromethane	2023/01/25	90	60 - 140	97	60 - 130	<0.040	ug/g	NC	50
8467553	Dichlorodifluoromethane (FREON 12)	2023/01/25	112	60 - 140	102	60 - 140	<0.040	ug/g	NC	50
8467553	Ethylbenzene	2023/01/25	92	60 - 140	85	60 - 130	<0.010	ug/g	12	50
8467553	Ethylene Dibromide	2023/01/25	89	60 - 140	97	60 - 130	<0.040	ug/g	NC	50
8467553	F1 (C6-C10) - BTEX	2023/01/25					<10	ug/g	16	30
8467553	F1 (C6-C10)	2023/01/25	NC	60 - 140	94	80 - 120	<10	ug/g	15	30
8467553	Hexane	2023/01/25	99	60 - 140	96	60 - 130	<0.040	ug/g	15	50
8467553	Methyl Ethyl Ketone (2-Butanone)	2023/01/25	90	60 - 140	84	60 - 140	<0.40	ug/g	NC	50
8467553	Methyl Isobutyl Ketone	2023/01/25	94	60 - 140	116	60 - 130	<0.40	ug/g	NC	50
8467553	Methyl t-butyl ether (MTBE)	2023/01/25	90	60 - 140	94	60 - 130	<0.040	ug/g	NC	50
8467553	Methylene Chloride(Dichloromethane)	2023/01/25	95	60 - 140	104	60 - 130	<0.049	ug/g	NC	50
8467553	o-Xylene	2023/01/25	103	60 - 140	90	60 - 130	<0.020	ug/g	5.1	50
8467553	p+m-Xylene	2023/01/25	118	60 - 140	89	60 - 130	<0.020	ug/g	12	50
8467553	Styrene	2023/01/25	106	60 - 140	103	60 - 130	<0.040	ug/g	NC	50
8467553	Tetrachloroethylene	2023/01/25	90	60 - 140	88	60 - 130	<0.040	ug/g	NC	50
8467553	Toluene	2023/01/25	94	60 - 140	90	60 - 130	<0.020	ug/g	9.2	50
8467553	Total Xylenes	2023/01/25					<0.020	ug/g	9.9	50
8467553	trans-1,2-Dichloroethylene	2023/01/25	92	60 - 140	94	60 - 130	<0.040	ug/g	NC	50

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QUALITY ASSURANCE REPORT(CONT'D)

			Matrix Spike		SPIKED BLANK		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8467553	trans-1,3-Dichloropropene	2023/01/25	103	60 - 140	96	60 - 130	<0.040	ug/g	NC	50
8467553	Trichloroethylene	2023/01/25	101	60 - 140	98	60 - 130	<0.010	ug/g	NC	50
8467553	Trichlorofluoromethane (FREON 11)	2023/01/25	95	60 - 140	99	60 - 130	<0.040	ug/g	NC	50
8467553	Vinyl Chloride	2023/01/25	89	60 - 140	88	60 - 130	<0.019	ug/g	NC	50
8467791	Benzene	2023/01/25	91	50 - 140	84	50 - 140	<0.020	ug/g	NC	50
8467791	Ethylbenzene	2023/01/25	109	50 - 140	98	50 - 140	<0.020	ug/g	4.9	50
8467791	F1 (C6-C10) - BTEX	2023/01/25					<10	ug/g	NC	30
8467791	F1 (C6-C10)	2023/01/25	100	60 - 140	88	80 - 120	<10	ug/g	NC	30
8467791	o-Xylene	2023/01/25	111	50 - 140	99	50 - 140	<0.020	ug/g	NC	50
8467791	p+m-Xylene	2023/01/25	104	50 - 140	94	50 - 140	<0.040	ug/g	NC	50
8467791	Toluene	2023/01/25	92	50 - 140	84	50 - 140	<0.020	ug/g	NC	50
8467791	Total Xylenes	2023/01/25					<0.040	ug/g	NC	50
8468006	Moisture	2023/01/25							4.6	20
8468378	Moisture	2023/01/25							3.1	20
8468387	Moisture	2023/01/25							0.66	20
8470083	WAD Cyanide (Free)	2023/01/26	110	75 - 125	101	80 - 120	<0.01	ug/g	NC	35
8470139	Chromium (VI)	2023/01/26	85	70 - 130	98	80 - 120	<0.18	ug/g	NC	35
8470144	Hot Water Ext. Boron (B)	2023/01/26	NC	75 - 125	97	75 - 125	<0.050	ug/g	0.038	40
8470415	Conductivity	2023/01/26			106	90 - 110	<0.002	mS/cm	0.50	10
8470416	Acid Extractable Antimony (Sb)	2023/01/26	95	75 - 125	100	80 - 120	<0.20	ug/g	NC	30
8470416	Acid Extractable Arsenic (As)	2023/01/26	93	75 - 125	102	80 - 120	<1.0	ug/g	1.5	30
8470416	Acid Extractable Barium (Ba)	2023/01/26	92	75 - 125	99	80 - 120	<0.50	ug/g	2.4	30
8470416	Acid Extractable Beryllium (Be)	2023/01/26	95	75 - 125	99	80 - 120	<0.20	ug/g	NC	30
8470416	Acid Extractable Boron (B)	2023/01/26	99	75 - 125	101	80 - 120	<5.0	ug/g	NC	30
8470416	Acid Extractable Cadmium (Cd)	2023/01/26	93	75 - 125	98	80 - 120	<0.10	ug/g	NC	30
8470416	Acid Extractable Chromium (Cr)	2023/01/26	95	75 - 125	102	80 - 120	<1.0	ug/g	3.4	30
8470416	Acid Extractable Cobalt (Co)	2023/01/26	95	75 - 125	101	80 - 120	<0.10	ug/g	3.6	30
8470416	Acid Extractable Copper (Cu)	2023/01/26	94	75 - 125	102	80 - 120	<0.50	ug/g	0.72	30
8470416	Acid Extractable Lead (Pb)	2023/01/26	90	75 - 125	95	80 - 120	<1.0	ug/g	1.2	30
8470416	Acid Extractable Mercury (Hg)	2023/01/26	97	75 - 125	99	80 - 120	<0.050	ug/g		
8470416	Acid Extractable Molybdenum (Mo)	2023/01/26	98	75 - 125	99	80 - 120	<0.50	ug/g	NC	30

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QUALITY ASSURANCE REPORT(CONT'D)

			Matrix Spike		SPIKED BLANK		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8470416	Acid Extractable Nickel (Ni)	2023/01/26	93	75 - 125	100	80 - 120	<0.50	ug/g	2.9	30
8470416	Acid Extractable Selenium (Se)	2023/01/26	88	75 - 125	94	80 - 120	<0.50	ug/g	NC	30
8470416	Acid Extractable Silver (Ag)	2023/01/26	96	75 - 125	100	80 - 120	<0.20	ug/g	NC	30
8470416	Acid Extractable Thallium (Tl)	2023/01/26	92	75 - 125	98	80 - 120	<0.050	ug/g	NC	30
8470416	Acid Extractable Uranium (U)	2023/01/26	97	75 - 125	102	80 - 120	<0.050	ug/g	0.081	30
8470416	Acid Extractable Vanadium (V)	2023/01/26	93	75 - 125	101	80 - 120	<5.0	ug/g	7.2	30
8470416	Acid Extractable Zinc (Zn)	2023/01/26	94	75 - 125	103	80 - 120	<5.0	ug/g	4.9	30
8470625	Available (CaCl2) pH	2023/01/26			100	97 - 103			0.018	N/A
8472365	F2 (C10-C16 Hydrocarbons)	2023/01/28	102	60 - 130	104	80 - 120	<10	ug/g	NC	30
8472365	F3 (C16-C34 Hydrocarbons)	2023/01/28	104	60 - 130	101	80 - 120	<50	ug/g	NC	30
8472365	F4 (C34-C50 Hydrocarbons)	2023/01/28	102	60 - 130	102	80 - 120	<50	ug/g	NC	30

N/A = Not Applicable

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

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

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

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

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

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

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

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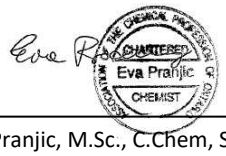
Bureau Veritas Job #: C321247
Report Date: 2023/01/30

Terrapex Environmental Ltd
Client Project #: CH244.00
Site Location: DE ZEN, QUEEN ST, S, MISSISSAUGA
Sampler Initials: ID

VALIDATION SIGNATURE PAGE

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



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

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CHAIN OF CUSTODY RECORD

Page 1 of 1

23-Jan-23 15:30
Kudrat Bajwa
C321247
SWP ENV-1390

INVOICE TO:		REPORT TO:		PROJECT INFORMATION:	
Company Name:	#34561 Terrapex Environmental Ltd	Company Name:	TPEX	Quotation #:	~~C01024~~
Attention:	Accounts Payable	Attention:	~~Mike Deans~~ Geoff Lussier	P.O. #:	TPEX SO
Address:	90 Scarsdale Rd	Address:	65 Nebo Road	Project:	~~CT3431.00~~ CH244.00
	Toronto ON M3B 2R7		Hamilton ON L8W 2C9	Project Name:	De Zen
Tel:	(416) 245-0011 Fax:	Tel:	416 570 3209 Fax:	Site #:	Queen St. S. Mississauga
Email:	accounts.payable@terrapex.com	Email:	~~m.deans@terrapex.com~~ g.lussier@terrapex.com	Sampled By:	JD

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

Regulation 153 (2011)
- [ ] Table 1 [x] Res/Park [x] Medium/Fine
- [x] Table 2 [ ] Ind/Comm [ ] Coarse
- [ ] Table 3 [ ] Agri/Other [x] For RSC
- [ ] Table ___

Other Regulations
- [ ] CCME [ ] Sanitary Sewer Bylaw
- [ ] Reg 558 [ ] Storm Sewer Bylaw
- [ ] MISA Municipality ______
- [ ] PWQO [ ] Reg 406 Table ______
- [ ] Other ______

Special Instructions

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

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

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

Job Specific Rush TAT (if applies to entire submission)
Date Required: ______ Time Required: ______ [ ]
Rush Confirmation Number: ______ *(call lab for #)*

ANALYSIS REQUESTED (PLEASE BE SPECIFIC)

	Sample Barcode Label	Sample (Location) Identification	Date Sampled	Time Sampled	Matrix	Field Filtered (please circle): Metals / Hg / Cr VI	~~O.Reg 153 PHCs, BTEX/F1-F4 (Soil)~~	M+I (Reg 153 MEI pkg)	BTEX/~~PHCs~~ F1-F4	VOCs	~~BTEX~~/F1-F4 VOCs						# of Bottles	Comments
1		MW101-2	Jan 18/23	14:10	S		x	X									1	
2		MW101-9	Jan 19/23	14:30			x				X						4	
3		MW107-2A	Jan 18/23	13:45			x	X									2	
4		MW107-9B	Jan 18/23	14:00			x		X								3	# hold #
5		BH109-2A	Jan 17/23	13:00			x	X									2	
6		BH109-8	Jan 17/23	13:10			x		~~X~~		X						3	
7		MW113-2	Jan 16/23	13:15				X									2	
8		MW113-7A	Jan 16/23	13:30					X								3	
9		MW113-10	Jan 16/23	13:45						X							3	
10																		

* RELINQUISHED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	RECEIVED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	# jars used and not submitted	Time Sensitive	Temperature (°C) on Recei	Custody Seal	Yes	No
Wahida / WAHIDA NASHREEN	23 Jan/2023	10:00	Raman / RAMANDEEP KAUR	2023/01/23	15:30			3/5/5	Present	✓	
									Intact	✓	

Laboratory Use Only

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

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

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

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

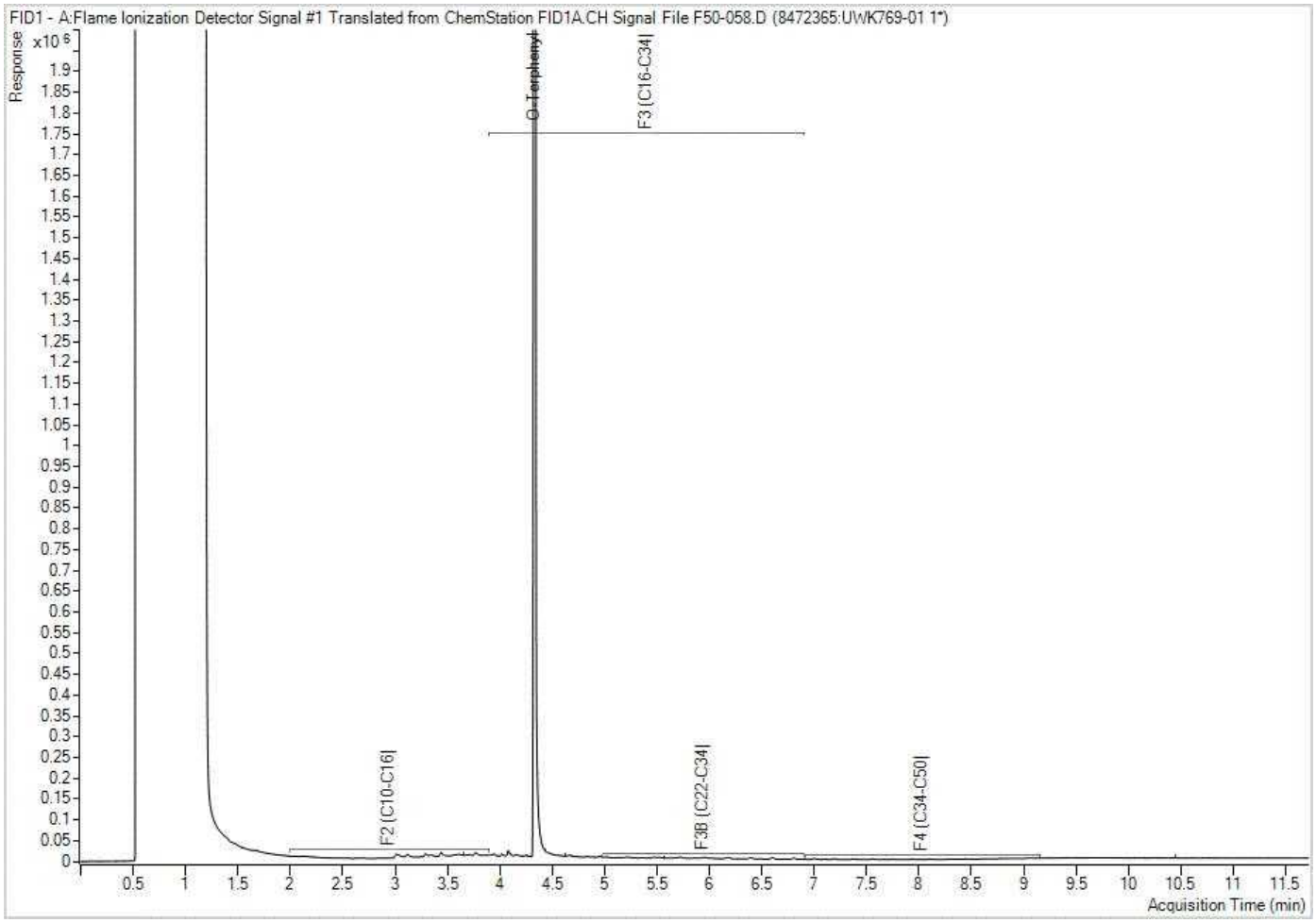
White: Bureau Veritas Yellow: Client

Onice

Bureau Veritas Job #: C321247
Report Date: 2023/01/30
Bureau Veritas Sample: UWK769

Terrapex Environmental Ltd
Client Project #: CH244.00
Project name: DE ZEN, QUEEN ST, S, MISSISSAUGA
Client ID: MW101-9

Petroleum Hydrocarbons F2-F4 in Soil Chromatogram

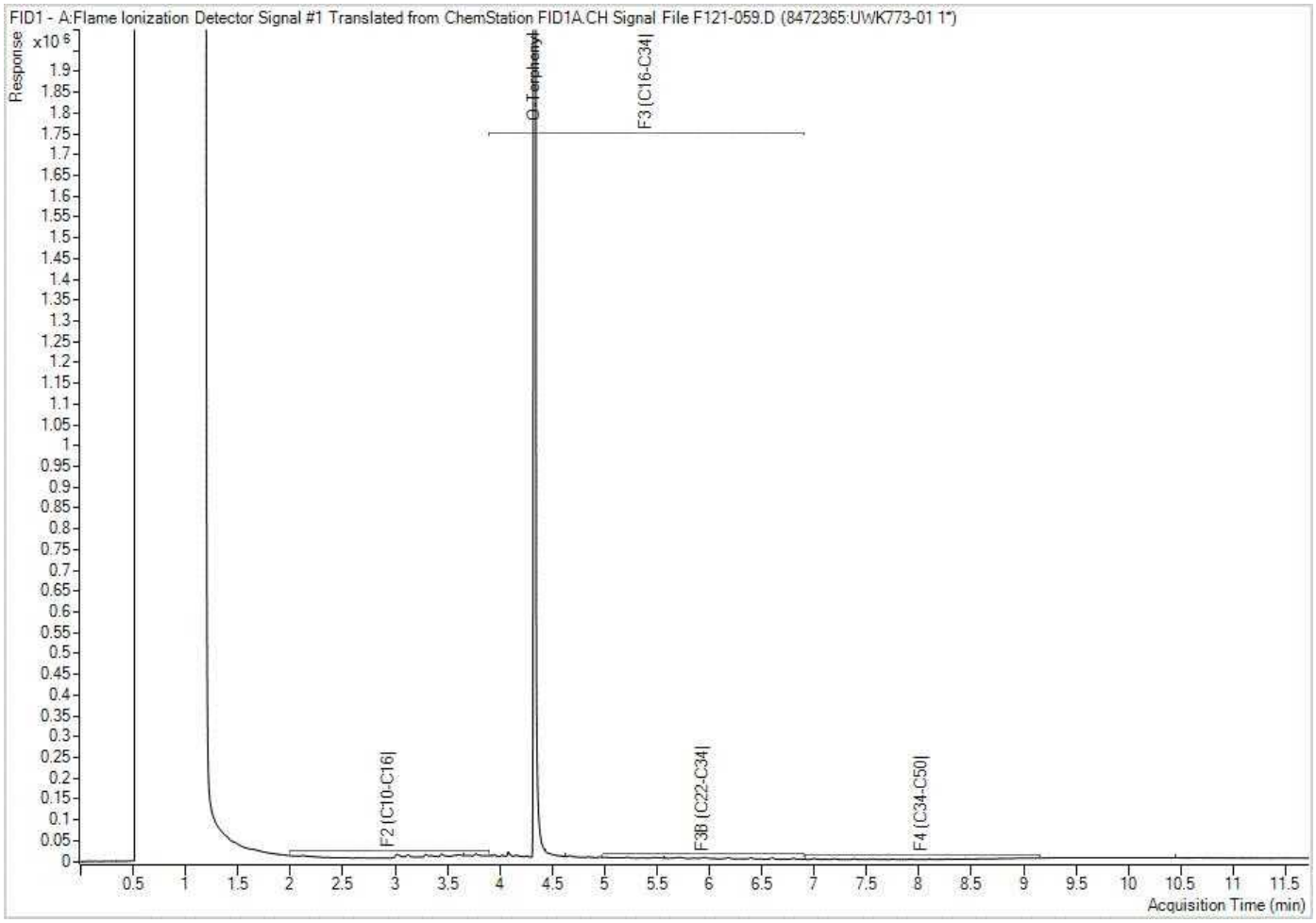


Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Bureau Veritas Job #: C321247
Report Date: 2023/01/30
Bureau Veritas Sample: UWK773

Terrapex Environmental Ltd
Client Project #: CH244.00
Project name: DE ZEN, QUEEN ST, S, MISSISSAUGA
Client ID: BH109-8

Petroleum Hydrocarbons F2-F4 in Soil Chromatogram

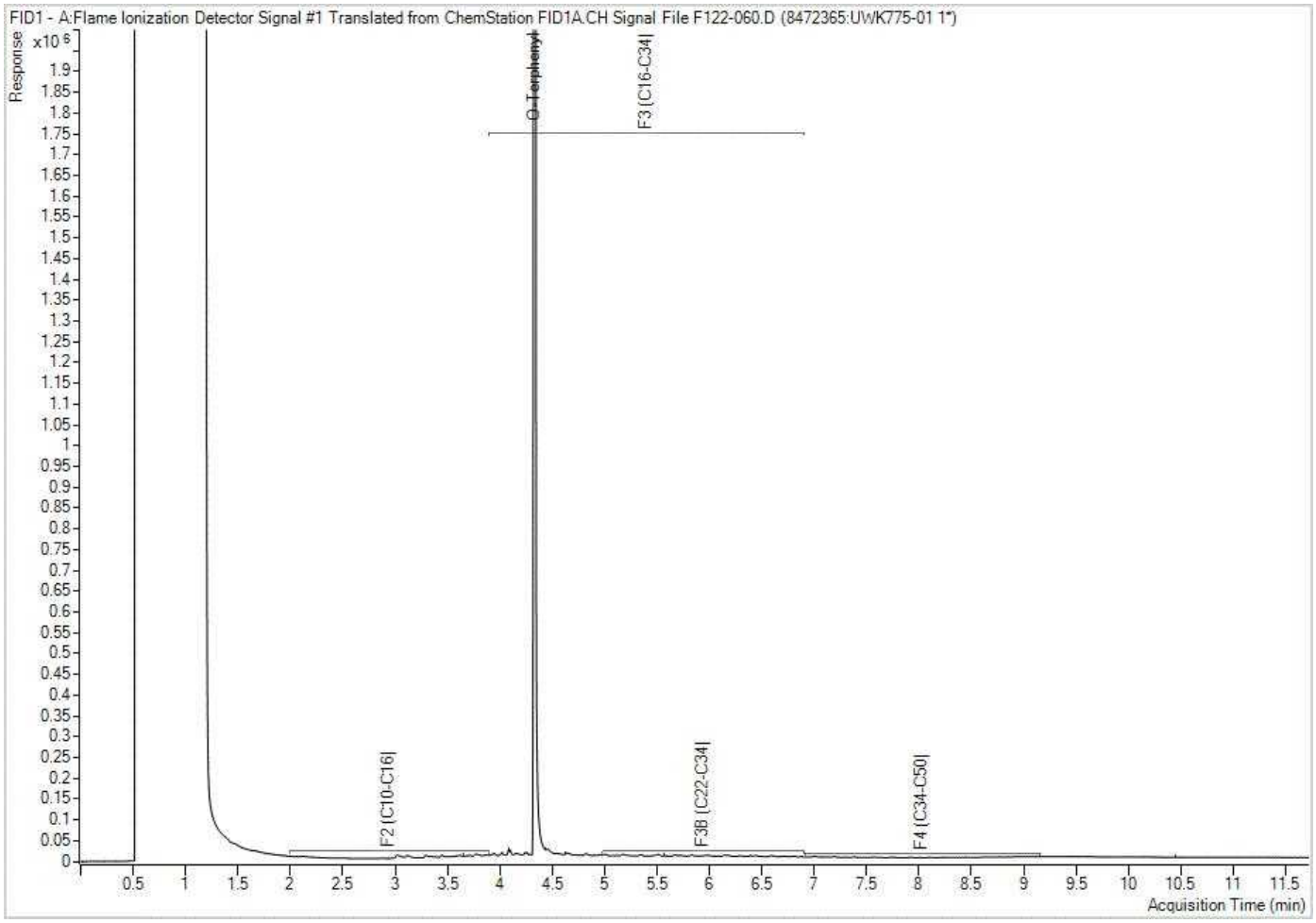


Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Bureau Veritas Job #: C321247
Report Date: 2023/01/30
Bureau Veritas Sample: UWK775

Terrapex Environmental Ltd
Client Project #: CH244.00
Project name: DE ZEN, QUEEN ST, S, MISSISSAUGA
Client ID: MW113-7A

Petroleum Hydrocarbons F2-F4 in Soil Chromatogram



Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Your P.O. #: TPEX SO
Your Project #: CH244.00
Site#: DE ZEN
Site Location: QUEEN ST., SOUTH, MISSISSAUGA
Your C.O.C. #: 910564-13-01

Attention: Geoff Lussier

Terrapex Environmental Ltd
65 Nebo Road
Hamilton, ON
CANADA L8W 2C9

Report Date: 2023/02/03
Report #: R7496181
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C326614
Received: 2023/01/27, 15:36

Sample Matrix: Soil
Samples Received: 12

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Methylnaphthalene Sum	4	N/A	2023/02/01	CAM SOP-00301	EPA 8270D m
Hot Water Extractable Boron	3	2023/01/31	2023/02/01	CAM SOP-00408	R153 Ana. Prot. 2011
Hot Water Extractable Boron	2	2023/02/01	2023/02/02	CAM SOP-00408	R153 Ana. Prot. 2011
1,3-Dichloropropene Sum	1	N/A	2023/02/02		EPA 8260C m
1,3-Dichloropropene Sum	1	N/A	2023/02/03		EPA 8260C m
Free (WAD) Cyanide	5	2023/02/01	2023/02/01	CAM SOP-00457	OMOE E3015 m
Conductivity	5	2023/02/01	2023/02/01	CAM SOP-00414	OMOE E3530 v1 m
Hexavalent Chromium in Soil by IC (1)	4	2023/02/01	2023/02/01	CAM SOP-00436	EPA 3060/7199 m
Hexavalent Chromium in Soil by IC (1)	1	2023/02/01	2023/02/02	CAM SOP-00436	EPA 3060/7199 m
Petroleum Hydro. CCME F1 & BTEX in Soil (2)	3	N/A	2023/01/31	CAM SOP-00315	CCME PHC-CWS m
Petroleum Hydrocarbons F2-F4 in Soil (3)	5	2023/02/01	2023/02/03	CAM SOP-00316	CCME CWS m
Acid Extractable Metals by ICPMS	5	2023/02/01	2023/02/01	CAM SOP-00447	EPA 6020B m
Moisture	12	N/A	2023/01/31	CAM SOP-00445	Carter 2nd ed 51.2 m
PAH Compounds in Soil by GC/MS (SIM)	4	2023/01/31	2023/02/01	CAM SOP-00318	EPA 8270E
pH CaCl2 EXTRACT	5	2023/02/01	2023/02/01	CAM SOP-00413	EPA 9045 D m
Sodium Adsorption Ratio (SAR)	3	N/A	2023/02/01	CAM SOP-00102	EPA 6010C
Sodium Adsorption Ratio (SAR)	2	N/A	2023/02/03	CAM SOP-00102	EPA 6010C
Volatile Organic Compounds and F1 PHCs	2	N/A	2023/02/02	CAM SOP-00230	EPA 8260C m

Remarks:

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

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

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

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Your P.O. #: TPEX SO
Your Project #: CH244.00
Site#: DE ZEN
Site Location: QUEEN ST., SOUTH, MISSISSAUGA
Your C.O.C. #: 910564-13-01

Attention: Geoff Lussier

Terrapex Environmental Ltd
65 Nebo Road
Hamilton, ON
CANADA L8W 2C9

Report Date: 2023/02/03
Report #: R7496181
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C326614
Received: 2023/01/27, 15:36

otherwise agreed in writing. Bureau Veritas is not responsible for the accuracy or any data impacts, that result from the information provided by the customer or their agent.

Solid sample results, except biota, are based on dry weight unless otherwise indicated. Organic analyses are not recovery corrected except for isotope dilution methods.
Results relate to samples tested. When sampling is not conducted by Bureau Veritas, results relate to the supplied samples tested.
This Certificate shall not be reproduced except in full, without the written approval of the laboratory.
Reference Method suffix "m" indicates test methods incorporate validated modifications from specific reference methods to improve performance.
* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.
(1) Soils are reported on a dry weight basis unless otherwise specified.
(2) No lab extraction date is given for F1BTEX & VOC samples that are field preserved with methanol. Extraction date is the date sampled unless otherwise stated.
(3) All CCME PHC results met required criteria unless otherwise stated in the report. The CWS PHC methods employed by Bureau Veritas conform to all prescribed elements of the reference method and performance based elements have been validated. All modifications have been validated and proven equivalent following "Alberta Environment's Interpretation of the Reference Method for the Canada-Wide Standard for Petroleum Hydrocarbons in Soil Validation of Performance-Based Alternative Methods September 2003". Documentation is available upon request. Modifications from Reference Method for the Canada-wide Standard for Petroleum Hydrocarbons in Soil-Tier 1 Method: F2/F3/F4 data reported using validated cold solvent extraction instead of Soxhlet extraction.

Encryption Key

Please direct all questions regarding this Certificate of Analysis to:
Kudrat Bajwa, B.Sc., Project Manager
Email: Kudrat.Bajwa@bureauveritas.com
Phone# (905)817-5755

==========

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Bureau Veritas Job #: C326614
Report Date: 2023/02/03

Terrapex Environmental Ltd
Client Project #: CH244.00
Site Location: QUEEN ST., SOUTH, MISSISSAUGA
Your P.O. #: TPEX SO
Sampler Initials: JD

O.REG 153 METALS & INORGANICS PKG (SOIL)

Bureau Veritas ID		UXN333		UXN336		UXN338		
Sampling Date		2023/01/19 11:00		2023/01/20 12:30		2023/01/23 14:30		
COC Number		910564-13-01		910564-13-01		910564-13-01		
	UNITS	MW106-1	QC Batch	MW115-3	QC Batch	MW116-2	RDL	QC Batch
Calculated Parameters								
Sodium Adsorption Ratio	N/A	11	8474893	12	8474893	2.0		8474893
Inorganics								
Conductivity	mS/cm	1.8	8480307	3.5	8481122	0.82	0.002	8481122
Available (CaCl2) pH	pH	7.73	8480692	7.15	8480692	7.68		8480692
WAD Cyanide (Free)	ug/g	<0.01	8480295	<0.01	8480295	<0.01	0.01	8480487
Chromium (VI)	ug/g	<0.18	8480400	<0.18	8480400	<0.18	0.18	8480400
Metals								
Hot Water Ext. Boron (B)	ug/g	0.38	8479696	1.3	8481077	0.29	0.050	8481077
Acid Extractable Antimony (Sb)	ug/g	0.37	8480318	<0.20	8481080	<0.20	0.20	8481080
Acid Extractable Arsenic (As)	ug/g	4.7	8480318	4.4	8481080	4.7	1.0	8481080
Acid Extractable Barium (Ba)	ug/g	77	8480318	93	8481080	88	0.50	8481080
Acid Extractable Beryllium (Be)	ug/g	0.66	8480318	1.0	8481080	0.79	0.20	8481080
Acid Extractable Boron (B)	ug/g	12	8480318	8.0	8481080	12	5.0	8481080
Acid Extractable Cadmium (Cd)	ug/g	0.14	8480318	0.21	8481080	0.12	0.10	8481080
Acid Extractable Chromium (Cr)	ug/g	22	8480318	26	8481080	26	1.0	8481080
Acid Extractable Cobalt (Co)	ug/g	10	8480318	12	8481080	12	0.10	8481080
Acid Extractable Copper (Cu)	ug/g	25	8480318	27	8481080	30	0.50	8481080
Acid Extractable Lead (Pb)	ug/g	19	8480318	15	8481080	10	1.0	8481080
Acid Extractable Molybdenum (Mo)	ug/g	0.63	8480318	<0.50	8481080	0.52	0.50	8481080
Acid Extractable Nickel (Ni)	ug/g	22	8480318	25	8481080	27	0.50	8481080
Acid Extractable Selenium (Se)	ug/g	<0.50	8480318	<0.50	8481080	<0.50	0.50	8481080
Acid Extractable Silver (Ag)	ug/g	<0.20	8480318	<0.20	8481080	<0.20	0.20	8481080
Acid Extractable Thallium (Tl)	ug/g	0.15	8480318	0.16	8481080	0.15	0.050	8481080
Acid Extractable Uranium (U)	ug/g	0.62	8480318	0.90	8481080	0.66	0.050	8481080
Acid Extractable Vanadium (V)	ug/g	29	8480318	38	8481080	33	5.0	8481080
Acid Extractable Zinc (Zn)	ug/g	74	8480318	72	8481080	67	5.0	8481080
Acid Extractable Mercury (Hg)	ug/g	<0.050	8480318	<0.050	8481080	<0.050	0.050	8481080

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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O.REG 153 METALS & INORGANICS PKG (SOIL)

Bureau Veritas ID		UXN339		UXN340		
Sampling Date		2023/01/26 15:30		2023/01/26 15:30		
COC Number		910564-13-01		910564-13-01		
	UNITS	BH117-2	QC Batch	BH9117-2	RDL	QC Batch
Calculated Parameters						
Sodium Adsorption Ratio	N/A	14	8474893	8.8		8474893
Inorganics						
Conductivity	mS/cm	2.1	8480307	1.9	0.002	8480307
Available (CaCl2) pH	pH	7.76	8480692	7.78		8480692
WAD Cyanide (Free)	ug/g	<0.01	8480487	<0.01	0.01	8480487
Chromium (VI)	ug/g	<0.18	8480963	<0.18	0.18	8480400
Metals						
Hot Water Ext. Boron (B)	ug/g	0.42	8479696	0.21	0.050	8479696
Acid Extractable Antimony (Sb)	ug/g	<0.20	8480318	<0.20	0.20	8480318
Acid Extractable Arsenic (As)	ug/g	2.5	8480318	2.3	1.0	8480318
Acid Extractable Barium (Ba)	ug/g	28	8480318	31	0.50	8480318
Acid Extractable Beryllium (Be)	ug/g	0.32	8480318	0.35	0.20	8480318
Acid Extractable Boron (B)	ug/g	6.0	8480318	5.9	5.0	8480318
Acid Extractable Cadmium (Cd)	ug/g	<0.10	8480318	<0.10	0.10	8480318
Acid Extractable Chromium (Cr)	ug/g	13	8480318	13	1.0	8480318
Acid Extractable Cobalt (Co)	ug/g	5.2	8480318	5.8	0.10	8480318
Acid Extractable Copper (Cu)	ug/g	15	8480318	16	0.50	8480318
Acid Extractable Lead (Pb)	ug/g	5.6	8480318	5.6	1.0	8480318
Acid Extractable Molybdenum (Mo)	ug/g	<0.50	8480318	<0.50	0.50	8480318
Acid Extractable Nickel (Ni)	ug/g	10	8480318	11	0.50	8480318
Acid Extractable Selenium (Se)	ug/g	<0.50	8480318	<0.50	0.50	8480318
Acid Extractable Silver (Ag)	ug/g	<0.20	8480318	<0.20	0.20	8480318
Acid Extractable Thallium (Tl)	ug/g	0.073	8480318	0.079	0.050	8480318
Acid Extractable Uranium (U)	ug/g	0.44	8480318	0.49	0.050	8480318
Acid Extractable Vanadium (V)	ug/g	22	8480318	22	5.0	8480318
Acid Extractable Zinc (Zn)	ug/g	30	8480318	30	5.0	8480318
Acid Extractable Mercury (Hg)	ug/g	<0.050	8480318	<0.050	0.050	8480318

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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O.REG 153 PAHS (SOIL)

Bureau Veritas ID		UXN336		UXN338	UXN341	UXN342		
Sampling Date		2023/01/20 12:30		2023/01/23 14:30	2023/01/26 15:50	2023/01/26 15:50		
COC Number		910564-13-01		910564-13-01	910564-13-01	910564-13-01		
	UNITS	MW115-3	RDL	MW116-2	BH117-3	BH9117-3	RDL	QC Batch
Calculated Parameters								
Methylnaphthalene, 2-(1-)	ug/g	<0.071	0.071	0.016	<0.0071	<0.0071	0.0071	8474961
Polyaromatic Hydrocarbons								
Acenaphthene	ug/g	<0.050	0.050	<0.0050	<0.0050	<0.0050	0.0050	8480116
Acenaphthylene	ug/g	<0.050	0.050	<0.0050	<0.0050	<0.0050	0.0050	8480116
Anthracene	ug/g	<0.050	0.050	<0.0050	<0.0050	<0.0050	0.0050	8480116
Benzo(a)anthracene	ug/g	<0.050	0.050	<0.0050	<0.0050	<0.0050	0.0050	8480116
Benzo(a)pyrene	ug/g	<0.050	0.050	0.0060	<0.0050	<0.0050	0.0050	8480116
Benzo(b/j)fluoranthene	ug/g	<0.050	0.050	0.010	<0.0050	<0.0050	0.0050	8480116
Benzo(g,h,i)perylene	ug/g	<0.050	0.050	0.0097	<0.0050	<0.0050	0.0050	8480116
Benzo(k)fluoranthene	ug/g	<0.050	0.050	<0.0050	<0.0050	<0.0050	0.0050	8480116
Chrysene	ug/g	<0.050	0.050	0.0073	<0.0050	<0.0050	0.0050	8480116
Dibenzo(a,h)anthracene	ug/g	<0.050	0.050	<0.0050	<0.0050	<0.0050	0.0050	8480116
Fluoranthene	ug/g	<0.050	0.050	0.012	<0.0050	<0.0050	0.0050	8480116
Fluorene	ug/g	<0.050	0.050	<0.0050	<0.0050	<0.0050	0.0050	8480116
Indeno(1,2,3-cd)pyrene	ug/g	<0.050	0.050	0.0060	<0.0050	<0.0050	0.0050	8480116
1-Methylnaphthalene	ug/g	<0.050	0.050	0.0078	<0.0050	<0.0050	0.0050	8480116
2-Methylnaphthalene	ug/g	<0.050	0.050	0.0082	<0.0050	<0.0050	0.0050	8480116
Naphthalene	ug/g	<0.050	0.050	0.0057	<0.0050	<0.0050	0.0050	8480116
Phenanthrene	ug/g	<0.050	0.050	0.011	<0.0050	<0.0050	0.0050	8480116
Pyrene	ug/g	<0.050	0.050	0.011	<0.0050	<0.0050	0.0050	8480116
Surrogate Recovery (%)								
D10-Anthracene	%	113		101	110	109		8480116
D14-Terphenyl (FS)	%	94		94	100	100		8480116
D8-Acenaphthylene	%	93		89	97	96		8480116

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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

Bureau Veritas ID		UXN334	UXN335	UXN343		
Sampling Date		2023/01/20 14:00	2023/01/20 14:00	2023/01/25 15:30		
COC Number		910564-13-01	910564-13-01	910564-13-01		
	UNITS	MW106-8	MW9106-8	MW116-9	RDL	QC Batch
BTEX & F1 Hydrocarbons						
Benzene	ug/g	<0.020	<0.020	<0.020	0.020	8477941
Toluene	ug/g	<0.020	<0.020	<0.020	0.020	8477941
Ethylbenzene	ug/g	<0.020	<0.020	<0.020	0.020	8477941
o-Xylene	ug/g	<0.020	<0.020	<0.020	0.020	8477941
p+m-Xylene	ug/g	<0.040	<0.040	<0.040	0.040	8477941
Total Xylenes	ug/g	<0.040	<0.040	<0.040	0.040	8477941
F1 (C6-C10)	ug/g	<10	<10	<10	10	8477941
F1 (C6-C10) - BTEX	ug/g	<10	<10	<10	10	8477941
F2-F4 Hydrocarbons						
F2 (C10-C16 Hydrocarbons)	ug/g	15	<10	11	10	8482438
F3 (C16-C34 Hydrocarbons)	ug/g	<50	<50	<50	50	8482438
F4 (C34-C50 Hydrocarbons)	ug/g	<50	<50	<50	50	8482438
Reached Baseline at C50	ug/g	Yes	Yes	Yes		8482438
Surrogate Recovery (%)						
1,4-Difluorobenzene	%	102	102	101		8477941
4-Bromofluorobenzene	%	98	98	98		8477941
D10-o-Xylene	%	94	99	103		8477941
D4-1,2-Dichloroethane	%	104	104	108		8477941
o-Terphenyl	%	110	107	107		8482438

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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

Bureau Veritas ID		UXN337			UXN337			UXN344		
Sampling Date		2023/01/23 13:00			2023/01/23 13:00			2023/01/26 16:45		
COC Number		910564-13-01			910564-13-01			910564-13-01		
	UNITS	MW115-9	RDL	QC Batch	MW115-9 Lab-Dup	RDL	QC Batch	BH117-9	RDL	QC Batch
Calculated Parameters										
1,3-Dichloropropene (cis+trans)	ug/g	<0.050	0.050	8474865				<0.050	0.050	8474865
Volatile Organics										
Acetone (2-Propanone)	ug/g	<0.49	0.49	8477095	<0.49	0.49	8477095	<0.49	0.49	8477095
Benzene	ug/g	<0.0060	0.0060	8477095	<0.0060	0.0060	8477095	<0.0060	0.0060	8477095
Bromodichloromethane	ug/g	<0.040	0.040	8477095	<0.040	0.040	8477095	<0.040	0.040	8477095
Bromoform	ug/g	<0.040	0.040	8477095	<0.040	0.040	8477095	<0.040	0.040	8477095
Bromomethane	ug/g	<0.040	0.040	8477095	<0.040	0.040	8477095	<0.040	0.040	8477095
Carbon Tetrachloride	ug/g	<0.040	0.040	8477095	<0.040	0.040	8477095	<0.040	0.040	8477095
Chlorobenzene	ug/g	<0.040	0.040	8477095	<0.040	0.040	8477095	<0.040	0.040	8477095
Chloroform	ug/g	<0.040	0.040	8477095	<0.040	0.040	8477095	<0.040	0.040	8477095
Dibromochloromethane	ug/g	<0.040	0.040	8477095	<0.040	0.040	8477095	<0.040	0.040	8477095
1,2-Dichlorobenzene	ug/g	<0.040	0.040	8477095	<0.040	0.040	8477095	<0.040	0.040	8477095
1,3-Dichlorobenzene	ug/g	<0.040	0.040	8477095	<0.040	0.040	8477095	<0.040	0.040	8477095
1,4-Dichlorobenzene	ug/g	<0.040	0.040	8477095	<0.040	0.040	8477095	<0.040	0.040	8477095
Dichlorodifluoromethane (FREON 12)	ug/g	<0.040	0.040	8477095	<0.040	0.040	8477095	<0.040	0.040	8477095
1,1-Dichloroethane	ug/g	<0.040	0.040	8477095	<0.040	0.040	8477095	<0.040	0.040	8477095
1,2-Dichloroethane	ug/g	<0.049	0.049	8477095	<0.049	0.049	8477095	<0.049	0.049	8477095
1,1-Dichloroethylene	ug/g	<0.040	0.040	8477095	<0.040	0.040	8477095	<0.040	0.040	8477095
cis-1,2-Dichloroethylene	ug/g	<0.040	0.040	8477095	<0.040	0.040	8477095	<0.040	0.040	8477095
trans-1,2-Dichloroethylene	ug/g	<0.040	0.040	8477095	<0.040	0.040	8477095	<0.040	0.040	8477095
1,2-Dichloropropane	ug/g	<0.040	0.040	8477095	<0.040	0.040	8477095	<0.040	0.040	8477095
cis-1,3-Dichloropropene	ug/g	<0.030	0.030	8477095	<0.030	0.030	8477095	<0.030	0.030	8477095
trans-1,3-Dichloropropene	ug/g	<0.040	0.040	8477095	<0.040	0.040	8477095	<0.040	0.040	8477095
Ethylbenzene	ug/g	<0.010	0.010	8477095	<0.010	0.010	8477095	<0.010	0.010	8477095
Ethylene Dibromide	ug/g	<0.040	0.040	8477095	<0.040	0.040	8477095	<0.040	0.040	8477095
Hexane	ug/g	<0.040	0.040	8477095	<0.040	0.040	8477095	<0.040	0.040	8477095
Methylene Chloride(Dichloromethane)	ug/g	<0.049	0.049	8477095	<0.049	0.049	8477095	<0.049	0.049	8477095
Methyl Ethyl Ketone (2-Butanone)	ug/g	<0.40	0.40	8477095	<0.40	0.40	8477095	<0.40	0.40	8477095
Methyl Isobutyl Ketone	ug/g	<0.40	0.40	8477095	<0.40	0.40	8477095	<0.40	0.40	8477095

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate

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

Bureau Veritas ID		UXN337			UXN337			UXN344		
Sampling Date		2023/01/23 13:00			2023/01/23 13:00			2023/01/26 16:45		
COC Number		910564-13-01			910564-13-01			910564-13-01		
	UNITS	MW115-9	RDL	QC Batch	MW115-9 Lab-Dup	RDL	QC Batch	BH117-9	RDL	QC Batch
Methyl t-butyl ether (MTBE)	ug/g	<0.040	0.040	8477095	<0.040	0.040	8477095	<0.040	0.040	8477095
Styrene	ug/g	<0.040	0.040	8477095	<0.040	0.040	8477095	<0.040	0.040	8477095
1,1,1,2-Tetrachloroethane	ug/g	<0.040	0.040	8477095	<0.040	0.040	8477095	<0.040	0.040	8477095
1,1,2,2-Tetrachloroethane	ug/g	<0.040	0.040	8477095	<0.040	0.040	8477095	<0.040	0.040	8477095
Tetrachloroethylene	ug/g	<0.040	0.040	8477095	<0.040	0.040	8477095	<0.040	0.040	8477095
Toluene	ug/g	<0.020	0.020	8477095	<0.020	0.020	8477095	<0.020	0.020	8477095
1,1,1-Trichloroethane	ug/g	<0.040	0.040	8477095	<0.040	0.040	8477095	<0.040	0.040	8477095
1,1,2-Trichloroethane	ug/g	<0.040	0.040	8477095	<0.040	0.040	8477095	<0.040	0.040	8477095
Trichloroethylene	ug/g	<0.010	0.010	8477095	<0.010	0.010	8477095	<0.010	0.010	8477095
Trichlorofluoromethane (FREON 11)	ug/g	<0.040	0.040	8477095	<0.040	0.040	8477095	<0.040	0.040	8477095
Vinyl Chloride	ug/g	<0.019	0.019	8477095	<0.019	0.019	8477095	<0.019	0.019	8477095
p+m-Xylene	ug/g	<0.020	0.020	8477095	<0.020	0.020	8477095	<0.020	0.020	8477095
o-Xylene	ug/g	<0.020	0.020	8477095	<0.020	0.020	8477095	<0.020	0.020	8477095
Total Xylenes	ug/g	<0.020	0.020	8477095	<0.020	0.020	8477095	<0.020	0.020	8477095
F1 (C6-C10)	ug/g	<10	10	8477095	<10	10	8477095	<10	10	8477095
F1 (C6-C10) - BTEX	ug/g	<10	10	8477095	<10	10	8477095	<10	10	8477095
F2-F4 Hydrocarbons										
F2 (C10-C16 Hydrocarbons)	ug/g	<10	10	8482438				10	10	8482438
F3 (C16-C34 Hydrocarbons)	ug/g	<50	50	8482438				<50	50	8482438
F4 (C34-C50 Hydrocarbons)	ug/g	<50	50	8482438				<50	50	8482438
Reached Baseline at C50	ug/g	Yes		8482438				Yes		8482438
Surrogate Recovery (%)										
o-Terphenyl	%	108		8482438				106		8482438
4-Bromofluorobenzene	%	90		8477095	90		8477095	90		8477095
D10-o-Xylene	%	93		8477095	93		8477095	94		8477095
D4-1,2-Dichloroethane	%	105		8477095	107		8477095	107		8477095
D8-Toluene	%	96		8477095	97		8477095	98		8477095

RDL = Reportable Detection Limit
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Bureau Veritas Job #: C326614
Report Date: 2023/02/03

Terrapex Environmental Ltd
Client Project #: CH244.00
Site Location: QUEEN ST., SOUTH, MISSISSAUGA
Your P.O. #: TPEX SO
Sampler Initials: JD

RESULTS OF ANALYSES OF SOIL

Bureau Veritas ID		UXN333		UXN334		UXN335	UXN336		
Sampling Date		2023/01/19 11:00		2023/01/20 14:00		2023/01/20 14:00	2023/01/20 12:30		
COC Number		910564-13-01		910564-13-01		910564-13-01	910564-13-01		
	UNITS	MW106-1	QC Batch	MW106-8	QC Batch	MW9106-8	MW115-3	RDL	QC Batch
Inorganics									
Moisture	%	15	8479731	11	8479241	10	15	1.0	8479149

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Bureau Veritas ID		UXN337		UXN338		UXN339	UXN340		
Sampling Date		2023/01/23 13:00		2023/01/23 14:30		2023/01/26 15:30	2023/01/26 15:30		
COC Number		910564-13-01		910564-13-01		910564-13-01	910564-13-01		
	UNITS	MW115-9	QC Batch	MW116-2	QC Batch	BH117-2	BH9117-2	RDL	QC Batch
Inorganics									
Moisture	%	13	8479241	21	8479149	13	14	1.0	8479731

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Bureau Veritas ID		UXN341	UXN342	UXN343	UXN344		
Sampling Date		2023/01/26 15:50	2023/01/26 15:50	2023/01/25 15:30	2023/01/26 16:45		
COC Number		910564-13-01	910564-13-01	910564-13-01	910564-13-01		
	UNITS	BH117-3	BH9117-3	MW116-9	BH117-9	RDL	QC Batch
Inorganics							
Moisture	%	16	15	14	10	1.0	8479149

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Bureau Veritas Job #: C326614
Report Date: 2023/02/03

Terrapex Environmental Ltd
Client Project #: CH244.00
Site Location: QUEEN ST., SOUTH, MISSISSAUGA
Your P.O. #: TPEX SO
Sampler Initials: JD

TEST SUMMARY

Bureau Veritas ID: UXN333 **Collected:** 2023/01/19
Sample ID: MW106-1 **Shipped:**
Matrix: Soil **Received:** 2023/01/27

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hot Water Extractable Boron	ICP	8479696	2023/01/31	2023/02/01	Medhat Nasr
Free (WAD) Cyanide	TECH	8480295	2023/02/01	2023/02/01	Kruti Jitesh Patel
Conductivity	AT	8480307	2023/02/01	2023/02/01	Surinder Rai
Hexavalent Chromium in Soil by IC	IC/SPEC	8480400	2023/02/01	2023/02/01	Violeta Porcila
Acid Extractable Metals by ICPMS	ICP/MS	8480318	2023/02/01	2023/02/01	Viviana Canzonieri
Moisture	BAL	8479731	N/A	2023/01/31	Simrat Bhathal
pH CaCl2 EXTRACT	AT	8480692	2023/02/01	2023/02/01	Surinder Rai
Sodium Adsorption Ratio (SAR)	CALC/MET	8474893	N/A	2023/02/01	Automated Statchk

Bureau Veritas ID: UXN334 **Collected:** 2023/01/20
Sample ID: MW106-8 **Shipped:**
Matrix: Soil **Received:** 2023/01/27

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	8477941	N/A	2023/01/31	Abdikarim Ali
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	8482438	2023/02/01	2023/02/03	Agnieszka Brzuzy-Snopko
Moisture	BAL	8479241	N/A	2023/01/31	Simrat Bhathal

Bureau Veritas ID: UXN335 **Collected:** 2023/01/20
Sample ID: MW9106-8 **Shipped:**
Matrix: Soil **Received:** 2023/01/27

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	8477941	N/A	2023/01/31	Abdikarim Ali
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	8482438	2023/02/01	2023/02/03	Agnieszka Brzuzy-Snopko
Moisture	BAL	8479149	N/A	2023/01/31	Simrat Bhathal

Bureau Veritas ID: UXN336 **Collected:** 2023/01/20
Sample ID: MW115-3 **Shipped:**
Matrix: Soil **Received:** 2023/01/27

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	8474961	N/A	2023/02/01	Automated Statchk
Hot Water Extractable Boron	ICP	8481077	2023/02/01	2023/02/02	Suban Kanapathippllai
Free (WAD) Cyanide	TECH	8480295	2023/02/01	2023/02/01	Kruti Jitesh Patel
Conductivity	AT	8481122	2023/02/01	2023/02/01	Surinder Rai
Hexavalent Chromium in Soil by IC	IC/SPEC	8480400	2023/02/01	2023/02/01	Violeta Porcila
Acid Extractable Metals by ICPMS	ICP/MS	8481080	2023/02/01	2023/02/01	Azita Fazaeli
Moisture	BAL	8479149	N/A	2023/01/31	Simrat Bhathal
PAH Compounds in Soil by GC/MS (SIM)	GC/MS	8480116	2023/01/31	2023/02/01	Jonghan Yoon
pH CaCl2 EXTRACT	AT	8480692	2023/02/01	2023/02/01	Surinder Rai
Sodium Adsorption Ratio (SAR)	CALC/MET	8474893	N/A	2023/02/03	Automated Statchk

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TEST SUMMARY

Bureau Veritas ID: UXN337 **Collected:** 2023/01/23
Sample ID: MW115-9 **Shipped:**
Matrix: Soil **Received:** 2023/01/27

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
1,3-Dichloropropene Sum	CALC	8474865	N/A	2023/02/02	Automated Statchk
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	8482438	2023/02/01	2023/02/03	Agnieszka Brzuzy-Snopko
Moisture	BAL	8479241	N/A	2023/01/31	Simrat Bhathal
Volatile Organic Compounds and F1 PHCs	GC/MSFD	8477095	N/A	2023/02/02	Blair Gannon

Bureau Veritas ID: UXN337 Dup **Collected:** 2023/01/23
Sample ID: MW115-9 **Shipped:**
Matrix: Soil **Received:** 2023/01/27

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Volatile Organic Compounds and F1 PHCs	GC/MSFD	8477095	N/A	2023/02/02	Blair Gannon

Bureau Veritas ID: UXN338 **Collected:** 2023/01/23
Sample ID: MW116-2 **Shipped:**
Matrix: Soil **Received:** 2023/01/27

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	8474961	N/A	2023/02/01	Automated Statchk
Hot Water Extractable Boron	ICP	8481077	2023/02/01	2023/02/02	Suban Kanapathippllai
Free (WAD) Cyanide	TECH	8480487	2023/02/01	2023/02/01	Kruti Jitesh Patel
Conductivity	AT	8481122	2023/02/01	2023/02/01	Surinder Rai
Hexavalent Chromium in Soil by IC	IC/SPEC	8480400	2023/02/01	2023/02/01	Violeta Porcila
Acid Extractable Metals by ICPMS	ICP/MS	8481080	2023/02/01	2023/02/01	Azita Fazaeli
Moisture	BAL	8479149	N/A	2023/01/31	Simrat Bhathal
PAH Compounds in Soil by GC/MS (SIM)	GC/MS	8480116	2023/01/31	2023/02/01	Jonghan Yoon
pH CaCl2 EXTRACT	AT	8480692	2023/02/01	2023/02/01	Surinder Rai
Sodium Adsorption Ratio (SAR)	CALC/MET	8474893	N/A	2023/02/03	Automated Statchk

Bureau Veritas ID: UXN339 **Collected:** 2023/01/26
Sample ID: BH117-2 **Shipped:**
Matrix: Soil **Received:** 2023/01/27

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hot Water Extractable Boron	ICP	8479696	2023/01/31	2023/02/01	Medhat Nasr
Free (WAD) Cyanide	TECH	8480487	2023/02/01	2023/02/01	Kruti Jitesh Patel
Conductivity	AT	8480307	2023/02/01	2023/02/01	Surinder Rai
Hexavalent Chromium in Soil by IC	IC/SPEC	8480963	2023/02/01	2023/02/02	Rupinder Sihota
Acid Extractable Metals by ICPMS	ICP/MS	8480318	2023/02/01	2023/02/01	Viviana Canzonieri
Moisture	BAL	8479731	N/A	2023/01/31	Simrat Bhathal
pH CaCl2 EXTRACT	AT	8480692	2023/02/01	2023/02/01	Surinder Rai
Sodium Adsorption Ratio (SAR)	CALC/MET	8474893	N/A	2023/02/01	Automated Statchk

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TEST SUMMARY

Bureau Veritas ID: UXN340 **Collected:** 2023/01/26
Sample ID: BH9117-2 **Shipped:**
Matrix: Soil **Received:** 2023/01/27

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hot Water Extractable Boron	ICP	8479696	2023/01/31	2023/02/01	Medhat Nasr
Free (WAD) Cyanide	TECH	8480487	2023/02/01	2023/02/01	Kruti Jitesh Patel
Conductivity	AT	8480307	2023/02/01	2023/02/01	Surinder Rai
Hexavalent Chromium in Soil by IC	IC/SPEC	8480400	2023/02/01	2023/02/01	Violeta Porcila
Acid Extractable Metals by ICPMS	ICP/MS	8480318	2023/02/01	2023/02/01	Viviana Canzonieri
Moisture	BAL	8479731	N/A	2023/01/31	Simrat Bhathal
pH CaCl2 EXTRACT	AT	8480692	2023/02/01	2023/02/01	Surinder Rai
Sodium Adsorption Ratio (SAR)	CALC/MET	8474893	N/A	2023/02/01	Automated Statchk

Bureau Veritas ID: UXN341 **Collected:** 2023/01/26
Sample ID: BH117-3 **Shipped:**
Matrix: Soil **Received:** 2023/01/27

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	8474961	N/A	2023/02/01	Automated Statchk
Moisture	BAL	8479149	N/A	2023/01/31	Simrat Bhathal
PAH Compounds in Soil by GC/MS (SIM)	GC/MS	8480116	2023/01/31	2023/02/01	Jonghan Yoon

Bureau Veritas ID: UXN342 **Collected:** 2023/01/26
Sample ID: BH9117-3 **Shipped:**
Matrix: Soil **Received:** 2023/01/27

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	8474961	N/A	2023/02/01	Automated Statchk
Moisture	BAL	8479149	N/A	2023/01/31	Simrat Bhathal
PAH Compounds in Soil by GC/MS (SIM)	GC/MS	8480116	2023/01/31	2023/02/01	Jonghan Yoon

Bureau Veritas ID: UXN343 **Collected:** 2023/01/25
Sample ID: MW116-9 **Shipped:**
Matrix: Soil **Received:** 2023/01/27

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	8477941	N/A	2023/01/31	Abdikarim Ali
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	8482438	2023/02/01	2023/02/03	Agnieszka Brzuzy-Snopko
Moisture	BAL	8479149	N/A	2023/01/31	Simrat Bhathal

Bureau Veritas ID: UXN344 **Collected:** 2023/01/26
Sample ID: BH117-9 **Shipped:**
Matrix: Soil **Received:** 2023/01/27

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
1,3-Dichloropropene Sum	CALC	8474865	N/A	2023/02/03	Automated Statchk
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	8482438	2023/02/01	2023/02/03	Agnieszka Brzuzy-Snopko
Moisture	BAL	8479149	N/A	2023/01/31	Simrat Bhathal

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Bureau Veritas Job #: C326614
Report Date: 2023/02/03

Terrapex Environmental Ltd
Client Project #: CH244.00
Site Location: QUEEN ST., SOUTH, MISSISSAUGA
Your P.O. #: TPEX SO
Sampler Initials: JD

TEST SUMMARY

Bureau Veritas ID: UXN344
Sample ID: BH117-9
Matrix: Soil

Collected: 2023/01/26
Shipped:
Received: 2023/01/27

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Volatile Organic Compounds and F1 PHCs	GC/MSFD	8477095	N/A	2023/02/02	Blair Gannon

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GENERAL COMMENTS

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

Package 1	3.0°C

Sample UXN336 [MW115-3] : PAH Analysis: Due to the sample matrix, sample required dilution. Detection limits were adjusted accordingly.

Results relate only to the items tested.

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QUALITY ASSURANCE REPORT

			Matrix Spike		SPIKED BLANK		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8477095	4-Bromofluorobenzene	2023/02/02	98	60 - 140	98	60 - 140	92	%		
8477095	D10-o-Xylene	2023/02/02	103	60 - 130	104	60 - 130	99	%		
8477095	D4-1,2-Dichloroethane	2023/02/02	101	60 - 140	101	60 - 140	108	%		
8477095	D8-Toluene	2023/02/02	107	60 - 140	107	60 - 140	98	%		
8477941	1,4-Difluorobenzene	2023/01/31	98	60 - 140	102	60 - 140	102	%		
8477941	4-Bromofluorobenzene	2023/01/31	102	60 - 140	100	60 - 140	98	%		
8477941	D10-o-Xylene	2023/01/31	93	60 - 140	90	60 - 140	95	%		
8477941	D4-1,2-Dichloroethane	2023/01/31	103	60 - 140	110	60 - 140	108	%		
8480116	D10-Anthracene	2023/02/01	93	50 - 130	109	50 - 130	106	%		
8480116	D14-Terphenyl (FS)	2023/02/01	91	50 - 130	98	50 - 130	95	%		
8480116	D8-Acenaphthylene	2023/02/01	85	50 - 130	98	50 - 130	90	%		
8482438	o-Terphenyl	2023/02/03	105	60 - 130	106	60 - 130	109	%		
8477095	1,1,1,2-Tetrachloroethane	2023/02/02	95	60 - 140	101	60 - 130	<0.040	ug/g	NC	50
8477095	1,1,1-Trichloroethane	2023/02/02	102	60 - 140	105	60 - 130	<0.040	ug/g	NC	50
8477095	1,1,2,2-Tetrachloroethane	2023/02/02	87	60 - 140	93	60 - 130	<0.040	ug/g	NC	50
8477095	1,1,2-Trichloroethane	2023/02/02	98	60 - 140	102	60 - 130	<0.040	ug/g	NC	50
8477095	1,1-Dichloroethane	2023/02/02	99	60 - 140	102	60 - 130	<0.040	ug/g	NC	50
8477095	1,1-Dichloroethylene	2023/02/02	105	60 - 140	107	60 - 130	<0.040	ug/g	NC	50
8477095	1,2-Dichlorobenzene	2023/02/02	88	60 - 140	96	60 - 130	<0.040	ug/g	NC	50
8477095	1,2-Dichloroethane	2023/02/02	93	60 - 140	97	60 - 130	<0.049	ug/g	NC	50
8477095	1,2-Dichloropropane	2023/02/02	96	60 - 140	100	60 - 130	<0.040	ug/g	NC	50
8477095	1,3-Dichlorobenzene	2023/02/02	87	60 - 140	95	60 - 130	<0.040	ug/g	NC	50
8477095	1,4-Dichlorobenzene	2023/02/02	99	60 - 140	109	60 - 130	<0.040	ug/g	NC	50
8477095	Acetone (2-Propanone)	2023/02/02	95	60 - 140	98	60 - 140	<0.49	ug/g	NC	50
8477095	Benzene	2023/02/02	91	60 - 140	94	60 - 130	<0.0060	ug/g	NC	50
8477095	Bromodichloromethane	2023/02/02	97	60 - 140	101	60 - 130	<0.040	ug/g	NC	50
8477095	Bromoform	2023/02/02	87	60 - 140	94	60 - 130	<0.040	ug/g	NC	50
8477095	Bromomethane	2023/02/02	101	60 - 140	106	60 - 140	<0.040	ug/g	NC	50
8477095	Carbon Tetrachloride	2023/02/02	103	60 - 140	105	60 - 130	<0.040	ug/g	NC	50
8477095	Chlorobenzene	2023/02/02	93	60 - 140	97	60 - 130	<0.040	ug/g	NC	50

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QUALITY ASSURANCE REPORT(CONT'D)

			Matrix Spike		SPIKED BLANK		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8477095	Chloroform	2023/02/02	97	60 - 140	100	60 - 130	<0.040	ug/g	NC	50
8477095	cis-1,2-Dichloroethylene	2023/02/02	100	60 - 140	103	60 - 130	<0.040	ug/g	NC	50
8477095	cis-1,3-Dichloropropene	2023/02/02	83	60 - 140	94	60 - 130	<0.030	ug/g	NC	50
8477095	Dibromochloromethane	2023/02/02	87	60 - 140	94	60 - 130	<0.040	ug/g	NC	50
8477095	Dichlorodifluoromethane (FREON 12)	2023/02/02	117	60 - 140	113	60 - 140	<0.040	ug/g	NC	50
8477095	Ethylbenzene	2023/02/02	84	60 - 140	89	60 - 130	<0.010	ug/g	NC	50
8477095	Ethylene Dibromide	2023/02/02	87	60 - 140	92	60 - 130	<0.040	ug/g	NC	50
8477095	F1 (C6-C10) - BTEX	2023/02/02					<10	ug/g	NC	30
8477095	F1 (C6-C10)	2023/02/02	97	60 - 140	101	80 - 120	<10	ug/g	NC	30
8477095	Hexane	2023/02/02	111	60 - 140	114	60 - 130	<0.040	ug/g	NC	50
8477095	Methyl Ethyl Ketone (2-Butanone)	2023/02/02	95	60 - 140	99	60 - 140	<0.40	ug/g	NC	50
8477095	Methyl Isobutyl Ketone	2023/02/02	87	60 - 140	92	60 - 130	<0.40	ug/g	NC	50
8477095	Methyl t-butyl ether (MTBE)	2023/02/02	90	60 - 140	93	60 - 130	<0.040	ug/g	NC	50
8477095	Methylene Chloride(Dichloromethane)	2023/02/02	97	60 - 140	100	60 - 130	<0.049	ug/g	NC	50
8477095	o-Xylene	2023/02/02	89	60 - 140	94	60 - 130	<0.020	ug/g	NC	50
8477095	p+m-Xylene	2023/02/02	88	60 - 140	93	60 - 130	<0.020	ug/g	NC	50
8477095	Styrene	2023/02/02	97	60 - 140	103	60 - 130	<0.040	ug/g	NC	50
8477095	Tetrachloroethylene	2023/02/02	91	60 - 140	96	60 - 130	<0.040	ug/g	NC	50
8477095	Toluene	2023/02/02	94	60 - 140	98	60 - 130	<0.020	ug/g	NC	50
8477095	Total Xylenes	2023/02/02					<0.020	ug/g	NC	50
8477095	trans-1,2-Dichloroethylene	2023/02/02	99	60 - 140	101	60 - 130	<0.040	ug/g	NC	50
8477095	trans-1,3-Dichloropropene	2023/02/02	90	60 - 140	104	60 - 130	<0.040	ug/g	NC	50
8477095	Trichloroethylene	2023/02/02	103	60 - 140	106	60 - 130	<0.010	ug/g	NC	50
8477095	Trichlorofluoromethane (FREON 11)	2023/02/02	104	60 - 140	107	60 - 130	<0.040	ug/g	NC	50
8477095	Vinyl Chloride	2023/02/02	102	60 - 140	103	60 - 130	<0.019	ug/g	NC	50
8477941	Benzene	2023/01/31	90	50 - 140	93	50 - 140	<0.020	ug/g	NC	50
8477941	Ethylbenzene	2023/01/31	97	50 - 140	96	50 - 140	<0.020	ug/g	NC	50
8477941	F1 (C6-C10) - BTEX	2023/01/31					<10	ug/g	NC	30
8477941	F1 (C6-C10)	2023/01/31	88	60 - 140	95	80 - 120	<10	ug/g	NC	30
8477941	o-Xylene	2023/01/31	97	50 - 140	93	50 - 140	<0.020	ug/g	NC	50

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QUALITY ASSURANCE REPORT(CONT'D)

			Matrix Spike		SPIKED BLANK		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8477941	p+m-Xylene	2023/01/31	93	50 - 140	90	50 - 140	<0.040	ug/g	NC	50
8477941	Toluene	2023/01/31	86	50 - 140	85	50 - 140	<0.020	ug/g	NC	50
8477941	Total Xylenes	2023/01/31					<0.040	ug/g	NC	50
8479149	Moisture	2023/01/31							0	20
8479241	Moisture	2023/01/31							1.1	20
8479696	Hot Water Ext. Boron (B)	2023/02/01	101	75 - 125	104	75 - 125	<0.050	ug/g	0.99	40
8479731	Moisture	2023/01/31							8.5	20
8480116	1-Methylnaphthalene	2023/02/01	79	50 - 130	80	50 - 130	<0.0050	ug/g	NC	40
8480116	2-Methylnaphthalene	2023/02/01	81	50 - 130	82	50 - 130	<0.0050	ug/g	NC	40
8480116	Acenaphthene	2023/02/01	93	50 - 130	96	50 - 130	<0.0050	ug/g	NC	40
8480116	Acenaphthylene	2023/02/01	90	50 - 130	94	50 - 130	<0.0050	ug/g	NC	40
8480116	Anthracene	2023/02/01	90	50 - 130	97	50 - 130	<0.0050	ug/g	NC	40
8480116	Benzo(a)anthracene	2023/02/01	90	50 - 130	96	50 - 130	<0.0050	ug/g	NC	40
8480116	Benzo(a)pyrene	2023/02/01	87	50 - 130	94	50 - 130	<0.0050	ug/g	NC	40
8480116	Benzo(b/j)fluoranthene	2023/02/01	88	50 - 130	96	50 - 130	<0.0050	ug/g	NC	40
8480116	Benzo(g,h,i)perylene	2023/02/01	98	50 - 130	107	50 - 130	<0.0050	ug/g	NC	40
8480116	Benzo(k)fluoranthene	2023/02/01	85	50 - 130	91	50 - 130	<0.0050	ug/g	NC	40
8480116	Chrysene	2023/02/01	91	50 - 130	98	50 - 130	<0.0050	ug/g	NC	40
8480116	Dibenzo(a,h)anthracene	2023/02/01	91	50 - 130	97	50 - 130	<0.0050	ug/g	NC	40
8480116	Fluoranthene	2023/02/01	93	50 - 130	100	50 - 130	<0.0050	ug/g	NC	40
8480116	Fluorene	2023/02/01	91	50 - 130	96	50 - 130	<0.0050	ug/g	NC	40
8480116	Indeno(1,2,3-cd)pyrene	2023/02/01	100	50 - 130	107	50 - 130	<0.0050	ug/g	NC	40
8480116	Naphthalene	2023/02/01	88	50 - 130	90	50 - 130	<0.0050	ug/g	NC	40
8480116	Phenanthrene	2023/02/01	91	50 - 130	98	50 - 130	<0.0050	ug/g	NC	40
8480116	Pyrene	2023/02/01	92	50 - 130	98	50 - 130	<0.0050	ug/g	NC	40
8480295	WAD Cyanide (Free)	2023/02/01	104	75 - 125	101	80 - 120	<0.01	ug/g	NC	35
8480307	Conductivity	2023/02/01			104	90 - 110	<0.002	mS/cm	1.8	10
8480318	Acid Extractable Antimony (Sb)	2023/02/01	93	75 - 125	99	80 - 120	<0.20	ug/g	NC	30
8480318	Acid Extractable Arsenic (As)	2023/02/01	102	75 - 125	103	80 - 120	<1.0	ug/g	3.5	30
8480318	Acid Extractable Barium (Ba)	2023/02/01	NC	75 - 125	95	80 - 120	<0.50	ug/g	4.4	30

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QUALITY ASSURANCE REPORT(CONT'D)

			Matrix Spike		SPIKED BLANK		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8480318	Acid Extractable Beryllium (Be)	2023/02/01	98	75 - 125	94	80 - 120	<0.20	ug/g	3.3	30
8480318	Acid Extractable Boron (B)	2023/02/01	95	75 - 125	94	80 - 120	<5.0	ug/g	0.52	30
8480318	Acid Extractable Cadmium (Cd)	2023/02/01	98	75 - 125	98	80 - 120	<0.10	ug/g	23	30
8480318	Acid Extractable Chromium (Cr)	2023/02/01	101	75 - 125	99	80 - 120	<1.0	ug/g	1.2	30
8480318	Acid Extractable Cobalt (Co)	2023/02/01	100	75 - 125	101	80 - 120	<0.10	ug/g	3.1	30
8480318	Acid Extractable Copper (Cu)	2023/02/01	97	75 - 125	101	80 - 120	<0.50	ug/g	3.8	30
8480318	Acid Extractable Lead (Pb)	2023/02/01	97	75 - 125	100	80 - 120	<1.0	ug/g	0.72	30
8480318	Acid Extractable Mercury (Hg)	2023/02/01	103	75 - 125	101	80 - 120	<0.050	ug/g	NC	30
8480318	Acid Extractable Molybdenum (Mo)	2023/02/01	101	75 - 125	100	80 - 120	<0.50	ug/g	NC	30
8480318	Acid Extractable Nickel (Ni)	2023/02/01	100	75 - 125	102	80 - 120	<0.50	ug/g	3.6	30
8480318	Acid Extractable Selenium (Se)	2023/02/01	103	75 - 125	104	80 - 120	<0.50	ug/g	NC	30
8480318	Acid Extractable Silver (Ag)	2023/02/01	100	75 - 125	103	80 - 120	<0.20	ug/g	NC	30
8480318	Acid Extractable Thallium (Tl)	2023/02/01	100	75 - 125	100	80 - 120	<0.050	ug/g	3.4	30
8480318	Acid Extractable Uranium (U)	2023/02/01	98	75 - 125	99	80 - 120	<0.050	ug/g	5.4	30
8480318	Acid Extractable Vanadium (V)	2023/02/01	NC	75 - 125	98	80 - 120	<5.0	ug/g	0.63	30
8480318	Acid Extractable Zinc (Zn)	2023/02/01	NC	75 - 125	96	80 - 120	<5.0	ug/g	2.4	30
8480400	Chromium (VI)	2023/02/01	86	70 - 130	92	80 - 120	<0.18	ug/g	0.93	35
8480487	WAD Cyanide (Free)	2023/02/01	104	75 - 125	104	80 - 120	<0.01	ug/g	NC	35
8480692	Available (CaCl2) pH	2023/02/01			99	97 - 103			0.58	N/A
8480963	Chromium (VI)	2023/02/02	87	70 - 130	89	80 - 120	<0.18	ug/g	NC	35
8481077	Hot Water Ext. Boron (B)	2023/02/02	101	75 - 125	101	75 - 125	<0.050	ug/g	2.4	40
8481080	Acid Extractable Antimony (Sb)	2023/02/01	101	75 - 125	99	80 - 120	<0.20	ug/g	NC	30
8481080	Acid Extractable Arsenic (As)	2023/02/01	104	75 - 125	100	80 - 120	<1.0	ug/g	3.0	30
8481080	Acid Extractable Barium (Ba)	2023/02/01	NC	75 - 125	101	80 - 120	<0.50	ug/g	0.59	30
8481080	Acid Extractable Beryllium (Be)	2023/02/01	107	75 - 125	103	80 - 120	<0.20	ug/g	2.7	30
8481080	Acid Extractable Boron (B)	2023/02/01	110	75 - 125	104	80 - 120	<5.0	ug/g	0.72	30
8481080	Acid Extractable Cadmium (Cd)	2023/02/01	100	75 - 125	96	80 - 120	<0.10	ug/g	NC	30
8481080	Acid Extractable Chromium (Cr)	2023/02/01	107	75 - 125	101	80 - 120	<1.0	ug/g	0.34	30
8481080	Acid Extractable Cobalt (Co)	2023/02/01	104	75 - 125	100	80 - 120	<0.10	ug/g	1.7	30
8481080	Acid Extractable Copper (Cu)	2023/02/01	103	75 - 125	103	80 - 120	<0.50	ug/g	5.1	30

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

QUALITY ASSURANCE REPORT(CONT'D)

			Matrix Spike		SPIKED BLANK		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8481080	Acid Extractable Lead (Pb)	2023/02/01	97	75 - 125	96	80 - 120	<1.0	ug/g	0.31	30
8481080	Acid Extractable Mercury (Hg)	2023/02/01	103	75 - 125	96	80 - 120	<0.050	ug/g	NC	30
8481080	Acid Extractable Molybdenum (Mo)	2023/02/01	108	75 - 125	101	80 - 120	<0.50	ug/g	NC	30
8481080	Acid Extractable Nickel (Ni)	2023/02/01	106	75 - 125	103	80 - 120	<0.50	ug/g	1.3	30
8481080	Acid Extractable Selenium (Se)	2023/02/01	103	75 - 125	99	80 - 120	<0.50	ug/g	NC	30
8481080	Acid Extractable Silver (Ag)	2023/02/01	100	75 - 125	99	80 - 120	<0.20	ug/g	NC	30
8481080	Acid Extractable Thallium (Tl)	2023/02/01	97	75 - 125	97	80 - 120	<0.050	ug/g	7.4	30
8481080	Acid Extractable Uranium (U)	2023/02/01	104	75 - 125	102	80 - 120	<0.050	ug/g	4.3	30
8481080	Acid Extractable Vanadium (V)	2023/02/01	106	75 - 125	100	80 - 120	<5.0	ug/g	1.3	30
8481080	Acid Extractable Zinc (Zn)	2023/02/01	98	75 - 125	102	80 - 120	<5.0	ug/g	2.6	30
8481122	Conductivity	2023/02/01			105	90 - 110	<0.002	mS/cm	0.82	10
8482438	F2 (C10-C16 Hydrocarbons)	2023/02/03	116	60 - 130	115	80 - 120	<10	ug/g	NC	30
8482438	F3 (C16-C34 Hydrocarbons)	2023/02/03	114	60 - 130	111	80 - 120	<50	ug/g	NC	30
8482438	F4 (C34-C50 Hydrocarbons)	2023/02/03	109	60 - 130	107	80 - 120	<50	ug/g	NC	30

N/A = Not Applicable

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

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

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

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

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

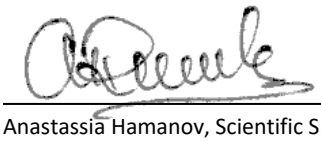
NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spike amount was too small to permit a reliable recovery calculation (matrix spike concentration was less than the native sample concentration)

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

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

VALIDATION SIGNATURE PAGE

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



Anastassia Hamanov, Scientific Specialist

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

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E-mail: g.lussier@terrapex.com

Page 1 of 2

27-Jan-23 15:36
Kudrat Bajwa
C326614

Bottle Order #: 910564

COC #: C#910564-13-01

Project Manager: Kudrat Bajwa

AK0 ENV-673

INVOICE TO:		REPORT TO:		PROJECT INFORMATION:	
Company Name:	#4398 Terrapex Environmental Ltd	Company Name:	TPEX	Quotation #:	~~C20955~~
Attention:	Accounts Payable	Attention:	~~Chaoran Li~~ Geoff Lussier	P.O. #:	TPEX SO
Address:	90 Scarsdale Rd	Address:	65 Nebo Road	Project:	~~CT3696.00~~ CH244'00
	Toronto ON M3B 2R7		Hamilton ON L8W 2C9	Project Name:	De Zon
Tel:	(416) 245-0011 Fax: (416) 245-0012	Tel:	(416) 245-0011 Ext: 232 Fax 4165703209	Site #:	Queen St. South Mississauga
Email:	accounts.payable@terrapex.com	Email:	g.lussier@terrapex.com; EDD@terrapex.com;	Sampled By:	JD

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

Regulation 153 (2011): ☐ Table 1 ☒ Res/Park ☒ Medium/Fine ☐ Table 2 ☐ Ind/Comm ☐ Coarse ☐ Table 3 ☐ Agri/Other ☒ For RSC ☐ Table ___

Other Regulations: ☐ CCME ☐ Sanitary Sewer Bylaw ☐ Reg 558 ☐ Storm Sewer Bylaw ☐ MISA Municipality ☐ PWQO ☐ Reg 406 Table ☐ Other

Special Instructions

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

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

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

Job Specific Rush TAT (if applies to entire submission)
Date Required: ___ Time Required: ___ ☐
Rush Confirmation Number: ___ *(call lab for #)*

ANALYSIS REQUESTED (PLEASE BE SPECIFIC)

	Sample Barcode Label	Sample (Location) Identification	Date Sampled	Time Sampled	Matrix	Field Filtered (please circle): Metals / Hg / Cr VI	Petroleum Hydro. CCME F1 & BTEX in Soil	MeI (Reg 153 MeI pkg)	VOCs/F1-F4	PCBs 3 MeI PAHs and PAHs	PAHs	BTEX/F1-F4	# of Bottles	Comments
1		MW106-1	Jan19/23	11:00	Soil			X					2	
2		MW106-8	Jan20/23	14:00					✱			X	4	
3		MW106-8	Jan20/23	14:00					✱			X	4	
4		MW115-3	Jan20/23	12:30				X			X		2	
5		MW115-9	Jan23/23	13:00					X				4	
6		MW116-2	Jan25/23	10:30				X			X		2	
7		BH117-2	Jan26/23	15:30				X					2	
8		BH9117-2	Jan26/23	15:30				X					2	
9		BH117-3	Jan26/23	15:50							X		1	
10		BH9117-3	Jan26/23	15:50							X		1	

* RELINQUISHED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	RECEIVED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	# jars used and not submitted
Wahida WAHIDA NASHREEN	27Jan/23	11:50	JARSHEER	23/01/27	15:36	

Laboratory Use Only

Time Sensitive	Temperature (°C) on Recei	Custody Seal	Yes	No
	2/3/4	Present		
		Intact		

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

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

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

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

White: Bureau Veritas Yellow: Client

Bureau Veritas Canada (2019) Inc.

BUREAU VERITAS

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

CHAIN OF CUSTODY RECORD

E-mail: g.lussier@terrapex.com

INVOICE TO:		REPORT TO:		PROJECT INFORMATION:		Laboratory Use Only:	
Company Name:	#4398 Terrapex Environmental Ltd	Company Name:	TPEX	Quotation #:	C20955	Bureau Veritas Job #:	Bottle Order #:
Attention:	Accounts Payable	Attention:	~~Chaoran Li~~ Geoff Lussier	P.O. #:	TPEX 50		910564
Address:	90 Scarsdale Rd Toronto ON M3B 2R7	Address:	65 Nebo Road Hamilton ON L8W 2C9	Project:	~~CT3696.00~~ CH244.00	COC #:	Project Manager:
Tel:	(416) 245-0011 Fax: (416) 245-0012	Tel:	(416) 245-0011 Ext. 232 Fax: 4165703209	Project Name:	Dr Zen	C#910564-11-01	Kudrat Bajwa
Email:	accounts.payable@terrapex.com	Email:	g.li@terrapex.com; EDD@terrapex.com;	Site #:	Queen St S, Mississauga		
				Sampled By:	JD		

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

Regulation 153 (2011)	Other Regulations	Special Instructions
☐ Table 1 ☒ Res/Park ☒ Medium/Fine ☐ Table 2 ☐ Ind/Comm ☐ Coarse ☒ Table 3 ☐ Agri/Other ☒ For RSC ☐ Table ___	☐ CCME ☐ Sanitary Sewer Bylaw ☐ Reg 558 ☐ Storm Sewer Bylaw ☐ MISA Municipality _____ ☐ PWQO ☐ Reg 406 Table _____ ☐ Other _____	

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

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

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

Job Specific Rush TAT (if applies to entire submission)
Date Required: _____ Time Required: _____ ☐
Rush Confirmation Number: _____ *(call lab for #)*

	Sample Barcode Label	Sample (Location) Identification	Date Sampled	Time Sampled	Matrix	Field Filtered (please circle): Metals / Hg / Cr VI	Petroleum Hydro CCME F1 & BTEX in Soil	MeI (Reg 153 MeI PAHs)	VOCs/F1-F4	PAHs	BTEX/F1-F4	# of Bottles	Comments
1		MW116-9	Jan25/23	15:30	Soil				~~X~~		X	4	
2		BH 117-9	Jan26/23	16:45	Soil				X			4	
3													
4													
5													
6													
7													
8													
9													
10													

* RELINQUISHED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	RECEIVED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	# jars used and not submitted	Laboratory Use Only			
Wahida WAHIDA NASHREEN	27 Jan/23	11:50	ARSHDEEP	23/01/27	15:36		Time Sensitive	Temperature (°C) on Recei 2/3/4	Custody Seal Present ✓ Intact ✓	Yes / No

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

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

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

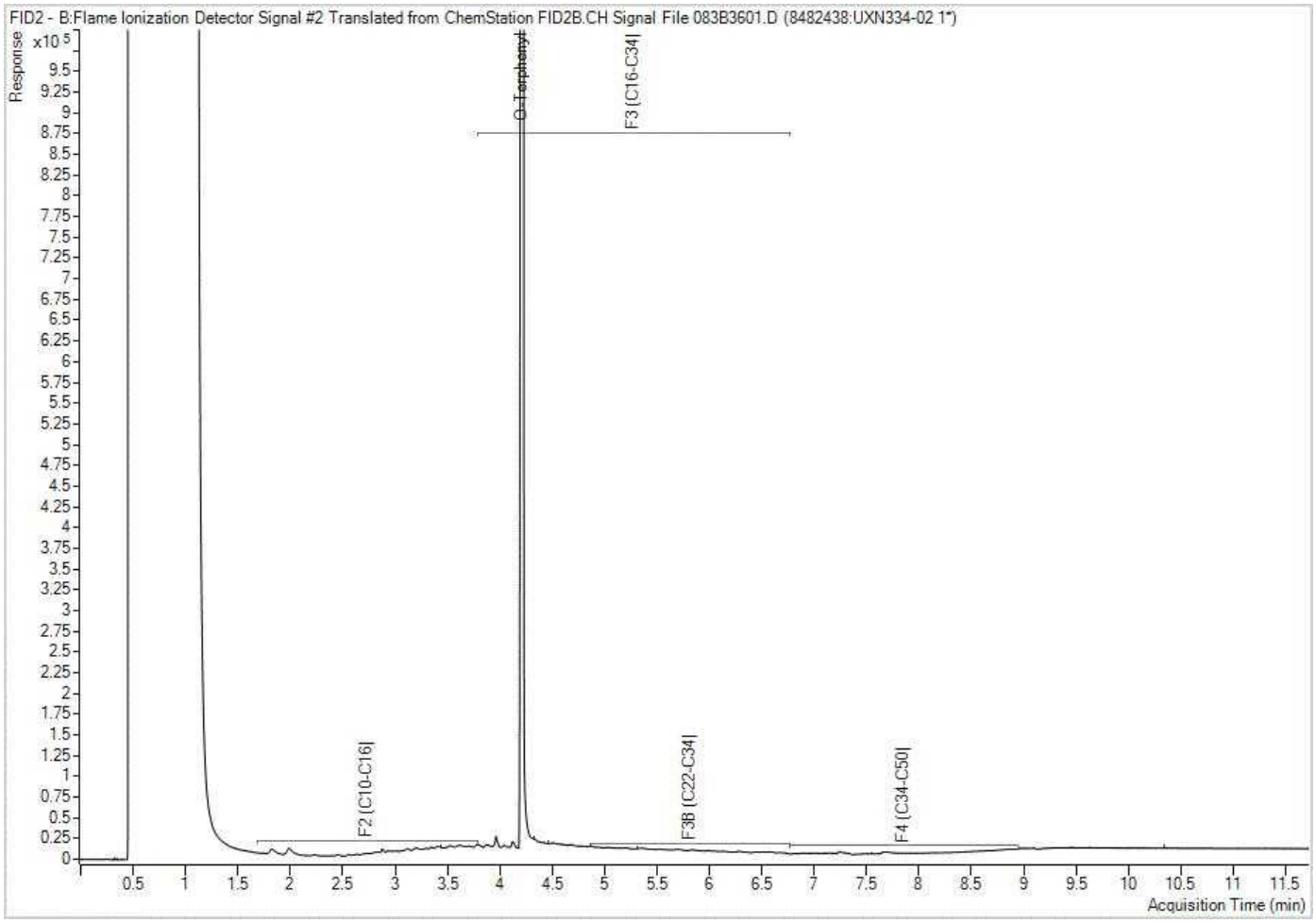
White: Bureau Veritas Yellow: Client

Bureau Veritas Canada (2019) Inc.

Bureau Veritas Job #: C326614
Report Date: 2023/02/03
Bureau Veritas Sample: UXN334

Terrapex Environmental Ltd
Client Project #: CH244.00
Project name: QUEEN ST., SOUTH, MISSISSAUGA
Client ID: MW106-8

Petroleum Hydrocarbons F2-F4 in Soil Chromatogram

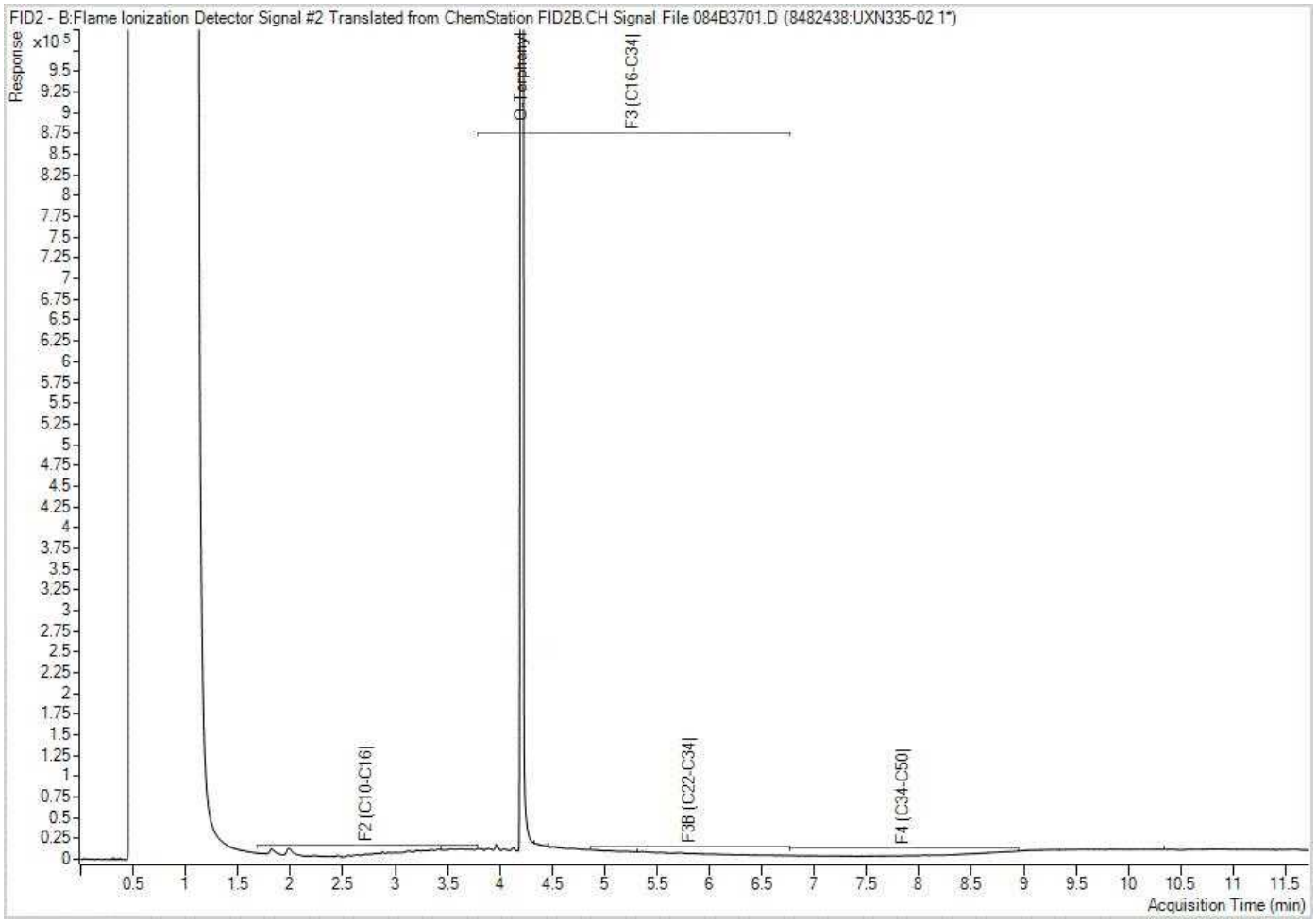


Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Bureau Veritas Job #: C326614
Report Date: 2023/02/03
Bureau Veritas Sample: UXN335

Terrapex Environmental Ltd
Client Project #: CH244.00
Project name: QUEEN ST., SOUTH, MISSISSAUGA
Client ID: MW9106-8

Petroleum Hydrocarbons F2-F4 in Soil Chromatogram

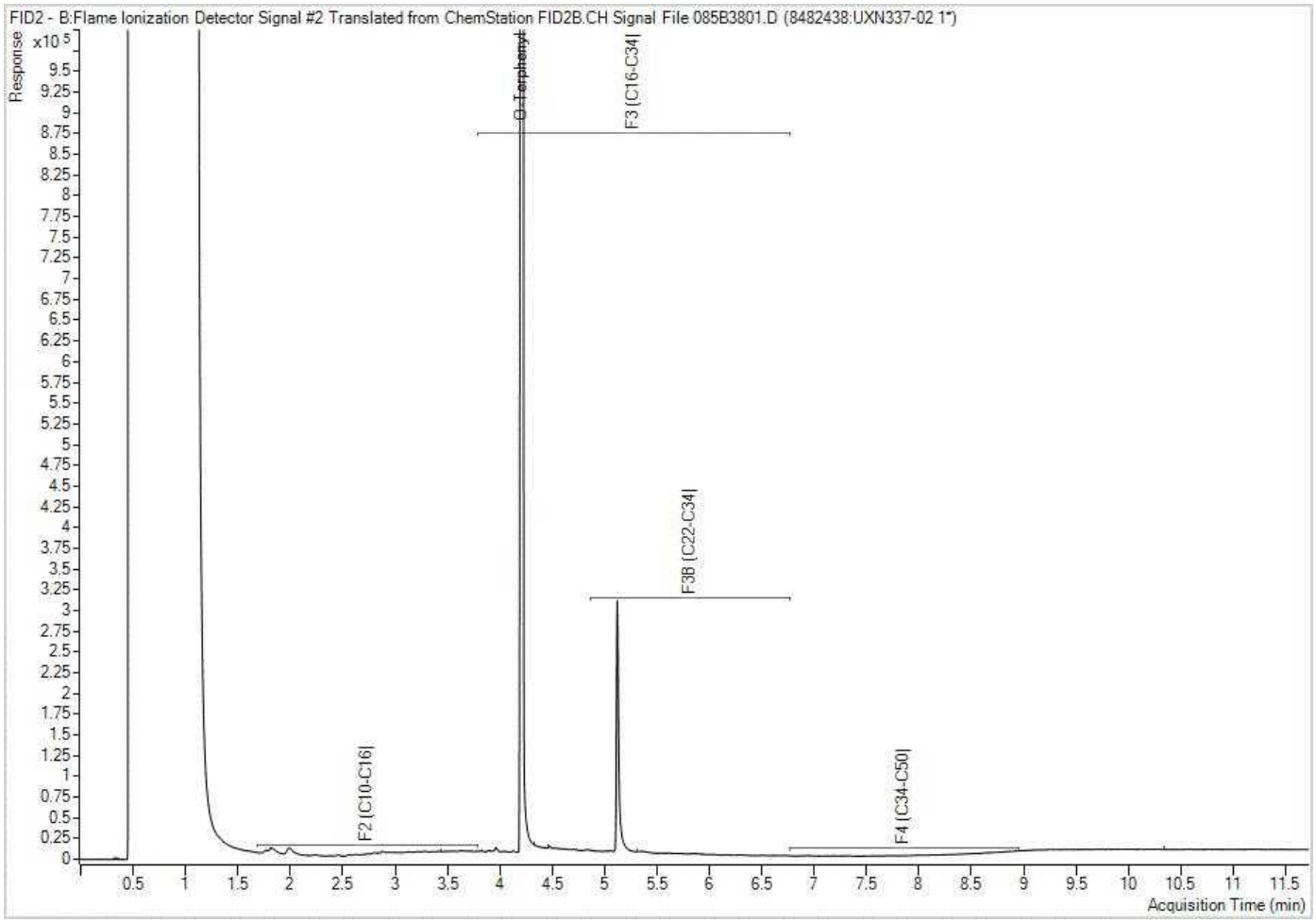


Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Bureau Veritas Job #: C326614
Report Date: 2023/02/03
Bureau Veritas Sample: UXN337

Terrapex Environmental Ltd
Client Project #: CH244.00
Project name: QUEEN ST., SOUTH, MISSISSAUGA
Client ID: MW115-9

Petroleum Hydrocarbons F2-F4 in Soil Chromatogram

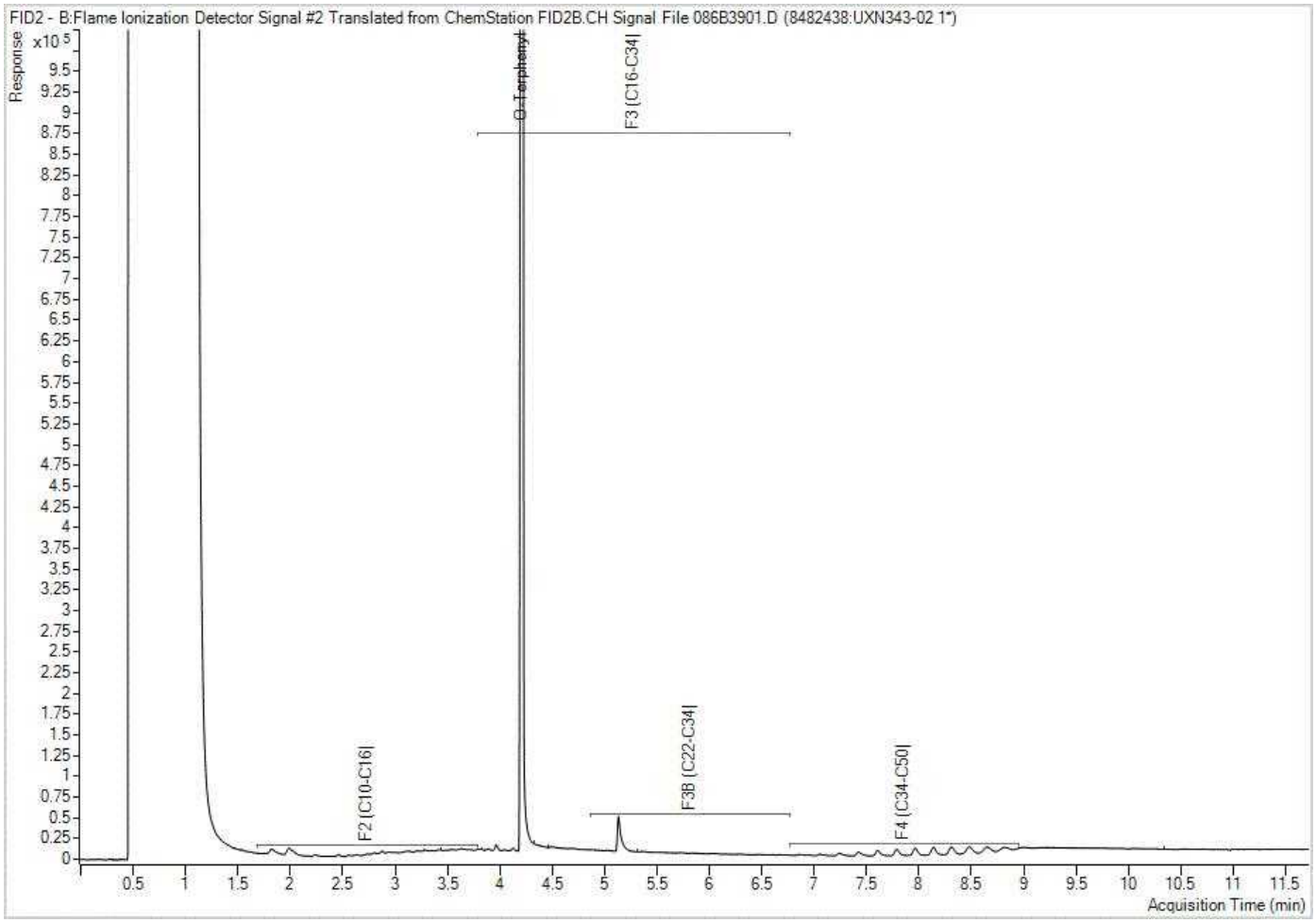


Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Bureau Veritas Job #: C326614
Report Date: 2023/02/03
Bureau Veritas Sample: UXN343

Terrapex Environmental Ltd
Client Project #: CH244.00
Project name: QUEEN ST., SOUTH, MISSISSAUGA
Client ID: MW116-9

Petroleum Hydrocarbons F2-F4 in Soil Chromatogram

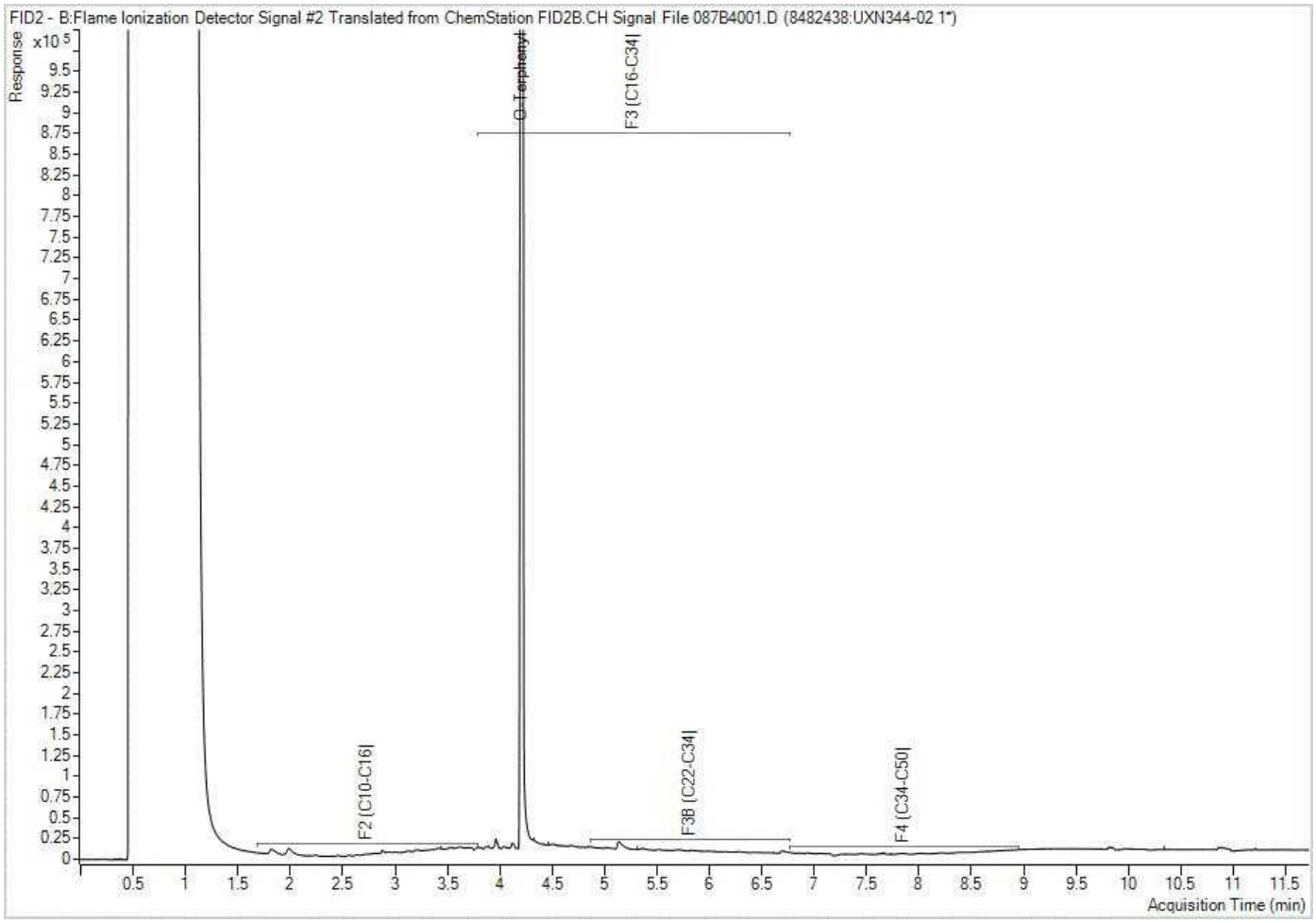


Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Bureau Veritas Job #: C326614
Report Date: 2023/02/03
Bureau Veritas Sample: UXN344

Terrapex Environmental Ltd
Client Project #: CH244.00
Project name: QUEEN ST., SOUTH, MISSISSAUGA
Client ID: BH117-9

Petroleum Hydrocarbons F2-F4 in Soil Chromatogram



Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Your P.O. #: TPEX S0
Your Project #: CH244.00
Site Location: QUEEN ST.S., MISSISSAUGA
Your C.O.C. #: 904775-01-01

Attention: Geoff Lussier

Terrapex Environmental Ltd
65 Nebo Road
Hamilton, ON
CANADA L8W 2C9

Report Date: 2023/02/13
Report #: R7507653
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C333819
Received: 2023/02/03, 15:40

Sample Matrix: Soil
Samples Received: 12

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Methylnaphthalene Sum	1	N/A	2023/02/10	CAM SOP-00301	EPA 8270D m
Methylnaphthalene Sum	2	N/A	2023/02/13	CAM SOP-00301	EPA 8270D m
Hot Water Extractable Boron	1	2023/02/08	2023/02/08	CAM SOP-00408	R153 Ana. Prot. 2011
Hot Water Extractable Boron	4	2023/02/09	2023/02/09	CAM SOP-00408	R153 Ana. Prot. 2011
1,3-Dichloropropene Sum	2	N/A	2023/02/08		EPA 8260C m
Free (WAD) Cyanide	1	2023/02/08	2023/02/08	CAM SOP-00457	OMOE E3015 m
Free (WAD) Cyanide	4	2023/02/09	2023/02/09	CAM SOP-00457	OMOE E3015 m
Conductivity	1	2023/02/08	2023/02/08	CAM SOP-00414	OMOE E3530 v1 m
Conductivity	4	2023/02/09	2023/02/09	CAM SOP-00414	OMOE E3530 v1 m
Hexavalent Chromium in Soil by IC (1)	1	2023/02/08	2023/02/09	CAM SOP-00436	EPA 3060/7199 m
Hexavalent Chromium in Soil by IC (1)	4	2023/02/09	2023/02/09	CAM SOP-00436	EPA 3060/7199 m
Petroleum Hydro. CCME F1 & BTEX in Soil (2)	3	N/A	2023/02/07	CAM SOP-00315	CCME PHC-CWS m
Petroleum Hydrocarbons F2-F4 in Soil (3)	5	2023/02/08	2023/02/09	CAM SOP-00316	CCME CWS m
Acid Extractable Metals by ICPMS	1	2023/02/08	2023/02/08	CAM SOP-00447	EPA 6020B m
Acid Extractable Metals by ICPMS	4	2023/02/09	2023/02/09	CAM SOP-00447	EPA 6020B m
Moisture	1	N/A	2023/02/06	CAM SOP-00445	Carter 2nd ed 51.2 m
Moisture	6	N/A	2023/02/07	CAM SOP-00445	Carter 2nd ed 51.2 m
Moisture	5	N/A	2023/02/08	CAM SOP-00445	Carter 2nd ed 51.2 m
PAH Compounds in Soil by GC/MS (SIM)	3	2023/02/08	2023/02/09	CAM SOP-00318	EPA 8270E
pH CaCl2 EXTRACT	1	2023/02/08	2023/02/08	CAM SOP-00413	EPA 9045 D m
pH CaCl2 EXTRACT	4	2023/02/09	2023/02/09	CAM SOP-00413	EPA 9045 D m
Sodium Adsorption Ratio (SAR)	4	N/A	2023/02/10	CAM SOP-00102	EPA 6010C
Sodium Adsorption Ratio (SAR)	1	N/A	2023/02/09	CAM SOP-00102	EPA 6010C
Volatile Organic Compounds and F1 PHCs	2	N/A	2023/02/07	CAM SOP-00230	EPA 8260C m

Remarks:

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

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

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

Your P.O. #: TPEX S0
Your Project #: CH244.00
Site Location: QUEEN ST.S., MISSISSAUGA
Your C.O.C. #: 904775-01-01

Attention: Geoff Lussier

Terrapex Environmental Ltd
65 Nebo Road
Hamilton, ON
CANADA L8W 2C9

Report Date: 2023/02/13
Report #: R7507653
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C333819
Received: 2023/02/03, 15:40

writing). All data is in statistical control and has met quality control and method performance criteria unless otherwise noted. All method blanks are reported; unless indicated otherwise, associated sample data are not blank corrected. Where applicable, unless otherwise noted, Measurement Uncertainty has not been accounted for when stating conformity to the referenced standard.

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

Solid sample results, except biota, are based on dry weight unless otherwise indicated. Organic analyses are not recovery corrected except for isotope dilution methods.
Results relate to samples tested. When sampling is not conducted by Bureau Veritas, results relate to the supplied samples tested.
This Certificate shall not be reproduced except in full, without the written approval of the laboratory.
Reference Method suffix "m" indicates test methods incorporate validated modifications from specific reference methods to improve performance.
* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.
(1) Soils are reported on a dry weight basis unless otherwise specified.
(2) No lab extraction date is given for F1BTEX & VOC samples that are field preserved with methanol. Extraction date is the date sampled unless otherwise stated.
(3) All CCME PHC results met required criteria unless otherwise stated in the report. The CWS PHC methods employed by Bureau Veritas conform to all prescribed elements of the reference method and performance based elements have been validated. All modifications have been validated and proven equivalent following "Alberta Environment's Interpretation of the Reference Method for the Canada-Wide Standard for Petroleum Hydrocarbons in Soil Validation of Performance-Based Alternative Methods September 2003". Documentation is available upon request. Modifications from Reference Method for the Canada-wide Standard for Petroleum Hydrocarbons in Soil-Tier 1 Method: F2/F3/F4 data reported using validated cold solvent extraction instead of Soxhlet extraction.

Encryption Key

Please direct all questions regarding this Certificate of Analysis to:
Kudrat Bajwa, B.Sc., Project Manager
Email: Kudrat.Bajwa@bureauveritas.com
Phone# (905)817-5755

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

O.REG 153 METALS & INORGANICS PKG (SOIL)

Bureau Veritas ID		UZB951			UZB951		UZB953		
Sampling Date		2023/01/27 15:00			2023/01/27 15:00		2023/01/30 11:50		
COC Number		904775-01-01			904775-01-01		904775-01-01		
	UNITS	MW118-2	RDL	QC Batch	MW118-2 Lab-Dup	QC Batch	BH111-1	RDL	QC Batch
Calculated Parameters									
Sodium Adsorption Ratio	N/A	0.44		8487288			17		8487288
Inorganics									
Conductivity	mS/cm	5.2	0.002	8493678			5.2	0.002	8495716
Available (CaCl2) pH	pH	7.80		8493012	7.82	8493012	10.8		8495352
WAD Cyanide (Free)	ug/g	<0.01	0.01	8492632			<0.01	0.01	8495028
Chromium (VI)	ug/g	<0.18	0.18	8492796			<0.18	0.18	8495246
Metals									
Hot Water Ext. Boron (B)	ug/g	1.5	0.050	8493847			0.75	0.050	8495658
Acid Extractable Antimony (Sb)	ug/g	<0.20	0.20	8493705			0.25	0.20	8495482
Acid Extractable Arsenic (As)	ug/g	4.4	1.0	8493705			4.3	1.0	8495482
Acid Extractable Barium (Ba)	ug/g	83	0.50	8493705			91	0.50	8495482
Acid Extractable Beryllium (Be)	ug/g	0.77	0.20	8493705			0.82	0.20	8495482
Acid Extractable Boron (B)	ug/g	13	5.0	8493705			10	5.0	8495482
Acid Extractable Cadmium (Cd)	ug/g	0.16	0.10	8493705			0.19	0.10	8495482
Acid Extractable Chromium (Cr)	ug/g	24	1.0	8493705			26	1.0	8495482
Acid Extractable Cobalt (Co)	ug/g	12	0.10	8493705			13	0.10	8495482
Acid Extractable Copper (Cu)	ug/g	33	0.50	8493705			29	0.50	8495482
Acid Extractable Lead (Pb)	ug/g	11	1.0	8493705			17	1.0	8495482
Acid Extractable Molybdenum (Mo)	ug/g	<0.50	0.50	8493705			1.1	0.50	8495482
Acid Extractable Nickel (Ni)	ug/g	27	0.50	8493705			25	0.50	8495482
Acid Extractable Selenium (Se)	ug/g	<0.50	0.50	8493705			<0.50	0.50	8495482
Acid Extractable Silver (Ag)	ug/g	<0.20	0.20	8493705			<0.20	0.20	8495482
Acid Extractable Thallium (Tl)	ug/g	0.16	0.050	8493705			0.15	0.050	8495482
Acid Extractable Uranium (U)	ug/g	0.62	0.050	8493705			0.58	0.050	8495482
Acid Extractable Vanadium (V)	ug/g	31	5.0	8493705			34	5.0	8495482
Acid Extractable Zinc (Zn)	ug/g	65	5.0	8493705			85	5.0	8495482
Acid Extractable Mercury (Hg)	ug/g	<0.050	0.050	8493705			<0.050	0.050	8495482

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate

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Bureau Veritas Job #: C333819
Report Date: 2023/02/13

Terrapex Environmental Ltd
Client Project #: CH244.00
Site Location: QUEEN ST.S., MISSISSAUGA
Your P.O. #: TPEX S0
Sampler Initials: JD

O.REG 153 METALS & INORGANICS PKG (SOIL)

Bureau Veritas ID		UZB953		UZB956		UZB959		
Sampling Date		2023/01/30 11:50		2023/01/31 13:00		2023/02/01 14:50		
COC Number		904775-01-01		904775-01-01		904775-01-01		
	UNITS	BH111-1 Lab-Dup	QC Batch	BH114-2	QC Batch	MW105-2	RDL	QC Batch
Calculated Parameters								
Sodium Adsorption Ratio	N/A			6.3	8487288	49		8487288
Inorganics								
Conductivity	mS/cm			1.4	8495716	7.3	0.002	8495716
Available (CaCl2) pH	pH	10.8	8495352	7.52	8495352	7.93		8495352
WAD Cyanide (Free)	ug/g			<0.01	8495028	<0.01	0.01	8495028
Chromium (VI)	ug/g			<0.18	8495246	<0.18	0.18	8495246
Metals								
Hot Water Ext. Boron (B)	ug/g			2.3	8495671	1.1	0.050	8495671
Acid Extractable Antimony (Sb)	ug/g			0.24	8495482	0.27	0.20	8495780
Acid Extractable Arsenic (As)	ug/g			4.4	8495482	5.1	1.0	8495780
Acid Extractable Barium (Ba)	ug/g			55	8495482	97	0.50	8495780
Acid Extractable Beryllium (Be)	ug/g			0.44	8495482	0.77	0.20	8495780
Acid Extractable Boron (B)	ug/g			12	8495482	12	5.0	8495780
Acid Extractable Cadmium (Cd)	ug/g			0.26	8495482	0.23	0.10	8495780
Acid Extractable Chromium (Cr)	ug/g			16	8495482	24	1.0	8495780
Acid Extractable Cobalt (Co)	ug/g			15	8495482	13	0.10	8495780
Acid Extractable Copper (Cu)	ug/g			20	8495482	31	0.50	8495780
Acid Extractable Lead (Pb)	ug/g			21	8495482	39	1.0	8495780
Acid Extractable Molybdenum (Mo)	ug/g			0.98	8495482	<0.50	0.50	8495780
Acid Extractable Nickel (Ni)	ug/g			20	8495482	27	0.50	8495780
Acid Extractable Selenium (Se)	ug/g			<0.50	8495482	<0.50	0.50	8495780
Acid Extractable Silver (Ag)	ug/g			<0.20	8495482	<0.20	0.20	8495780
Acid Extractable Thallium (Tl)	ug/g			0.19	8495482	0.16	0.050	8495780
Acid Extractable Uranium (U)	ug/g			0.47	8495482	0.64	0.050	8495780
Acid Extractable Vanadium (V)	ug/g			21	8495482	33	5.0	8495780
Acid Extractable Zinc (Zn)	ug/g			110	8495482	73	5.0	8495780
Acid Extractable Mercury (Hg)	ug/g			<0.050	8495482	0.075	0.050	8495780

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate

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O.REG 153 METALS & INORGANICS PKG (SOIL)

Bureau Veritas ID		UZB961			UZB961		
Sampling Date		2023/02/02 16:00			2023/02/02 16:00		
COC Number		904775-01-01			904775-01-01		
	UNITS	MW108-2	RDL	QC Batch	MW108-2 Lab-Dup	RDL	QC Batch
Calculated Parameters							
Sodium Adsorption Ratio	N/A	18		8487288			
Inorganics							
Conductivity	mS/cm	3.0	0.002	8495716			
Available (CaCl2) pH	pH	7.89		8495597			
WAD Cyanide (Free)	ug/g	<0.01	0.01	8495028	<0.01	0.01	8495028
Chromium (VI)	ug/g	<0.18	0.18	8495246			
Metals							
Hot Water Ext. Boron (B)	ug/g	0.32	0.050	8495671			
Acid Extractable Antimony (Sb)	ug/g	<0.20	0.20	8495482			
Acid Extractable Arsenic (As)	ug/g	4.7	1.0	8495482			
Acid Extractable Barium (Ba)	ug/g	66	0.50	8495482			
Acid Extractable Beryllium (Be)	ug/g	0.69	0.20	8495482			
Acid Extractable Boron (B)	ug/g	7.3	5.0	8495482			
Acid Extractable Cadmium (Cd)	ug/g	0.17	0.10	8495482			
Acid Extractable Chromium (Cr)	ug/g	24	1.0	8495482			
Acid Extractable Cobalt (Co)	ug/g	11	0.10	8495482			
Acid Extractable Copper (Cu)	ug/g	30	0.50	8495482			
Acid Extractable Lead (Pb)	ug/g	12	1.0	8495482			
Acid Extractable Molybdenum (Mo)	ug/g	0.56	0.50	8495482			
Acid Extractable Nickel (Ni)	ug/g	25	0.50	8495482			
Acid Extractable Selenium (Se)	ug/g	<0.50	0.50	8495482			
Acid Extractable Silver (Ag)	ug/g	<0.20	0.20	8495482			
Acid Extractable Thallium (Tl)	ug/g	0.15	0.050	8495482			
Acid Extractable Uranium (U)	ug/g	0.50	0.050	8495482			
Acid Extractable Vanadium (V)	ug/g	34	5.0	8495482			
Acid Extractable Zinc (Zn)	ug/g	65	5.0	8495482			
Acid Extractable Mercury (Hg)	ug/g	<0.050	0.050	8495482			

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate

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O.REG 153 PAHS (SOIL)

Bureau Veritas ID		UZB951		UZB954			UZB954		
Sampling Date		2023/01/27 15:00		2023/01/30 12:10			2023/01/30 12:10		
COC Number		904775-01-01		904775-01-01			904775-01-01		
	UNITS	MW118-2	QC Batch	BH111-2	RDL	QC Batch	BH111-2 Lab-Dup	RDL	QC Batch
Calculated Parameters									
Methylnaphthalene, 2-(1-)	ug/g	<0.0071	8487259	<0.0071	0.0071	8487259			
Polyaromatic Hydrocarbons									
Acenaphthene	ug/g	<0.0050	8492645	<0.0050	0.0050	8493967	<0.0050	0.0050	8493967
Acenaphthylene	ug/g	<0.0050	8492645	<0.0050	0.0050	8493967	<0.0050	0.0050	8493967
Anthracene	ug/g	<0.0050	8492645	<0.0050	0.0050	8493967	<0.0050	0.0050	8493967
Benzo(a)anthracene	ug/g	<0.0050	8492645	<0.0050	0.0050	8493967	<0.0050	0.0050	8493967
Benzo(a)pyrene	ug/g	<0.0050	8492645	<0.0050	0.0050	8493967	<0.0050	0.0050	8493967
Benzo(b/j)fluoranthene	ug/g	<0.0050	8492645	<0.0050	0.0050	8493967	<0.0050	0.0050	8493967
Benzo(g,h,i)perylene	ug/g	<0.0050	8492645	<0.0050	0.0050	8493967	<0.0050	0.0050	8493967
Benzo(k)fluoranthene	ug/g	<0.0050	8492645	<0.0050	0.0050	8493967	<0.0050	0.0050	8493967
Chrysene	ug/g	<0.0050	8492645	<0.0050	0.0050	8493967	<0.0050	0.0050	8493967
Dibenzo(a,h)anthracene	ug/g	<0.0050	8492645	<0.0050	0.0050	8493967	<0.0050	0.0050	8493967
Fluoranthene	ug/g	0.0063	8492645	<0.0050	0.0050	8493967	<0.0050	0.0050	8493967
Fluorene	ug/g	<0.0050	8492645	<0.0050	0.0050	8493967	<0.0050	0.0050	8493967
Indeno(1,2,3-cd)pyrene	ug/g	<0.0050	8492645	<0.0050	0.0050	8493967	<0.0050	0.0050	8493967
1-Methylnaphthalene	ug/g	<0.0050	8492645	<0.0050	0.0050	8493967	<0.0050	0.0050	8493967
2-Methylnaphthalene	ug/g	<0.0050	8492645	<0.0050	0.0050	8493967	<0.0050	0.0050	8493967
Naphthalene	ug/g	<0.0050	8492645	<0.0050	0.0050	8493967	<0.0050	0.0050	8493967
Phenanthrene	ug/g	<0.0050	8492645	<0.0050	0.0050	8493967	<0.0050	0.0050	8493967
Pyrene	ug/g	<0.0050	8492645	<0.0050	0.0050	8493967	<0.0050	0.0050	8493967
Surrogate Recovery (%)									
D10-Anthracene	%	122	8492645	110		8493967	108		8493967
D14-Terphenyl (FS)	%	101	8492645	117		8493967	121		8493967
D8-Acenaphthylene	%	86	8492645	86		8493967	88		8493967

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate

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O.REG 153 PAHS (SOIL)

Bureau Veritas ID		UZB958		
Sampling Date		2023/02/01 14:30		
COC Number		904775-01-01		
	UNITS	MW105-1	RDL	QC Batch
Calculated Parameters				
Methylnaphthalene, 2-(1-)	ug/g	<0.071	0.071	8487259
Polyaromatic Hydrocarbons				
Acenaphthene	ug/g	<0.050	0.050	8493967
Acenaphthylene	ug/g	<0.050	0.050	8493967
Anthracene	ug/g	<0.050	0.050	8493967
Benzo(a)anthracene	ug/g	<0.050	0.050	8493967
Benzo(a)pyrene	ug/g	<0.050	0.050	8493967
Benzo(b/j)fluoranthene	ug/g	<0.050	0.050	8493967
Benzo(g,h,i)perylene	ug/g	0.087	0.050	8493967
Benzo(k)fluoranthene	ug/g	<0.050	0.050	8493967
Chrysene	ug/g	<0.050	0.050	8493967
Dibenzo(a,h)anthracene	ug/g	<0.050	0.050	8493967
Fluoranthene	ug/g	<0.050	0.050	8493967
Fluorene	ug/g	<0.050	0.050	8493967
Indeno(1,2,3-cd)pyrene	ug/g	<0.050	0.050	8493967
1-Methylnaphthalene	ug/g	<0.050	0.050	8493967
2-Methylnaphthalene	ug/g	<0.050	0.050	8493967
Naphthalene	ug/g	<0.050	0.050	8493967
Phenanthrene	ug/g	<0.050	0.050	8493967
Pyrene	ug/g	<0.050	0.050	8493967
Surrogate Recovery (%)				
D10-Anthracene	%	120		8493967
D14-Terphenyl (FS)	%	134 (1)		8493967
D8-Acenaphthylene	%	100		8493967

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
(1) Surrogate recovery was above the upper control limit due to matrix interference. This may represent a high bias in some results.

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

Bureau Veritas ID		UZB957	UZB960	UZB962		
Sampling Date		2023/01/31 14:00	2023/02/01 17:00	2023/02/02 17:00		
COC Number		904775-01-01	904775-01-01	904775-01-01		
	UNITS	BH114-7	MW105-9	MW108-8	RDL	QC Batch
BTEX & F1 Hydrocarbons						
Benzene	ug/g	<0.020	<0.020	<0.020	0.020	8490359
Toluene	ug/g	<0.020	<0.020	<0.020	0.020	8490359
Ethylbenzene	ug/g	<0.020	<0.020	<0.020	0.020	8490359
o-Xylene	ug/g	<0.020	<0.020	<0.020	0.020	8490359
p+m-Xylene	ug/g	<0.040	<0.040	<0.040	0.040	8490359
Total Xylenes	ug/g	<0.040	<0.040	<0.040	0.040	8490359
F1 (C6-C10)	ug/g	<10	<10	<10	10	8490359
F1 (C6-C10) - BTEX	ug/g	<10	<10	<10	10	8490359
F2-F4 Hydrocarbons						
F2 (C10-C16 Hydrocarbons)	ug/g	<10	<10	<10	10	8493826
F3 (C16-C34 Hydrocarbons)	ug/g	<50	<50	<50	50	8493826
F4 (C34-C50 Hydrocarbons)	ug/g	<50	<50	<50	50	8493826
Reached Baseline at C50	ug/g	Yes	Yes	Yes		8493826
Surrogate Recovery (%)						
1,4-Difluorobenzene	%	104	84	96		8490359
4-Bromofluorobenzene	%	113	100	105		8490359
D10-o-Xylene	%	135	109	108		8490359
D4-1,2-Dichloroethane	%	104	82	95		8490359
o-Terphenyl	%	97	94	92		8493826

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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

Bureau Veritas ID		UZB952	UZB955			UZB955		
Sampling Date		2023/01/27 16:00	2023/01/30 13:25			2023/01/30 13:25		
COC Number		904775-01-01	904775-01-01			904775-01-01		
	UNITS	MW118-9	BH111-9	RDL	QC Batch	BH111-9 Lab-Dup	RDL	QC Batch
Calculated Parameters								
1,3-Dichloropropene (cis+trans)	ug/g	<0.050	<0.050	0.050	8487289			
Volatile Organics								
Acetone (2-Propanone)	ug/g	<0.49	<0.49	0.49	8488729			
Benzene	ug/g	<0.0060	<0.0060	0.0060	8488729			
Bromodichloromethane	ug/g	<0.040	<0.040	0.040	8488729			
Bromoform	ug/g	<0.040	<0.040	0.040	8488729			
Bromomethane	ug/g	<0.040	<0.040	0.040	8488729			
Carbon Tetrachloride	ug/g	<0.040	<0.040	0.040	8488729			
Chlorobenzene	ug/g	<0.040	<0.040	0.040	8488729			
Chloroform	ug/g	<0.040	<0.040	0.040	8488729			
Dibromochloromethane	ug/g	<0.040	<0.040	0.040	8488729			
1,2-Dichlorobenzene	ug/g	<0.040	<0.040	0.040	8488729			
1,3-Dichlorobenzene	ug/g	<0.040	<0.040	0.040	8488729			
1,4-Dichlorobenzene	ug/g	<0.040	<0.040	0.040	8488729			
Dichlorodifluoromethane (FREON 12)	ug/g	<0.040	<0.040	0.040	8488729			
1,1-Dichloroethane	ug/g	<0.040	<0.040	0.040	8488729			
1,2-Dichloroethane	ug/g	<0.049	<0.049	0.049	8488729			
1,1-Dichloroethylene	ug/g	<0.040	<0.040	0.040	8488729			
cis-1,2-Dichloroethylene	ug/g	<0.040	<0.040	0.040	8488729			
trans-1,2-Dichloroethylene	ug/g	<0.040	<0.040	0.040	8488729			
1,2-Dichloropropane	ug/g	<0.040	<0.040	0.040	8488729			
cis-1,3-Dichloropropene	ug/g	<0.030	<0.030	0.030	8488729			
trans-1,3-Dichloropropene	ug/g	<0.040	<0.040	0.040	8488729			
Ethylbenzene	ug/g	<0.010	<0.010	0.010	8488729			
Ethylene Dibromide	ug/g	<0.040	<0.040	0.040	8488729			
Hexane	ug/g	<0.040	<0.040	0.040	8488729			
Methylene Chloride(Dichloromethane)	ug/g	<0.049	<0.049	0.049	8488729			
Methyl Ethyl Ketone (2-Butanone)	ug/g	<0.40	<0.40	0.40	8488729			
Methyl Isobutyl Ketone	ug/g	<0.40	<0.40	0.40	8488729			

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate

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

Bureau Veritas ID		UZB952	UZB955			UZB955		
Sampling Date		2023/01/27 16:00	2023/01/30 13:25			2023/01/30 13:25		
COC Number		904775-01-01	904775-01-01			904775-01-01		
	UNITS	MW118-9	BH111-9	RDL	QC Batch	BH111-9 Lab-Dup	RDL	QC Batch
Methyl t-butyl ether (MTBE)	ug/g	<0.040	<0.040	0.040	8488729			
Styrene	ug/g	<0.040	<0.040	0.040	8488729			
1,1,1,2-Tetrachloroethane	ug/g	<0.040	<0.040	0.040	8488729			
1,1,2,2-Tetrachloroethane	ug/g	<0.040	<0.040	0.040	8488729			
Tetrachloroethylene	ug/g	<0.040	<0.040	0.040	8488729			
Toluene	ug/g	<0.020	0.023	0.020	8488729			
1,1,1-Trichloroethane	ug/g	<0.040	<0.040	0.040	8488729			
1,1,2-Trichloroethane	ug/g	<0.040	<0.040	0.040	8488729			
Trichloroethylene	ug/g	<0.010	<0.010	0.010	8488729			
Trichlorofluoromethane (FREON 11)	ug/g	<0.040	<0.040	0.040	8488729			
Vinyl Chloride	ug/g	<0.019	<0.019	0.019	8488729			
p+m-Xylene	ug/g	<0.020	<0.020	0.020	8488729			
o-Xylene	ug/g	<0.020	<0.020	0.020	8488729			
Total Xylenes	ug/g	<0.020	<0.020	0.020	8488729			
F1 (C6-C10)	ug/g	<10	<10	10	8488729			
F1 (C6-C10) - BTEX	ug/g	<10	<10	10	8488729			
F2-F4 Hydrocarbons								
F2 (C10-C16 Hydrocarbons)	ug/g	<10	13	10	8493826	13	10	8493826
F3 (C16-C34 Hydrocarbons)	ug/g	<50	63	50	8493826	70	50	8493826
F4 (C34-C50 Hydrocarbons)	ug/g	<50	<50	50	8493826	<50	50	8493826
Reached Baseline at C50	ug/g	Yes	Yes		8493826	Yes		8493826
Surrogate Recovery (%)								
o-Terphenyl	%	93	92		8493826	90		8493826
4-Bromofluorobenzene	%	92	91		8488729			
D10-o-Xylene	%	97	116		8488729			
D4-1,2-Dichloroethane	%	100	99		8488729			
D8-Toluene	%	99	98		8488729			

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate

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Bureau Veritas Job #: C333819
Report Date: 2023/02/13

Terrapex Environmental Ltd
Client Project #: CH244.00
Site Location: QUEEN ST.S., MISSISSAUGA
Your P.O. #: TPEX S0
Sampler Initials: JD

RESULTS OF ANALYSES OF SOIL

Bureau Veritas ID		UZB951		UZB952	UZB952	UZB953		UZB954		
Sampling Date		2023/01/27 15:00		2023/01/27 16:00	2023/01/27 16:00	2023/01/30 11:50		2023/01/30 12:10		
COC Number		904775-01-01		904775-01-01	904775-01-01	904775-01-01		904775-01-01		
	UNITS	MW118-2	QC Batch	MW118-9	MW118-9 Lab-Dup	BH111-1	QC Batch	BH111-2	RDL	QC Batch
Inorganics										
Moisture	%	16	8489280	19	19	20	8493022	9.7	1.0	8491368

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate

Bureau Veritas ID		UZB955		UZB956		UZB957	UZB958		
Sampling Date		2023/01/30 13:25		2023/01/31 13:00		2023/01/31 14:00	2023/02/01 14:30		
COC Number		904775-01-01		904775-01-01		904775-01-01	904775-01-01		
	UNITS	BH111-9	QC Batch	BH114-2	QC Batch	BH114-7	MW105-1	RDL	QC Batch
Inorganics									
Moisture	%	14	8491368	20	8493022	12	11	1.0	8491368

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Bureau Veritas ID		UZB959		UZB960		UZB961		UZB962		
Sampling Date		2023/02/01 14:50		2023/02/01 17:00		2023/02/02 16:00		2023/02/02 17:00		
COC Number		904775-01-01		904775-01-01		904775-01-01		904775-01-01		
	UNITS	MW105-2	QC Batch	MW105-9	QC Batch	MW108-2	QC Batch	MW108-8	RDL	QC Batch
Inorganics										
Moisture	%	17	8493022	8.8	8491368	16	8493022	9.9	1.0	8491368

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Bureau Veritas Job #: C333819
Report Date: 2023/02/13

Terrapex Environmental Ltd
Client Project #: CH244.00
Site Location: QUEEN ST.S., MISSISSAUGA
Your P.O. #: TPEX S0
Sampler Initials: JD

TEST SUMMARY

Bureau Veritas ID: UZB951
Sample ID: MW118-2
Matrix: Soil

Collected: 2023/01/27
Shipped:
Received: 2023/02/03

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	8487259	N/A	2023/02/10	Automated Statchk
Hot Water Extractable Boron	ICP	8493847	2023/02/08	2023/02/08	Medhat Nasr
Free (WAD) Cyanide	TECH	8492632	2023/02/08	2023/02/08	Chloe Pollock
Conductivity	AT	8493678	2023/02/08	2023/02/08	Surinder Rai
Hexavalent Chromium in Soil by IC	IC/SPEC	8492796	2023/02/08	2023/02/09	Sousan Besharatlou
Acid Extractable Metals by ICPMS	ICP/MS	8493705	2023/02/08	2023/02/08	Indira HarryPaul
Moisture	BAL	8489280	N/A	2023/02/06	Simrat Bhathal
PAH Compounds in Soil by GC/MS (SIM)	GC/MS	8492645	2023/02/08	2023/02/09	Mitesh Raj
pH CaCl2 EXTRACT	AT	8493012	2023/02/08	2023/02/08	Taslima Aktar
Sodium Adsorption Ratio (SAR)	CALC/MET	8487288	N/A	2023/02/09	Automated Statchk

Bureau Veritas ID: UZB951 Dup
Sample ID: MW118-2
Matrix: Soil

Collected: 2023/01/27
Shipped:
Received: 2023/02/03

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
pH CaCl2 EXTRACT	AT	8493012	2023/02/08	2023/02/08	Taslima Aktar

Bureau Veritas ID: UZB952
Sample ID: MW118-9
Matrix: Soil

Collected: 2023/01/27
Shipped:
Received: 2023/02/03

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
1,3-Dichloropropene Sum	CALC	8487289	N/A	2023/02/08	Automated Statchk
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	8493826	2023/02/08	2023/02/09	Dennis Ngondu
Moisture	BAL	8493022	N/A	2023/02/08	Muhammad Chhaidan
Volatile Organic Compounds and F1 PHCs	GC/MSFD	8488729	N/A	2023/02/07	Denis Reid

Bureau Veritas ID: UZB952 Dup
Sample ID: MW118-9
Matrix: Soil

Collected: 2023/01/27
Shipped:
Received: 2023/02/03

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Moisture	BAL	8493022	N/A	2023/02/08	Muhammad Chhaidan

Bureau Veritas ID: UZB953
Sample ID: BH111-1
Matrix: Soil

Collected: 2023/01/30
Shipped:
Received: 2023/02/03

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hot Water Extractable Boron	ICP	8495658	2023/02/09	2023/02/09	Medhat Nasr
Free (WAD) Cyanide	TECH	8495028	2023/02/09	2023/02/09	Kruti Jitesh Patel
Conductivity	AT	8495716	2023/02/09	2023/02/09	Gurparteek KAUR
Hexavalent Chromium in Soil by IC	IC/SPEC	8495246	2023/02/09	2023/02/09	Sousan Besharatlou

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TEST SUMMARY

Bureau Veritas ID: UZB953 **Collected:** 2023/01/30
Sample ID: BH111-1 **Shipped:**
Matrix: Soil **Received:** 2023/02/03

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acid Extractable Metals by ICPMS	ICP/MS	8495482	2023/02/09	2023/02/09	Indira HarryPaul
Moisture	BAL	8493022	N/A	2023/02/08	Muhammad Chhaidan
pH CaCl2 EXTRACT	AT	8495352	2023/02/09	2023/02/09	Taslima Aktar
Sodium Adsorption Ratio (SAR)	CALC/MET	8487288	N/A	2023/02/10	Automated Statchk

Bureau Veritas ID: UZB953 Dup **Collected:** 2023/01/30
Sample ID: BH111-1 **Shipped:**
Matrix: Soil **Received:** 2023/02/03

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
pH CaCl2 EXTRACT	AT	8495352	2023/02/09	2023/02/09	Taslima Aktar

Bureau Veritas ID: UZB954 **Collected:** 2023/01/30
Sample ID: BH111-2 **Shipped:**
Matrix: Soil **Received:** 2023/02/03

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	8487259	N/A	2023/02/13	Automated Statchk
Moisture	BAL	8491368	N/A	2023/02/07	Shivani Desai
PAH Compounds in Soil by GC/MS (SIM)	GC/MS	8493967	2023/02/08	2023/02/09	Joe Paino

Bureau Veritas ID: UZB954 Dup **Collected:** 2023/01/30
Sample ID: BH111-2 **Shipped:**
Matrix: Soil **Received:** 2023/02/03

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
PAH Compounds in Soil by GC/MS (SIM)	GC/MS	8493967	2023/02/08	2023/02/09	Joe Paino

Bureau Veritas ID: UZB955 **Collected:** 2023/01/30
Sample ID: BH111-9 **Shipped:**
Matrix: Soil **Received:** 2023/02/03

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
1,3-Dichloropropene Sum	CALC	8487289	N/A	2023/02/08	Automated Statchk
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	8493826	2023/02/08	2023/02/09	Dennis Ngondu
Moisture	BAL	8491368	N/A	2023/02/07	Shivani Desai
Volatile Organic Compounds and F1 PHCs	GC/MSFD	8488729	N/A	2023/02/07	Denis Reid

Bureau Veritas ID: UZB955 Dup **Collected:** 2023/01/30
Sample ID: BH111-9 **Shipped:**
Matrix: Soil **Received:** 2023/02/03

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	8493826	2023/02/08	2023/02/09	Dennis Ngondu

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Bureau Veritas Job #: C333819
Report Date: 2023/02/13

Terrapex Environmental Ltd
Client Project #: CH244.00
Site Location: QUEEN ST.S., MISSISSAUGA
Your P.O. #: TPEX S0
Sampler Initials: JD

TEST SUMMARY

Bureau Veritas ID: UZB956
Sample ID: BH114-2
Matrix: Soil

Collected: 2023/01/31
Shipped:
Received: 2023/02/03

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hot Water Extractable Boron	ICP	8495671	2023/02/09	2023/02/09	Jaswinder Kaur
Free (WAD) Cyanide	TECH	8495028	2023/02/09	2023/02/09	Kruti Jitesh Patel
Conductivity	AT	8495716	2023/02/09	2023/02/09	Gurparteek KAUR
Hexavalent Chromium in Soil by IC	IC/SPEC	8495246	2023/02/09	2023/02/09	Sousan Besharatlou
Acid Extractable Metals by ICPMS	ICP/MS	8495482	2023/02/09	2023/02/09	Indira HarryPaul
Moisture	BAL	8493022	N/A	2023/02/08	Muhammad Chhaidan
pH CaCl2 EXTRACT	AT	8495352	2023/02/09	2023/02/09	Taslima Aktar
Sodium Adsorption Ratio (SAR)	CALC/MET	8487288	N/A	2023/02/10	Automated Statchk

Bureau Veritas ID: UZB957
Sample ID: BH114-7
Matrix: Soil

Collected: 2023/01/31
Shipped:
Received: 2023/02/03

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	8490359	N/A	2023/02/07	Domnica Andronescu
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	8493826	2023/02/08	2023/02/09	Dennis Ngondu
Moisture	BAL	8491368	N/A	2023/02/07	Shivani Desai

Bureau Veritas ID: UZB958
Sample ID: MW105-1
Matrix: Soil

Collected: 2023/02/01
Shipped:
Received: 2023/02/03

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	8487259	N/A	2023/02/13	Automated Statchk
Moisture	BAL	8491368	N/A	2023/02/07	Shivani Desai
PAH Compounds in Soil by GC/MS (SIM)	GC/MS	8493967	2023/02/08	2023/02/09	Joe Paino

Bureau Veritas ID: UZB959
Sample ID: MW105-2
Matrix: Soil

Collected: 2023/02/01
Shipped:
Received: 2023/02/03

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hot Water Extractable Boron	ICP	8495671	2023/02/09	2023/02/09	Jaswinder Kaur
Free (WAD) Cyanide	TECH	8495028	2023/02/09	2023/02/09	Kruti Jitesh Patel
Conductivity	AT	8495716	2023/02/09	2023/02/09	Gurparteek KAUR
Hexavalent Chromium in Soil by IC	IC/SPEC	8495246	2023/02/09	2023/02/09	Sousan Besharatlou
Acid Extractable Metals by ICPMS	ICP/MS	8495780	2023/02/09	2023/02/09	Daniel Teclu
Moisture	BAL	8493022	N/A	2023/02/08	Muhammad Chhaidan
pH CaCl2 EXTRACT	AT	8495352	2023/02/09	2023/02/09	Taslima Aktar
Sodium Adsorption Ratio (SAR)	CALC/MET	8487288	N/A	2023/02/10	Automated Statchk

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Bureau Veritas Job #: C333819
Report Date: 2023/02/13

Terrapex Environmental Ltd
Client Project #: CH244.00
Site Location: QUEEN ST.S., MISSISSAUGA
Your P.O. #: TPEX S0
Sampler Initials: JD

TEST SUMMARY

Bureau Veritas ID: UZB960
Sample ID: MW105-9
Matrix: Soil
Collected: 2023/02/01
Shipped:
Received: 2023/02/03

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	8490359	N/A	2023/02/07	Domnica Andronescu
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	8493826	2023/02/08	2023/02/09	Dennis Ngondu
Moisture	BAL	8491368	N/A	2023/02/07	Shivani Desai

Bureau Veritas ID: UZB961
Sample ID: MW108-2
Matrix: Soil
Collected: 2023/02/02
Shipped:
Received: 2023/02/03

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hot Water Extractable Boron	ICP	8495671	2023/02/09	2023/02/09	Jaswinder Kaur
Free (WAD) Cyanide	TECH	8495028	2023/02/09	2023/02/09	Kruti Jitesh Patel
Conductivity	AT	8495716	2023/02/09	2023/02/09	Gurparteek KAUR
Hexavalent Chromium in Soil by IC	IC/SPEC	8495246	2023/02/09	2023/02/09	Sousan Besharatlou
Acid Extractable Metals by ICPMS	ICP/MS	8495482	2023/02/09	2023/02/09	Indira HarryPaul
Moisture	BAL	8493022	N/A	2023/02/08	Muhammad Chhaidan
pH CaCl2 EXTRACT	AT	8495597	2023/02/09	2023/02/09	Taslima Aktar
Sodium Adsorption Ratio (SAR)	CALC/MET	8487288	N/A	2023/02/10	Automated Statchk

Bureau Veritas ID: UZB961 Dup
Sample ID: MW108-2
Matrix: Soil
Collected: 2023/02/02
Shipped:
Received: 2023/02/03

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Free (WAD) Cyanide	TECH	8495028	2023/02/09	2023/02/09	Kruti Jitesh Patel

Bureau Veritas ID: UZB962
Sample ID: MW108-8
Matrix: Soil
Collected: 2023/02/02
Shipped:
Received: 2023/02/03

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	8490359	N/A	2023/02/07	Domnica Andronescu
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	8493826	2023/02/08	2023/02/09	Dennis Ngondu
Moisture	BAL	8491368	N/A	2023/02/07	Shivani Desai

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GENERAL COMMENTS

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

Package 1	0.3°C

Sample UZB958 [MW105-1] : PAH ANALYSIS: Due to the sample matrix, sample required dilution. Detection limis were adjusted accordingly.

Results relate only to the items tested.

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QUALITY ASSURANCE REPORT

			Matrix Spike		SPIKED BLANK		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8488729	4-Bromofluorobenzene	2023/02/07	97	60 - 140	98	60 - 140	90	%		
8488729	D10-o-Xylene	2023/02/07	111	60 - 130	99	60 - 130	94	%		
8488729	D4-1,2-Dichloroethane	2023/02/07	102	60 - 140	109	60 - 140	101	%		
8488729	D8-Toluene	2023/02/07	103	60 - 140	101	60 - 140	99	%		
8490359	1,4-Difluorobenzene	2023/02/07	91	60 - 140	97	60 - 140	88	%		
8490359	4-Bromofluorobenzene	2023/02/07	99	60 - 140	114	60 - 140	102	%		
8490359	D10-o-Xylene	2023/02/07	104	60 - 140	112	60 - 140	108	%		
8490359	D4-1,2-Dichloroethane	2023/02/07	84	60 - 140	96	60 - 140	88	%		
8492645	D10-Anthracene	2023/02/09	106	50 - 130	111	50 - 130	111	%		
8492645	D14-Terphenyl (FS)	2023/02/09	103	50 - 130	105	50 - 130	104	%		
8492645	D8-Acenaphthylene	2023/02/09	87	50 - 130	92	50 - 130	86	%		
8493826	o-Terphenyl	2023/02/08	86	60 - 130	88	60 - 130	91	%		
8493967	D10-Anthracene	2023/02/09	103	50 - 130	109	50 - 130	110	%		
8493967	D14-Terphenyl (FS)	2023/02/09	116	50 - 130	123	50 - 130	119	%		
8493967	D8-Acenaphthylene	2023/02/09	85	50 - 130	94	50 - 130	85	%		
8488729	1,1,1,2-Tetrachloroethane	2023/02/07	105	60 - 140	105	60 - 130	<0.040	ug/g	NC	50
8488729	1,1,1-Trichloroethane	2023/02/07	99	60 - 140	96	60 - 130	<0.040	ug/g	NC	50
8488729	1,1,2,2-Tetrachloroethane	2023/02/07	98	60 - 140	107	60 - 130	<0.040	ug/g	NC	50
8488729	1,1,2-Trichloroethane	2023/02/07	100	60 - 140	107	60 - 130	<0.040	ug/g	NC	50
8488729	1,1-Dichloroethane	2023/02/07	91	60 - 140	90	60 - 130	<0.040	ug/g	NC	50
8488729	1,1-Dichloroethylene	2023/02/07	96	60 - 140	91	60 - 130	<0.040	ug/g	NC	50
8488729	1,2-Dichlorobenzene	2023/02/07	97	60 - 140	96	60 - 130	<0.040	ug/g	NC	50
8488729	1,2-Dichloroethane	2023/02/07	92	60 - 140	98	60 - 130	<0.049	ug/g	NC	50
8488729	1,2-Dichloropropane	2023/02/07	92	60 - 140	94	60 - 130	<0.040	ug/g	NC	50
8488729	1,3-Dichlorobenzene	2023/02/07	99	60 - 140	96	60 - 130	<0.040	ug/g	NC	50
8488729	1,4-Dichlorobenzene	2023/02/07	111	60 - 140	109	60 - 130	<0.040	ug/g	NC	50
8488729	Acetone (2-Propanone)	2023/02/07	98	60 - 140	99	60 - 140	<0.49	ug/g	NC	50
8488729	Benzene	2023/02/07	89	60 - 140	88	60 - 130	<0.0060	ug/g	NC	50
8488729	Bromodichloromethane	2023/02/07	102	60 - 140	105	60 - 130	<0.040	ug/g	NC	50
8488729	Bromoform	2023/02/07	116	60 - 140	125	60 - 130	<0.040	ug/g	NC	50

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QUALITY ASSURANCE REPORT(CONT'D)

			Matrix Spike		SPIKED BLANK		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8488729	Bromomethane	2023/02/07	96	60 - 140	96	60 - 140	<0.040	ug/g	NC	50
8488729	Carbon Tetrachloride	2023/02/07	106	60 - 140	101	60 - 130	<0.040	ug/g	NC	50
8488729	Chlorobenzene	2023/02/07	95	60 - 140	94	60 - 130	<0.040	ug/g	NC	50
8488729	Chloroform	2023/02/07	95	60 - 140	95	60 - 130	<0.040	ug/g	NC	50
8488729	cis-1,2-Dichloroethylene	2023/02/07	96	60 - 140	97	60 - 130	<0.040	ug/g	NC	50
8488729	cis-1,3-Dichloropropene	2023/02/07	88	60 - 140	96	60 - 130	<0.030	ug/g	NC	50
8488729	Dibromochloromethane	2023/02/07	137	60 - 140	144 (1)	60 - 130	<0.040	ug/g	NC	50
8488729	Dichlorodifluoromethane (FREON 12)	2023/02/07	112	60 - 140	106	60 - 140	<0.040	ug/g	NC	50
8488729	Ethylbenzene	2023/02/07	83	60 - 140	80	60 - 130	<0.010	ug/g	NC	50
8488729	Ethylene Dibromide	2023/02/07	93	60 - 140	100	60 - 130	<0.040	ug/g	NC	50
8488729	F1 (C6-C10) - BTEX	2023/02/07					<10	ug/g	NC	30
8488729	F1 (C6-C10)	2023/02/07	108	60 - 140	90	80 - 120	<10	ug/g	NC	30
8488729	Hexane	2023/02/07	92	60 - 140	88	60 - 130	<0.040	ug/g	NC	50
8488729	Methyl Ethyl Ketone (2-Butanone)	2023/02/07	90	60 - 140	98	60 - 140	<0.40	ug/g	NC	50
8488729	Methyl Isobutyl Ketone	2023/02/07	96	60 - 140	109	60 - 130	<0.40	ug/g	NC	50
8488729	Methyl t-butyl ether (MTBE)	2023/02/07	82	60 - 140	83	60 - 130	<0.040	ug/g	NC	50
8488729	Methylene Chloride(Dichloromethane)	2023/02/07	99	60 - 140	101	60 - 130	<0.049	ug/g	NC	50
8488729	o-Xylene	2023/02/07	87	60 - 140	85	60 - 130	<0.020	ug/g	NC	50
8488729	p+m-Xylene	2023/02/07	87	60 - 140	83	60 - 130	<0.020	ug/g	NC	50
8488729	Styrene	2023/02/07	97	60 - 140	98	60 - 130	<0.040	ug/g	NC	50
8488729	Tetrachloroethylene	2023/02/07	90	60 - 140	85	60 - 130	<0.040	ug/g	NC	50
8488729	Toluene	2023/02/07	92	60 - 140	88	60 - 130	<0.020	ug/g	NC	50
8488729	Total Xylenes	2023/02/07					<0.020	ug/g	NC	50
8488729	trans-1,2-Dichloroethylene	2023/02/07	96	60 - 140	93	60 - 130	<0.040	ug/g	NC	50
8488729	trans-1,3-Dichloropropene	2023/02/07	96	60 - 140	105	60 - 130	<0.040	ug/g	NC	50
8488729	Trichloroethylene	2023/02/07	97	60 - 140	95	60 - 130	<0.010	ug/g	NC	50
8488729	Trichlorofluoromethane (FREON 11)	2023/02/07	98	60 - 140	93	60 - 130	<0.040	ug/g	NC	50
8488729	Vinyl Chloride	2023/02/07	87	60 - 140	84	60 - 130	<0.019	ug/g	NC	50
8489280	Moisture	2023/02/06							2.9	20
8490359	Benzene	2023/02/07	80	50 - 140	99	50 - 140	<0.020	ug/g	NC	50

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QUALITY ASSURANCE REPORT(CONT'D)

			Matrix Spike		SPIKED BLANK		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8490359	Ethylbenzene	2023/02/07	103	50 - 140	125	50 - 140	<0.020	ug/g	NC	50
8490359	F1 (C6-C10) - BTEX	2023/02/07					<10	ug/g	NC	30
8490359	F1 (C6-C10)	2023/02/07	99	60 - 140	100	80 - 120	<10	ug/g	NC	30
8490359	o-Xylene	2023/02/07	98	50 - 140	118	50 - 140	<0.020	ug/g	NC	50
8490359	p+m-Xylene	2023/02/07	99	50 - 140	113	50 - 140	<0.040	ug/g	NC	50
8490359	Toluene	2023/02/07	77	50 - 140	93	50 - 140	<0.020	ug/g	NC	50
8490359	Total Xylenes	2023/02/07					<0.040	ug/g	NC	50
8491368	Moisture	2023/02/07							5.0	20
8492632	WAD Cyanide (Free)	2023/02/08	101	75 - 125	102	80 - 120	<0.01	ug/g	NC	35
8492645	1-Methylnaphthalene	2023/02/09	91	50 - 130	99	50 - 130	<0.0050	ug/g	NC	40
8492645	2-Methylnaphthalene	2023/02/09	88	50 - 130	98	50 - 130	<0.0050	ug/g	NC	40
8492645	Acenaphthene	2023/02/09	102	50 - 130	105	50 - 130	<0.0050	ug/g	NC	40
8492645	Acenaphthylene	2023/02/09	93	50 - 130	99	50 - 130	<0.0050	ug/g	NC	40
8492645	Anthracene	2023/02/09	105	50 - 130	107	50 - 130	<0.0050	ug/g	NC	40
8492645	Benzo(a)anthracene	2023/02/09	114	50 - 130	111	50 - 130	<0.0050	ug/g	NC	40
8492645	Benzo(a)pyrene	2023/02/09	110	50 - 130	109	50 - 130	<0.0050	ug/g	NC	40
8492645	Benzo(b/j)fluoranthene	2023/02/09	105	50 - 130	105	50 - 130	<0.0050	ug/g	NC	40
8492645	Benzo(g,h,i)perylene	2023/02/09	105	50 - 130	109	50 - 130	<0.0050	ug/g	NC	40
8492645	Benzo(k)fluoranthene	2023/02/09	119	50 - 130	127	50 - 130	<0.0050	ug/g	NC	40
8492645	Chrysene	2023/02/09	110	50 - 130	110	50 - 130	<0.0050	ug/g	NC	40
8492645	Dibenzo(a,h)anthracene	2023/02/09	121	50 - 130	120	50 - 130	<0.0050	ug/g	NC	40
8492645	Fluoranthene	2023/02/09	111	50 - 130	112	50 - 130	<0.0050	ug/g	NC	40
8492645	Fluorene	2023/02/09	104	50 - 130	106	50 - 130	<0.0050	ug/g	NC	40
8492645	Indeno(1,2,3-cd)pyrene	2023/02/09	105	50 - 130	109	50 - 130	<0.0050	ug/g	NC	40
8492645	Naphthalene	2023/02/09	85	50 - 130	102	50 - 130	<0.0050	ug/g	NC	40
8492645	Phenanthrene	2023/02/09	105	50 - 130	108	50 - 130	<0.0050	ug/g	NC	40
8492645	Pyrene	2023/02/09	111	50 - 130	112	50 - 130	<0.0050	ug/g	NC	40
8492796	Chromium (VI)	2023/02/08	76	70 - 130	91	80 - 120	<0.18	ug/g	NC	35
8493012	Available (CaCl2) pH	2023/02/08			100	97 - 103			0.29	N/A
8493022	Moisture	2023/02/08							2.1	20

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QUALITY ASSURANCE REPORT(CONT'D)

			Matrix Spike		SPIKED BLANK		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8493678	Conductivity	2023/02/08			105	90 - 110	<0.002	mS/cm	7.6	10
8493705	Acid Extractable Antimony (Sb)	2023/02/08	NC	75 - 125	99	80 - 120	<0.20	ug/g		
8493705	Acid Extractable Arsenic (As)	2023/02/08	NC	75 - 125	95	80 - 120	<1.0	ug/g		
8493705	Acid Extractable Barium (Ba)	2023/02/08	NC	75 - 125	93	80 - 120	<0.50	ug/g		
8493705	Acid Extractable Beryllium (Be)	2023/02/08	NC	75 - 125	94	80 - 120	<0.20	ug/g		
8493705	Acid Extractable Boron (B)	2023/02/08	NC	75 - 125	95	80 - 120	<5.0	ug/g		
8493705	Acid Extractable Cadmium (Cd)	2023/02/08	NC	75 - 125	98	80 - 120	<0.10	ug/g		
8493705	Acid Extractable Chromium (Cr)	2023/02/08	NC	75 - 125	97	80 - 120	<1.0	ug/g		
8493705	Acid Extractable Cobalt (Co)	2023/02/08	NC	75 - 125	97	80 - 120	<0.10	ug/g		
8493705	Acid Extractable Copper (Cu)	2023/02/08	NC	75 - 125	98	80 - 120	<0.50	ug/g		
8493705	Acid Extractable Lead (Pb)	2023/02/09	NC (2)	75 - 125	103	80 - 120	<1.0	ug/g	1.9	30
8493705	Acid Extractable Mercury (Hg)	2023/02/08	NC	75 - 125	99	80 - 120	<0.050	ug/g		
8493705	Acid Extractable Molybdenum (Mo)	2023/02/08	NC	75 - 125	96	80 - 120	<0.50	ug/g		
8493705	Acid Extractable Nickel (Ni)	2023/02/08	NC	75 - 125	97	80 - 120	<0.50	ug/g		
8493705	Acid Extractable Selenium (Se)	2023/02/08	NC	75 - 125	98	80 - 120	<0.50	ug/g		
8493705	Acid Extractable Silver (Ag)	2023/02/08	NC	75 - 125	98	80 - 120	<0.20	ug/g		
8493705	Acid Extractable Thallium (Tl)	2023/02/08	NC	75 - 125	101	80 - 120	<0.050	ug/g		
8493705	Acid Extractable Uranium (U)	2023/02/08	NC	75 - 125	97	80 - 120	<0.050	ug/g		
8493705	Acid Extractable Vanadium (V)	2023/02/08	NC	75 - 125	97	80 - 120	<5.0	ug/g		
8493705	Acid Extractable Zinc (Zn)	2023/02/08	NC	75 - 125	97	80 - 120	<5.0	ug/g		
8493826	F2 (C10-C16 Hydrocarbons)	2023/02/09	95	60 - 130	97	80 - 120	<10	ug/g	1.8	30
8493826	F3 (C16-C34 Hydrocarbons)	2023/02/09	94	60 - 130	97	80 - 120	<50	ug/g	10	30
8493826	F4 (C34-C50 Hydrocarbons)	2023/02/09	89	60 - 130	92	80 - 120	<50	ug/g	NC	30
8493847	Hot Water Ext. Boron (B)	2023/02/08	109	75 - 125	103	75 - 125	<0.050	ug/g	2.3	40
8493967	1-Methylnaphthalene	2023/02/09	87	50 - 130	92	50 - 130	<0.0050	ug/g	NC	40
8493967	2-Methylnaphthalene	2023/02/09	93	50 - 130	98	50 - 130	<0.0050	ug/g	NC	40
8493967	Acenaphthene	2023/02/09	102	50 - 130	103	50 - 130	<0.0050	ug/g	NC	40
8493967	Acenaphthylene	2023/02/09	95	50 - 130	97	50 - 130	<0.0050	ug/g	NC	40
8493967	Anthracene	2023/02/09	106	50 - 130	108	50 - 130	<0.0050	ug/g	NC	40
8493967	Benzo(a)anthracene	2023/02/09	107	50 - 130	108	50 - 130	<0.0050	ug/g	NC	40

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QUALITY ASSURANCE REPORT(CONT'D)

			Matrix Spike		SPIKED BLANK		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8493967	Benzo(a)pyrene	2023/02/09	106	50 - 130	107	50 - 130	<0.0050	ug/g	NC	40
8493967	Benzo(b/j)fluoranthene	2023/02/09	100	50 - 130	100	50 - 130	<0.0050	ug/g	NC	40
8493967	Benzo(g,h,i)perylene	2023/02/09	115	50 - 130	118	50 - 130	<0.0050	ug/g	NC	40
8493967	Benzo(k)fluoranthene	2023/02/09	103	50 - 130	102	50 - 130	<0.0050	ug/g	NC	40
8493967	Chrysene	2023/02/09	108	50 - 130	109	50 - 130	<0.0050	ug/g	NC	40
8493967	Dibenzo(a,h)anthracene	2023/02/09	119	50 - 130	120	50 - 130	<0.0050	ug/g	NC	40
8493967	Fluoranthene	2023/02/09	112	50 - 130	114	50 - 130	<0.0050	ug/g	NC	40
8493967	Fluorene	2023/02/09	108	50 - 130	110	50 - 130	<0.0050	ug/g	NC	40
8493967	Indeno(1,2,3-cd)pyrene	2023/02/09	114	50 - 130	115	50 - 130	<0.0050	ug/g	NC	40
8493967	Naphthalene	2023/02/09	90	50 - 130	100	50 - 130	<0.0050	ug/g	NC	40
8493967	Phenanthrene	2023/02/09	106	50 - 130	106	50 - 130	<0.0050	ug/g	NC	40
8493967	Pyrene	2023/02/09	112	50 - 130	112	50 - 130	<0.0050	ug/g	NC	40
8495028	WAD Cyanide (Free)	2023/02/09	76	75 - 125	97	80 - 120	<0.01	ug/g	NC	35
8495246	Chromium (VI)	2023/02/09	96	70 - 130	97	80 - 120	<0.18	ug/g	NC	35
8495352	Available (CaCl2) pH	2023/02/09			100	97 - 103			0.022	N/A
8495482	Acid Extractable Antimony (Sb)	2023/02/09	88	75 - 125	97	80 - 120	<0.20	ug/g	NC	30
8495482	Acid Extractable Arsenic (As)	2023/02/09	99	75 - 125	99	80 - 120	<1.0	ug/g	1.5	30
8495482	Acid Extractable Barium (Ba)	2023/02/09	NC	75 - 125	94	80 - 120	<0.50	ug/g	2.1	30
8495482	Acid Extractable Beryllium (Be)	2023/02/09	94	75 - 125	93	80 - 120	<0.20	ug/g	2.3	30
8495482	Acid Extractable Boron (B)	2023/02/09	86	75 - 125	95	80 - 120	<5.0	ug/g	NC	30
8495482	Acid Extractable Cadmium (Cd)	2023/02/09	98	75 - 125	96	80 - 120	<0.10	ug/g	4.7	30
8495482	Acid Extractable Chromium (Cr)	2023/02/09	105	75 - 125	100	80 - 120	<1.0	ug/g	2.6	30
8495482	Acid Extractable Cobalt (Co)	2023/02/09	100	75 - 125	102	80 - 120	<0.10	ug/g	2.7	30
8495482	Acid Extractable Copper (Cu)	2023/02/09	96	75 - 125	98	80 - 120	<0.50	ug/g	1.6	30
8495482	Acid Extractable Lead (Pb)	2023/02/09	101	75 - 125	99	80 - 120	<1.0	ug/g	0.0072	30
8495482	Acid Extractable Mercury (Hg)	2023/02/09	97	75 - 125	99	80 - 120	<0.050	ug/g	NC	30
8495482	Acid Extractable Molybdenum (Mo)	2023/02/09	97	75 - 125	98	80 - 120	<0.50	ug/g	NC	30
8495482	Acid Extractable Nickel (Ni)	2023/02/09	100	75 - 125	100	80 - 120	<0.50	ug/g	1.8	30
8495482	Acid Extractable Selenium (Se)	2023/02/09	96	75 - 125	100	80 - 120	<0.50	ug/g	NC	30
8495482	Acid Extractable Silver (Ag)	2023/02/09	100	75 - 125	97	80 - 120	<0.20	ug/g	NC	30

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QUALITY ASSURANCE REPORT(CONT'D)

			Matrix Spike		SPIKED BLANK		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8495482	Acid Extractable Thallium (Tl)	2023/02/09	99	75 - 125	99	80 - 120	<0.050	ug/g	3.1	30
8495482	Acid Extractable Uranium (U)	2023/02/09	87	75 - 125	86	80 - 120	<0.050	ug/g	0.15	30
8495482	Acid Extractable Vanadium (V)	2023/02/09	NC	75 - 125	101	80 - 120	<5.0	ug/g	0.38	30
8495482	Acid Extractable Zinc (Zn)	2023/02/09	NC	75 - 125	102	80 - 120	<5.0	ug/g	1.0	30
8495597	Available (CaCl2) pH	2023/02/09			100	97 - 103			1.2	N/A
8495658	Hot Water Ext. Boron (B)	2023/02/09	116	75 - 125	108	75 - 125	<0.050	ug/g	15	40
8495671	Hot Water Ext. Boron (B)	2023/02/09	104	75 - 125	101	75 - 125	<0.050	ug/g	31	40
8495716	Conductivity	2023/02/09			104	90 - 110	<0.002	mS/cm	0.39	10
8495780	Acid Extractable Antimony (Sb)	2023/02/09	91	75 - 125	102	80 - 120	<0.20	ug/g	NC	30
8495780	Acid Extractable Arsenic (As)	2023/02/09	100	75 - 125	100	80 - 120	<1.0	ug/g	1.3	30
8495780	Acid Extractable Barium (Ba)	2023/02/09	NC	75 - 125	103	80 - 120	<0.50	ug/g	4.8	30
8495780	Acid Extractable Beryllium (Be)	2023/02/09	98	75 - 125	95	80 - 120	<0.20	ug/g	0.26	30
8495780	Acid Extractable Boron (B)	2023/02/09	92	75 - 125	98	80 - 120	<5.0	ug/g	NC	30
8495780	Acid Extractable Cadmium (Cd)	2023/02/09	101	75 - 125	99	80 - 120	<0.10	ug/g	5.8	30
8495780	Acid Extractable Chromium (Cr)	2023/02/09	112	75 - 125	101	80 - 120	<1.0	ug/g	0.96	30
8495780	Acid Extractable Cobalt (Co)	2023/02/09	108	75 - 125	103	80 - 120	<0.10	ug/g	3.3	30
8495780	Acid Extractable Copper (Cu)	2023/02/09	NC	75 - 125	101	80 - 120	<0.50	ug/g	1.7	30
8495780	Acid Extractable Lead (Pb)	2023/02/09	107	75 - 125	103	80 - 120	<1.0	ug/g	2.1	30
8495780	Acid Extractable Mercury (Hg)	2023/02/09	103	75 - 125	101	80 - 120	<0.050	ug/g	2.4	30
8495780	Acid Extractable Molybdenum (Mo)	2023/02/09	102	75 - 125	101	80 - 120	<0.50	ug/g	0.28	30
8495780	Acid Extractable Nickel (Ni)	2023/02/09	101	75 - 125	99	80 - 120	<0.50	ug/g	1.0	30
8495780	Acid Extractable Selenium (Se)	2023/02/09	103	75 - 125	105	80 - 120	<0.50	ug/g	NC	30
8495780	Acid Extractable Silver (Ag)	2023/02/09	105	75 - 125	101	80 - 120	<0.20	ug/g	NC	30
8495780	Acid Extractable Thallium (Tl)	2023/02/09	104	75 - 125	102	80 - 120	<0.050	ug/g	10	30
8495780	Acid Extractable Uranium (U)	2023/02/09	90	75 - 125	87	80 - 120	<0.050	ug/g	0.32	30
8495780	Acid Extractable Vanadium (V)	2023/02/09	NC	75 - 125	102	80 - 120	<5.0	ug/g	1.7	30

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QUALITY ASSURANCE REPORT(CONT'D)

			Matrix Spike		SPIKED BLANK		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8495780	Acid Extractable Zinc (Zn)	2023/02/09	NC	75 - 125	104	80 - 120	<5.0	ug/g	1.2	30

N/A = Not Applicable

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

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

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

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

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

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

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

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

(2) Matrix Spike not calculated. Original sample and matrix spike sample were analyzed at a dilution, due to high target analytes, or sample matrix interference.

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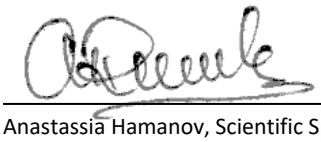
VALIDATION SIGNATURE PAGE

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



Anastassia Hamanov, Scientific Specialist

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03-Feb-23 15:40
Kudrat Bajwa
C333819
AKO ENV-906

Bottle Order #: 904775
COC #: C#904775-01-01
Project Manager: Kudrat Bajwa

INVOICE TO:		REPORT TO:		PROJECT INFORMATION:	
Company Name:	#4398 Terrapex Environmental Ltd	Company Name:	Terrapex Environmental Ltd	Quotation #:	~~C20955~~
Attention:	Accounts Payable	Attention:	Geoff Lussier	P.O. #:	TPEX 50
Address:	90 Scarsdale Rd, Toronto ON M3B 2R7	Address:	65 Nebo Road, Hamilton ON L8W 2C9	Project:	CH244.00
Tel:	(416) 245-0011 Fax: (416) 245-0012	Tel:	416 570 3200 Fax:	Project Name:	Queen St. S., Mississauga
Email:	accounts.payable@terrapex.com	Email:	g.lussier@terrapex.com	Site #:	
				Sampled By:	JD

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

Regulation 153 (2011): [ ] Table 1 [X] Res/Park [X] Medium/Fine [ ] Table 2 [ ] Ind/Comm [ ] Coarse [X] Table 3 [ ] Agri/Other [X] For RSC [ ] Table ___

Other Regulations: [ ] CCME [ ] Sanitary Sewer Bylaw [ ] Reg 558 [ ] Storm Sewer Bylaw [ ] MISA Municipality ___ [ ] PWQO [ ] Reg 406 Table ___ [ ] Other

Special Instructions

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

ANALYSIS REQUESTED (PLEASE BE SPECIFIC): Field Filtered (please circle): Metals / Hg / Cr VI; MET (Reg 153 pkg); VOCs/F1-F4; PAHs; BTEX/F1-F4

	Sample Barcode Label	Sample (Location) Identification	Date Sampled	Time Sampled	Matrix	Field Filtered	MET (Reg 153 pkg)	VOCs/F1-F4	PAHs	BTEX/F1-F4	# of Bottles	Comments
1		MW118-2	27Jan/23	15:00	Soil		X		X		1	
2		MW118-9	27Jan/23	16:00	↓			X			3	
3		BH111-1	30Jan/23	11:50			X				2	
4		BH111-2	30Jan/23	12:10					X		1	
5		BH111-9	30Jan/23	13:25				X			3	
6		BH114-2	31Jan/23	13:00			X				2	
7		BH114-7	31Jan/23	14:00						X	4	
8		MW105-1	1Feb/23	14:30					X		1	
9		MW105-2	1Feb/23	14:50			X				2	
10		MW105-9	1Feb/23	17:00	↓					X	4	

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

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

Job Specific Rush TAT (if applies to entire submission)
Date Required: ___ Time Required: ___
Rush Confirmation Number: ___ *(call lab for #)*

* RELINQUISHED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	RECEIVED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	# jars used and not submitted
Wahida / WAHIDA NASHREEN	3Feb/23	10:30am	[signature] / ARSHDEEP	2023/02/03	15:40	

Laboratory Use Only

Time Sensitive	Temperature (°C) on Recei	Custody Seal	Yes	No
	1/0/0	Present	✓	
		Intact	✓	

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

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

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

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

White: Bureau Veritas Yellow: Client

Bureau Veritas Canada (2019) Inc.

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

CHAIN OF CUSTODY RECORD

INVOICE TO:		REPORT TO:		PROJECT INFORMATION:		Laboratory Use Only:	
Company Name:	#4398 Terrapex Environmental Ltd	Company Name:	Terrapex Environmental Ltd	Quotation #:	C20955	Bureau Veritas Job #:	Bottle Order #:
Attention:	Accounts Payable	Attention:	Geoff Lussier	P.O. #:	TPEX SO		904775
Address:	90 Scarsdale Rd	Address:	65 Nebo Road	Project:	CH 244-00	COC #:	Project Manager:
	Toronto ON M3B 2R7		Hamilton ON L8W 2C9	Project Name:	Queen St. S. Mississauga	C#904775-02-01	Kudrat Bajwa
Tel:	(416) 245-0011 Fax: (416) 245-0012	Tel:	4165703200 Fax:	Site #:			
Email:	accounts.payable@terrapex.com	Email:	g.lussier@terrapex.com	Sampled By:	JD		

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

Regulation 153 (2011)	Other Regulations	Special Instructions
☐ Table 1 ☒ Res/Park ☒ Medium/Fine	☐ CCME ☐ Sanitary Sewer Bylaw	
☐ Table 2 ☐ Ind/Comm ☐ Coarse	☐ Reg 558 ☐ Storm Sewer Bylaw	
☒ Table 3 ☐ Agri/Other ☒ For RSC	☐ MISA Municipality	
☐ Table	☐ PWQO ☐ Reg 406 Table	
	☐ Other	

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

ANALYSIS REQUESTED (PLEASE BE SPECIFIC)

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

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

Job Specific Rush TAT (if applies to entire submission)
Date Required: _____ Time Required: _____ ☐
Rush Confirmation Number: _____ *(call lab for #)*

	Sample Barcode Label	Sample (Location) Identification	Date Sampled	Time Sampled	Matrix	Field Filtered (please circle): Metals / Hg / Cr VI	Me'I (Reg 153 pkg)	VOCs / F1-F4	PAHs	BTEX/F1-F4						# of Bottles	Comments
1		MW108-2	2Feb/23	16:00	Soil		X									2	
2		MW108-8	2Feb/23	17:00	Soil					X						4	
3																	
4																	
5																	
6																	
7																	
8																	
9																	
10																	

* RELINQUISHED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	RECEIVED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	# jars used and not submitted	Laboratory Use Only				
Wahida NASHREEN	3Feb/23	10:30am	See Page 1				Time Sensitive	Temperature (°C) on Recei	Custody Seal	Yes	No
									Present		
									Intact		

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

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

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

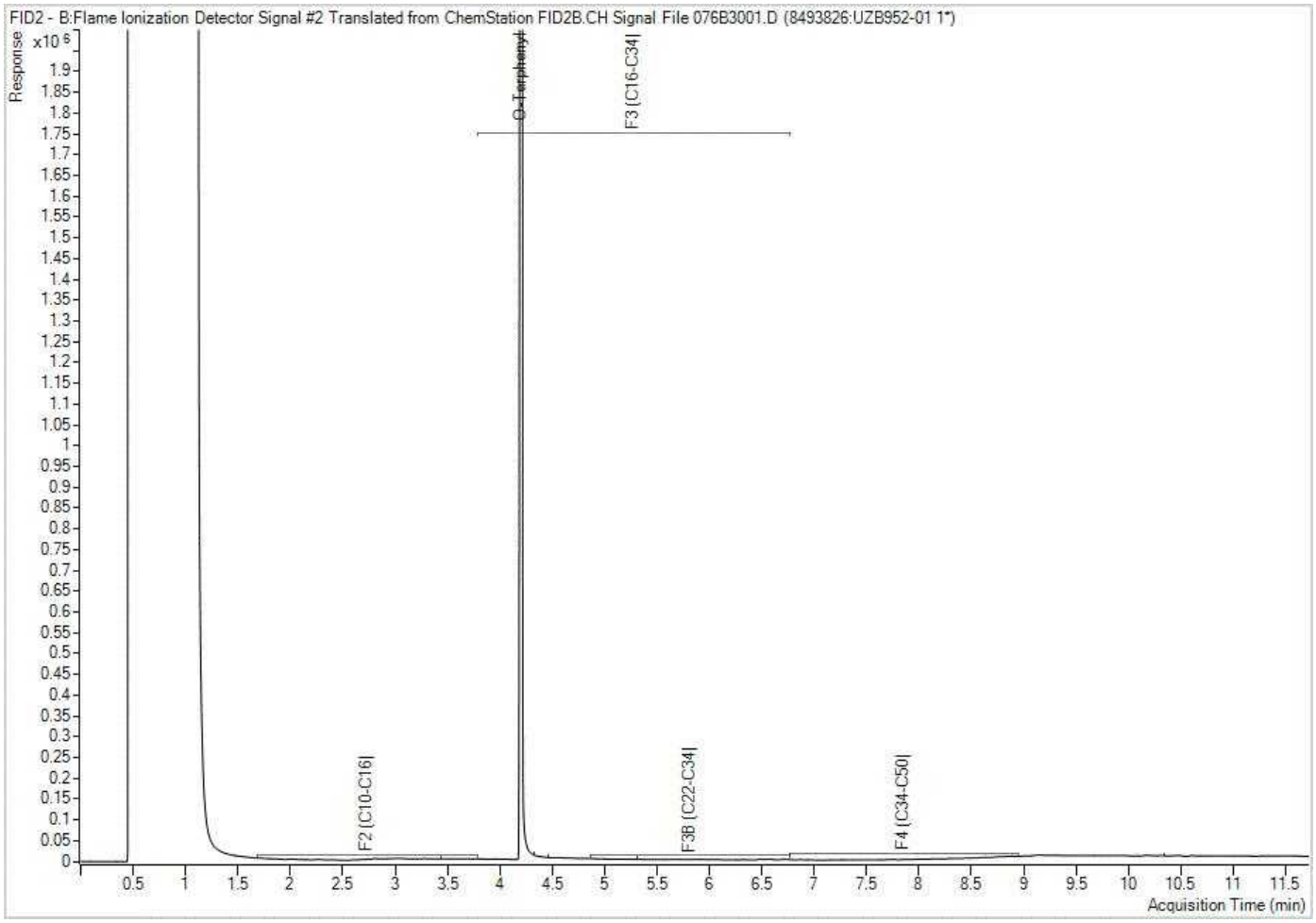
White: Bureau Veritas Yellow: Client

Bureau Veritas Canada (2019) Inc.

Bureau Veritas Job #: C333819
Report Date: 2023/02/13
Bureau Veritas Sample: UZB952

Terrapex Environmental Ltd
Client Project #: CH244.00
Project name: QUEEN ST.S., MISSISSAUGA
Client ID: MW118-9

Petroleum Hydrocarbons F2-F4 in Soil Chromatogram

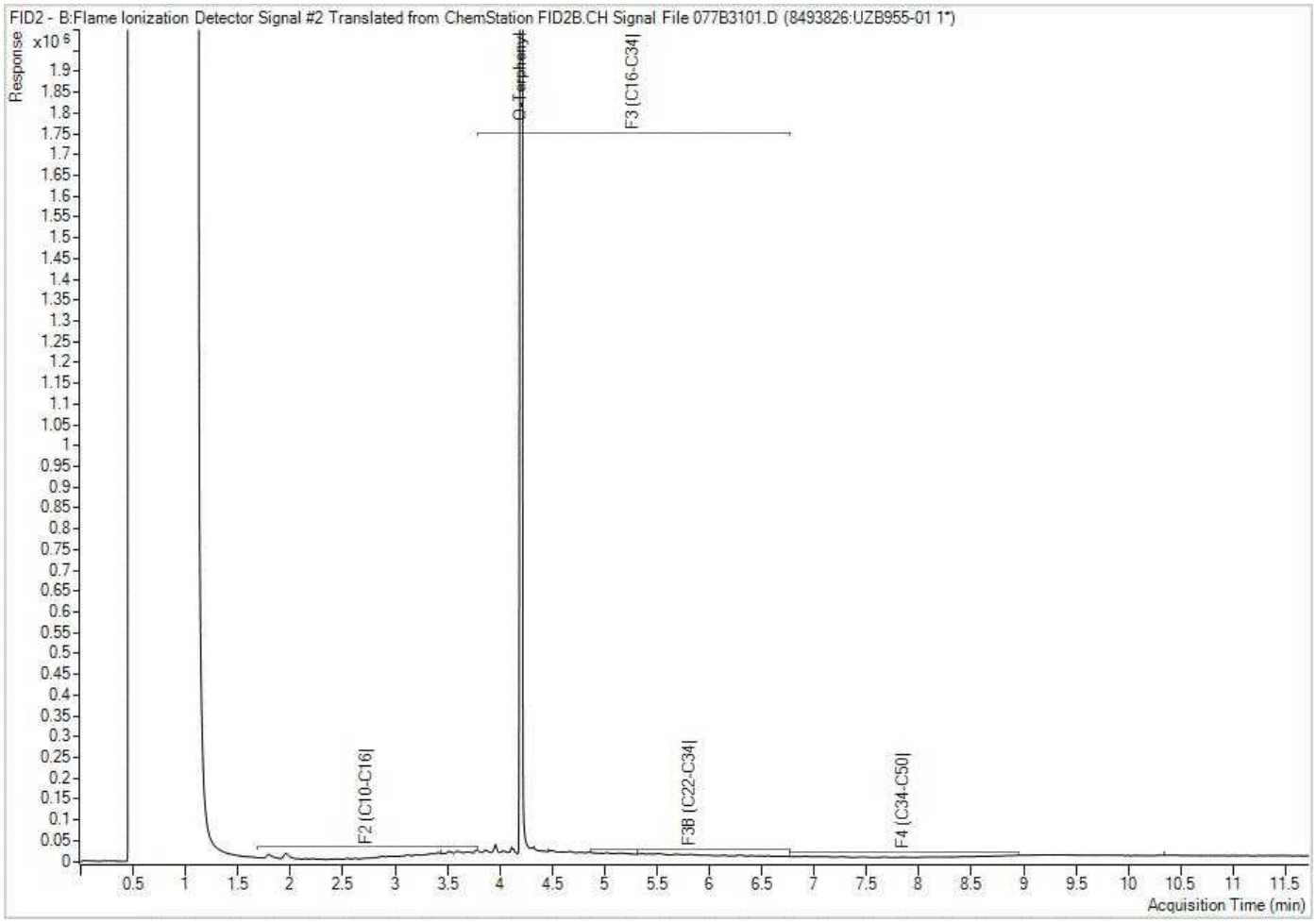


Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Bureau Veritas Job #: C333819
Report Date: 2023/02/13
Bureau Veritas Sample: UZB955

Terrapex Environmental Ltd
Client Project #: CH244.00
Project name: QUEEN ST.S., MISSISSAUGA
Client ID: BH111-9

Petroleum Hydrocarbons F2-F4 in Soil Chromatogram

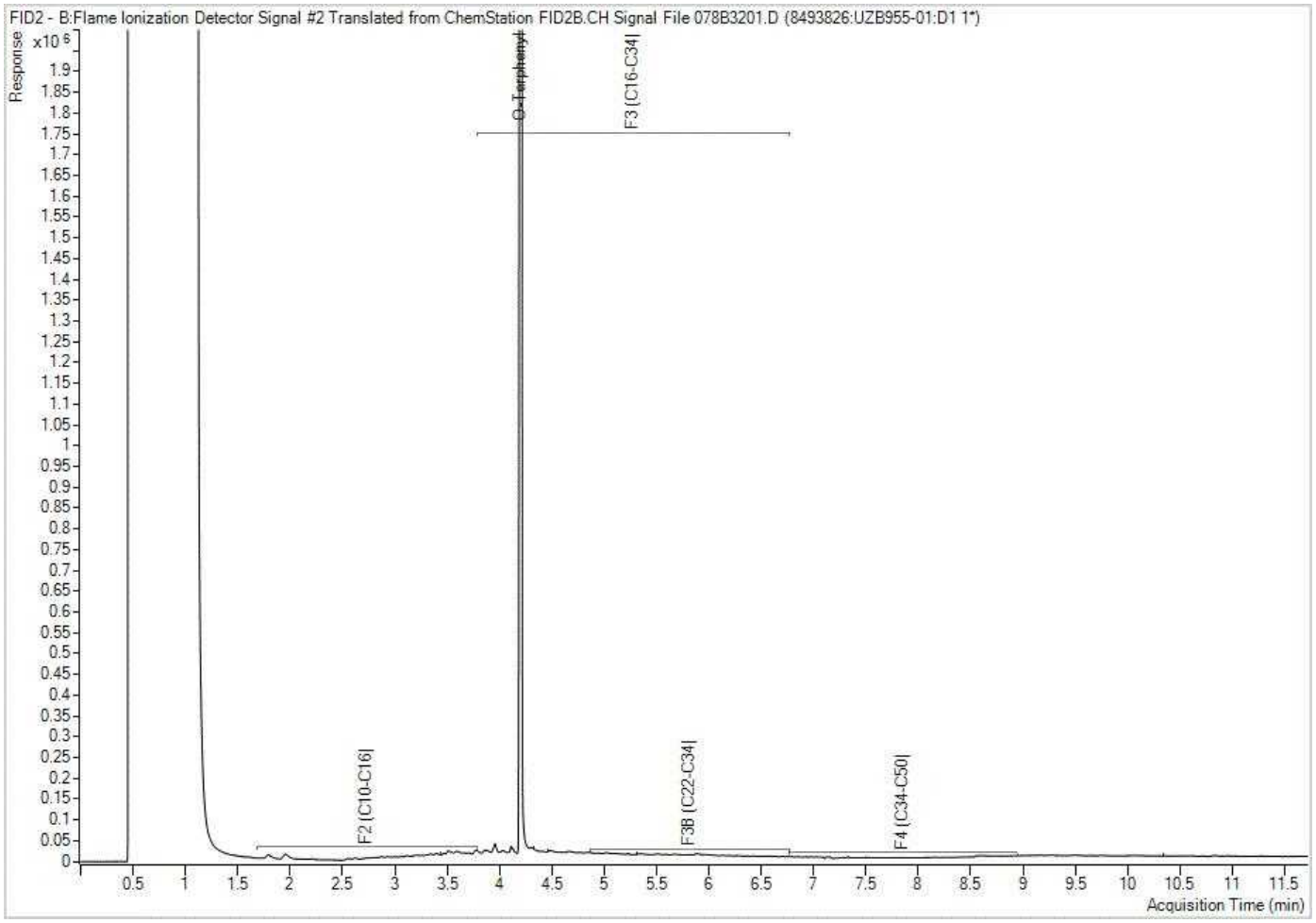


Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Bureau Veritas Job #: C333819
Report Date: 2023/02/13
Bureau Veritas Sample: UZB955 Lab-Dup

Terrapex Environmental Ltd
Client Project #: CH244.00
Project name: QUEEN ST.S., MISSISSAUGA
Client ID: BH111-9

Petroleum Hydrocarbons F2-F4 in Soil Chromatogram

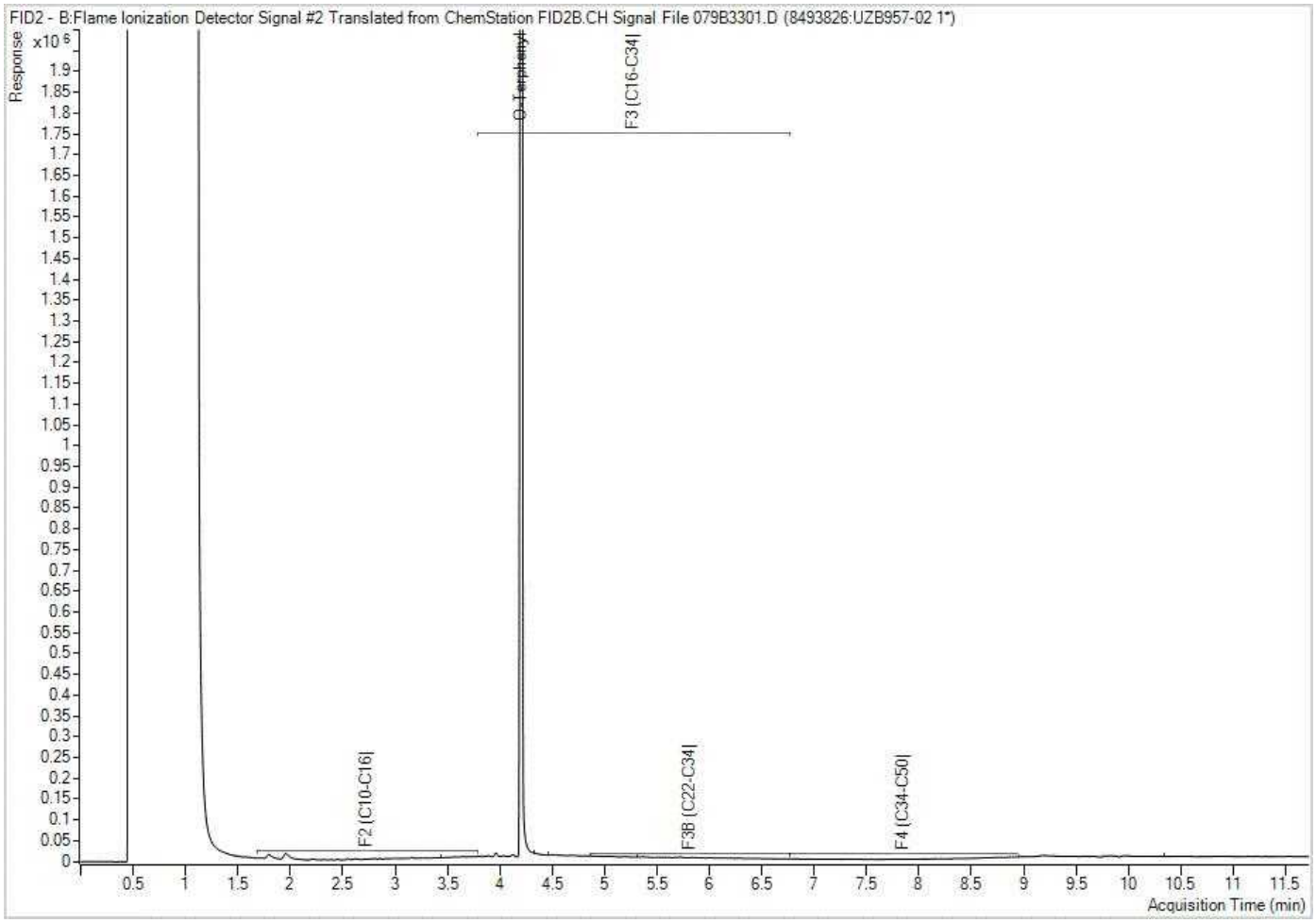


Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Bureau Veritas Job #: C333819
Report Date: 2023/02/13
Bureau Veritas Sample: UZB957

Terrapex Environmental Ltd
Client Project #: CH244.00
Project name: QUEEN ST.S., MISSISSAUGA
Client ID: BH114-7

Petroleum Hydrocarbons F2-F4 in Soil Chromatogram

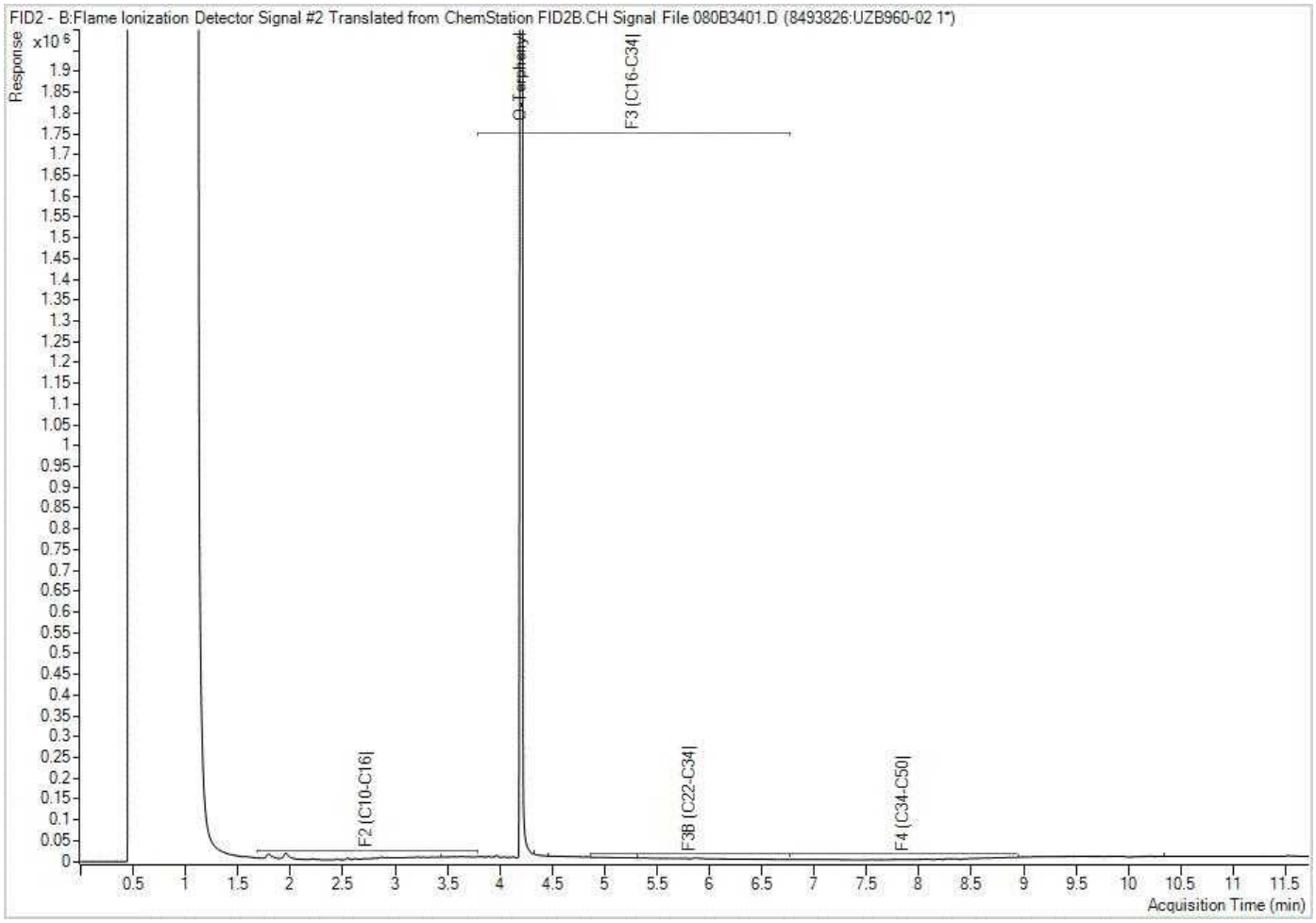


Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Bureau Veritas Job #: C333819
Report Date: 2023/02/13
Bureau Veritas Sample: UZB960

Terrapex Environmental Ltd
Client Project #: CH244.00
Project name: QUEEN ST.S., MISSISSAUGA
Client ID: MW105-9

Petroleum Hydrocarbons F2-F4 in Soil Chromatogram

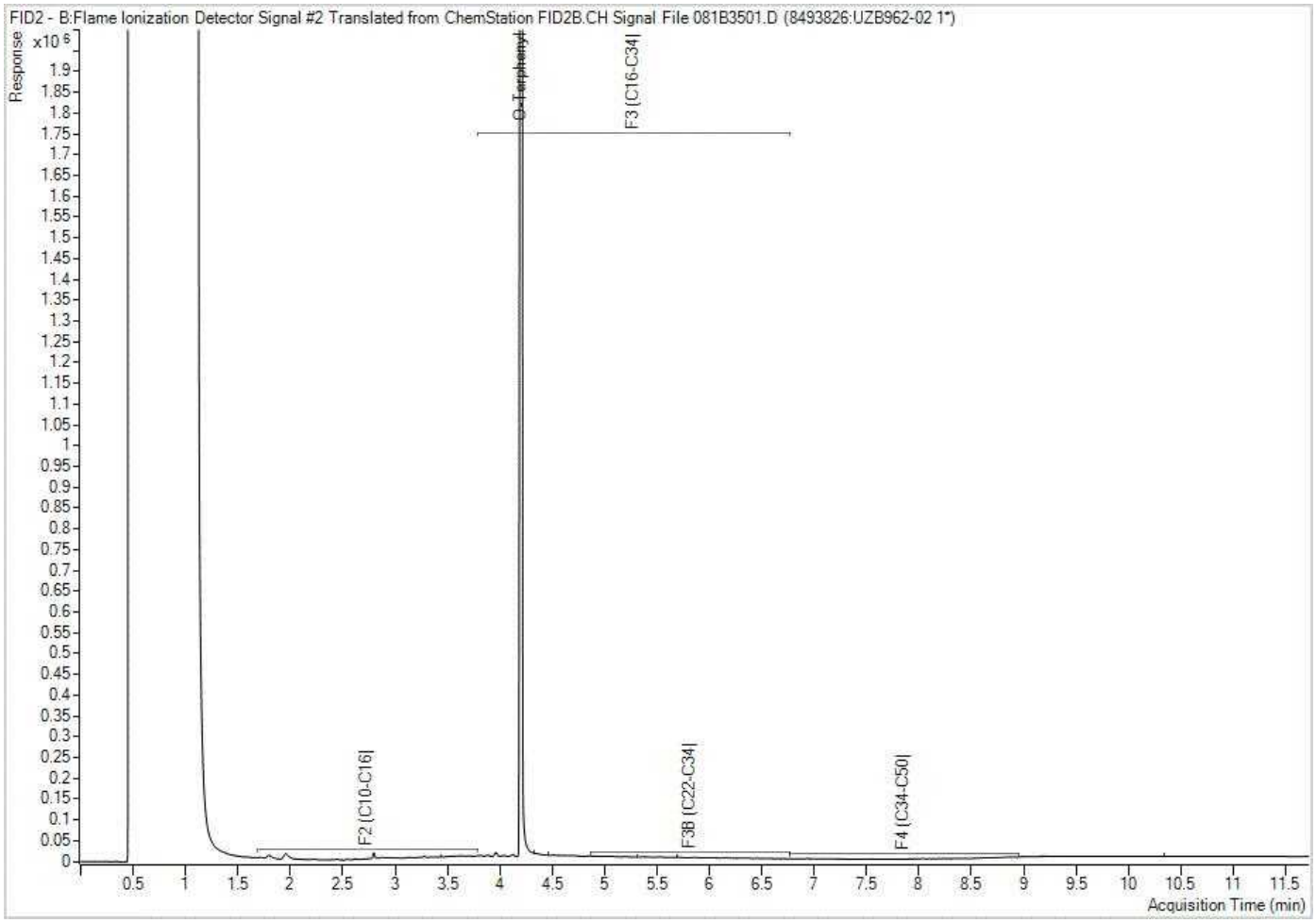


Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Bureau Veritas Job #: C333819
Report Date: 2023/02/13
Bureau Veritas Sample: UZB962

Terrapex Environmental Ltd
Client Project #: CH244.00
Project name: QUEEN ST.S., MISSISSAUGA
Client ID: MW108-8

Petroleum Hydrocarbons F2-F4 in Soil Chromatogram



Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Your P.O. #: TPEXS.0
Your Project #: CH244.00
Site Location: DE ZEN/QUEEN STREETS.MISSISSAUGA
Your C.O.C. #: 904775-03-01, 904775-08-01

Attention: Geoff Lussier

Terrapex Environmental Ltd
65 Nebo Road
Hamilton, ON
CANADA L8W 2C9

Report Date: 2023/02/17
Report #: R7514322
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C340981
Received: 2023/02/10, 15:55

Sample Matrix: Soil
Samples Received: 11

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Methylnaphthalene Sum	1	N/A	2023/02/17	CAM SOP-00301	EPA 8270D m
Hot Water Extractable Boron	1	2023/02/15	2023/02/16	CAM SOP-00408	R153 Ana. Prot. 2011
Hot Water Extractable Boron	4	2023/02/16	2023/02/16	CAM SOP-00408	R153 Ana. Prot. 2011
1,3-Dichloropropene Sum	1	N/A	2023/02/14		EPA 8260C m
1,3-Dichloropropene Sum	2	N/A	2023/02/15		EPA 8260C m
Free (WAD) Cyanide	5	2023/02/15	2023/02/15	CAM SOP-00457	OMOE E3015 m
Conductivity	5	2023/02/16	2023/02/16	CAM SOP-00414	OMOE E3530 v1 m
Hexavalent Chromium in Soil by IC (1)	5	2023/02/15	2023/02/16	CAM SOP-00436	EPA 3060/7199 m
Petroleum Hydro. CCME F1 & BTEX in Soil (2)	3	N/A	2023/02/14	CAM SOP-00315	CCME PHC-CWS m
Petroleum Hydrocarbons F2-F4 in Soil (3)	4	2023/02/15	2023/02/15	CAM SOP-00316	CCME CWS m
Acid Extractable Metals by ICPMS	5	2023/02/16	2023/02/16	CAM SOP-00447	EPA 6020B m
Moisture	1	N/A	2023/02/13	CAM SOP-00445	Carter 2nd ed 51.2 m
Moisture	9	N/A	2023/02/14	CAM SOP-00445	Carter 2nd ed 51.2 m
PAH Compounds in Soil by GC/MS (SIM)	1	2023/02/15	2023/02/16	CAM SOP-00318	EPA 8270E
pH CaCl2 EXTRACT	5	2023/02/15	2023/02/15	CAM SOP-00413	EPA 9045 D m
Sodium Adsorption Ratio (SAR)	5	N/A	2023/02/17	CAM SOP-00102	EPA 6010C
Volatile Organic Compounds and F1 PHCs	1	N/A	2023/02/14	CAM SOP-00230	EPA 8260C m
Volatile Organic Compounds in Soil	1	N/A	2023/02/13	CAM SOP-00228	EPA 8260D
Volatile Organic Compounds in Soil	1	N/A	2023/02/14	CAM SOP-00228	EPA 8260D

Remarks:

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

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

Bureau Veritas liability is limited to the actual cost of the requested analyses, unless otherwise agreed in writing. There is no other warranty expressed or implied. Bureau Veritas has been retained to provide analysis of samples provided by the Client using the testing methodology referenced in this report.

Your P.O. #: TPEXS.0
Your Project #: CH244.00
Site Location: DE ZEN/QUEEN STREETS.MISSISSAUGA
Your C.O.C. #: 904775-03-01, 904775-08-01

Attention: Geoff Lussier

Terrapex Environmental Ltd
65 Nebo Road
Hamilton, ON
CANADA L8W 2C9

Report Date: 2023/02/17
Report #: R7514322
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C340981
Received: 2023/02/10, 15:55

Interpretation and use of test results are the sole responsibility of the Client and are not within the scope of services provided by Bureau Veritas, unless otherwise agreed in writing. Bureau Veritas is not responsible for the accuracy or any data impacts, that result from the information provided by the customer or their agent.

Solid sample results, except biota, are based on dry weight unless otherwise indicated. Organic analyses are not recovery corrected except for isotope dilution methods.
Results relate to samples tested. When sampling is not conducted by Bureau Veritas, results relate to the supplied samples tested.
This Certificate shall not be reproduced except in full, without the written approval of the laboratory.
Reference Method suffix "m" indicates test methods incorporate validated modifications from specific reference methods to improve performance.
* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.
(1) Soils are reported on a dry weight basis unless otherwise specified.
(2) No lab extraction date is given for F1BTEX & VOC samples that are field preserved with methanol. Extraction date is the date sampled unless otherwise stated.
(3) All CCME PHC results met required criteria unless otherwise stated in the report. The CWS PHC methods employed by Bureau Veritas conform to all prescribed elements of the reference method and performance based elements have been validated. All modifications have been validated and proven equivalent following "Alberta Environment's Interpretation of the Reference Method for the Canada-Wide Standard for Petroleum Hydrocarbons in Soil Validation of Performance-Based Alternative Methods September 2003". Documentation is available upon request. Modifications from Reference Method for the Canada-wide Standard for Petroleum Hydrocarbons in Soil-Tier 1 Method: F2/F3/F4 data reported using validated cold solvent extraction instead of Soxhlet extraction.

Encryption Key

Please direct all questions regarding this Certificate of Analysis to:
Kudrat Bajwa, B.Sc., Project Manager
Email: Kudrat.Bajwa@bureauveritas.com
Phone# (905)817-5755

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

Bureau Veritas Job #: C340981
Report Date: 2023/02/17

Terrapex Environmental Ltd
Client Project #: CH244.00
Site Location: DE ZEN/QUEEN STREETS.MISSISSAUGA
Your P.O. #: TPEXS.0
Sampler Initials: JD

O.REG 153 METALS & INORGANICS PKG (SOIL)

Bureau Veritas ID		VAP890	VAP891		VAP893		VAP895		
Sampling Date		2023/02/06	2023/02/06		2023/02/06		2023/02/07		
COC Number		904775-03-01	904775-03-01		904775-03-01		904775-03-01		
	UNITS	BH110-2	BH9110-2	QC Batch	MW104-2	QC Batch	MW103-2	RDL	QC Batch
Calculated Parameters									
Sodium Adsorption Ratio	N/A	9.2	16	8498450	0.28 (1)	8498450	0.42		8498450
Inorganics									
Conductivity	mS/cm	2.3	2.3	8507822	0.17	8507822	0.28	0.002	8507822
Available (CaCl2) pH	pH	7.43	7.38	8505282	7.67	8505282	7.71		8505282
WAD Cyanide (Free)	ug/g	0.01	<0.01	8504992	<0.01	8504992	<0.01	0.01	8504992
Chromium (VI)	ug/g	<0.18	<0.18	8505234	<0.18	8505234	<0.18	0.18	8505234
Metals									
Hot Water Ext. Boron (B)	ug/g	2.3	1.4	8507704	0.17	8506181	0.085	0.050	8507704
Acid Extractable Antimony (Sb)	ug/g	0.29	0.31	8507398	<0.20	8507398	0.20	0.20	8507398
Acid Extractable Arsenic (As)	ug/g	4.4	6.4	8507398	3.2	8507398	4.5	1.0	8507398
Acid Extractable Barium (Ba)	ug/g	84	73	8507398	43	8507398	84	0.50	8507398
Acid Extractable Beryllium (Be)	ug/g	0.72	0.55	8507398	0.22	8507398	0.68	0.20	8507398
Acid Extractable Boron (B)	ug/g	11	11	8507398	<5.0	8507398	10	5.0	8507398
Acid Extractable Cadmium (Cd)	ug/g	0.35	0.23	8507398	0.20	8507398	<0.10	0.10	8507398
Acid Extractable Chromium (Cr)	ug/g	24	51	8507398	8.2	8507398	21	1.0	8507398
Acid Extractable Cobalt (Co)	ug/g	11	10	8507398	3.4	8507398	13	0.10	8507398
Acid Extractable Copper (Cu)	ug/g	25	28	8507398	28	8507398	32	0.50	8507398
Acid Extractable Lead (Pb)	ug/g	30	19	8507398	46	8507398	10	1.0	8507398
Acid Extractable Molybdenum (Mo)	ug/g	0.61	1.9	8507398	<0.50	8507398	<0.50	0.50	8507398
Acid Extractable Nickel (Ni)	ug/g	23	19	8507398	8.4	8507398	28	0.50	8507398
Acid Extractable Selenium (Se)	ug/g	<0.50	<0.50	8507398	<0.50	8507398	<0.50	0.50	8507398
Acid Extractable Silver (Ag)	ug/g	<0.20	<0.20	8507398	<0.20	8507398	<0.20	0.20	8507398
Acid Extractable Thallium (Tl)	ug/g	0.16	0.12	8507398	0.092	8507398	0.17	0.050	8507398
Acid Extractable Uranium (U)	ug/g	0.78	0.58	8507398	0.33	8507398	0.63	0.050	8507398
Acid Extractable Vanadium (V)	ug/g	33	25	8507398	9.0	8507398	29	5.0	8507398
Acid Extractable Zinc (Zn)	ug/g	94	68	8507398	55	8507398	61	5.0	8507398
Acid Extractable Mercury (Hg)	ug/g	<0.050	<0.050	8507398	<0.050	8507398	<0.050	0.050	8507398

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
(1) Sodium was not detected. To report SAR the sodium detection limit was used in the calculation. This value represents a maximum ratio.

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

O.REG 153 METALS & INORGANICS PKG (SOIL)

Bureau Veritas ID		VAP895			VAP898		
Sampling Date		2023/02/07			2023/02/08		
COC Number		904775-03-01			904775-03-01		
	UNITS	MW103-2 Lab-Dup	RDL	QC Batch	MW102-2	RDL	QC Batch
Calculated Parameters							
Sodium Adsorption Ratio	N/A				13		8498450
Inorganics							
Conductivity	mS/cm				1.6	0.002	8507822
Available (CaCl2) pH	pH				7.69		8505282
WAD Cyanide (Free)	ug/g				<0.01	0.01	8504992
Chromium (VI)	ug/g	<0.18	0.18	8505234	<0.18	0.18	8505234
Metals							
Hot Water Ext. Boron (B)	ug/g				0.22	0.050	8507704
Acid Extractable Antimony (Sb)	ug/g				<0.20	0.20	8507398
Acid Extractable Arsenic (As)	ug/g				4.4	1.0	8507398
Acid Extractable Barium (Ba)	ug/g				85	0.50	8507398
Acid Extractable Beryllium (Be)	ug/g				0.74	0.20	8507398
Acid Extractable Boron (B)	ug/g				11	5.0	8507398
Acid Extractable Cadmium (Cd)	ug/g				0.11	0.10	8507398
Acid Extractable Chromium (Cr)	ug/g				24	1.0	8507398
Acid Extractable Cobalt (Co)	ug/g				12	0.10	8507398
Acid Extractable Copper (Cu)	ug/g				28	0.50	8507398
Acid Extractable Lead (Pb)	ug/g				10	1.0	8507398
Acid Extractable Molybdenum (Mo)	ug/g				<0.50	0.50	8507398
Acid Extractable Nickel (Ni)	ug/g				26	0.50	8507398
Acid Extractable Selenium (Se)	ug/g				<0.50	0.50	8507398
Acid Extractable Silver (Ag)	ug/g				<0.20	0.20	8507398
Acid Extractable Thallium (Tl)	ug/g				0.15	0.050	8507398
Acid Extractable Uranium (U)	ug/g				0.70	0.050	8507398
Acid Extractable Vanadium (V)	ug/g				32	5.0	8507398
Acid Extractable Zinc (Zn)	ug/g				63	5.0	8507398
Acid Extractable Mercury (Hg)	ug/g				<0.050	0.050	8507398

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate

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O.REG 153 PAHS (SOIL)

Bureau Veritas ID		VAP896		
Sampling Date		2023/02/07		
COC Number		904775-03-01		
	UNITS	MW103-7	RDL	QC Batch
Calculated Parameters				
Methylnaphthalene, 2-(1-)	ug/g	<0.0071	0.0071	8499447
Polyaromatic Hydrocarbons				
Acenaphthene	ug/g	<0.0050	0.0050	8504976
Acenaphthylene	ug/g	<0.0050	0.0050	8504976
Anthracene	ug/g	<0.0050	0.0050	8504976
Benzo(a)anthracene	ug/g	<0.0050	0.0050	8504976
Benzo(a)pyrene	ug/g	<0.0050	0.0050	8504976
Benzo(b/j)fluoranthene	ug/g	<0.0050	0.0050	8504976
Benzo(g,h,i)perylene	ug/g	<0.0050	0.0050	8504976
Benzo(k)fluoranthene	ug/g	<0.0050	0.0050	8504976
Chrysene	ug/g	<0.0050	0.0050	8504976
Dibenzo(a,h)anthracene	ug/g	<0.0050	0.0050	8504976
Fluoranthene	ug/g	<0.0050	0.0050	8504976
Fluorene	ug/g	<0.0050	0.0050	8504976
Indeno(1,2,3-cd)pyrene	ug/g	<0.0050	0.0050	8504976
1-Methylnaphthalene	ug/g	<0.0050	0.0050	8504976
2-Methylnaphthalene	ug/g	<0.0050	0.0050	8504976
Naphthalene	ug/g	<0.0050	0.0050	8504976
Phenanthrene	ug/g	0.0077	0.0050	8504976
Pyrene	ug/g	<0.0050	0.0050	8504976
Surrogate Recovery (%)				
D10-Anthracene	%	93		8504976
D14-Terphenyl (FS)	%	98		8504976
D8-Acenaphthylene	%	76		8504976

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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

Bureau Veritas ID		VAP892	VAP894	VAP896		
Sampling Date		2023/02/06	2023/02/07	2023/02/07		
COC Number		904775-03-01	904775-03-01	904775-03-01		
	UNITS	BH110-8	MW104-9	MW103-7	RDL	QC Batch
BTEX & F1 Hydrocarbons						
Benzene	ug/g	<0.020	<0.020	<0.020	0.020	8503128
Toluene	ug/g	<0.020	<0.020	<0.020	0.020	8503128
Ethylbenzene	ug/g	<0.020	<0.020	<0.020	0.020	8503128
o-Xylene	ug/g	<0.020	<0.020	<0.020	0.020	8503128
p+m-Xylene	ug/g	<0.040	<0.040	<0.040	0.040	8503128
Total Xylenes	ug/g	<0.040	<0.040	<0.040	0.040	8503128
F1 (C6-C10)	ug/g	<10	<10	<10	10	8503128
F1 (C6-C10) - BTEX	ug/g	<10	<10	<10	10	8503128
F2-F4 Hydrocarbons						
F2 (C10-C16 Hydrocarbons)	ug/g	<10	<10	<10	10	8504969
F3 (C16-C34 Hydrocarbons)	ug/g	<50	<50	<50	50	8504969
F4 (C34-C50 Hydrocarbons)	ug/g	<50	<50	<50	50	8504969
Reached Baseline at C50	ug/g	Yes	Yes	Yes		8504969
Surrogate Recovery (%)						
1,4-Difluorobenzene	%	99	104	102		8503128
4-Bromofluorobenzene	%	101	96	94		8503128
D10-o-Xylene	%	98	98	101		8503128
D4-1,2-Dichloroethane	%	119	104	103		8503128
o-Terphenyl	%	87	87	87		8504969

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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

Bureau Veritas ID		VAP899		
Sampling Date		2023/02/09		
COC Number		904775-03-01		
	UNITS	MW102-9	RDL	QC Batch
Calculated Parameters				
1,3-Dichloropropene (cis+trans)	ug/g	<0.050	0.050	8498917
Volatile Organics				
Acetone (2-Propanone)	ug/g	<0.49	0.49	8500501
Benzene	ug/g	<0.0060	0.0060	8500501
Bromodichloromethane	ug/g	<0.040	0.040	8500501
Bromoform	ug/g	<0.040	0.040	8500501
Bromomethane	ug/g	<0.040	0.040	8500501
Carbon Tetrachloride	ug/g	<0.040	0.040	8500501
Chlorobenzene	ug/g	<0.040	0.040	8500501
Chloroform	ug/g	<0.040	0.040	8500501
Dibromochloromethane	ug/g	<0.040	0.040	8500501
1,2-Dichlorobenzene	ug/g	<0.040	0.040	8500501
1,3-Dichlorobenzene	ug/g	<0.040	0.040	8500501
1,4-Dichlorobenzene	ug/g	<0.040	0.040	8500501
Dichlorodifluoromethane (FREON 12)	ug/g	<0.040	0.040	8500501
1,1-Dichloroethane	ug/g	<0.040	0.040	8500501
1,2-Dichloroethane	ug/g	<0.049	0.049	8500501
1,1-Dichloroethylene	ug/g	<0.040	0.040	8500501
cis-1,2-Dichloroethylene	ug/g	<0.040	0.040	8500501
trans-1,2-Dichloroethylene	ug/g	<0.040	0.040	8500501
1,2-Dichloropropane	ug/g	<0.040	0.040	8500501
cis-1,3-Dichloropropene	ug/g	<0.030	0.030	8500501
trans-1,3-Dichloropropene	ug/g	<0.040	0.040	8500501
Ethylbenzene	ug/g	<0.010	0.010	8500501
Ethylene Dibromide	ug/g	<0.040	0.040	8500501
Hexane	ug/g	<0.040	0.040	8500501
Methylene Chloride(Dichloromethane)	ug/g	<0.049	0.049	8500501
Methyl Ethyl Ketone (2-Butanone)	ug/g	<0.40	0.40	8500501
Methyl Isobutyl Ketone	ug/g	<0.40	0.40	8500501
Methyl t-butyl ether (MTBE)	ug/g	<0.040	0.040	8500501
Styrene	ug/g	<0.040	0.040	8500501

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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

Bureau Veritas ID		VAP899		
Sampling Date		2023/02/09		
COC Number		904775-03-01		
	UNITS	**MW102-9**	**RDL**	**QC Batch**
1,1,1,2-Tetrachloroethane	ug/g	<0.040	0.040	8500501
1,1,2,2-Tetrachloroethane	ug/g	<0.040	0.040	8500501
Tetrachloroethylene	ug/g	<0.040	0.040	8500501
Toluene	ug/g	<0.020	0.020	8500501
1,1,1-Trichloroethane	ug/g	<0.040	0.040	8500501
1,1,2-Trichloroethane	ug/g	<0.040	0.040	8500501
Trichloroethylene	ug/g	<0.010	0.010	8500501
Trichlorofluoromethane (FREON 11)	ug/g	<0.040	0.040	8500501
Vinyl Chloride	ug/g	<0.019	0.019	8500501
p+m-Xylene	ug/g	<0.020	0.020	8500501
o-Xylene	ug/g	<0.020	0.020	8500501
Total Xylenes	ug/g	<0.020	0.020	8500501
F1 (C6-C10)	ug/g	<10	10	8500501
F1 (C6-C10) - BTEX	ug/g	<10	10	8500501
F2-F4 Hydrocarbons				
F2 (C10-C16 Hydrocarbons)	ug/g	<10	10	8504969
F3 (C16-C34 Hydrocarbons)	ug/g	<50	50	8504969
F4 (C34-C50 Hydrocarbons)	ug/g	<50	50	8504969
Reached Baseline at C50	ug/g	Yes		8504969
Surrogate Recovery (%)				
o-Terphenyl	%	90		8504969
4-Bromofluorobenzene	%	79		8500501
D10-o-Xylene	%	92		8500501
D4-1,2-Dichloroethane	%	103		8500501
D8-Toluene	%	102		8500501

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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O.REG 153 VOCS BY HS (SOIL)

Bureau Veritas ID		VAP897			VAP897		
Sampling Date		2023/02/07			2023/02/07		
COC Number		904775-03-01			904775-03-01		
	UNITS	MW103-9	RDL	QC Batch	MW103-9 Lab-Dup	RDL	QC Batch
Calculated Parameters							
1,3-Dichloropropene (cis+trans)	ug/g	<0.050	0.050	8498917			
Volatile Organics							
Acetone (2-Propanone)	ug/g	<0.49	0.49	8501897	<0.49	0.49	8501897
Benzene	ug/g	<0.0060	0.0060	8501897	<0.0060	0.0060	8501897
Bromodichloromethane	ug/g	<0.040	0.040	8501897	<0.040	0.040	8501897
Bromoform	ug/g	<0.040	0.040	8501897	<0.040	0.040	8501897
Bromomethane	ug/g	<0.040	0.040	8501897	<0.040	0.040	8501897
Carbon Tetrachloride	ug/g	<0.040	0.040	8501897	<0.040	0.040	8501897
Chlorobenzene	ug/g	<0.040	0.040	8501897	<0.040	0.040	8501897
Chloroform	ug/g	<0.040	0.040	8501897	<0.040	0.040	8501897
Dibromochloromethane	ug/g	<0.040	0.040	8501897	<0.040	0.040	8501897
1,2-Dichlorobenzene	ug/g	<0.040	0.040	8501897	<0.040	0.040	8501897
1,3-Dichlorobenzene	ug/g	<0.040	0.040	8501897	<0.040	0.040	8501897
1,4-Dichlorobenzene	ug/g	<0.040	0.040	8501897	<0.040	0.040	8501897
Dichlorodifluoromethane (FREON 12)	ug/g	<0.040	0.040	8501897	<0.040	0.040	8501897
1,1-Dichloroethane	ug/g	<0.040	0.040	8501897	<0.040	0.040	8501897
1,2-Dichloroethane	ug/g	<0.049	0.049	8501897	<0.049	0.049	8501897
1,1-Dichloroethylene	ug/g	<0.040	0.040	8501897	<0.040	0.040	8501897
cis-1,2-Dichloroethylene	ug/g	<0.040	0.040	8501897	<0.040	0.040	8501897
trans-1,2-Dichloroethylene	ug/g	<0.040	0.040	8501897	<0.040	0.040	8501897
1,2-Dichloropropane	ug/g	<0.040	0.040	8501897	<0.040	0.040	8501897
cis-1,3-Dichloropropene	ug/g	<0.030	0.030	8501897	<0.030	0.030	8501897
trans-1,3-Dichloropropene	ug/g	<0.040	0.040	8501897	<0.040	0.040	8501897
Ethylbenzene	ug/g	<0.010	0.010	8501897	<0.010	0.010	8501897
Ethylene Dibromide	ug/g	<0.040	0.040	8501897	<0.040	0.040	8501897
Hexane	ug/g	<0.040	0.040	8501897	<0.040	0.040	8501897
Methylene Chloride(Dichloromethane)	ug/g	<0.049	0.049	8501897	<0.049	0.049	8501897
Methyl Ethyl Ketone (2-Butanone)	ug/g	<0.40	0.40	8501897	<0.40	0.40	8501897
Methyl Isobutyl Ketone	ug/g	<0.40	0.40	8501897	<0.40	0.40	8501897
Methyl t-butyl ether (MTBE)	ug/g	<0.040	0.040	8501897	<0.040	0.040	8501897

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate

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O.REG 153 VOCS BY HS (SOIL)

Bureau Veritas ID		VAP897			VAP897		
Sampling Date		2023/02/07			2023/02/07		
COC Number		904775-03-01			904775-03-01		
	UNITS	MW103-9	RDL	QC Batch	MW103-9 Lab-Dup	RDL	QC Batch
Styrene	ug/g	<0.040	0.040	8501897	<0.040	0.040	8501897
1,1,1,2-Tetrachloroethane	ug/g	<0.040	0.040	8501897	<0.040	0.040	8501897
1,1,2,2-Tetrachloroethane	ug/g	<0.040	0.040	8501897	<0.040	0.040	8501897
Tetrachloroethylene	ug/g	<0.040	0.040	8501897	<0.040	0.040	8501897
Toluene	ug/g	<0.020	0.020	8501897	<0.020	0.020	8501897
1,1,1-Trichloroethane	ug/g	<0.040	0.040	8501897	<0.040	0.040	8501897
1,1,2-Trichloroethane	ug/g	<0.040	0.040	8501897	<0.040	0.040	8501897
Trichloroethylene	ug/g	<0.010	0.010	8501897	<0.010	0.010	8501897
Trichlorofluoromethane (FREON 11)	ug/g	<0.040	0.040	8501897	<0.040	0.040	8501897
Vinyl Chloride	ug/g	<0.019	0.019	8501897	<0.019	0.019	8501897
p+m-Xylene	ug/g	<0.020	0.020	8501897	<0.020	0.020	8501897
o-Xylene	ug/g	<0.020	0.020	8501897	<0.020	0.020	8501897
Total Xylenes	ug/g	<0.020	0.020	8501897	<0.020	0.020	8501897
Surrogate Recovery (%)							
4-Bromofluorobenzene	%	99		8501897	100		8501897
D10-o-Xylene	%	117		8501897	115		8501897
D4-1,2-Dichloroethane	%	97		8501897	97		8501897
D8-Toluene	%	99		8501897	99		8501897

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate

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O.REG 153 VOCS BY HS (SOIL)

Bureau Veritas ID		VAP901		
Sampling Date				
COC Number		904775-08-01		
	UNITS	METHANOL BLANK	RDL	QC Batch
Calculated Parameters				
1,3-Dichloropropene (cis+trans)	ug/g	<0.050	0.050	8498917
Volatile Organics				
Acetone (2-Propanone)	ug/g	<0.49	0.49	8500370
Benzene	ug/g	<0.0060	0.0060	8500370
Bromodichloromethane	ug/g	<0.040	0.040	8500370
Bromoform	ug/g	<0.040	0.040	8500370
Bromomethane	ug/g	<0.040	0.040	8500370
Carbon Tetrachloride	ug/g	<0.040	0.040	8500370
Chlorobenzene	ug/g	<0.040	0.040	8500370
Chloroform	ug/g	<0.040	0.040	8500370
Dibromochloromethane	ug/g	<0.040	0.040	8500370
1,2-Dichlorobenzene	ug/g	<0.040	0.040	8500370
1,3-Dichlorobenzene	ug/g	<0.040	0.040	8500370
1,4-Dichlorobenzene	ug/g	<0.040	0.040	8500370
Dichlorodifluoromethane (FREON 12)	ug/g	<0.040	0.040	8500370
1,1-Dichloroethane	ug/g	<0.040	0.040	8500370
1,2-Dichloroethane	ug/g	<0.049	0.049	8500370
1,1-Dichloroethylene	ug/g	<0.040	0.040	8500370
cis-1,2-Dichloroethylene	ug/g	<0.040	0.040	8500370
trans-1,2-Dichloroethylene	ug/g	<0.040	0.040	8500370
1,2-Dichloropropane	ug/g	<0.040	0.040	8500370
cis-1,3-Dichloropropene	ug/g	<0.030	0.030	8500370
trans-1,3-Dichloropropene	ug/g	<0.040	0.040	8500370
Ethylbenzene	ug/g	<0.010	0.010	8500370
Ethylene Dibromide	ug/g	<0.040	0.040	8500370
Hexane	ug/g	<0.040	0.040	8500370
Methylene Chloride(Dichloromethane)	ug/g	<0.049	0.049	8500370
Methyl Ethyl Ketone (2-Butanone)	ug/g	<0.40	0.40	8500370
Methyl Isobutyl Ketone	ug/g	<0.40	0.40	8500370
Methyl t-butyl ether (MTBE)	ug/g	<0.040	0.040	8500370
Styrene	ug/g	<0.040	0.040	8500370

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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O.REG 153 VOCS BY HS (SOIL)

Bureau Veritas ID		VAP901		
Sampling Date				
COC Number		904775-08-01		
	UNITS	METHANOL BLANK	RDL	QC Batch
1,1,1,2-Tetrachloroethane	ug/g	<0.040	0.040	8500370
1,1,2,2-Tetrachloroethane	ug/g	<0.040	0.040	8500370
Tetrachloroethylene	ug/g	<0.040	0.040	8500370
Toluene	ug/g	<0.020	0.020	8500370
1,1,1-Trichloroethane	ug/g	<0.040	0.040	8500370
1,1,2-Trichloroethane	ug/g	<0.040	0.040	8500370
Trichloroethylene	ug/g	<0.010	0.010	8500370
Trichlorofluoromethane (FREON 11)	ug/g	<0.040	0.040	8500370
Vinyl Chloride	ug/g	<0.019	0.019	8500370
p+m-Xylene	ug/g	<0.020	0.020	8500370
o-Xylene	ug/g	<0.020	0.020	8500370
Total Xylenes	ug/g	<0.020	0.020	8500370
Surrogate Recovery (%)				
4-Bromofluorobenzene	%	91		8500370
D10-o-Xylene	%	106		8500370
D4-1,2-Dichloroethane	%	98		8500370
D8-Toluene	%	102		8500370

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Bureau Veritas Job #: C340981
Report Date: 2023/02/17

Terrapex Environmental Ltd
Client Project #: CH244.00
Site Location: DE ZEN/QUEEN STREETS.MISSISSAUGA
Your P.O. #: TPEXS.0
Sampler Initials: JD

RESULTS OF ANALYSES OF SOIL

Bureau Veritas ID		VAP890	VAP891		VAP892		VAP893		
Sampling Date		2023/02/06	2023/02/06		2023/02/06		2023/02/06		
COC Number		904775-03-01	904775-03-01		904775-03-01		904775-03-01		
	UNITS	BH110-2	BH9110-2	QC Batch	BH110-8	QC Batch	MW104-2	RDL	QC Batch
Inorganics									
Moisture	%	16	17	8503205	11	8503196	7.8	1.0	8503205

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Bureau Veritas ID		VAP894		VAP895		VAP896		VAP897		
Sampling Date		2023/02/07		2023/02/07		2023/02/07		2023/02/07		
COC Number		904775-03-01		904775-03-01		904775-03-01		904775-03-01		
	UNITS	MW104-9	QC Batch	MW103-2	QC Batch	MW103-7	QC Batch	MW103-9	RDL	QC Batch
Inorganics										
Moisture	%	9.7	8503196	14	8503205	11	8503196	8.7	1.0	8500970

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Bureau Veritas ID		VAP898		VAP899		
Sampling Date		2023/02/08		2023/02/09		
COC Number		904775-03-01		904775-03-01		
	UNITS	MW102-2	QC Batch	MW102-9	RDL	QC Batch
Inorganics						
Moisture	%	17	8503205	13	1.0	8503196

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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TEST SUMMARY

Bureau Veritas ID: VAP890 **Collected:** 2023/02/06
Sample ID: BH110-2 **Shipped:**
Matrix: Soil **Received:** 2023/02/10

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hot Water Extractable Boron	ICP	8507704	2023/02/16	2023/02/16	Thuy Linh Nguyen
Free (WAD) Cyanide	TECH	8504992	2023/02/15	2023/02/15	Kruti Jitesh Patel
Conductivity	AT	8507822	2023/02/16	2023/02/16	Gurparteek KAUR
Hexavalent Chromium in Soil by IC	IC/SPEC	8505234	2023/02/15	2023/02/16	Surleen Kaur Romana
Acid Extractable Metals by ICPMS	ICP/MS	8507398	2023/02/16	2023/02/16	Daniel Teclu
Moisture	BAL	8503205	N/A	2023/02/14	Shivani Desai
pH CaCl2 EXTRACT	AT	8505282	2023/02/15	2023/02/15	Taslima Aktar
Sodium Adsorption Ratio (SAR)	CALC/MET	8498450	N/A	2023/02/17	Automated Statchk

Bureau Veritas ID: VAP891 **Collected:** 2023/02/06
Sample ID: BH9110-2 **Shipped:**
Matrix: Soil **Received:** 2023/02/10

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hot Water Extractable Boron	ICP	8507704	2023/02/16	2023/02/16	Thuy Linh Nguyen
Free (WAD) Cyanide	TECH	8504992	2023/02/15	2023/02/15	Kruti Jitesh Patel
Conductivity	AT	8507822	2023/02/16	2023/02/16	Gurparteek KAUR
Hexavalent Chromium in Soil by IC	IC/SPEC	8505234	2023/02/15	2023/02/16	Surleen Kaur Romana
Acid Extractable Metals by ICPMS	ICP/MS	8507398	2023/02/16	2023/02/16	Daniel Teclu
Moisture	BAL	8503205	N/A	2023/02/14	Shivani Desai
pH CaCl2 EXTRACT	AT	8505282	2023/02/15	2023/02/15	Taslima Aktar
Sodium Adsorption Ratio (SAR)	CALC/MET	8498450	N/A	2023/02/17	Automated Statchk

Bureau Veritas ID: VAP892 **Collected:** 2023/02/06
Sample ID: BH110-8 **Shipped:**
Matrix: Soil **Received:** 2023/02/10

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	8503128	N/A	2023/02/14	Domnica Andronescu
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	8504969	2023/02/15	2023/02/15	Agnieszka Brzuzy-Snopko
Moisture	BAL	8503196	N/A	2023/02/14	Shivani Desai

Bureau Veritas ID: VAP893 **Collected:** 2023/02/06
Sample ID: MW104-2 **Shipped:**
Matrix: Soil **Received:** 2023/02/10

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hot Water Extractable Boron	ICP	8506181	2023/02/15	2023/02/16	Jaswinder Kaur
Free (WAD) Cyanide	TECH	8504992	2023/02/15	2023/02/15	Kruti Jitesh Patel
Conductivity	AT	8507822	2023/02/16	2023/02/16	Gurparteek KAUR
Hexavalent Chromium in Soil by IC	IC/SPEC	8505234	2023/02/15	2023/02/16	Surleen Kaur Romana
Acid Extractable Metals by ICPMS	ICP/MS	8507398	2023/02/16	2023/02/16	Daniel Teclu
Moisture	BAL	8503205	N/A	2023/02/14	Shivani Desai

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TEST SUMMARY

Bureau Veritas ID: VAP893 **Collected:** 2023/02/06
Sample ID: MW104-2 **Shipped:**
Matrix: Soil **Received:** 2023/02/10

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
pH CaCl2 EXTRACT	AT	8505282	2023/02/15	2023/02/15	Taslima Aktar
Sodium Adsorption Ratio (SAR)	CALC/MET	8498450	N/A	2023/02/17	Automated Statchk

Bureau Veritas ID: VAP894 **Collected:** 2023/02/07
Sample ID: MW104-9 **Shipped:**
Matrix: Soil **Received:** 2023/02/10

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	8503128	N/A	2023/02/14	Domnica Andronescu
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	8504969	2023/02/15	2023/02/15	Agnieszka Brzuzy-Snopko
Moisture	BAL	8503196	N/A	2023/02/14	Shivani Desai

Bureau Veritas ID: VAP895 **Collected:** 2023/02/07
Sample ID: MW103-2 **Shipped:**
Matrix: Soil **Received:** 2023/02/10

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hot Water Extractable Boron	ICP	8507704	2023/02/16	2023/02/16	Thuy Linh Nguyen
Free (WAD) Cyanide	TECH	8504992	2023/02/15	2023/02/15	Kruti Jitesh Patel
Conductivity	AT	8507822	2023/02/16	2023/02/16	Gurparteek KAUR
Hexavalent Chromium in Soil by IC	IC/SPEC	8505234	2023/02/15	2023/02/16	Surleen Kaur Romana
Acid Extractable Metals by ICPMS	ICP/MS	8507398	2023/02/16	2023/02/16	Daniel Teclu
Moisture	BAL	8503205	N/A	2023/02/14	Shivani Desai
pH CaCl2 EXTRACT	AT	8505282	2023/02/15	2023/02/15	Taslima Aktar
Sodium Adsorption Ratio (SAR)	CALC/MET	8498450	N/A	2023/02/17	Automated Statchk

Bureau Veritas ID: VAP895 Dup **Collected:** 2023/02/07
Sample ID: MW103-2 **Shipped:**
Matrix: Soil **Received:** 2023/02/10

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hexavalent Chromium in Soil by IC	IC/SPEC	8505234	2023/02/15	2023/02/16	Surleen Kaur Romana

Bureau Veritas ID: VAP896 **Collected:** 2023/02/07
Sample ID: MW103-7 **Shipped:**
Matrix: Soil **Received:** 2023/02/10

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	8499447	N/A	2023/02/17	Automated Statchk
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	8503128	N/A	2023/02/14	Domnica Andronescu
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	8504969	2023/02/15	2023/02/15	Agnieszka Brzuzy-Snopko
Moisture	BAL	8503196	N/A	2023/02/14	Shivani Desai
PAH Compounds in Soil by GC/MS (SIM)	GC/MS	8504976	2023/02/15	2023/02/16	Joe Paino

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Bureau Veritas Job #: C340981
Report Date: 2023/02/17

Terrapex Environmental Ltd
Client Project #: CH244.00
Site Location: DE ZEN/QUEEN STREETS.MISSISSAUGA
Your P.O. #: TPEXS.0
Sampler Initials: JD

TEST SUMMARY

Bureau Veritas ID: VAP897
Sample ID: MW103-9
Matrix: Soil
Collected: 2023/02/07
Shipped:
Received: 2023/02/10

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
1,3-Dichloropropene Sum	CALC	8498917	N/A	2023/02/14	Automated Statchk
Moisture	BAL	8500970	N/A	2023/02/13	Muhammad Chhaidan
Volatile Organic Compounds in Soil	GC/MS	8501897	N/A	2023/02/14	Gladys Guerrero

Bureau Veritas ID: VAP897 Dup
Sample ID: MW103-9
Matrix: Soil
Collected: 2023/02/07
Shipped:
Received: 2023/02/10

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Volatile Organic Compounds in Soil	GC/MS	8501897	N/A	2023/02/14	Gladys Guerrero

Bureau Veritas ID: VAP898
Sample ID: MW102-2
Matrix: Soil
Collected: 2023/02/08
Shipped:
Received: 2023/02/10

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hot Water Extractable Boron	ICP	8507704	2023/02/16	2023/02/16	Thuy Linh Nguyen
Free (WAD) Cyanide	TECH	8504992	2023/02/15	2023/02/15	Kruti Jitesh Patel
Conductivity	AT	8507822	2023/02/16	2023/02/16	Gurparteek KAUR
Hexavalent Chromium in Soil by IC	IC/SPEC	8505234	2023/02/15	2023/02/16	Surleen Kaur Romana
Acid Extractable Metals by ICPMS	ICP/MS	8507398	2023/02/16	2023/02/16	Daniel Teclu
Moisture	BAL	8503205	N/A	2023/02/14	Shivani Desai
pH CaCl2 EXTRACT	AT	8505282	2023/02/15	2023/02/15	Taslima Aktar
Sodium Adsorption Ratio (SAR)	CALC/MET	8498450	N/A	2023/02/17	Automated Statchk

Bureau Veritas ID: VAP899
Sample ID: MW102-9
Matrix: Soil
Collected: 2023/02/09
Shipped:
Received: 2023/02/10

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
1,3-Dichloropropene Sum	CALC	8498917	N/A	2023/02/15	Automated Statchk
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	8504969	2023/02/15	2023/02/15	Agnieszka Brzuzy-Snopko
Moisture	BAL	8503196	N/A	2023/02/14	Shivani Desai
Volatile Organic Compounds and F1 PHCs	GC/MSFD	8500501	N/A	2023/02/14	Jett Wu

Bureau Veritas ID: VAP901
Sample ID: METHANOL BLANK
Matrix: Soil
Collected:
Shipped:
Received: 2023/02/10

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
1,3-Dichloropropene Sum	CALC	8498917	N/A	2023/02/15	Automated Statchk
Volatile Organic Compounds in Soil	GC/MS	8500370	N/A	2023/02/13	Manpreet Sarao

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GENERAL COMMENTS

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

Package 1	3.7°C

Results relate only to the items tested.

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QUALITY ASSURANCE REPORT

			Matrix Spike		SPIKED BLANK		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8500370	4-Bromofluorobenzene	2023/02/13	95	60 - 140	97	60 - 140	93	%		
8500370	D10-o-Xylene	2023/02/13	109	60 - 130	86	60 - 130	90	%		
8500370	D4-1,2-Dichloroethane	2023/02/13	97	60 - 140	100	60 - 140	101	%		
8500370	D8-Toluene	2023/02/13	106	60 - 140	104	60 - 140	100	%		
8500501	4-Bromofluorobenzene	2023/02/14	90	60 - 140	92	60 - 140	78	%		
8500501	D10-o-Xylene	2023/02/14	89	60 - 130	101	60 - 130	86	%		
8500501	D4-1,2-Dichloroethane	2023/02/14	102	60 - 140	101	60 - 140	105	%		
8500501	D8-Toluene	2023/02/14	108	60 - 140	110	60 - 140	100	%		
8501897	4-Bromofluorobenzene	2023/02/14	100	60 - 140	101	60 - 140	102	%		
8501897	D10-o-Xylene	2023/02/14	115	60 - 130	108	60 - 130	118	%		
8501897	D4-1,2-Dichloroethane	2023/02/14	97	60 - 140	101	60 - 140	103	%		
8501897	D8-Toluene	2023/02/14	100	60 - 140	99	60 - 140	97	%		
8503128	1,4-Difluorobenzene	2023/02/14	102	60 - 140	100	60 - 140	103	%		
8503128	4-Bromofluorobenzene	2023/02/14	99	60 - 140	99	60 - 140	95	%		
8503128	D10-o-Xylene	2023/02/14	102	60 - 140	100	60 - 140	101	%		
8503128	D4-1,2-Dichloroethane	2023/02/14	101	60 - 140	101	60 - 140	105	%		
8504969	o-Terphenyl	2023/02/15	82	60 - 130	80	60 - 130	89	%		
8504976	D10-Anthracene	2023/02/16	97	50 - 130	103	50 - 130	106	%		
8504976	D14-Terphenyl (FS)	2023/02/16	104	50 - 130	112	50 - 130	107	%		
8504976	D8-Acenaphthylene	2023/02/16	84	50 - 130	92	50 - 130	84	%		
8500370	1,1,1,2-Tetrachloroethane	2023/02/13	100	60 - 140	100	60 - 130	<0.040	ug/g	NC	50
8500370	1,1,1-Trichloroethane	2023/02/13	102	60 - 140	101	60 - 130	<0.040	ug/g	NC	50
8500370	1,1,2,2-Tetrachloroethane	2023/02/13	90	60 - 140	95	60 - 130	<0.040	ug/g	NC	50
8500370	1,1,2-Trichloroethane	2023/02/13	99	60 - 140	101	60 - 130	<0.040	ug/g	NC	50
8500370	1,1-Dichloroethane	2023/02/13	96	60 - 140	96	60 - 130	<0.040	ug/g	NC	50
8500370	1,1-Dichloroethylene	2023/02/13	101	60 - 140	100	60 - 130	<0.040	ug/g	NC	50
8500370	1,2-Dichlorobenzene	2023/02/13	94	60 - 140	95	60 - 130	<0.040	ug/g	NC	50
8500370	1,2-Dichloroethane	2023/02/13	89	60 - 140	92	60 - 130	<0.049	ug/g	NC	50
8500370	1,2-Dichloropropane	2023/02/13	96	60 - 140	97	60 - 130	<0.040	ug/g	NC	50
8500370	1,3-Dichlorobenzene	2023/02/13	95	60 - 140	95	60 - 130	<0.040	ug/g	NC	50

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QUALITY ASSURANCE REPORT(CONT'D)

			Matrix Spike		SPIKED BLANK		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8500370	1,4-Dichlorobenzene	2023/02/13	111	60 - 140	111	60 - 130	<0.040	ug/g	NC	50
8500370	Acetone (2-Propanone)	2023/02/13	89	60 - 140	94	60 - 140	<0.49	ug/g	NC	50
8500370	Benzene	2023/02/13	93	60 - 140	93	60 - 130	<0.0060	ug/g	NC	50
8500370	Bromodichloromethane	2023/02/13	98	60 - 140	101	60 - 130	<0.040	ug/g	NC	50
8500370	Bromoform	2023/02/13	89	60 - 140	94	60 - 130	<0.040	ug/g	NC	50
8500370	Bromomethane	2023/02/13	101	60 - 140	100	60 - 140	<0.040	ug/g	NC	50
8500370	Carbon Tetrachloride	2023/02/13	102	60 - 140	100	60 - 130	<0.040	ug/g	NC	50
8500370	Chlorobenzene	2023/02/13	97	60 - 140	97	60 - 130	<0.040	ug/g	NC	50
8500370	Chloroform	2023/02/13	99	60 - 140	100	60 - 130	<0.040	ug/g	NC	50
8500370	cis-1,2-Dichloroethylene	2023/02/13	99	60 - 140	101	60 - 130	<0.040	ug/g	NC	50
8500370	cis-1,3-Dichloropropene	2023/02/13	86	60 - 140	86	60 - 130	<0.030	ug/g	NC	50
8500370	Dibromochloromethane	2023/02/13	92	60 - 140	95	60 - 130	<0.040	ug/g	NC	50
8500370	Dichlorodifluoromethane (FREON 12)	2023/02/13	120	60 - 140	114	60 - 140	<0.040	ug/g	NC	50
8500370	Ethylbenzene	2023/02/13	91	60 - 140	90	60 - 130	<0.010	ug/g	NC	50
8500370	Ethylene Dibromide	2023/02/13	89	60 - 140	92	60 - 130	<0.040	ug/g	NC	50
8500370	Hexane	2023/02/13	106	60 - 140	103	60 - 130	<0.040	ug/g	NC	50
8500370	Methyl Ethyl Ketone (2-Butanone)	2023/02/13	90	60 - 140	99	60 - 140	<0.40	ug/g	NC	50
8500370	Methyl Isobutyl Ketone	2023/02/13	82	60 - 140	91	60 - 130	<0.40	ug/g	NC	50
8500370	Methyl t-butyl ether (MTBE)	2023/02/13	84	60 - 140	85	60 - 130	<0.040	ug/g	NC	50
8500370	Methylene Chloride(Dichloromethane)	2023/02/13	98	60 - 140	100	60 - 130	<0.049	ug/g	NC	50
8500370	o-Xylene	2023/02/13	90	60 - 140	89	60 - 130	<0.020	ug/g	NC	50
8500370	p+m-Xylene	2023/02/13	94	60 - 140	93	60 - 130	<0.020	ug/g	NC	50
8500370	Styrene	2023/02/13	100	60 - 140	101	60 - 130	<0.040	ug/g	NC	50
8500370	Tetrachloroethylene	2023/02/13	96	60 - 140	93	60 - 130	<0.040	ug/g	NC	50
8500370	Toluene	2023/02/13	98	60 - 140	96	60 - 130	<0.020	ug/g	NC	50
8500370	Total Xylenes	2023/02/13					<0.020	ug/g	NC	50
8500370	trans-1,2-Dichloroethylene	2023/02/13	98	60 - 140	98	60 - 130	<0.040	ug/g	NC	50
8500370	trans-1,3-Dichloropropene	2023/02/13	92	60 - 140	91	60 - 130	<0.040	ug/g	NC	50
8500370	Trichloroethylene	2023/02/13	103	60 - 140	103	60 - 130	<0.010	ug/g	NC	50
8500370	Trichlorofluoromethane (FREON 11)	2023/02/13	104	60 - 140	102	60 - 130	<0.040	ug/g	NC	50

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QUALITY ASSURANCE REPORT(CONT'D)

			Matrix Spike		SPIKED BLANK		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8500370	Vinyl Chloride	2023/02/13	98	60 - 140	95	60 - 130	<0.019	ug/g	NC	50
8500501	1,1,1,2-Tetrachloroethane	2023/02/14	93	60 - 140	99	60 - 130	<0.040	ug/g	NC	50
8500501	1,1,1-Trichloroethane	2023/02/14	92	60 - 140	99	60 - 130	<0.040	ug/g	NC	50
8500501	1,1,2,2-Tetrachloroethane	2023/02/14	90	60 - 140	92	60 - 130	<0.040	ug/g	NC	50
8500501	1,1,2-Trichloroethane	2023/02/14	101	60 - 140	106	60 - 130	<0.040	ug/g	NC	50
8500501	1,1-Dichloroethane	2023/02/14	93	60 - 140	98	60 - 130	<0.040	ug/g	NC	50
8500501	1,1-Dichloroethylene	2023/02/14	92	60 - 140	100	60 - 130	<0.040	ug/g	NC	50
8500501	1,2-Dichlorobenzene	2023/02/14	92	60 - 140	97	60 - 130	<0.040	ug/g	NC	50
8500501	1,2-Dichloroethane	2023/02/14	87	60 - 140	90	60 - 130	<0.049	ug/g	NC	50
8500501	1,2-Dichloropropane	2023/02/14	90	60 - 140	94	60 - 130	<0.040	ug/g	NC	50
8500501	1,3-Dichlorobenzene	2023/02/14	94	60 - 140	101	60 - 130	<0.040	ug/g	NC	50
8500501	1,4-Dichlorobenzene	2023/02/14	103	60 - 140	110	60 - 130	<0.040	ug/g	NC	50
8500501	Acetone (2-Propanone)	2023/02/14	92	60 - 140	92	60 - 140	<0.49	ug/g	NC	50
8500501	Benzene	2023/02/14	86	60 - 140	92	60 - 130	<0.0060	ug/g	NC	50
8500501	Bromodichloromethane	2023/02/14	92	60 - 140	96	60 - 130	<0.040	ug/g	NC	50
8500501	Bromoform	2023/02/14	86	60 - 140	88	60 - 130	<0.040	ug/g	NC	50
8500501	Bromomethane	2023/02/14	94	60 - 140	101	60 - 140	<0.040	ug/g	NC	50
8500501	Carbon Tetrachloride	2023/02/14	91	60 - 140	98	60 - 130	<0.040	ug/g	NC	50
8500501	Chlorobenzene	2023/02/14	90	60 - 140	97	60 - 130	<0.040	ug/g	NC	50
8500501	Chloroform	2023/02/14	89	60 - 140	95	60 - 130	<0.040	ug/g	NC	50
8500501	cis-1,2-Dichloroethylene	2023/02/14	90	60 - 140	96	60 - 130	<0.040	ug/g	NC	50
8500501	cis-1,3-Dichloropropene	2023/02/14	84	60 - 140	82	60 - 130	<0.030	ug/g	NC	50
8500501	Dibromochloromethane	2023/02/14	90	60 - 140	93	60 - 130	<0.040	ug/g	NC	50
8500501	Dichlorodifluoromethane (FREON 12)	2023/02/14	80	60 - 140	103	60 - 140	<0.040	ug/g	NC	50
8500501	Ethylbenzene	2023/02/14	82	60 - 140	89	60 - 130	<0.010	ug/g	NC	50
8500501	Ethylene Dibromide	2023/02/14	87	60 - 140	91	60 - 130	<0.040	ug/g	NC	50
8500501	F1 (C6-C10) - BTEX	2023/02/14					<10	ug/g	NC	30
8500501	F1 (C6-C10)	2023/02/14	90	60 - 140	82	80 - 120	<10	ug/g	NC	30
8500501	Hexane	2023/02/14	86	60 - 140	101	60 - 130	<0.040	ug/g	NC	50
8500501	Methyl Ethyl Ketone (2-Butanone)	2023/02/14	88	60 - 140	87	60 - 140	<0.40	ug/g	NC	50

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QUALITY ASSURANCE REPORT(CONT'D)

			Matrix Spike		SPIKED BLANK		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8500501	Methyl Isobutyl Ketone	2023/02/14	86	60 - 140	85	60 - 130	<0.40	ug/g	NC	50
8500501	Methyl t-butyl ether (MTBE)	2023/02/14	80	60 - 140	81	60 - 130	<0.040	ug/g	NC	50
8500501	Methylene Chloride(Dichloromethane)	2023/02/14	100	60 - 140	105	60 - 130	<0.049	ug/g	NC	50
8500501	o-Xylene	2023/02/14	81	60 - 140	89	60 - 130	<0.020	ug/g	NC	50
8500501	p+m-Xylene	2023/02/14	82	60 - 140	89	60 - 130	<0.020	ug/g	NC	50
8500501	Styrene	2023/02/14	88	60 - 140	95	60 - 130	<0.040	ug/g	NC	50
8500501	Tetrachloroethylene	2023/02/14	86	60 - 140	95	60 - 130	<0.040	ug/g	NC	50
8500501	Toluene	2023/02/14	90	60 - 140	98	60 - 130	<0.020	ug/g	NC	50
8500501	Total Xylenes	2023/02/14					<0.020	ug/g	NC	50
8500501	trans-1,2-Dichloroethylene	2023/02/14	93	60 - 140	102	60 - 130	<0.040	ug/g	NC	50
8500501	trans-1,3-Dichloropropene	2023/02/14	93	60 - 140	91	60 - 130	<0.040	ug/g	NC	50
8500501	Trichloroethylene	2023/02/14	91	60 - 140	97	60 - 130	<0.010	ug/g	NC	50
8500501	Trichlorofluoromethane (FREON 11)	2023/02/14	91	60 - 140	101	60 - 130	<0.040	ug/g	NC	50
8500501	Vinyl Chloride	2023/02/14	90	60 - 140	101	60 - 130	<0.019	ug/g	NC	50
8500970	Moisture	2023/02/13							1.4	20
8501897	1,1,1,2-Tetrachloroethane	2023/02/14	92	60 - 140	92	60 - 130	<0.040	ug/g	NC	50
8501897	1,1,1-Trichloroethane	2023/02/14	94	60 - 140	92	60 - 130	<0.040	ug/g	NC	50
8501897	1,1,2,2-Tetrachloroethane	2023/02/14	81	60 - 140	87	60 - 130	<0.040	ug/g	NC	50
8501897	1,1,2-Trichloroethane	2023/02/14	88	60 - 140	90	60 - 130	<0.040	ug/g	NC	50
8501897	1,1-Dichloroethane	2023/02/14	86	60 - 140	86	60 - 130	<0.040	ug/g	NC	50
8501897	1,1-Dichloroethylene	2023/02/14	94	60 - 140	92	60 - 130	<0.040	ug/g	NC	50
8501897	1,2-Dichlorobenzene	2023/02/14	93	60 - 140	91	60 - 130	<0.040	ug/g	NC	50
8501897	1,2-Dichloroethane	2023/02/14	89	60 - 140	92	60 - 130	<0.049	ug/g	NC	50
8501897	1,2-Dichloropropane	2023/02/14	88	60 - 140	89	60 - 130	<0.040	ug/g	NC	50
8501897	1,3-Dichlorobenzene	2023/02/14	95	60 - 140	90	60 - 130	<0.040	ug/g	NC	50
8501897	1,4-Dichlorobenzene	2023/02/14	109	60 - 140	104	60 - 130	<0.040	ug/g	NC	50
8501897	Acetone (2-Propanone)	2023/02/14	92	60 - 140	96	60 - 140	<0.49	ug/g	NC	50
8501897	Benzene	2023/02/14	89	60 - 140	88	60 - 130	<0.0060	ug/g	NC	50
8501897	Bromodichloromethane	2023/02/14	90	60 - 140	92	60 - 130	<0.040	ug/g	NC	50
8501897	Bromoform	2023/02/14	86	60 - 140	91	60 - 130	<0.040	ug/g	NC	50

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QUALITY ASSURANCE REPORT(CONT'D)

			Matrix Spike		SPIKED BLANK		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8501897	Bromomethane	2023/02/14	92	60 - 140	91	60 - 140	<0.040	ug/g	NC	50
8501897	Carbon Tetrachloride	2023/02/14	95	60 - 140	93	60 - 130	<0.040	ug/g	NC	50
8501897	Chlorobenzene	2023/02/14	90	60 - 140	89	60 - 130	<0.040	ug/g	NC	50
8501897	Chloroform	2023/02/14	89	60 - 140	89	60 - 130	<0.040	ug/g	NC	50
8501897	cis-1,2-Dichloroethylene	2023/02/14	90	60 - 140	91	60 - 130	<0.040	ug/g	NC	50
8501897	cis-1,3-Dichloropropene	2023/02/14	87	60 - 140	88	60 - 130	<0.030	ug/g	NC	50
8501897	Dibromochloromethane	2023/02/14	87	60 - 140	90	60 - 130	<0.040	ug/g	NC	50
8501897	Dichlorodifluoromethane (FREON 12)	2023/02/14	103	60 - 140	100	60 - 140	<0.040	ug/g	NC	50
8501897	Ethylbenzene	2023/02/14	86	60 - 140	84	60 - 130	<0.010	ug/g	NC	50
8501897	Ethylene Dibromide	2023/02/14	84	60 - 140	87	60 - 130	<0.040	ug/g	NC	50
8501897	Hexane	2023/02/14	93	60 - 140	90	60 - 130	<0.040	ug/g	NC	50
8501897	Methyl Ethyl Ketone (2-Butanone)	2023/02/14	88	60 - 140	93	60 - 140	<0.40	ug/g	NC	50
8501897	Methyl Isobutyl Ketone	2023/02/14	81	60 - 140	89	60 - 130	<0.40	ug/g	NC	50
8501897	Methyl t-butyl ether (MTBE)	2023/02/14	84	60 - 140	86	60 - 130	<0.040	ug/g	NC	50
8501897	Methylene Chloride(Dichloromethane)	2023/02/14	100	60 - 140	101	60 - 130	<0.049	ug/g	NC	50
8501897	o-Xylene	2023/02/14	85	60 - 140	83	60 - 130	<0.020	ug/g	NC	50
8501897	p+m-Xylene	2023/02/14	88	60 - 140	84	60 - 130	<0.020	ug/g	NC	50
8501897	Styrene	2023/02/14	94	60 - 140	93	60 - 130	<0.040	ug/g	NC	50
8501897	Tetrachloroethylene	2023/02/14	92	60 - 140	88	60 - 130	<0.040	ug/g	NC	50
8501897	Toluene	2023/02/14	87	60 - 140	85	60 - 130	<0.020	ug/g	NC	50
8501897	Total Xylenes	2023/02/14					<0.020	ug/g	NC	50
8501897	trans-1,2-Dichloroethylene	2023/02/14	93	60 - 140	91	60 - 130	<0.040	ug/g	NC	50
8501897	trans-1,3-Dichloropropene	2023/02/14	95	60 - 140	95	60 - 130	<0.040	ug/g	NC	50
8501897	Trichloroethylene	2023/02/14	102	60 - 140	100	60 - 130	<0.010	ug/g	NC	50
8501897	Trichlorofluoromethane (FREON 11)	2023/02/14	98	60 - 140	95	60 - 130	<0.040	ug/g	NC	50
8501897	Vinyl Chloride	2023/02/14	88	60 - 140	85	60 - 130	<0.019	ug/g	NC	50
8503128	Benzene	2023/02/14	87	50 - 140	94	50 - 140	<0.020	ug/g	NC	50
8503128	Ethylbenzene	2023/02/14	99	50 - 140	101	50 - 140	<0.020	ug/g	NC	50
8503128	F1 (C6-C10) - BTEX	2023/02/14					<10	ug/g	NC	30
8503128	F1 (C6-C10)	2023/02/14	85	60 - 140	97	80 - 120	<10	ug/g	NC	30

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QUALITY ASSURANCE REPORT(CONT'D)

			Matrix Spike		SPIKED BLANK		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8503128	o-Xylene	2023/02/14	98	50 - 140	101	50 - 140	<0.020	ug/g	NC	50
8503128	p+m-Xylene	2023/02/14	98	50 - 140	101	50 - 140	<0.040	ug/g	NC	50
8503128	Toluene	2023/02/14	85	50 - 140	89	50 - 140	<0.020	ug/g	NC	50
8503128	Total Xylenes	2023/02/14					<0.040	ug/g	NC	50
8503196	Moisture	2023/02/14							3.4	20
8503205	Moisture	2023/02/14							0.49	20
8504969	F2 (C10-C16 Hydrocarbons)	2023/02/15	92	60 - 130	91	80 - 120	<10	ug/g	NC	30
8504969	F3 (C16-C34 Hydrocarbons)	2023/02/15	92	60 - 130	90	80 - 120	<50	ug/g	NC	30
8504969	F4 (C34-C50 Hydrocarbons)	2023/02/15	92	60 - 130	90	80 - 120	<50	ug/g	15	30
8504976	1-Methylnaphthalene	2023/02/16	85	50 - 130	87	50 - 130	<0.0050	ug/g	NC	40
8504976	2-Methylnaphthalene	2023/02/16	90	50 - 130	93	50 - 130	<0.0050	ug/g	NC	40
8504976	Acenaphthene	2023/02/16	91	50 - 130	95	50 - 130	<0.0050	ug/g	NC	40
8504976	Acenaphthylene	2023/02/16	88	50 - 130	92	50 - 130	<0.0050	ug/g	NC	40
8504976	Anthracene	2023/02/16	91	50 - 130	92	50 - 130	<0.0050	ug/g	NC	40
8504976	Benzo(a)anthracene	2023/02/16	95	50 - 130	98	50 - 130	<0.0050	ug/g	NC	40
8504976	Benzo(a)pyrene	2023/02/16	94	50 - 130	96	50 - 130	<0.0050	ug/g	NC	40
8504976	Benzo(b/j)fluoranthene	2023/02/16	95	50 - 130	98	50 - 130	<0.0050	ug/g	NC	40
8504976	Benzo(g,h,i)perylene	2023/02/16	81	50 - 130	91	50 - 130	<0.0050	ug/g	NC	40
8504976	Benzo(k)fluoranthene	2023/02/16	95	50 - 130	96	50 - 130	<0.0050	ug/g	NC	40
8504976	Chrysene	2023/02/16	94	50 - 130	97	50 - 130	<0.0050	ug/g	NC	40
8504976	Dibenzo(a,h)anthracene	2023/02/16	90	50 - 130	90	50 - 130	<0.0050	ug/g	NC	40
8504976	Fluoranthene	2023/02/16	100	50 - 130	101	50 - 130	<0.0050	ug/g	NC	40
8504976	Fluorene	2023/02/16	96	50 - 130	99	50 - 130	<0.0050	ug/g	NC	40
8504976	Indeno(1,2,3-cd)pyrene	2023/02/16	87	50 - 130	95	50 - 130	<0.0050	ug/g	NC	40
8504976	Naphthalene	2023/02/16	85	50 - 130	90	50 - 130	<0.0050	ug/g	NC	40
8504976	Phenanthrene	2023/02/16	93	50 - 130	95	50 - 130	<0.0050	ug/g	23	40
8504976	Pyrene	2023/02/16	100	50 - 130	101	50 - 130	<0.0050	ug/g	NC	40
8504992	WAD Cyanide (Free)	2023/02/15	102	75 - 125	104	80 - 120	<0.01	ug/g	NC	35
8505234	Chromium (VI)	2023/02/16	88	70 - 130	90	80 - 120	<0.18	ug/g	NC	35
8505282	Available (CaCl2) pH	2023/02/15			100	97 - 103			1.0	N/A

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QUALITY ASSURANCE REPORT(CONT'D)

			Matrix Spike		SPIKED BLANK		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8506181	Hot Water Ext. Boron (B)	2023/02/16	95	75 - 125	95	75 - 125	<0.050	ug/g	7.7	40
8507398	Acid Extractable Antimony (Sb)	2023/02/16	101	75 - 125	102	80 - 120	<0.20	ug/g	NC	30
8507398	Acid Extractable Arsenic (As)	2023/02/16	100	75 - 125	98	80 - 120	<1.0	ug/g	2.3	30
8507398	Acid Extractable Barium (Ba)	2023/02/16	NC	75 - 125	99	80 - 120	<0.50	ug/g	3.1	30
8507398	Acid Extractable Beryllium (Be)	2023/02/16	100	75 - 125	99	80 - 120	<0.20	ug/g	6.1	30
8507398	Acid Extractable Boron (B)	2023/02/16	100	75 - 125	99	80 - 120	<5.0	ug/g	7.6	30
8507398	Acid Extractable Cadmium (Cd)	2023/02/16	103	75 - 125	100	80 - 120	<0.10	ug/g	29	30
8507398	Acid Extractable Chromium (Cr)	2023/02/16	101	75 - 125	98	80 - 120	<1.0	ug/g	0.79	30
8507398	Acid Extractable Cobalt (Co)	2023/02/16	99	75 - 125	100	80 - 120	<0.10	ug/g	0.13	30
8507398	Acid Extractable Copper (Cu)	2023/02/16	102	75 - 125	102	80 - 120	<0.50	ug/g	1.6	30
8507398	Acid Extractable Lead (Pb)	2023/02/16	101	75 - 125	101	80 - 120	<1.0	ug/g	3.4	30
8507398	Acid Extractable Mercury (Hg)	2023/02/16	101	75 - 125	99	80 - 120	<0.050	ug/g	NC	30
8507398	Acid Extractable Molybdenum (Mo)	2023/02/16	106	75 - 125	103	80 - 120	<0.50	ug/g	NC	30
8507398	Acid Extractable Nickel (Ni)	2023/02/16	98	75 - 125	101	80 - 120	<0.50	ug/g	0.21	30
8507398	Acid Extractable Selenium (Se)	2023/02/16	104	75 - 125	103	80 - 120	<0.50	ug/g	NC	30
8507398	Acid Extractable Silver (Ag)	2023/02/16	105	75 - 125	103	80 - 120	<0.20	ug/g	NC	30
8507398	Acid Extractable Thallium (Tl)	2023/02/16	103	75 - 125	102	80 - 120	<0.050	ug/g	3.0	30
8507398	Acid Extractable Uranium (U)	2023/02/16	103	75 - 125	100	80 - 120	<0.050	ug/g	3.4	30
8507398	Acid Extractable Vanadium (V)	2023/02/16	103	75 - 125	100	80 - 120	<5.0	ug/g	0.047	30
8507398	Acid Extractable Zinc (Zn)	2023/02/16	NC	75 - 125	103	80 - 120	<5.0	ug/g	5.3	30
8507704	Hot Water Ext. Boron (B)	2023/02/16	105	75 - 125	109	75 - 125	<0.050	ug/g	1.9	40

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QUALITY ASSURANCE REPORT(CONT'D)

			Matrix Spike		SPIKED BLANK		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8507822	Conductivity	2023/02/16			106	90 - 110	<0.002	mS/cm	3.5	10

N/A = Not Applicable

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

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

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

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

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

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

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

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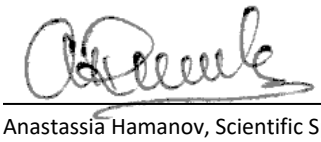
VALIDATION SIGNATURE PAGE

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



Anastassia Hamanov, Scientific Specialist

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

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CHAIN OF (

10-Feb-23 15:55
Kudrat Bajwa
C340981
RUK ENV-796
C#904775-03-01
Project Manager: Kudrat Bajwa

INVOICE TO:		REPORT TO:		PROJECT INFORMATION:	
Company Name:	#4398 Terrapex Environmental Ltd	Company Name:	TPEX	Quotation #:	C20955
Attention:	Accounts Payable	Attention:	Geoff Lussier	P.O. #:	TPEX C.O
Address:	90 Scarsdale Rd	Address:	65 Nebo Road	Project:	CH244.00
	Toronto ON M3B 2R7		Hamilton ON L8W 2C9	Project Name:	De Zen
Tel:	(416) 245-0011 Fax: (416) 245-0012	Tel:	416 5703209 Fax:	Site #:	Queen Streets. Mississauga
Email:	accounts.payable@terrapex.com	Email:	g.lussier@terrapex.com	Sampled By:	JD

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

Regulation 153 (2011): [ ] Table 1 [X] Res/Park [X] Medium/Fine; [ ] Table 2 [ ] Ind/Comm [ ] Coarse; [X] Table 3 [ ] Agri/Other [X] For RSC; [ ] Table

Other Regulations: [ ] CCME [ ] Sanitary Sewer Bylaw; [ ] Reg 558 [ ] Storm Sewer Bylaw; [ ] MISA Municipality; [ ] PWQO [ ] Reg 406 Table; [ ] Other

Special Instructions

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

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

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

Job Specific Rush TAT (if applies to entire submission)
Date Required: ______ Time Required: ______
Rush Confirmation Number: ______ *(call lab for #)*

ANALYSIS REQUESTED (PLEASE BE SPECIFIC)

	Sample Barcode Label	Sample (Location) Identification	Date Sampled	Time Sampled	Matrix	Field Filtered (please circle):	Metals / Hg / Cr VI	MEI (Reg153 M&I pkg)	BTEX/F1-F4	PAH	VOCs	VOCs/F1-F4						# of Bottles	Comments
1		BH110-2	Feb6/23	12:30	Soil			X										2	
2		BH9110-2	Feb6/23	12:30				X										2	
3		BH 110-8	Feb6/23	13:00					X									4	
4		MW104-2	Feb6/23	14:15				X										2	
5		MW 104-9	Feb7/23	13:00					X									4	
6		MW103-2	Feb7/23	15:00				X										2	
7		MW103-7	Feb7/23	18:00					X	X								4	
8		MW103-9	Feb7/23	18:30							X							4	
9		MW102-2	Feb8/23	14:15				X										2	
10		MW102-9	Feb9/23	12:00								X						4	

* RELINQUISHED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	RECEIVED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	# jars used and not submitted	Time Sensitive	Laboratory Use Only
Wahida / WAHIDA NASHREEN	10Feb/2023	12:00	[signature] / ARSHDEEP	2023/02/10	15:55			Temperature (°C) on Recei: 3/4/4; Custody Seal Present: Yes; Intact: Yes

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

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

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

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

White: Bureau Veritas Yellow: Client

Bureau Veritas Canada (2019) Inc.

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CHAIN OF CUSTODY RECORD

INVOICE TO:		REPORT TO:		PROJECT INFORMATION:		Laboratory Use Only:	
Company Name:	#4398 Terrapex Environmental Ltd	Company Name:	TPEX	Quotation #:	C20955	Bureau Veritas Job #:	Bottle Order #: 904775
Attention:	Accounts Payable	Attention:	Geoff Lusier	P.O. #:	TPEX SO		
Address:	90 Scarsdale Rd, Toronto ON M3B 2R7	Address:	65 Nebo Road, Hamilton	Project:	CH264.00	COC #: C#904775-08-01	Project Manager: Kudrat Bajwa
Tel:	(416) 245-0011 Fax: (416) 245-0012	Tel:	416 570 3209 Fax:	Project Name:	De Zen		
Email:	accounts.payable@terrapex.com	Email:	g.lussier@terrapex.com	Site #:	Queen St S. Mississauga		
				Sampled By:	JD		

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

Regulation 153 (2011): ☐ Table 1 ☒ Res/Park ☒ Medium/Fine ☐ Table 2 ☐ Ind/Comm ☐ Coarse ☒ Table 3 ☐ Agri/Other ☒ For RSC ☐ Table

Other Regulations: ☐ CCME ☐ Sanitary Sewer Bylaw ☐ Reg 558 ☐ Storm Sewer Bylaw ☐ MISA Municipality ☐ PWQO ☐ Reg 406 Table ☐ Other

Special Instructions:

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

ANALYSIS REQUESTED (PLEASE BE SPECIFIC): Field Filtered (please circle): Metals / Hg / Cr VI; VOCs

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

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

Job Specific Rush TAT (if applies to entire submission) Date Required: Time Required: ☐ Rush Confirmation Number: *(call lab for #)*

	Sample Barcode Label	Sample (Location) Identification	Date Sampled	Time Sampled	Matrix	Field Filtered	VOCs	# of Bottles	Comments
1		Methanol Blank	—	—	—		X	1	
2									
3									
4									
5									
6									
7									
8									
9									
10									

* RELINQUISHED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	RECEIVED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	# jars used and not submitted	Time Sensitive	Laboratory Use Only
[signature] WAHIDA NASHREEN	10 Feb 23	12:00	[signature] / ARSHDEEP	See Page 1				Temperature (°C) on Recei: 3/4/4; Custody Seal Present / Intact: Yes / No

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

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

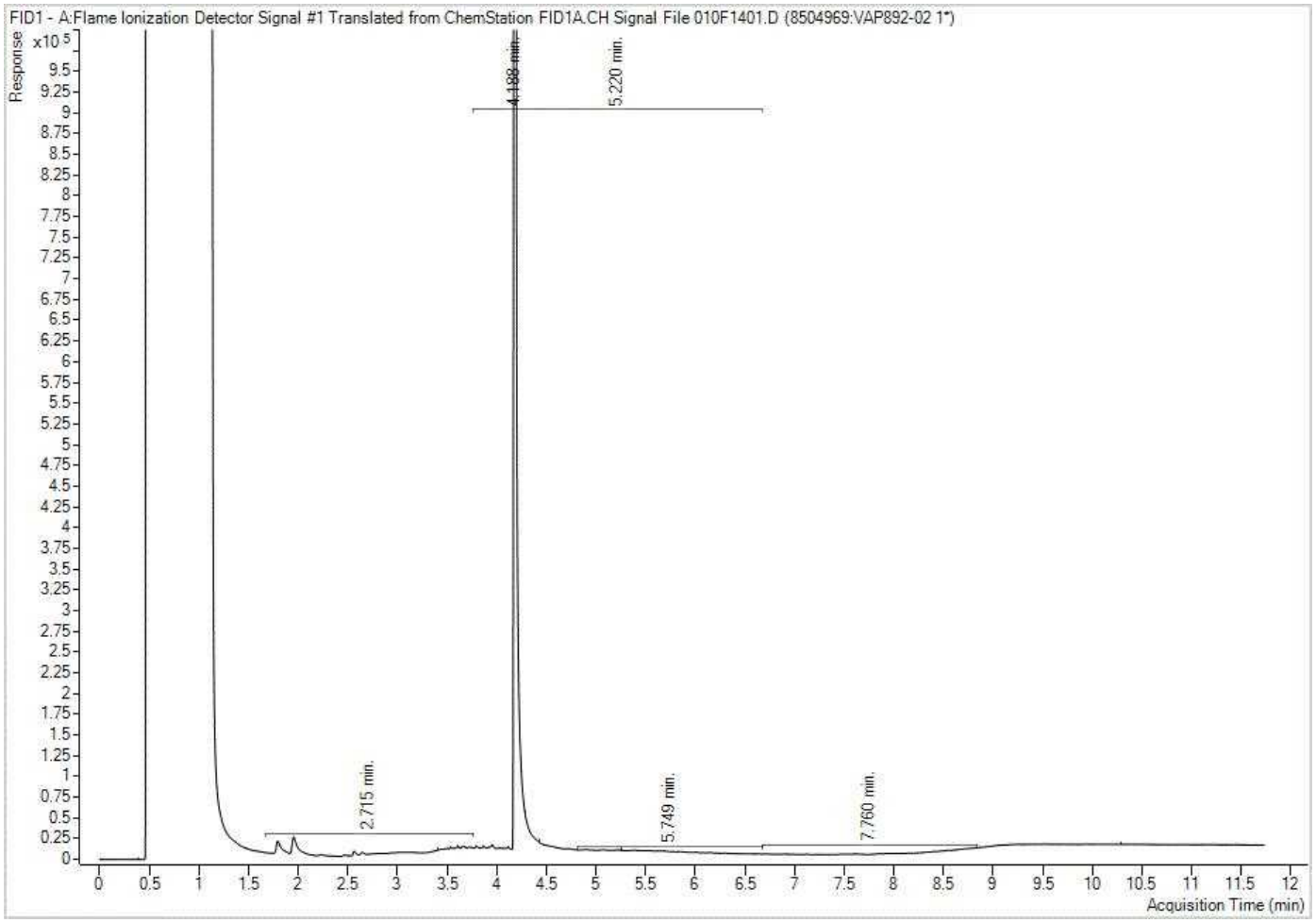
** SAMPLE CONTAINER, PRESERVATION, HOLD TIME AND PACKAGE INFORMATION CAN BE VIEWED AT WWW.BVNA.COM/ENVIRONMENTAL-LABORATORIES/RESOURCES/CHAIN-CUSTODY-FORMS-COCS.

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

White: Bureau Veritas Yellow: Client

Bureau Veritas Canada (2019) Inc.

Petroleum Hydrocarbons F2-F4 in Soil Chromatogram

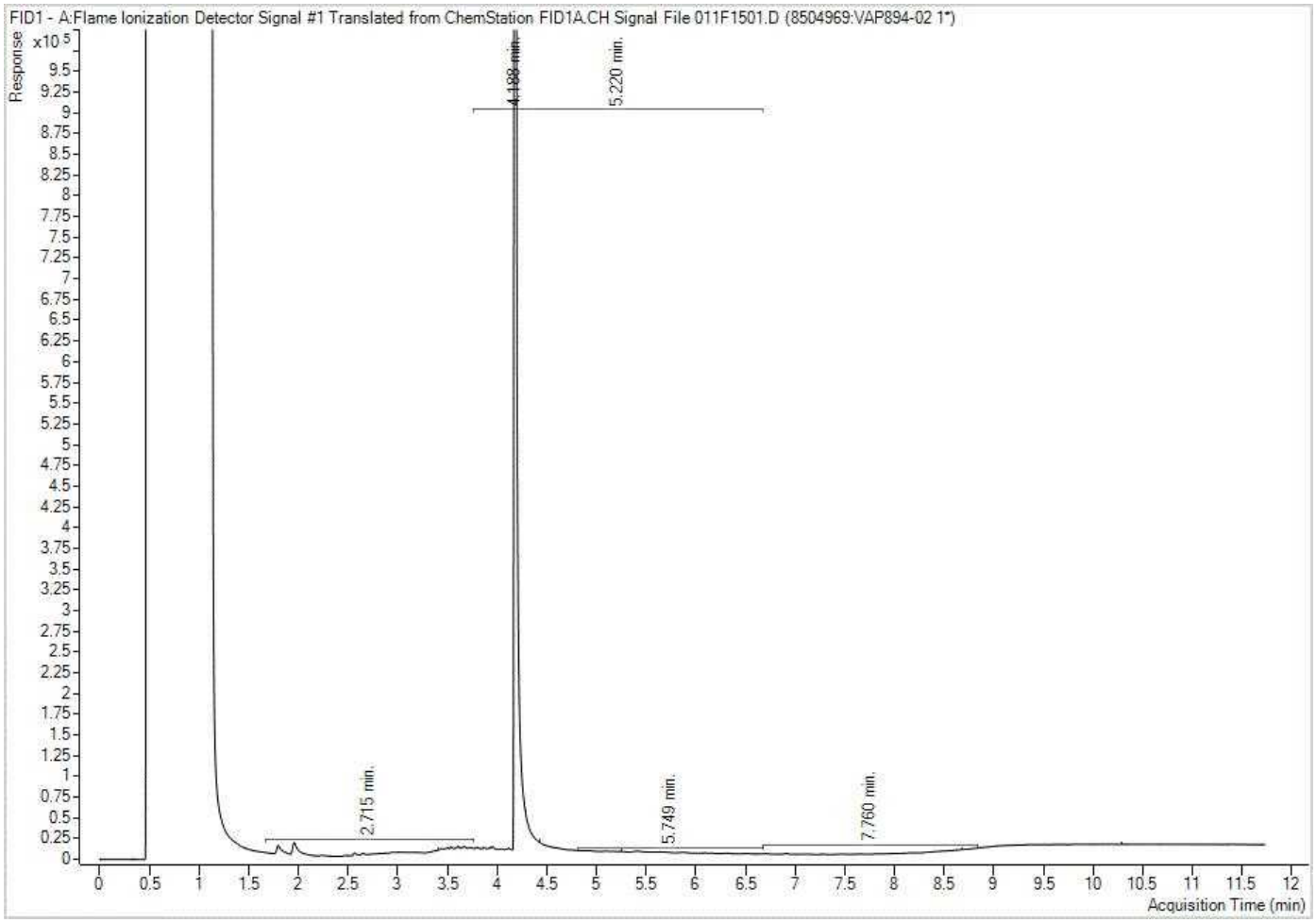


Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Bureau Veritas Job #: C340981
Report Date: 2023/02/17
Bureau Veritas Sample: VAP894

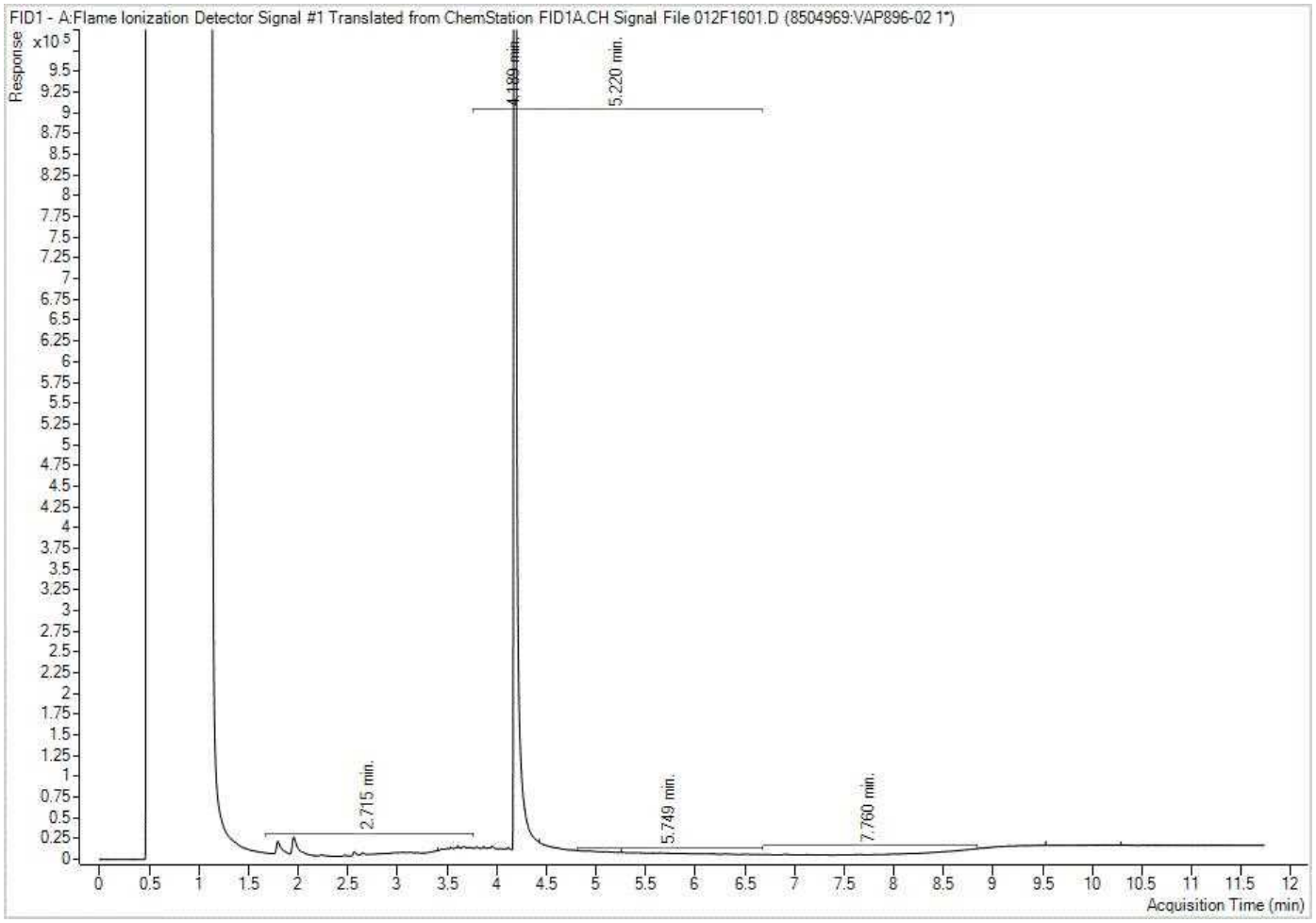
Terrapex Environmental Ltd
Client Project #: CH244.00
Project name: DE ZEN/QUEEN STREETS.MISSISSAUGA
Client ID: MW104-9

Petroleum Hydrocarbons F2-F4 in Soil Chromatogram



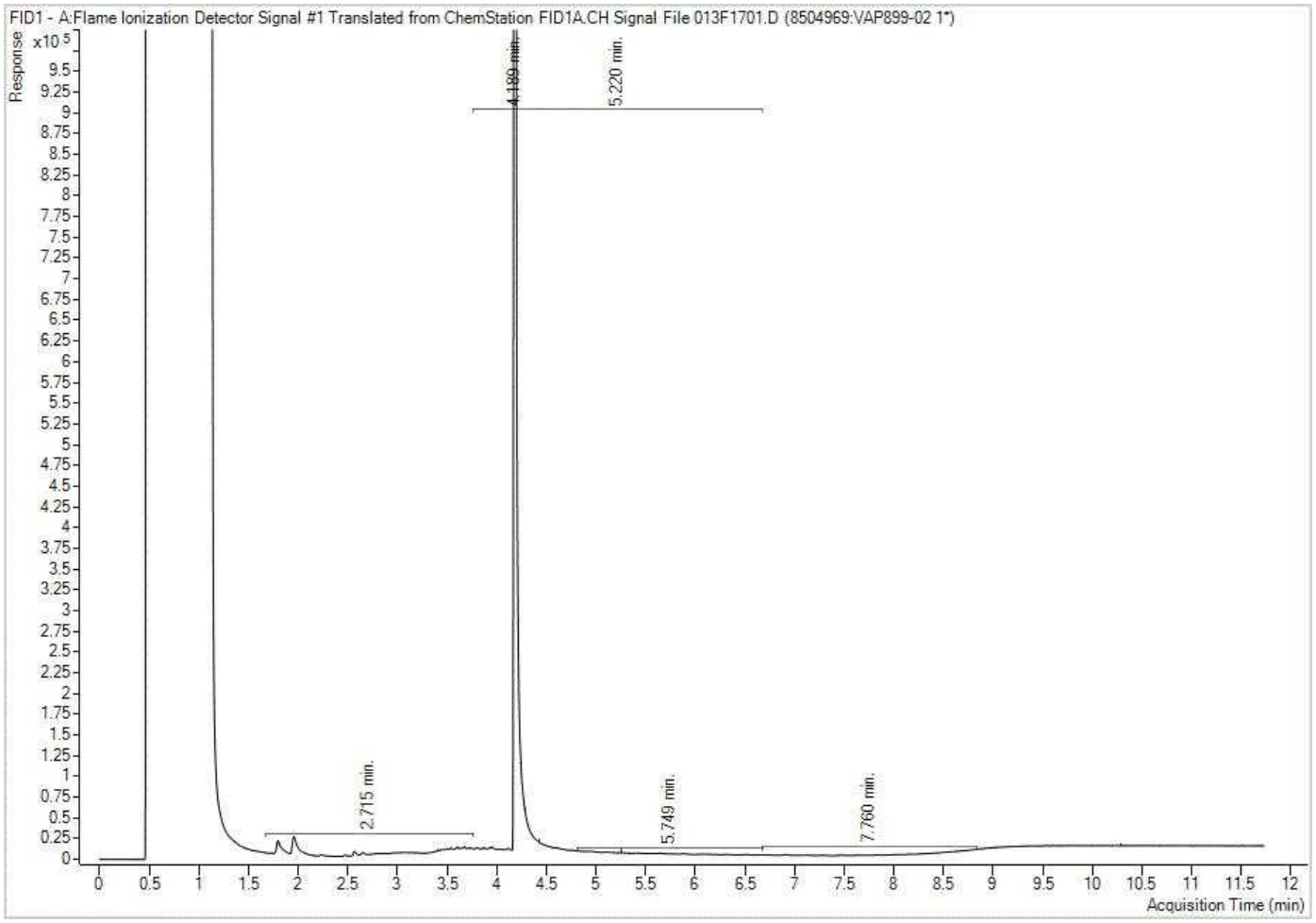
Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Petroleum Hydrocarbons F2-F4 in Soil Chromatogram



Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Petroleum Hydrocarbons F2-F4 in Soil Chromatogram



Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Your Project #: CH244.00
Site Location: 128 QUEEN ST S, MISSISSAUGA
Your C.O.C. #: 909931-06-01

Attention: Geoff Lussier

Terrapex Environmental Ltd
65 Nebo Road
Hamilton, ON
CANADA L8W 2C9

Report Date: 2023/06/16
Report #: R7675106
Version: 2 - Revision

CERTIFICATE OF ANALYSIS – REVISED REPORT

BUREAU VERITAS JOB #: C3G2781
Received: 2023/06/06, 15:05

Sample Matrix: Soil
Samples Received: 2

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Methylnaphthalene Sum	1	N/A	2023/06/09	CAM SOP-00301	EPA 8270D m
ABN Compounds in soil by GC/MS	1	2023/06/08	2023/06/09	CAM SOP-00301	EPA 8270 m
Hot Water Extractable Boron	1	2023/06/09	2023/06/09	CAM SOP-00408	R153 Ana. Prot. 2011
1,3-Dichloropropene Sum	1	N/A	2023/06/09		EPA 8260C m
Free (WAD) Cyanide	1	2023/06/09	2023/06/12	CAM SOP-00457	OMOE E3015 m
Conductivity	1	2023/06/09	2023/06/09	CAM SOP-00414	OMOE E3530 v1 m
Hexavalent Chromium in Soil by IC (1)	1	2023/06/08	2023/06/08	CAM SOP-00436	EPA 3060A/7199 m
Dinitrotoluene Sum	1	2023/06/06	2023/06/09	CAM SOP - 00301	EPA 8270
Petroleum Hydrocarbons F2-F4 in Soil (2)	1	2023/06/07	2023/06/08	CAM SOP-00316	CCME CWS m
Acid Extractable Metals by ICPMS	1	2023/06/09	2023/06/09	CAM SOP-00447	EPA 6020B m
Moisture	2	N/A	2023/06/07	CAM SOP-00445	Carter 2nd ed 51.2 m
Polychlorinated Biphenyl in Soil	1	2023/06/15	2023/06/16	CAM SOP-00309	EPA 8082A m
pH CaCl2 EXTRACT	1	2023/06/08	2023/06/08	CAM SOP-00413	EPA 9045 D m
Sodium Adsorption Ratio (SAR)	1	N/A	2023/06/12	CAM SOP-00102	EPA 6010C
Volatile Organic Compounds and F1 PHCs	1	N/A	2023/06/08	CAM SOP-00230	EPA 8260C m

Remarks:

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

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

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

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

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

Your Project #: CH244.00
Site Location: 128 QUEEN ST S, MISSISSAUGA
Your C.O.C. #: 909931-06-01

Attention: Geoff Lussier

Terrapex Environmental Ltd
65 Nebo Road
Hamilton, ON
CANADA L8W 2C9

Report Date: 2023/06/16
Report #: R7675106
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CERTIFICATE OF ANALYSIS – REVISED REPORT

BUREAU VERITAS JOB #: C3G2781
Received: 2023/06/06, 15:05

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

Reference Method suffix "m" indicates test methods incorporate validated modifications from specific reference methods to improve performance.
* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.
(1) Soils are reported on a dry weight basis unless otherwise specified.
(2) All CCME PHC results met required criteria unless otherwise stated in the report. The CWS PHC methods employed by Bureau Veritas conform to all prescribed elements of the reference method and performance based elements have been validated. All modifications have been validated and proven equivalent following "Alberta Environment's Interpretation of the Reference Method for the Canada-Wide Standard for Petroleum Hydrocarbons in Soil Validation of Performance-Based Alternative Methods September 2003". Documentation is available upon request. Modifications from Reference Method for the Canada-wide Standard for Petroleum Hydrocarbons in Soil-Tier 1 Method: F2/F3/F4 data reported using validated cold solvent extraction instead of Soxhlet extraction.

Encryption Key

Please direct all questions regarding this Certificate of Analysis to:
Kudrat Bajwa, B.Sc., Project Manager
Email: Kudrat.Bajwa@bureauveritas.com
Phone# (905)817-5755
==========
Bureau Veritas has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports. For Service Group specific validation, please refer to the Validation Signatures page if included, otherwise available by request. For Department specific Analyst/Supervisor validation names, please refer to the Test Summary section if included, otherwise available by request. This report is authorized by Rodney Major, General Manager responsible for Ontario Environmental laboratory operations.

Bureau Veritas Job #: C3G2781
Report Date: 2023/06/16

Terrapex Environmental Ltd
Client Project #: CH244.00
Site Location: 128 QUEEN ST S, MISSISSAUGA
Sampler Initials: KP

O.REG 153 METALS & INORGANICS PKG (SOIL)

Bureau Veritas ID		WAE651		
Sampling Date		2023/06/05 14:00		
COC Number		909931-06-01		
	UNITS	BH205-2	RDL	QC Batch
Calculated Parameters				
Sodium Adsorption Ratio	N/A	76		8708478
Inorganics				
Conductivity	mS/cm	5.5	0.002	8715073
Moisture	%	13	1.0	8709771
Available (CaCl2) pH	pH	7.84		8712637
WAD Cyanide (Free)	ug/g	<0.01	0.01	8715047
Chromium (VI)	ug/g	<0.18	0.18	8712326
Metals				
Hot Water Ext. Boron (B)	ug/g	2.5	0.050	8714954
Acid Extractable Antimony (Sb)	ug/g	0.28	0.20	8714755
Acid Extractable Arsenic (As)	ug/g	4.1	1.0	8714755
Acid Extractable Barium (Ba)	ug/g	85	0.50	8714755
Acid Extractable Beryllium (Be)	ug/g	0.69	0.20	8714755
Acid Extractable Boron (B)	ug/g	8.0	5.0	8714755
Acid Extractable Cadmium (Cd)	ug/g	0.23	0.10	8714755
Acid Extractable Chromium (Cr)	ug/g	23	1.0	8714755
Acid Extractable Cobalt (Co)	ug/g	12	0.10	8714755
Acid Extractable Copper (Cu)	ug/g	19	0.50	8714755
Acid Extractable Lead (Pb)	ug/g	20	1.0	8714755
Acid Extractable Molybdenum (Mo)	ug/g	0.61	0.50	8714755
Acid Extractable Nickel (Ni)	ug/g	21	0.50	8714755
Acid Extractable Selenium (Se)	ug/g	<0.50	0.50	8714755
Acid Extractable Silver (Ag)	ug/g	<0.20	0.20	8714755
Acid Extractable Thallium (Tl)	ug/g	0.14	0.050	8714755
Acid Extractable Uranium (U)	ug/g	0.54	0.050	8714755
Acid Extractable Vanadium (V)	ug/g	34	5.0	8714755
Acid Extractable Zinc (Zn)	ug/g	70	5.0	8714755
Acid Extractable Mercury (Hg)	ug/g	0.059	0.050	8714755

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Bureau Veritas Job #: C3G2781
Report Date: 2023/06/16

Terrapex Environmental Ltd
Client Project #: CH244.00
Site Location: 128 QUEEN ST S, MISSISSAUGA
Sampler Initials: KP

O.REG 153 PCBS (SOIL)

Bureau Veritas ID		WAE651		
Sampling Date		2023/06/05 14:00		
COC Number		909931-06-01		
	UNITS	BH205-2	RDL	QC Batch
PCBs				
Aroclor 1242	ug/g	<0.010	0.010	8730247
Aroclor 1248	ug/g	<0.010	0.010	8730247
Aroclor 1254	ug/g	<0.010	0.010	8730247
Aroclor 1260	ug/g	<0.010	0.010	8730247
Total PCB	ug/g	<0.010	0.010	8730247
Surrogate Recovery (%)				
Decachlorobiphenyl	%	86		8730247

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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

Bureau Veritas ID		WAE652		
Sampling Date		2023/06/05 14:30		
COC Number		909931-06-01		
	UNITS	BH205-7	RDL	QC Batch
Inorganics				
Moisture	%	13	1.0	8709771
Calculated Parameters				
1,3-Dichloropropene (cis+trans)	ug/g	<0.050	0.050	8708446
Volatile Organics				
Acetone (2-Propanone)	ug/g	<0.49	0.49	8710592
Benzene	ug/g	<0.0060	0.0060	8710592
Bromodichloromethane	ug/g	<0.040	0.040	8710592
Bromoform	ug/g	<0.040	0.040	8710592
Bromomethane	ug/g	<0.040	0.040	8710592
Carbon Tetrachloride	ug/g	<0.040	0.040	8710592
Chlorobenzene	ug/g	<0.040	0.040	8710592
Chloroform	ug/g	<0.040	0.040	8710592
Dibromochloromethane	ug/g	<0.040	0.040	8710592
1,2-Dichlorobenzene	ug/g	<0.040	0.040	8710592
1,3-Dichlorobenzene	ug/g	<0.040	0.040	8710592
1,4-Dichlorobenzene	ug/g	<0.040	0.040	8710592
Dichlorodifluoromethane (FREON 12)	ug/g	<0.040	0.040	8710592
1,1-Dichloroethane	ug/g	<0.040	0.040	8710592
1,2-Dichloroethane	ug/g	<0.049	0.049	8710592
1,1-Dichloroethylene	ug/g	<0.040	0.040	8710592
cis-1,2-Dichloroethylene	ug/g	<0.040	0.040	8710592
trans-1,2-Dichloroethylene	ug/g	<0.040	0.040	8710592
1,2-Dichloropropane	ug/g	<0.040	0.040	8710592
cis-1,3-Dichloropropene	ug/g	<0.030	0.030	8710592
trans-1,3-Dichloropropene	ug/g	<0.040	0.040	8710592
Ethylbenzene	ug/g	<0.010	0.010	8710592
Ethylene Dibromide	ug/g	<0.040	0.040	8710592
Hexane	ug/g	<0.040	0.040	8710592
Methylene Chloride(Dichloromethane)	ug/g	<0.049	0.049	8710592
Methyl Ethyl Ketone (2-Butanone)	ug/g	<0.40	0.40	8710592
Methyl Isobutyl Ketone	ug/g	<0.40	0.40	8710592

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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

Bureau Veritas ID		WAE652		
Sampling Date		2023/06/05 14:30		
COC Number		909931-06-01		
	UNITS	**BH205-7**	**RDL**	**QC Batch**
Methyl t-butyl ether (MTBE)	ug/g	<0.040	0.040	8710592
Styrene	ug/g	<0.040	0.040	8710592
1,1,1,2-Tetrachloroethane	ug/g	<0.040	0.040	8710592
1,1,2,2-Tetrachloroethane	ug/g	<0.040	0.040	8710592
Tetrachloroethylene	ug/g	<0.040	0.040	8710592
Toluene	ug/g	<0.020	0.020	8710592
1,1,1-Trichloroethane	ug/g	<0.040	0.040	8710592
1,1,2-Trichloroethane	ug/g	<0.040	0.040	8710592
Trichloroethylene	ug/g	<0.010	0.010	8710592
Trichlorofluoromethane (FREON 11)	ug/g	<0.040	0.040	8710592
Vinyl Chloride	ug/g	<0.019	0.019	8710592
p+m-Xylene	ug/g	<0.020	0.020	8710592
o-Xylene	ug/g	<0.020	0.020	8710592
Total Xylenes	ug/g	<0.020	0.020	8710592
F1 (C6-C10)	ug/g	<10	10	8710592
F1 (C6-C10) - BTEX	ug/g	<10	10	8710592
F2-F4 Hydrocarbons				
F2 (C10-C16 Hydrocarbons)	ug/g	<10	10	8710444
F3 (C16-C34 Hydrocarbons)	ug/g	87	50	8710444
F4 (C34-C50 Hydrocarbons)	ug/g	64	50	8710444
Reached Baseline at C50	ug/g	Yes		8710444
Surrogate Recovery (%)				
o-Terphenyl	%	99		8710444
4-Bromofluorobenzene	%	91		8710592
D10-o-Xylene	%	95		8710592
D4-1,2-Dichloroethane	%	100		8710592
D8-Toluene	%	97		8710592

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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O.REG 153 SEMIVOLATILES PACKAGE (SOIL)

Bureau Veritas ID		WAE651		
Sampling Date		2023/06/05 14:00		
COC Number		909931-06-01		
	UNITS	BH205-2	RDL	QC Batch
Semivolatile Organics				
1,2,4-Trichlorobenzene	ug/g	<0.05	0.05	8711799
1-Methylnaphthalene	ug/g	<0.03	0.03	8711799
2,4,5-Trichlorophenol	ug/g	<0.08	0.08	8711799
2,4,6-Trichlorophenol	ug/g	<0.1	0.1	8711799
2,4-Dichlorophenol	ug/g	<0.1	0.1	8711799
2,4-Dimethylphenol	ug/g	<0.2	0.2	8711799
2,4-Dinitrophenol	ug/g	<0.5	0.5	8711799
2,4-Dinitrotoluene	ug/g	<0.1	0.1	8711799
2,6-Dinitrotoluene	ug/g	<0.1	0.1	8711799
2-Chlorophenol	ug/g	<0.08	0.08	8711799
2-Methylnaphthalene	ug/g	<0.03	0.03	8711799
3,3'-Dichlorobenzidine	ug/g	<0.5	0.5	8711799
Acenaphthene	ug/g	<0.03	0.03	8711799
Acenaphthylene	ug/g	<0.05	0.05	8711799
Anthracene	ug/g	0.03	0.03	8711799
Benzo(a)anthracene	ug/g	0.08	0.05	8711799
Benzo(a)pyrene	ug/g	0.05	0.05	8711799
Benzo(b/j)fluoranthene	ug/g	<0.1	0.1	8711799
Benzo(g,h,i)perylene	ug/g	<0.1	0.1	8711799
Benzo(k)fluoranthene	ug/g	<0.03	0.03	8711799
Biphenyl	ug/g	<0.05	0.05	8711799
Bis(2-chloroethyl)ether	ug/g	<0.2	0.2	8711799
Bis(2-chloroisopropyl)ether	ug/g	<0.1	0.1	8711799
Bis(2-ethylhexyl)phthalate	ug/g	<1	1	8711799
Chrysene	ug/g	0.07	0.05	8711799
Dibenzo(a,h)anthracene	ug/g	<0.05	0.05	8711799
Diethyl phthalate	ug/g	<0.2	0.2	8711799
Dimethyl phthalate	ug/g	<0.2	0.2	8711799
Fluoranthene	ug/g	0.17	0.05	8711799
Fluorene	ug/g	<0.03	0.03	8711799
Indeno(1,2,3-cd)pyrene	ug/g	<0.08	0.08	8711799

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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O.REG 153 SEMIVOLATILES PACKAGE (SOIL)

Bureau Veritas ID		WAE651		
Sampling Date		2023/06/05 14:00		
COC Number		909931-06-01		
	UNITS	BH205-2	RDL	QC Batch
Naphthalene	ug/g	<0.03	0.03	8711799
p-Chloroaniline	ug/g	<0.2	0.2	8711799
Pentachlorophenol	ug/g	<0.1	0.1	8711799
Phenanthrene	ug/g	0.19	0.05	8711799
Phenol	ug/g	<0.09	0.09	8711799
Pyrene	ug/g	0.14	0.05	8711799
Calculated Parameters				
2,4- & 2,6-Dinitrotoluene	ug/g	<0.14	0.14	8706806
Methylnaphthalene, 2-(1-)	ug/g	<0.042	0.042	8708226
Surrogate Recovery (%)				
2,4,6-Tribromophenol	%	97		8711799
2-Fluorobiphenyl	%	73		8711799
D14-Terphenyl (FS)	%	107		8711799
D5-Nitrobenzene	%	69		8711799

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Bureau Veritas Job #: C3G2781
Report Date: 2023/06/16

Terrapex Environmental Ltd
Client Project #: CH244.00
Site Location: 128 QUEEN ST S, MISSISSAUGA
Sampler Initials: KP

TEST SUMMARY

Bureau Veritas ID: WAE651
Sample ID: BH205-2
Matrix: Soil

Collected: 2023/06/05
Shipped:
Received: 2023/06/06

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	8708226	N/A	2023/06/09	Automated Statchk
ABN Compounds in soil by GC/MS	GC/MS	8711799	2023/06/08	2023/06/09	Milijana Avramovic
Hot Water Extractable Boron	ICP	8714954	2023/06/09	2023/06/09	Medhat Nasr
Free (WAD) Cyanide	TECH	8715047	2023/06/09	2023/06/12	Prgya Panchal
Conductivity	AT	8715073	2023/06/09	2023/06/09	Gurparteek KAUR
Hexavalent Chromium in Soil by IC	IC/SPEC	8712326	2023/06/08	2023/06/08	Sousan Besharatlou
Dinitrotoluene Sum	CALC	8706806	2023/06/09	2023/06/09	Automated Statchk
Acid Extractable Metals by ICPMS	ICP/MS	8714755	2023/06/09	2023/06/09	Indira HarryPaul
Moisture	BAL	8709771	N/A	2023/06/07	Simrat Bhathal
Polychlorinated Biphenyl in Soil	GC/ECD	8730247	2023/06/15	2023/06/16	Svitlana Shaula
pH CaCl2 EXTRACT	AT	8712637	2023/06/08	2023/06/08	Surinder Rai
Sodium Adsorption Ratio (SAR)	CALC/MET	8708478	N/A	2023/06/12	Automated Statchk

Bureau Veritas ID: WAE652
Sample ID: BH205-7
Matrix: Soil

Collected: 2023/06/05
Shipped:
Received: 2023/06/06

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
1,3-Dichloropropene Sum	CALC	8708446	N/A	2023/06/09	Automated Statchk
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	8710444	2023/06/07	2023/06/08	Emir Danisman
Moisture	BAL	8709771	N/A	2023/06/07	Simrat Bhathal
Volatile Organic Compounds and F1 PHCs	GC/MSFD	8710592	N/A	2023/06/08	Blair Gannon

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GENERAL COMMENTS

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

Package 1	7.3°C

Revised Report:PCB analysis included for sample WAE651, as per request.

Results relate only to the items tested.

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QUALITY ASSURANCE REPORT

			Matrix Spike		SPIKED BLANK		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8710444	o-Terphenyl	2023/06/08	103	60 - 130	100	60 - 130	99	%		
8710592	4-Bromofluorobenzene	2023/06/08	95	60 - 140	96	60 - 140	95	%		
8710592	D10-o-Xylene	2023/06/08	102	60 - 130	102	60 - 130	93	%		
8710592	D4-1,2-Dichloroethane	2023/06/08	96	60 - 140	105	60 - 140	110	%		
8710592	D8-Toluene	2023/06/08	106	60 - 140	104	60 - 140	96	%		
8711799	2,4,6-Tribromophenol	2023/06/08	95	50 - 130	99	50 - 130	77	%		
8711799	2-Fluorobiphenyl	2023/06/08	74	50 - 130	92	50 - 130	92	%		
8711799	D14-Terphenyl (FS)	2023/06/08	92	50 - 130	94	50 - 130	93	%		
8711799	D5-Nitrobenzene	2023/06/08	74	50 - 130	97	50 - 130	93	%		
8730247	Decachlorobiphenyl	2023/06/15	109	60 - 130	91	60 - 130	94	%		
8709771	Moisture	2023/06/07							6.9	20
8710444	F2 (C10-C16 Hydrocarbons)	2023/06/08	112	60 - 130	107	80 - 120	<10	ug/g	NC	30
8710444	F3 (C16-C34 Hydrocarbons)	2023/06/08	113	60 - 130	107	80 - 120	<50	ug/g	NC	30
8710444	F4 (C34-C50 Hydrocarbons)	2023/06/08	117	60 - 130	109	80 - 120	<50	ug/g	NC	30
8710592	1,1,1,2-Tetrachloroethane	2023/06/08	97	60 - 140	101	60 - 130	<0.040	ug/g	NC	50
8710592	1,1,1-Trichloroethane	2023/06/08	106	60 - 140	104	60 - 130	<0.040	ug/g	NC	50
8710592	1,1,2,2-Tetrachloroethane	2023/06/08	85	60 - 140	97	60 - 130	<0.040	ug/g	NC	50
8710592	1,1,2-Trichloroethane	2023/06/08	97	60 - 140	107	60 - 130	<0.040	ug/g	NC	50
8710592	1,1-Dichloroethane	2023/06/08	96	60 - 140	97	60 - 130	<0.040	ug/g	NC	50
8710592	1,1-Dichloroethylene	2023/06/08	102	60 - 140	99	60 - 130	<0.040	ug/g	NC	50
8710592	1,2-Dichlorobenzene	2023/06/08	95	60 - 140	98	60 - 130	<0.040	ug/g	NC	50
8710592	1,2-Dichloroethane	2023/06/08	88	60 - 140	96	60 - 130	<0.049	ug/g	NC	50
8710592	1,2-Dichloropropane	2023/06/08	90	60 - 140	96	60 - 130	<0.040	ug/g	NC	50
8710592	1,3-Dichlorobenzene	2023/06/08	97	60 - 140	96	60 - 130	<0.040	ug/g	NC	50
8710592	1,4-Dichlorobenzene	2023/06/08	110	60 - 140	110	60 - 130	<0.040	ug/g	NC	50
8710592	Acetone (2-Propanone)	2023/06/08	83	60 - 140	95	60 - 140	<0.49	ug/g	NC	50
8710592	Benzene	2023/06/08	89	60 - 140	92	60 - 130	<0.0060	ug/g	NC	50
8710592	Bromodichloromethane	2023/06/08	96	60 - 140	102	60 - 130	<0.040	ug/g	NC	50
8710592	Bromoform	2023/06/08	86	60 - 140	96	60 - 130	<0.040	ug/g	NC	50
8710592	Bromomethane	2023/06/08	95	60 - 140	97	60 - 140	<0.040	ug/g	NC	50
8710592	Carbon Tetrachloride	2023/06/08	105	60 - 140	102	60 - 130	<0.040	ug/g	NC	50

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QUALITY ASSURANCE REPORT(CONT'D)

			Matrix Spike		SPIKED BLANK		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8710592	Chlorobenzene	2023/06/08	94	60 - 140	97	60 - 130	<0.040	ug/g	NC	50
8710592	Chloroform	2023/06/08	98	60 - 140	101	60 - 130	<0.040	ug/g	NC	50
8710592	cis-1,2-Dichloroethylene	2023/06/08	96	60 - 140	99	60 - 130	<0.040	ug/g	NC	50
8710592	cis-1,3-Dichloropropene	2023/06/08	89	60 - 140	98	60 - 130	<0.030	ug/g	NC	50
8710592	Dibromochloromethane	2023/06/08	90	60 - 140	97	60 - 130	<0.040	ug/g	NC	50
8710592	Dichlorodifluoromethane (FREON 12)	2023/06/08	78	60 - 140	79	60 - 140	<0.040	ug/g	NC	50
8710592	Ethylbenzene	2023/06/08	86	60 - 140	86	60 - 130	<0.010	ug/g	NC	50
8710592	Ethylene Dibromide	2023/06/08	84	60 - 140	94	60 - 130	<0.040	ug/g	NC	50
8710592	F1 (C6-C10) - BTEX	2023/06/08					<10	ug/g	NC	30
8710592	F1 (C6-C10)	2023/06/08	96	60 - 140	95	80 - 120	<10	ug/g	NC	30
8710592	Hexane	2023/06/08	101	60 - 140	96	60 - 130	<0.040	ug/g	NC	50
8710592	Methyl Ethyl Ketone (2-Butanone)	2023/06/08	84	60 - 140	100	60 - 140	<0.40	ug/g	NC	50
8710592	Methyl Isobutyl Ketone	2023/06/08	74	60 - 140	94	60 - 130	<0.40	ug/g	NC	50
8710592	Methyl t-butyl ether (MTBE)	2023/06/08	78	60 - 140	87	60 - 130	<0.040	ug/g	NC	50
8710592	Methylene Chloride(Dichloromethane)	2023/06/08	99	60 - 140	104	60 - 130	<0.049	ug/g	NC	50
8710592	o-Xylene	2023/06/08	89	60 - 140	91	60 - 130	<0.020	ug/g	NC	50
8710592	p+m-Xylene	2023/06/08	90	60 - 140	89	60 - 130	<0.020	ug/g	NC	50
8710592	Styrene	2023/06/08	95	60 - 140	99	60 - 130	<0.040	ug/g	NC	50
8710592	Tetrachloroethylene	2023/06/08	97	60 - 140	91	60 - 130	<0.040	ug/g	NC	50
8710592	Toluene	2023/06/08	93	60 - 140	93	60 - 130	<0.020	ug/g	NC	50
8710592	Total Xylenes	2023/06/08					<0.020	ug/g	NC	50
8710592	trans-1,2-Dichloroethylene	2023/06/08	98	60 - 140	96	60 - 130	<0.040	ug/g	NC	50
8710592	trans-1,3-Dichloropropene	2023/06/08	97	60 - 140	105	60 - 130	<0.040	ug/g	NC	50
8710592	Trichloroethylene	2023/06/08	102	60 - 140	101	60 - 130	<0.010	ug/g	4.7	50
8710592	Trichlorofluoromethane (FREON 11)	2023/06/08	103	60 - 140	100	60 - 130	<0.040	ug/g	NC	50
8710592	Vinyl Chloride	2023/06/08	95	60 - 140	94	60 - 130	<0.019	ug/g	NC	50
8711799	1,2,4-Trichlorobenzene	2023/06/08	61	50 - 130	86	50 - 130	<0.05	ug/g	NC	40
8711799	1-Methylnaphthalene	2023/06/08	79	50 - 130	97	50 - 130	<0.03	ug/g	NC	40
8711799	2,4,5-Trichlorophenol	2023/06/08	86	50 - 130	99	50 - 130	<0.08	ug/g	NC	40
8711799	2,4,6-Trichlorophenol	2023/06/08	86	50 - 130	99	50 - 130	<0.1	ug/g	NC	40
8711799	2,4-Dichlorophenol	2023/06/08	84	50 - 130	95	50 - 130	<0.1	ug/g	NC	40

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QUALITY ASSURANCE REPORT(CONT'D)

			Matrix Spike		SPIKED BLANK		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8711799	2,4-Dimethylphenol	2023/06/08	83	30 - 130	101	30 - 130	<0.2	ug/g	NC	40
8711799	2,4-Dinitrophenol	2023/06/08	13 (1)	30 - 130	32	30 - 130	<0.5	ug/g	NC	40
8711799	2,4-Dinitrotoluene	2023/06/08	67	50 - 130	83	50 - 130	<0.1	ug/g	NC	40
8711799	2,6-Dinitrotoluene	2023/06/08	61	50 - 130	85	50 - 130	<0.1	ug/g	NC	40
8711799	2-Chlorophenol	2023/06/08	77	50 - 130	92	50 - 130	<0.08	ug/g	NC	40
8711799	2-Methylnaphthalene	2023/06/08	72	50 - 130	89	50 - 130	<0.03	ug/g	NC	40
8711799	3,3'-Dichlorobenzidine	2023/06/08	94	30 - 130	51	30 - 130	<0.5	ug/g	NC	40
8711799	Acenaphthene	2023/06/08	70	50 - 130	86	50 - 130	<0.03	ug/g	NC	40
8711799	Acenaphthylene	2023/06/08	70	50 - 130	85	50 - 130	<0.05	ug/g	NC	40
8711799	Anthracene	2023/06/08	83	50 - 130	90	50 - 130	<0.03	ug/g	NC	40
8711799	Benzo(a)anthracene	2023/06/08	87	50 - 130	91	50 - 130	<0.05	ug/g	NC	40
8711799	Benzo(a)pyrene	2023/06/08	97	50 - 130	102	50 - 130	<0.05	ug/g	NC	40
8711799	Benzo(b/j)fluoranthene	2023/06/08	86	50 - 130	91	50 - 130	<0.1	ug/g	NC	40
8711799	Benzo(g,h,i)perylene	2023/06/08	102	50 - 130	118	50 - 130	<0.1	ug/g	NC	40
8711799	Benzo(k)fluoranthene	2023/06/08	92	50 - 130	103	50 - 130	<0.03	ug/g	NC	40
8711799	Biphenyl	2023/06/08	70	50 - 130	86	50 - 130	<0.05	ug/g	NC	40
8711799	Bis(2-chloroethyl)ether	2023/06/08	62	50 - 130	76	50 - 130	<0.2	ug/g	NC	40
8711799	Bis(2-chloroisopropyl)ether	2023/06/08	56	50 - 130	71	50 - 130	<0.1	ug/g	NC	40
8711799	Bis(2-ethylhexyl)phthalate	2023/06/08	107	50 - 130	100	50 - 130	<1	ug/g	NC	40
8711799	Chrysene	2023/06/08	90	50 - 130	94	50 - 130	<0.05	ug/g	NC	40
8711799	Dibenzo(a,h)anthracene	2023/06/08	103	50 - 130	115	50 - 130	<0.05	ug/g	NC	40
8711799	Diethyl phthalate	2023/06/08	76	50 - 130	88	50 - 130	<0.2	ug/g	NC	40
8711799	Dimethyl phthalate	2023/06/08	86	50 - 130	100	50 - 130	<0.2	ug/g	NC	40
8711799	Fluoranthene	2023/06/08	96	50 - 130	104	50 - 130	<0.05	ug/g	NC	40
8711799	Fluorene	2023/06/08	77	50 - 130	91	50 - 130	<0.03	ug/g	NC	40
8711799	Indeno(1,2,3-cd)pyrene	2023/06/08	97	50 - 130	108	50 - 130	<0.08	ug/g	NC	40
8711799	Naphthalene	2023/06/08	87	50 - 130	109	50 - 130	<0.03	ug/g	NC	40
8711799	p-Chloroaniline	2023/06/08	83	30 - 130	57	30 - 130	<0.2	ug/g	NC	40
8711799	Pentachlorophenol	2023/06/08	87	50 - 130	82	50 - 130	<0.1	ug/g	NC	40
8711799	Phenanthrene	2023/06/08	80	50 - 130	88	50 - 130	<0.05	ug/g	NC	40
8711799	Phenol	2023/06/08	81	30 - 130	89	30 - 130	<0.09	ug/g	NC	40

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QUALITY ASSURANCE REPORT(CONT'D)

			Matrix Spike		SPIKED BLANK		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8711799	Pyrene	2023/06/08	91	50 - 130	93	50 - 130	<0.05	ug/g	NC	40
8712326	Chromium (VI)	2023/06/08	54 (2)	70 - 130	88	80 - 120	<0.18	ug/g	NC	35
8712637	Available (CaCl2) pH	2023/06/08			100	97 - 103			0.39	N/A
8714755	Acid Extractable Antimony (Sb)	2023/06/09	82	75 - 125	100	80 - 120	<0.20	ug/g	NC	30
8714755	Acid Extractable Arsenic (As)	2023/06/09	102	75 - 125	98	80 - 120	<1.0	ug/g	1.6	30
8714755	Acid Extractable Barium (Ba)	2023/06/09	NC	75 - 125	94	80 - 120	<0.50	ug/g	0.89	30
8714755	Acid Extractable Beryllium (Be)	2023/06/09	101	75 - 125	98	80 - 120	<0.20	ug/g	0.32	30
8714755	Acid Extractable Boron (B)	2023/06/09	87	75 - 125	97	80 - 120	<5.0	ug/g	10	30
8714755	Acid Extractable Cadmium (Cd)	2023/06/09	101	75 - 125	99	80 - 120	<0.10	ug/g	NC	30
8714755	Acid Extractable Chromium (Cr)	2023/06/09	NC	75 - 125	99	80 - 120	<1.0	ug/g	4.9	30
8714755	Acid Extractable Cobalt (Co)	2023/06/09	101	75 - 125	99	80 - 120	<0.10	ug/g	0.47	30
8714755	Acid Extractable Copper (Cu)	2023/06/09	NC	75 - 125	100	80 - 120	<0.50	ug/g	0.33	30
8714755	Acid Extractable Lead (Pb)	2023/06/09	101	75 - 125	101	80 - 120	<1.0	ug/g	4.9	30
8714755	Acid Extractable Mercury (Hg)	2023/06/09	98	75 - 125	104	80 - 120	<0.050	ug/g	NC	30
8714755	Acid Extractable Molybdenum (Mo)	2023/06/09	97	75 - 125	99	80 - 120	<0.50	ug/g	NC	30
8714755	Acid Extractable Nickel (Ni)	2023/06/09	NC	75 - 125	101	80 - 120	<0.50	ug/g	0.40	30
8714755	Acid Extractable Selenium (Se)	2023/06/09	101	75 - 125	102	80 - 120	<0.50	ug/g	NC	30
8714755	Acid Extractable Silver (Ag)	2023/06/09	102	75 - 125	100	80 - 120	<0.20	ug/g	NC	30
8714755	Acid Extractable Thallium (Tl)	2023/06/09	100	75 - 125	100	80 - 120	<0.050	ug/g	0.42	30
8714755	Acid Extractable Uranium (U)	2023/06/09	98	75 - 125	98	80 - 120	<0.050	ug/g	3.9	30
8714755	Acid Extractable Vanadium (V)	2023/06/09	NC	75 - 125	96	80 - 120	<5.0	ug/g	3.4	30
8714755	Acid Extractable Zinc (Zn)	2023/06/09	NC	75 - 125	96	80 - 120	<5.0	ug/g	3.2	30
8714954	Hot Water Ext. Boron (B)	2023/06/09	112	75 - 125	103	75 - 125	<0.050	ug/g	0.98	40
8715047	WAD Cyanide (Free)	2023/06/12	101	75 - 125	107	80 - 120	<0.01	ug/g	NC	35
8715073	Conductivity	2023/06/09			103	90 - 110	<0.002	mS/cm	6.3	10
8730247	Aroclor 1242	2023/06/16					<0.010	ug/g	NC	50
8730247	Aroclor 1248	2023/06/16					<0.010	ug/g	NC	50
8730247	Aroclor 1254	2023/06/16					<0.010	ug/g	NC	50
8730247	Aroclor 1260	2023/06/16	133 (3)	30 - 130	117	30 - 130	<0.010	ug/g	NC	50

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QUALITY ASSURANCE REPORT(CONT'D)

			Matrix Spike		SPIKED BLANK		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8730247	Total PCB	2023/06/16	133 (3)	30 - 130	117	30 - 130	<0.010	ug/g	NC	50

N/A = Not Applicable

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

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

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

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

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

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

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

(1) Recovery or RPD for this parameter is outside control limits. The overall quality control for this analysis meets acceptability criteria.

(2) The matrix spike recovery was below the lower control limit. This may be due to the sample matrix. The sample was re-analyzed with the same results

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

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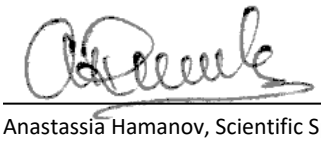
Bureau Veritas Job #: C3G2781
Report Date: 2023/06/16

Terrapex Environmental Ltd
Client Project #: CH244.00
Site Location: 128 QUEEN ST S, MISSISSAUGA
Sampler Initials: KP

VALIDATION SIGNATURE PAGE

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



Anastassia Hamanov, Scientific Specialist

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Page of

INVOICE TO:		REPORT TO:		PROJECT INFORMATION:	
Company Name:	#4398 Terrapex Environmental Ltd	Company Name:	#6839 Terrapex Environmental Ltd	Quotation #:	~~G20855~~
Attention:	Accounts Payable	Attention:	Geoff Lussier	P.O. #:	TREX SO
Address:	90 Scarsdale Rd	Address:	65 Nebo Road	Project:	~~CH203~~01 CH244-00
	Toronto ON M3B 2R7		Hamilton ON L8W 2C9	Project Name:	128 Queen St S, Mississauga
Tel:	(416) 245-0011 Fax: (416) 245-0012	Tel:	(905) 632-5939 Ext: 228 Fax: (905) 632-6793	Site #:	
Email:	accounts.payable@terrapex.com	Email:	g.lussier@terrapex.com; EDD@terrapex.com	Sampled By:	KP

Nont-06-027

nly:
Bottle Order #: 909931
COC #: C#909931-06-01
Project Manager: Kudrat Bajwa

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

Regulation 153 (2011)
☐ Table 1 ☐ Res/Park ☐ Medium/Fine
☐ Table 2 ☐ Ind/Comm ☐ Coarse
☐ Table 3 ☐ Agri/Other ☐ For RSC
☐ Table ___

Other Regulations
☐ CCME ☐ Sanitary Sewer Bylaw
☐ Reg 558. ☐ Storm Sewer Bylaw
☐ MISA Municipality _____
☐ PWQO ☐ Reg 406 Table _____
☐ Other _____

Special Instructions

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

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

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

Job Specific Rush TAT (if applies to entire submission)
Date Required: _____ Time Required: _____ ☐
Rush Confirmation Number: _____ *(call lab for #)*

	Sample Barcode Label	Sample (Location) Identification	Date Sampled	Time Sampled	Matrix	Field Filtered (please circle): Metals / Hg / Cr VI	O.Reg 153 VOCs by HS & F1-F4 (Soil)	O.Reg 153 PAHs (Soil)	O.Reg 153 Metals & Inorganics Pkg (Soil)	Other 153 semi VOCs						# of Bottles	Comments
1		BH205-2	June 5/23	2:00pm	Soil			X	X	X						3	
2		BH205-7	June 5/23	2:30pm	"		X									3	
3																	
4																	
5																	
6																	
7																	
8																	
9																	
10																	

* RELINQUISHED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	RECEIVED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	# jars used and not submitted
[signature] / Geoff Lussier	23/06/06	12:00pm	Ramdev RAMANDEEP	2023/06/06	15:05	

Laboratory Use Only
Time Sensitive
Temperature (°C) on Recei: 8 | 7 | 7
Custody Seal: Present ☐ Intact ☑ — Yes ☐ — No ☑

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

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

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

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

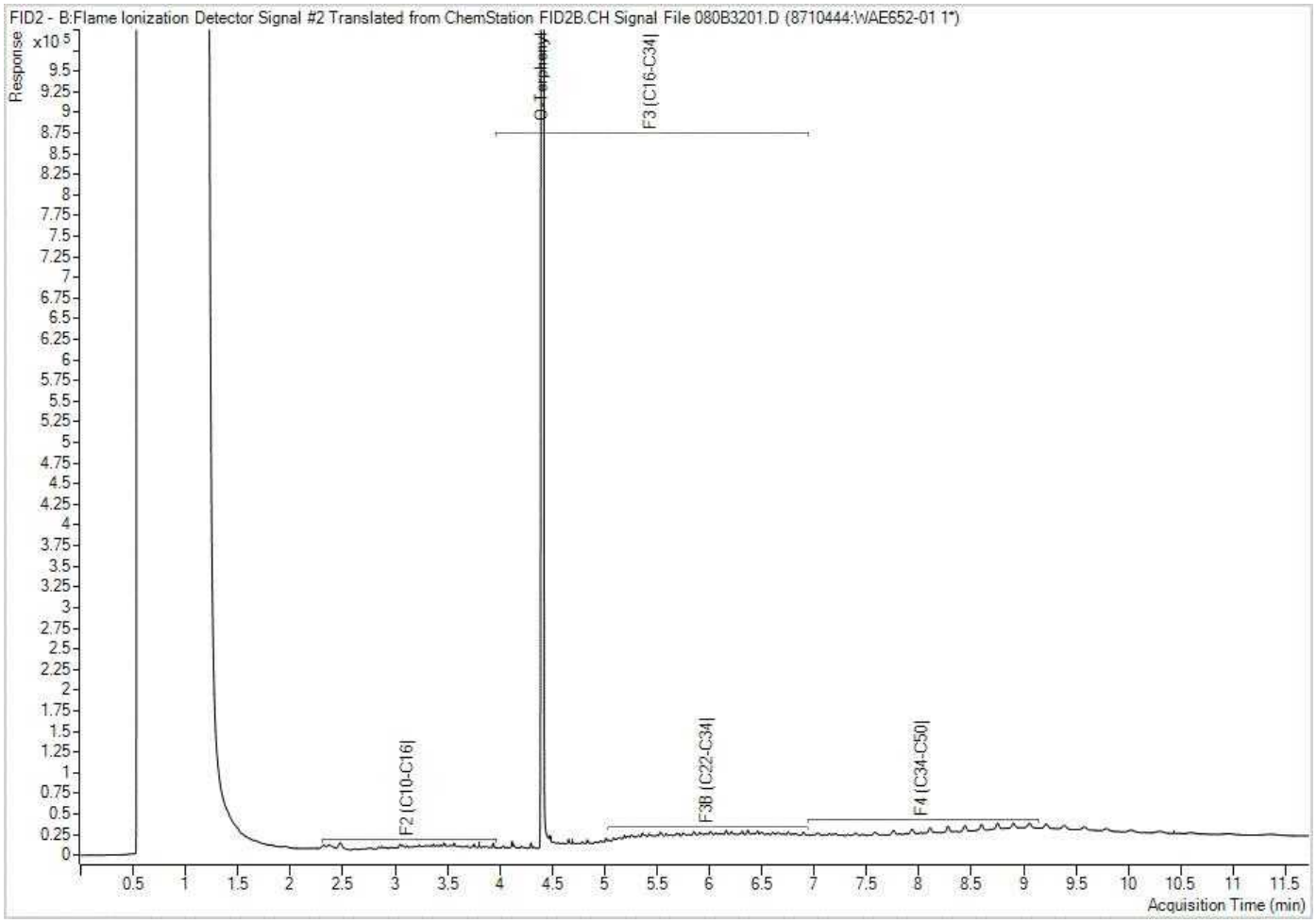
White: Bureau Veritas Yellow: Client

Bureau Veritas Canada (2019) Inc.

Bureau Veritas Job #: C3G2781
Report Date: 2023/06/16
Bureau Veritas Sample: WAE652

Terrapex Environmental Ltd
Client Project #: CH244.00
Project name: 128 QUEEN ST S, MISSISSAUGA
Client ID: BH205-7

Petroleum Hydrocarbons F2-F4 in Soil Chromatogram



Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Your Project #: CH244.00
Site Location: 128 QUEEN ST S,MISSISAUGA
Your C.O.C. #: 909931-07-01

Attention: Geoff Lussier

Terrapex Environmental Ltd
65 Nebo Road
Hamilton, ON
CANADA L8W 2C9

Report Date: 2023/06/21
Report #: R7682400
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C3H2595
Received: 2023/06/14, 15:20

Sample Matrix: Soil
Samples Received: 4

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Methylnaphthalene Sum	2	N/A	2023/06/21	CAM SOP-00301	EPA 8270D m
Hot Water Extractable Boron	2	2023/06/19	2023/06/20	CAM SOP-00408	R153 Ana. Prot. 2011
1,3-Dichloropropene Sum	2	N/A	2023/06/18		EPA 8260C m
Free (WAD) Cyanide	2	2023/06/19	2023/06/20	CAM SOP-00457	OMOE E3015 m
Conductivity	2	2023/06/19	2023/06/19	CAM SOP-00414	OMOE E3530 v1 m
Hexavalent Chromium in Soil by IC (1)	2	2023/06/19	2023/06/19	CAM SOP-00436	EPA 3060A/7199 m
Petroleum Hydrocarbons F2-F4 in Soil (2)	2	2023/06/16	2023/06/18	CAM SOP-00316	CCME CWS m
Acid Extractable Metals by ICPMS	2	2023/06/17	2023/06/19	CAM SOP-00447	EPA 6020B m
Moisture	4	N/A	2023/06/16	CAM SOP-00445	Carter 2nd ed 51.2 m
PAH Compounds in Soil by GC/MS (SIM)	2	2023/06/16	2023/06/17	CAM SOP-00318	EPA 8270E
pH CaCl2 EXTRACT	2	2023/06/19	2023/06/19	CAM SOP-00413	EPA 9045 D m
Sodium Adsorption Ratio (SAR)	2	N/A	2023/06/20	CAM SOP-00102	EPA 6010C
Volatile Organic Compounds and F1 PHCs	2	N/A	2023/06/17	CAM SOP-00230	EPA 8260C m

Remarks:

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

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

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

Solid sample results, except biota, are based on dry weight unless otherwise indicated. Organic analyses are not recovery corrected except for isotope dilution methods.
Results relate to samples tested. When sampling is not conducted by Bureau Veritas, results relate to the supplied samples tested.

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

Your Project #: CH244.00
Site Location: 128 QUEEN ST S,MISSISAUGA
Your C.O.C. #: 909931-07-01

Attention: Geoff Lussier

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Received: 2023/06/14, 15:20

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

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

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

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

Encryption Key

Please direct all questions regarding this Certificate of Analysis to:
Kudrat Bajwa, B.Sc., Project Manager
Email: Kudrat.Bajwa@bureauveritas.com
Phone# (905)817-5755

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This report has been generated and distributed using a secure automated process.

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

O.REG 153 METALS & INORGANICS PKG (SOIL)

Bureau Veritas ID		WCG112		WCG113		
Sampling Date		2023/06/09 11:00		2023/06/09 11:10		
COC Number		909931-07-01		909931-07-01		
	UNITS	MW206-1	QC Batch	MW906-1	RDL	QC Batch
Calculated Parameters						
Sodium Adsorption Ratio	N/A	1.0	8726118	1.0		8726118
Inorganics						
Conductivity	mS/cm	0.17	8735807	0.17	0.002	8735807
Available (CaCl2) pH	pH	7.75	8736223	7.73		8736181
WAD Cyanide (Free)	ug/g	<0.01	8735922	<0.01	0.01	8735922
Chromium (VI)	ug/g	<0.18	8735838	<0.18	0.18	8735838
Metals						
Hot Water Ext. Boron (B)	ug/g	0.26	8735468	0.25	0.050	8735468
Acid Extractable Antimony (Sb)	ug/g	<0.20	8733573	<0.20	0.20	8733573
Acid Extractable Arsenic (As)	ug/g	1.3	8733573	1.2	1.0	8733573
Acid Extractable Barium (Ba)	ug/g	15	8733573	17	0.50	8733573
Acid Extractable Beryllium (Be)	ug/g	<0.20	8733573	<0.20	0.20	8733573
Acid Extractable Boron (B)	ug/g	<5.0	8733573	<5.0	5.0	8733573
Acid Extractable Cadmium (Cd)	ug/g	<0.10	8733573	<0.10	0.10	8733573
Acid Extractable Chromium (Cr)	ug/g	6.2	8733573	6.6	1.0	8733573
Acid Extractable Cobalt (Co)	ug/g	2.4	8733573	2.6	0.10	8733573
Acid Extractable Copper (Cu)	ug/g	9.1	8733573	9.1	0.50	8733573
Acid Extractable Lead (Pb)	ug/g	3.4	8733573	3.6	1.0	8733573
Acid Extractable Molybdenum (Mo)	ug/g	<0.50	8733573	<0.50	0.50	8733573
Acid Extractable Nickel (Ni)	ug/g	4.4	8733573	4.5	0.50	8733573
Acid Extractable Selenium (Se)	ug/g	<0.50	8733573	<0.50	0.50	8733573
Acid Extractable Silver (Ag)	ug/g	<0.20	8733573	<0.20	0.20	8733573
Acid Extractable Thallium (Tl)	ug/g	<0.050	8733573	<0.050	0.050	8733573
Acid Extractable Uranium (U)	ug/g	0.28	8733573	0.66	0.050	8733573
Acid Extractable Vanadium (V)	ug/g	15	8733573	16	5.0	8733573
Acid Extractable Zinc (Zn)	ug/g	31	8733573	30	5.0	8733573
Acid Extractable Mercury (Hg)	ug/g	<0.050	8733573	<0.050	0.050	8733573

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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O.REG 153 PAHS (SOIL)

Bureau Veritas ID		WCG112	WCG113		
Sampling Date		2023/06/09 11:00	2023/06/09 11:10		
COC Number		909931-07-01	909931-07-01		
	UNITS	MW206-1	MW906-1	RDL	QC Batch
Calculated Parameters					
Methylnaphthalene, 2-(1-)	ug/g	<0.0071	<0.0071	0.0071	8726081
Polyaromatic Hydrocarbons					
Acenaphthene	ug/g	<0.0050	<0.0050	0.0050	8731555
Acenaphthylene	ug/g	<0.0050	<0.0050	0.0050	8731555
Anthracene	ug/g	0.0051	<0.0050	0.0050	8731555
Benzo(a)anthracene	ug/g	0.012	0.010	0.0050	8731555
Benzo(a)pyrene	ug/g	0.010	0.0079	0.0050	8731555
Benzo(b/j)fluoranthene	ug/g	0.014	0.010	0.0050	8731555
Benzo(g,h,i)perylene	ug/g	0.0057	<0.0050	0.0050	8731555
Benzo(k)fluoranthene	ug/g	0.0052	<0.0050	0.0050	8731555
Chrysene	ug/g	0.010	0.0080	0.0050	8731555
Dibenzo(a,h)anthracene	ug/g	<0.0050	<0.0050	0.0050	8731555
Fluoranthene	ug/g	0.031	0.023	0.0050	8731555
Fluorene	ug/g	<0.0050	<0.0050	0.0050	8731555
Indeno(1,2,3-cd)pyrene	ug/g	0.0062	<0.0050	0.0050	8731555
1-Methylnaphthalene	ug/g	<0.0050	<0.0050	0.0050	8731555
2-Methylnaphthalene	ug/g	<0.0050	<0.0050	0.0050	8731555
Naphthalene	ug/g	<0.0050	<0.0050	0.0050	8731555
Phenanthrene	ug/g	0.027	0.022	0.0050	8731555
Pyrene	ug/g	0.024	0.017	0.0050	8731555
Surrogate Recovery (%)					
D10-Anthracene	%	97	98		8731555
D14-Terphenyl (FS)	%	93	94		8731555
D8-Acenaphthylene	%	83	82		8731555

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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

Bureau Veritas ID		WCG114	WCG115		
Sampling Date		2023/06/09 02:10	2023/06/09 02:22		
COC Number		909931-07-01	909931-07-01		
	UNITS	MW206-6	MW906-6	RDL	QC Batch
Calculated Parameters					
1,3-Dichloropropene (cis+trans)	ug/g	<0.050	<0.050	0.050	8726083
Volatile Organics					
Acetone (2-Propanone)	ug/g	<0.49	<0.49	0.49	8729348
Benzene	ug/g	<0.0060	<0.0060	0.0060	8729348
Bromodichloromethane	ug/g	<0.040	<0.040	0.040	8729348
Bromoform	ug/g	<0.040	<0.040	0.040	8729348
Bromomethane	ug/g	<0.040	<0.040	0.040	8729348
Carbon Tetrachloride	ug/g	<0.040	<0.040	0.040	8729348
Chlorobenzene	ug/g	<0.040	<0.040	0.040	8729348
Chloroform	ug/g	<0.040	<0.040	0.040	8729348
Dibromochloromethane	ug/g	<0.040	<0.040	0.040	8729348
1,2-Dichlorobenzene	ug/g	<0.040	<0.040	0.040	8729348
1,3-Dichlorobenzene	ug/g	<0.040	<0.040	0.040	8729348
1,4-Dichlorobenzene	ug/g	<0.040	<0.040	0.040	8729348
Dichlorodifluoromethane (FREON 12)	ug/g	<0.040	<0.040	0.040	8729348
1,1-Dichloroethane	ug/g	<0.040	<0.040	0.040	8729348
1,2-Dichloroethane	ug/g	<0.049	<0.049	0.049	8729348
1,1-Dichloroethylene	ug/g	<0.040	<0.040	0.040	8729348
cis-1,2-Dichloroethylene	ug/g	<0.040	<0.040	0.040	8729348
trans-1,2-Dichloroethylene	ug/g	<0.040	<0.040	0.040	8729348
1,2-Dichloropropane	ug/g	<0.040	<0.040	0.040	8729348
cis-1,3-Dichloropropene	ug/g	<0.030	<0.030	0.030	8729348
trans-1,3-Dichloropropene	ug/g	<0.040	<0.040	0.040	8729348
Ethylbenzene	ug/g	<0.010	<0.010	0.010	8729348
Ethylene Dibromide	ug/g	<0.040	<0.040	0.040	8729348
Hexane	ug/g	<0.040	<0.040	0.040	8729348
Methylene Chloride(Dichloromethane)	ug/g	<0.049	<0.049	0.049	8729348
Methyl Ethyl Ketone (2-Butanone)	ug/g	<0.40	<0.40	0.40	8729348
Methyl Isobutyl Ketone	ug/g	<0.40	<0.40	0.40	8729348
Methyl t-butyl ether (MTBE)	ug/g	<0.040	<0.040	0.040	8729348
Styrene	ug/g	<0.040	<0.040	0.040	8729348

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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

Bureau Veritas ID		WCG114	WCG115		
Sampling Date		2023/06/09 02:10	2023/06/09 02:22		
COC Number		909931-07-01	909931-07-01		
	UNITS	MW206-6	MW906-6	RDL	QC Batch
1,1,1,2-Tetrachloroethane	ug/g	<0.040	<0.040	0.040	8729348
1,1,2,2-Tetrachloroethane	ug/g	<0.040	<0.040	0.040	8729348
Tetrachloroethylene	ug/g	<0.040	<0.040	0.040	8729348
Toluene	ug/g	<0.020	<0.020	0.020	8729348
1,1,1-Trichloroethane	ug/g	<0.040	<0.040	0.040	8729348
1,1,2-Trichloroethane	ug/g	<0.040	<0.040	0.040	8729348
Trichloroethylene	ug/g	<0.010	<0.010	0.010	8729348
Trichlorofluoromethane (FREON 11)	ug/g	<0.040	<0.040	0.040	8729348
Vinyl Chloride	ug/g	<0.019	<0.019	0.019	8729348
p+m-Xylene	ug/g	<0.020	<0.020	0.020	8729348
o-Xylene	ug/g	<0.020	<0.020	0.020	8729348
Total Xylenes	ug/g	<0.020	<0.020	0.020	8729348
F1 (C6-C10)	ug/g	<10	<10	10	8729348
F1 (C6-C10) - BTEX	ug/g	<10	<10	10	8729348
F2-F4 Hydrocarbons					
F2 (C10-C16 Hydrocarbons)	ug/g	<10	<10	10	8731730
F3 (C16-C34 Hydrocarbons)	ug/g	<50	<50	50	8731730
F4 (C34-C50 Hydrocarbons)	ug/g	<50	<50	50	8731730
Reached Baseline at C50	ug/g	Yes	Yes		8731730
Surrogate Recovery (%)					
o-Terphenyl	%	94	92		8731730
4-Bromofluorobenzene	%	95	96		8729348
D10-o-Xylene	%	86	80		8729348
D4-1,2-Dichloroethane	%	104	104		8729348
D8-Toluene	%	93	94		8729348

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Bureau Veritas Job #: C3H2595
Report Date: 2023/06/21

Terrapex Environmental Ltd
Client Project #: CH244.00
Site Location: 128 QUEEN ST S,MISSISAUGA
Sampler Initials: KP

RESULTS OF ANALYSES OF SOIL

Bureau Veritas ID		WCG112	WCG113	WCG114	WCG115		
Sampling Date		2023/06/09 11:00	2023/06/09 11:10	2023/06/09 02:10	2023/06/09 02:22		
COC Number		909931-07-01	909931-07-01	909931-07-01	909931-07-01		
	UNITS	MW206-1	MW906-1	MW206-6	MW906-6	RDL	QC Batch
Inorganics							
Moisture	%	7.2	7.4	21	15	1.0	8730688

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Bureau Veritas Job #: C3H2595
Report Date: 2023/06/21

Terrapex Environmental Ltd
Client Project #: CH244.00
Site Location: 128 QUEEN ST S,MISSISAUGA
Sampler Initials: KP

TEST SUMMARY

Bureau Veritas ID: WCG112
Sample ID: MW206-1
Matrix: Soil

Collected: 2023/06/09
Shipped:
Received: 2023/06/14

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	8726081	N/A	2023/06/21	Automated Statchk
Hot Water Extractable Boron	ICP	8735468	2023/06/19	2023/06/20	Suban Kanapathippllai
Free (WAD) Cyanide	TECH	8735922	2023/06/19	2023/06/20	Prgya Panchal
Conductivity	AT	8735807	2023/06/19	2023/06/19	Gurparteek KAUR
Hexavalent Chromium in Soil by IC	IC/SPEC	8735838	2023/06/19	2023/06/19	Violeta Porcila
Acid Extractable Metals by ICPMS	ICP/MS	8733573	2023/06/17	2023/06/19	Indira HarryPaul
Moisture	BAL	8730688	N/A	2023/06/16	Simrat Bhathal
PAH Compounds in Soil by GC/MS (SIM)	GC/MS	8731555	2023/06/16	2023/06/17	Mitesh Raj
pH CaCl2 EXTRACT	AT	8736223	2023/06/19	2023/06/19	Surinder Rai
Sodium Adsorption Ratio (SAR)	CALC/MET	8726118	N/A	2023/06/20	Automated Statchk

Bureau Veritas ID: WCG113
Sample ID: MW906-1
Matrix: Soil

Collected: 2023/06/09
Shipped:
Received: 2023/06/14

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	8726081	N/A	2023/06/21	Automated Statchk
Hot Water Extractable Boron	ICP	8735468	2023/06/19	2023/06/20	Suban Kanapathippllai
Free (WAD) Cyanide	TECH	8735922	2023/06/19	2023/06/20	Prgya Panchal
Conductivity	AT	8735807	2023/06/19	2023/06/19	Gurparteek KAUR
Hexavalent Chromium in Soil by IC	IC/SPEC	8735838	2023/06/19	2023/06/19	Violeta Porcila
Acid Extractable Metals by ICPMS	ICP/MS	8733573	2023/06/17	2023/06/19	Indira HarryPaul
Moisture	BAL	8730688	N/A	2023/06/16	Simrat Bhathal
PAH Compounds in Soil by GC/MS (SIM)	GC/MS	8731555	2023/06/16	2023/06/17	Mitesh Raj
pH CaCl2 EXTRACT	AT	8736181	2023/06/19	2023/06/19	Surinder Rai
Sodium Adsorption Ratio (SAR)	CALC/MET	8726118	N/A	2023/06/20	Automated Statchk

Bureau Veritas ID: WCG114
Sample ID: MW206-6
Matrix: Soil

Collected: 2023/06/09
Shipped:
Received: 2023/06/14

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
1,3-Dichloropropene Sum	CALC	8726083	N/A	2023/06/18	Automated Statchk
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	8731730	2023/06/16	2023/06/18	Suleeqa Nurr
Moisture	BAL	8730688	N/A	2023/06/16	Simrat Bhathal
Volatile Organic Compounds and F1 PHCs	GC/MSFD	8729348	N/A	2023/06/17	Jett Wu

Bureau Veritas ID: WCG115
Sample ID: MW906-6
Matrix: Soil

Collected: 2023/06/09
Shipped:
Received: 2023/06/14

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
1,3-Dichloropropene Sum	CALC	8726083	N/A	2023/06/18	Automated Statchk
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	8731730	2023/06/16	2023/06/18	Suleeqa Nurr

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Bureau Veritas Job #: C3H2595
Report Date: 2023/06/21

Terrapex Environmental Ltd
Client Project #: CH244.00
Site Location: 128 QUEEN ST S,MISSISAUGA
Sampler Initials: KP

TEST SUMMARY

Bureau Veritas ID: WCG115
Sample ID: MW906-6
Matrix: Soil

Collected: 2023/06/09
Shipped:
Received: 2023/06/14

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Moisture	BAL	8730688	N/A	2023/06/16	Simrat Bhathal
Volatile Organic Compounds and F1 PHCs	GC/MSFD	8729348	N/A	2023/06/17	Jett Wu

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GENERAL COMMENTS

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

Package 1	3.3°C

Results relate only to the items tested.

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QUALITY ASSURANCE REPORT

			Matrix Spike		SPIKED BLANK		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8729348	4-Bromofluorobenzene	2023/06/16	100	60 - 140	100	60 - 140	95	%		
8729348	D10-o-Xylene	2023/06/16	105	60 - 130	99	60 - 130	88	%		
8729348	D4-1,2-Dichloroethane	2023/06/16	99	60 - 140	93	60 - 140	99	%		
8729348	D8-Toluene	2023/06/16	105	60 - 140	106	60 - 140	95	%		
8731555	D10-Anthracene	2023/06/17	99	50 - 130	98	50 - 130	100	%		
8731555	D14-Terphenyl (FS)	2023/06/17	97	50 - 130	95	50 - 130	95	%		
8731555	D8-Acenaphthylene	2023/06/17	93	50 - 130	93	50 - 130	93	%		
8731730	o-Terphenyl	2023/06/18	87	60 - 130	89	60 - 130	89	%		
8729348	1,1,1,2-Tetrachloroethane	2023/06/16	93	60 - 140	95	60 - 130	<0.040	ug/g	NC	50
8729348	1,1,1-Trichloroethane	2023/06/16	92	60 - 140	97	60 - 130	<0.040	ug/g	NC	50
8729348	1,1,2,2-Tetrachloroethane	2023/06/16	91	60 - 140	86	60 - 130	<0.040	ug/g	NC	50
8729348	1,1,2-Trichloroethane	2023/06/16	93	60 - 140	90	60 - 130	<0.040	ug/g	NC	50
8729348	1,1-Dichloroethane	2023/06/16	88	60 - 140	91	60 - 130	<0.040	ug/g	NC	50
8729348	1,1-Dichloroethylene	2023/06/16	90	60 - 140	97	60 - 130	<0.040	ug/g	NC	50
8729348	1,2-Dichlorobenzene	2023/06/16	88	60 - 140	87	60 - 130	<0.040	ug/g	NC	50
8729348	1,2-Dichloroethane	2023/06/16	84	60 - 140	84	60 - 130	<0.049	ug/g	NC	50
8729348	1,2-Dichloropropane	2023/06/16	88	60 - 140	90	60 - 130	<0.040	ug/g	NC	50
8729348	1,3-Dichlorobenzene	2023/06/16	87	60 - 140	89	60 - 130	<0.040	ug/g	NC	50
8729348	1,4-Dichlorobenzene	2023/06/16	97	60 - 140	99	60 - 130	<0.040	ug/g	NC	50
8729348	Acetone (2-Propanone)	2023/06/16	88	60 - 140	84	60 - 140	<0.49	ug/g	NC	50
8729348	Benzene	2023/06/16	85	60 - 140	90	60 - 130	<0.0060	ug/g	NC	50
8729348	Bromodichloromethane	2023/06/16	92	60 - 140	92	60 - 130	<0.040	ug/g	NC	50
8729348	Bromoform	2023/06/16	89	60 - 140	86	60 - 130	<0.040	ug/g	NC	50
8729348	Bromomethane	2023/06/16	96	60 - 140	100	60 - 140	<0.040	ug/g	NC	50
8729348	Carbon Tetrachloride	2023/06/16	93	60 - 140	99	60 - 130	<0.040	ug/g	NC	50
8729348	Chlorobenzene	2023/06/16	89	60 - 140	94	60 - 130	<0.040	ug/g	NC	50
8729348	Chloroform	2023/06/16	91	60 - 140	93	60 - 130	<0.040	ug/g	NC	50
8729348	cis-1,2-Dichloroethylene	2023/06/16	94	60 - 140	97	60 - 130	<0.040	ug/g	NC	50
8729348	cis-1,3-Dichloropropene	2023/06/16	84	60 - 140	84	60 - 130	<0.030	ug/g	NC	50
8729348	Dibromochloromethane	2023/06/16	91	60 - 140	89	60 - 130	<0.040	ug/g	NC	50
8729348	Dichlorodifluoromethane (FREON 12)	2023/06/16	95	60 - 140	106	60 - 140	<0.040	ug/g	NC	50

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QUALITY ASSURANCE REPORT(CONT'D)

			Matrix Spike		SPIKED BLANK		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8729348	Ethylbenzene	2023/06/16	74	60 - 140	80	60 - 130	<0.010	ug/g	NC	50
8729348	Ethylene Dibromide	2023/06/16	88	60 - 140	85	60 - 130	<0.040	ug/g	NC	50
8729348	F1 (C6-C10) - BTEX	2023/06/16					<10	ug/g	NC	30
8729348	F1 (C6-C10)	2023/06/16	85	60 - 140	96	80 - 120	<10	ug/g	NC	30
8729348	Hexane	2023/06/16	90	60 - 140	100	60 - 130	<0.040	ug/g	NC	50
8729348	Methyl Ethyl Ketone (2-Butanone)	2023/06/16	85	60 - 140	80	60 - 140	<0.40	ug/g	NC	50
8729348	Methyl Isobutyl Ketone	2023/06/16	82	60 - 140	76	60 - 130	<0.40	ug/g	NC	50
8729348	Methyl t-butyl ether (MTBE)	2023/06/16	83	60 - 140	83	60 - 130	<0.040	ug/g	NC	50
8729348	Methylene Chloride(Dichloromethane)	2023/06/16	95	60 - 140	96	60 - 130	<0.049	ug/g	NC	50
8729348	o-Xylene	2023/06/16	80	60 - 140	85	60 - 130	<0.020	ug/g	NC	50
8729348	p+m-Xylene	2023/06/16	77	60 - 140	83	60 - 130	<0.020	ug/g	NC	50
8729348	Styrene	2023/06/16	85	60 - 140	89	60 - 130	<0.040	ug/g	NC	50
8729348	Tetrachloroethylene	2023/06/16	86	60 - 140	94	60 - 130	<0.040	ug/g	NC	50
8729348	Toluene	2023/06/16	86	60 - 140	90	60 - 130	<0.020	ug/g	NC	50
8729348	Total Xylenes	2023/06/16					<0.020	ug/g	NC	50
8729348	trans-1,2-Dichloroethylene	2023/06/16	92	60 - 140	98	60 - 130	<0.040	ug/g	NC	50
8729348	trans-1,3-Dichloropropene	2023/06/16	92	60 - 140	89	60 - 130	<0.040	ug/g	NC	50
8729348	Trichloroethylene	2023/06/16	94	60 - 140	100	60 - 130	<0.010	ug/g	NC	50
8729348	Trichlorofluoromethane (FREON 11)	2023/06/16	92	60 - 140	99	60 - 130	<0.040	ug/g	NC	50
8729348	Vinyl Chloride	2023/06/16	100	60 - 140	109	60 - 130	<0.019	ug/g	NC	50
8730688	Moisture	2023/06/16							0.87	20
8731555	1-Methylnaphthalene	2023/06/17	107	50 - 130	108	50 - 130	<0.0050	ug/g	NC	40
8731555	2-Methylnaphthalene	2023/06/17	99	50 - 130	99	50 - 130	<0.0050	ug/g	NC	40
8731555	Acenaphthene	2023/06/17	100	50 - 130	99	50 - 130	<0.0050	ug/g	NC	40
8731555	Acenaphthylene	2023/06/17	97	50 - 130	98	50 - 130	<0.0050	ug/g	NC	40
8731555	Anthracene	2023/06/17	102	50 - 130	101	50 - 130	<0.0050	ug/g	NC	40
8731555	Benzo(a)anthracene	2023/06/17	103	50 - 130	101	50 - 130	<0.0050	ug/g	NC	40
8731555	Benzo(a)pyrene	2023/06/17	96	50 - 130	98	50 - 130	<0.0050	ug/g	NC	40
8731555	Benzo(b/j)fluoranthene	2023/06/17	94	50 - 130	99	50 - 130	<0.0050	ug/g	NC	40
8731555	Benzo(g,h,i)perylene	2023/06/17	92	50 - 130	98	50 - 130	<0.0050	ug/g	NC	40
8731555	Benzo(k)fluoranthene	2023/06/17	100	50 - 130	102	50 - 130	<0.0050	ug/g	NC	40

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QUALITY ASSURANCE REPORT(CONT'D)

			Matrix Spike		SPIKED BLANK		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8731555	Chrysene	2023/06/17	102	50 - 130	102	50 - 130	<0.0050	ug/g	NC	40
8731555	Dibenzo(a,h)anthracene	2023/06/17	95	50 - 130	98	50 - 130	<0.0050	ug/g	NC	40
8731555	Fluoranthene	2023/06/17	100	50 - 130	102	50 - 130	<0.0050	ug/g	20	40
8731555	Fluorene	2023/06/17	97	50 - 130	96	50 - 130	<0.0050	ug/g	NC	40
8731555	Indeno(1,2,3-cd)pyrene	2023/06/17	94	50 - 130	100	50 - 130	<0.0050	ug/g	NC	40
8731555	Naphthalene	2023/06/17	96	50 - 130	97	50 - 130	<0.0050	ug/g	NC	40
8731555	Phenanthrene	2023/06/17	98	50 - 130	99	50 - 130	<0.0050	ug/g	NC	40
8731555	Pyrene	2023/06/17	101	50 - 130	102	50 - 130	<0.0050	ug/g	5.9	40
8731730	F2 (C10-C16 Hydrocarbons)	2023/06/18	97	60 - 130	98	80 - 120	<10	ug/g	NC	30
8731730	F3 (C16-C34 Hydrocarbons)	2023/06/18	97	60 - 130	99	80 - 120	<50	ug/g	NC	30
8731730	F4 (C34-C50 Hydrocarbons)	2023/06/18	100	60 - 130	101	80 - 120	<50	ug/g	NC	30
8733573	Acid Extractable Antimony (Sb)	2023/06/19	93	75 - 125	103	80 - 120	<0.20	ug/g		
8733573	Acid Extractable Arsenic (As)	2023/06/19	98	75 - 125	105	80 - 120	<1.0	ug/g		
8733573	Acid Extractable Barium (Ba)	2023/06/19	NC	75 - 125	100	80 - 120	<0.50	ug/g	2.6	30
8733573	Acid Extractable Beryllium (Be)	2023/06/19	95	75 - 125	97	80 - 120	<0.20	ug/g	5.4	30
8733573	Acid Extractable Boron (B)	2023/06/19	94	75 - 125	99	80 - 120	<5.0	ug/g	NC	30
8733573	Acid Extractable Cadmium (Cd)	2023/06/19	98	75 - 125	102	80 - 120	<0.10	ug/g	NC	30
8733573	Acid Extractable Chromium (Cr)	2023/06/19	98	75 - 125	105	80 - 120	<1.0	ug/g	8.4	30
8733573	Acid Extractable Cobalt (Co)	2023/06/19	99	75 - 125	105	80 - 120	<0.10	ug/g	12	30
8733573	Acid Extractable Copper (Cu)	2023/06/19	91	75 - 125	103	80 - 120	<0.50	ug/g	5.5	30
8733573	Acid Extractable Lead (Pb)	2023/06/19	94	75 - 125	106	80 - 120	<1.0	ug/g	25	30
8733573	Acid Extractable Mercury (Hg)	2023/06/19	100	75 - 125	104	80 - 120	<0.050	ug/g	NC	30
8733573	Acid Extractable Molybdenum (Mo)	2023/06/19	99	75 - 125	101	80 - 120	<0.50	ug/g	28	30
8733573	Acid Extractable Nickel (Ni)	2023/06/19	96	75 - 125	110	80 - 120	<0.50	ug/g	14	30
8733573	Acid Extractable Selenium (Se)	2023/06/19	101	75 - 125	106	80 - 120	<0.50	ug/g		
8733573	Acid Extractable Silver (Ag)	2023/06/19	100	75 - 125	106	80 - 120	<0.20	ug/g	NC	30
8733573	Acid Extractable Thallium (Tl)	2023/06/19	101	75 - 125	107	80 - 120	<0.050	ug/g	NC	30
8733573	Acid Extractable Uranium (U)	2023/06/19	101	75 - 125	105	80 - 120	<0.050	ug/g	0.15	30
8733573	Acid Extractable Vanadium (V)	2023/06/19	105	75 - 125	102	80 - 120	<5.0	ug/g	1.7	30
8733573	Acid Extractable Zinc (Zn)	2023/06/19	NC	75 - 125	104	80 - 120	<5.0	ug/g	22	30
8735468	Hot Water Ext. Boron (B)	2023/06/20	95	75 - 125	91	75 - 125	<0.050	ug/g	7.9	40

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QUALITY ASSURANCE REPORT(CONT'D)

			Matrix Spike		SPIKED BLANK		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8735807	Conductivity	2023/06/19			104	90 - 110	<0.002	mS/cm	4.0	10
8735838	Chromium (VI)	2023/06/19	54 (1)	70 - 130	91	80 - 120	<0.18	ug/g	NC	35
8735922	WAD Cyanide (Free)	2023/06/19	99	75 - 125	101	80 - 120	<0.01	ug/g	NC	35
8736181	Available (CaCl2) pH	2023/06/19			100	97 - 103			0.48	N/A
8736223	Available (CaCl2) pH	2023/06/19			100	97 - 103			0.41	N/A

N/A = Not Applicable

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

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

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

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

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

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

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

(1) The matrix spike recovery was below the lower control limit. This may be due to the sample matrix. The sample was re-analyzed with the same results

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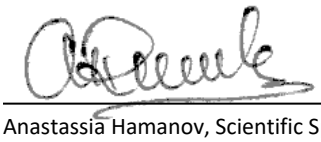
Bureau Veritas Job #: C3H2595
Report Date: 2023/06/21

Terrapex Environmental Ltd
Client Project #: CH244.00
Site Location: 128 QUEEN ST S,MISSISAUGA
Sampler Initials: KP

VALIDATION SIGNATURE PAGE

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



Anastassia Hamanov, Scientific Specialist

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

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CHAIN

14-Jun-23 15:20
Kudrat Bajwa
C3H2595
SPJ ENV-1601

INVOICE TO:		REPORT TO:		PROJECT INFORMATION:	
Company Name:	#4398 Terrapex Environmental Ltd	Company Name:	#6839 Terrapex Environmental Ltd	Quotation #:	~~C20955~~ TPEX SOA
Attention:	Accounts Payable	Attention:	Geoff Lussier	P.O. #:	
Address:	90 Scarsdale Rd Toronto ON M3B 2R7	Address:	65 Nebo Road Hamilton ON L8W 2C9	Project:	~~CH203-01~~ CH244-00
Tel:	(416) 245-0011 Fax: (416) 245-0012	Tel:	(905) 632-5939 Ext: 228 Fax: (905) 632-6793	Project Name:	128 Queen St E Mississauga
Email:	accounts.payable@terrapex.com	Email:	g.lussier@terrapex.com; EDD@terrapex.com	Site #:	
				Sampled By:	KP

COC #: C#909931-07-01 | Project Manager: Kudrat Bajwa

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

Regulation 153 (2011)
- ☐ Table 1 ☒ Res/Park ☐ Medium/Fine
- ☐ Table 2 ☐ Ind/Comm ☐ Coarse
- ☒ Table 3 ☐ Agri/Other ☒ For RSC
- ☐ Table ___

Other Regulations
- ☐ CCME ☐ Sanitary Sewer Bylaw
- ☐ Reg 558 ☐ Storm Sewer Bylaw
- ☐ MISA Municipality ___
- ☐ PWQO ☐ Reg 406 Table ___
- ☐ Other ___

Special Instructions

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

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

ANALYSIS REQUESTED (PLEASE BE SPECIFIC)

	Sample Barcode Label	Sample (Location) Identification	Date Sampled	Time Sampled	Matrix	O.Reg 153 VOCs by HS & F1-F4 (Soil)	O.Reg 153 PAHs (Soil)	O.Reg 153 Metals & Inorganics Pkg (Soil)	# of Bottles	Comments
1		MW206-1	June 9/23	11:00am	Soil		X	X	2	
2		MW906-1	"	11:10am			X	X	2	
3		MW206-6	"	2:10pm		X			3	
4		MW906-6	"	2:22pm		X			3	
5										
6										
7										
8										
9										
10										

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

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

Job Specific Rush TAT (if applies to entire submission)
Date Required: ___ Time Required: ___ ☐
Rush Confirmation Number: ___ *(call lab for #)*

* RELINQUISHED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	RECEIVED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	# jars used and not submitted
GEOFF LUSSIER	23/06/13	1:30pm	RUPINDER	2023/06/14	15:20	

Laboratory Use Only

Time Sensitive	Temperature (°C) on Recei	Custody Seal	Yes	No
	3/3/4	Present	✓	
		Intact	✓	

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

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

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

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

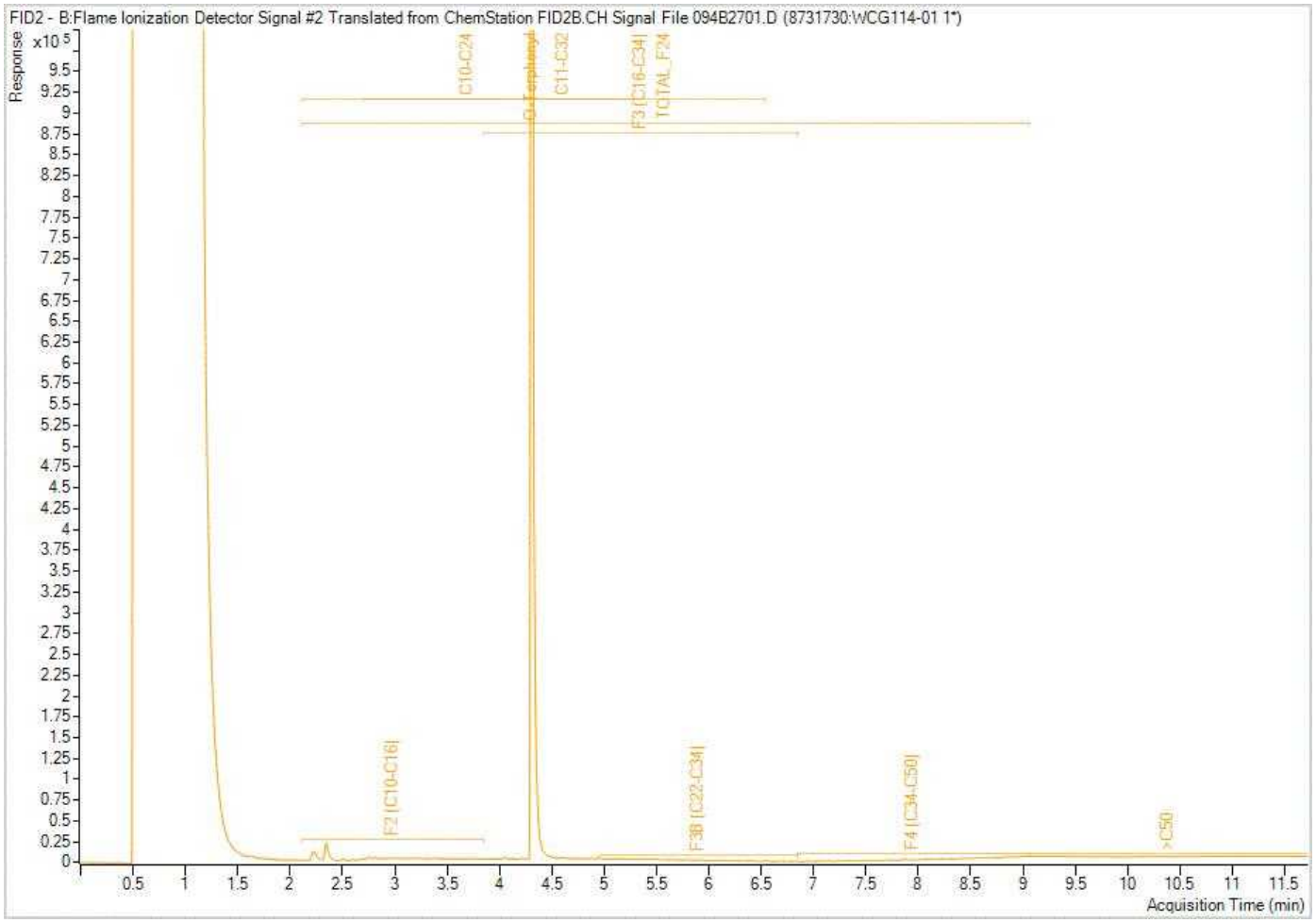
White: Bureau Veritas Yellow: Client

Bureau Veritas Canada (2019) Inc.

Bureau Veritas Job #: C3H2595
Report Date: 2023/06/21
Bureau Veritas Sample: WCG114

Terrapex Environmental Ltd
Client Project #: CH244.00
Project name: 128 QUEEN ST S,MISSISAUGA
Client ID: MW206-6

Petroleum Hydrocarbons F2-F4 in Soil Chromatogram

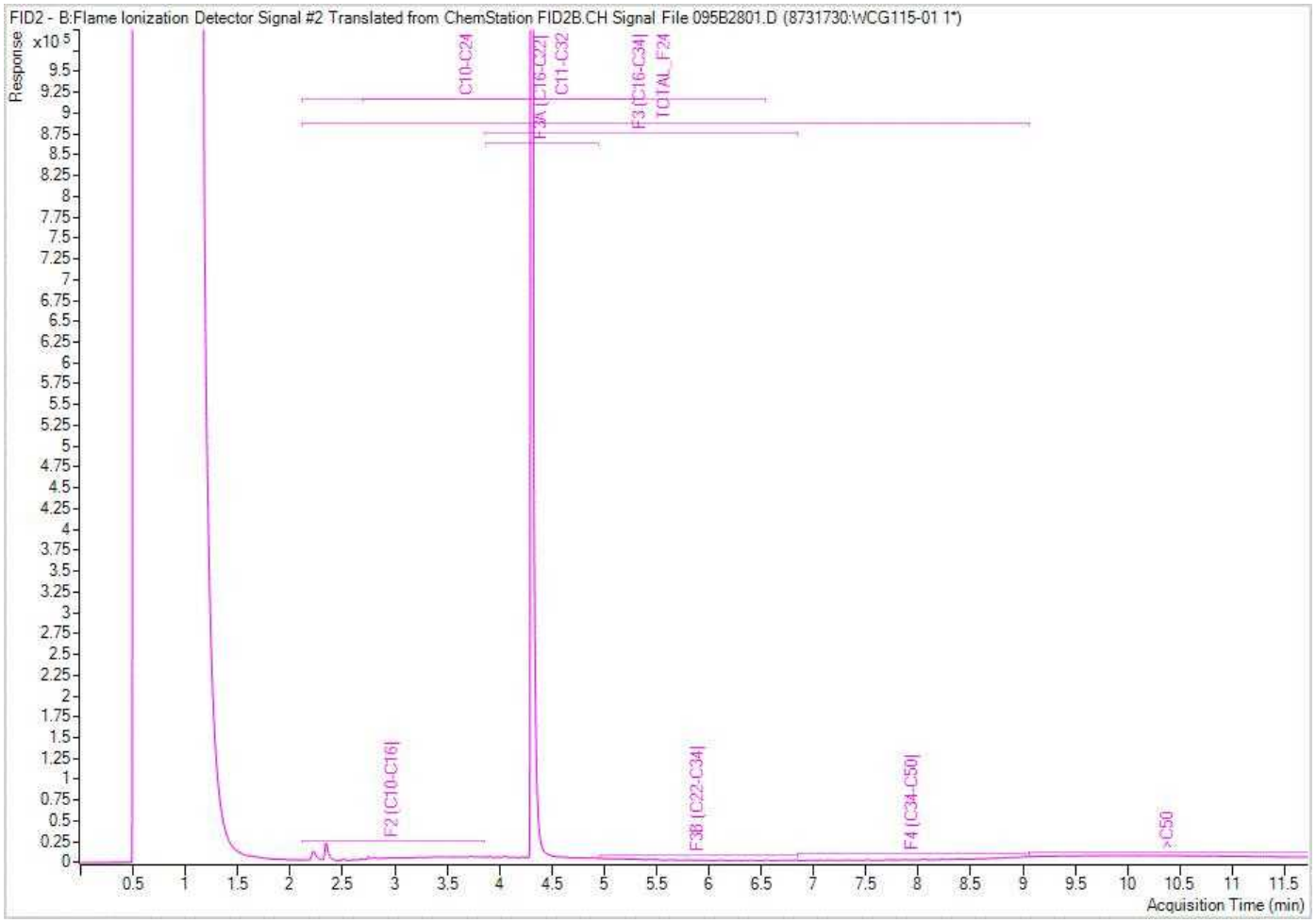


Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Bureau Veritas Job #: C3H2595
Report Date: 2023/06/21
Bureau Veritas Sample: WCG115

Terrapex Environmental Ltd
Client Project #: CH244.00
Project name: 128 QUEEN ST S,MISSISAUGA
Client ID: MW906-6

Petroleum Hydrocarbons F2-F4 in Soil Chromatogram



Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Your Project #: CH244.00
Site Location: 128 QUEEN ST S MISSISSAUGA
Your C.O.C. #: 939640-02-01, 922657-07-01

Attention: Geoff Lussier

Terrapex Environmental Ltd
90 Scarsdale Rd
Toronto, ON
CANADA M3B 2R7

Report Date: 2023/06/27
Report #: R7691585
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C3I3867
Received: 2023/06/22, 15:54

Sample Matrix: Soil
Samples Received: 13

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Hot Water Extractable Boron	13	2023/06/24	2023/06/27	CAM SOP-00408	R153 Ana. Prot. 2011

Remarks:

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

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

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

Solid sample results, except biota, are based on dry weight unless otherwise indicated. Organic analyses are not recovery corrected except for isotope dilution methods.
Results relate to samples tested. When sampling is not conducted by Bureau Veritas, results relate to the supplied samples tested.

Reference Method suffix “m” indicates test methods incorporate validated modifications from specific reference methods to improve performance.
* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.

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

Your Project #: CH244.00
Site Location: 128 QUEEN ST S MISSISSAUGA
Your C.O.C. #: 939640-02-01, 922657-07-01

Attention: Geoff Lussier

Terrapex Environmental Ltd
90 Scarsdale Rd
Toronto, ON
CANADA M3B 2R7

Report Date: 2023/06/27
Report #: R7691585
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C3I3867
Received: 2023/06/22, 15:54

Encryption Key

Please direct all questions regarding this Certificate of Analysis to:
Kudrat Bajwa, B.Sc., Project Manager
Email: Kudrat.Bajwa@bureauveritas.com
Phone# (905)817-5755

==========

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

Bureau Veritas Job #: C3I3867
Report Date: 2023/06/27

Terrapex Environmental Ltd
Client Project #: CH244.00
Site Location: 128 QUEEN ST S MISSISSAUGA
Sampler Initials: GL

ELEMENTS BY ATOMIC SPECTROSCOPY (SOIL)

Bureau Veritas ID		WEO227	WEO228	WEO229	WEO230	WEO231	WEO232		
Sampling Date		2023/06/20 09:30	2023/06/20 09:45	2023/06/20 10:00	2023/06/20 10:15	2023/06/20 10:25	2023/06/20 10:40		
COC Number		939640-02-01	939640-02-01	939640-02-01	939640-02-01	939640-02-01	939640-02-01		
	UNITS	BH110A-2	BH110B-2	BH110C-2	BH110D-2	BH110E-2	BH110F-2	RDL	QC Batch
Metals									
Hot Water Ext. Boron (B)	ug/g	2.5	1.3	1.4	3.1	2.0	0.40	0.050	8751024

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Bureau Veritas ID		WEO233	WEO234	WEO235	WEO236	WEO243	WEO244		
Sampling Date		2023/06/20 10:55	2023/06/20 10:55	2023/06/20 11:15	2023/06/20 11:30	2023/06/20 12:45	2023/06/20 13:00		
COC Number		939640-02-01	939640-02-01	939640-02-01	939640-02-01	922657-07-01	922657-07-01		
	UNITS	BH114A-2	BH114A-92	BH114B-2	BH114C-2	BH114D-2	BH114E-2	RDL	QC Batch
Metals									
Hot Water Ext. Boron (B)	ug/g	1.1	0.74	1.2	3.9	3.7	0.59	0.050	8751024

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Bureau Veritas ID		WEO245		
Sampling Date		2023/06/20 13:15		
COC Number		922657-07-01		
	UNITS	BH114F-2	RDL	QC Batch
Metals				
Hot Water Ext. Boron (B)	ug/g	4.4	0.050	8751024

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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TEST SUMMARY

Bureau Veritas ID: WEO227 **Collected:** 2023/06/20
Sample ID: BH110A-2 **Shipped:**
Matrix: Soil **Received:** 2023/06/22

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hot Water Extractable Boron	ICP	8751024	2023/06/24	2023/06/27	Jaswinder Kaur

Bureau Veritas ID: WEO228 **Collected:** 2023/06/20
Sample ID: BH110B-2 **Shipped:**
Matrix: Soil **Received:** 2023/06/22

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hot Water Extractable Boron	ICP	8751024	2023/06/24	2023/06/27	Jaswinder Kaur

Bureau Veritas ID: WEO229 **Collected:** 2023/06/20
Sample ID: BH110C-2 **Shipped:**
Matrix: Soil **Received:** 2023/06/22

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hot Water Extractable Boron	ICP	8751024	2023/06/24	2023/06/27	Jaswinder Kaur

Bureau Veritas ID: WEO230 **Collected:** 2023/06/20
Sample ID: BH110D-2 **Shipped:**
Matrix: Soil **Received:** 2023/06/22

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hot Water Extractable Boron	ICP	8751024	2023/06/24	2023/06/27	Jaswinder Kaur

Bureau Veritas ID: WEO231 **Collected:** 2023/06/20
Sample ID: BH110E-2 **Shipped:**
Matrix: Soil **Received:** 2023/06/22

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hot Water Extractable Boron	ICP	8751024	2023/06/24	2023/06/27	Jaswinder Kaur

Bureau Veritas ID: WEO232 **Collected:** 2023/06/20
Sample ID: BH110F-2 **Shipped:**
Matrix: Soil **Received:** 2023/06/22

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hot Water Extractable Boron	ICP	8751024	2023/06/24	2023/06/27	Jaswinder Kaur

Bureau Veritas ID: WEO233 **Collected:** 2023/06/20
Sample ID: BH114A-2 **Shipped:**
Matrix: Soil **Received:** 2023/06/22

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hot Water Extractable Boron	ICP	8751024	2023/06/24	2023/06/27	Jaswinder Kaur

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

Bureau Veritas Job #: C3I3867
Report Date: 2023/06/27

Terrapex Environmental Ltd
Client Project #: CH244.00
Site Location: 128 QUEEN ST S MISSISSAUGA
Sampler Initials: GL

TEST SUMMARY

Bureau Veritas ID: WEO234 **Collected:** 2023/06/20
Sample ID: BH114A-92 **Shipped:**
Matrix: Soil **Received:** 2023/06/22

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hot Water Extractable Boron	ICP	8751024	2023/06/24	2023/06/27	Jaswinder Kaur

Bureau Veritas ID: WEO235 **Collected:** 2023/06/20
Sample ID: BH114B-2 **Shipped:**
Matrix: Soil **Received:** 2023/06/22

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hot Water Extractable Boron	ICP	8751024	2023/06/24	2023/06/27	Jaswinder Kaur

Bureau Veritas ID: WEO236 **Collected:** 2023/06/20
Sample ID: BH114C-2 **Shipped:**
Matrix: Soil **Received:** 2023/06/22

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hot Water Extractable Boron	ICP	8751024	2023/06/24	2023/06/27	Jaswinder Kaur

Bureau Veritas ID: WEO243 **Collected:** 2023/06/20
Sample ID: BH114D-2 **Shipped:**
Matrix: Soil **Received:** 2023/06/22

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hot Water Extractable Boron	ICP	8751024	2023/06/24	2023/06/27	Jaswinder Kaur

Bureau Veritas ID: WEO244 **Collected:** 2023/06/20
Sample ID: BH114E-2 **Shipped:**
Matrix: Soil **Received:** 2023/06/22

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hot Water Extractable Boron	ICP	8751024	2023/06/24	2023/06/27	Jaswinder Kaur

Bureau Veritas ID: WEO245 **Collected:** 2023/06/20
Sample ID: BH114F-2 **Shipped:**
Matrix: Soil **Received:** 2023/06/22

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hot Water Extractable Boron	ICP	8751024	2023/06/24	2023/06/27	Jaswinder Kaur

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

GENERAL COMMENTS

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

Package 1	0.3°C

Results relate only to the items tested.

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QUALITY ASSURANCE REPORT

			Matrix Spike		SPIKED BLANK		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8751024	Hot Water Ext. Boron (B)	2023/06/26	108	75 - 125	105	75 - 125	<0.050	ug/g	NC	40

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

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

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

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

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

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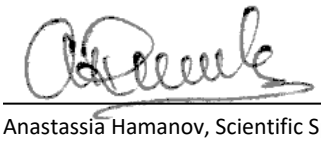
Bureau Veritas Job #: C3I3867
Report Date: 2023/06/27

Terrapex Environmental Ltd
Client Project #: CH244.00
Site Location: 128 QUEEN ST S MISSISSAUGA
Sampler Initials: GL

VALIDATION SIGNATURE PAGE

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



Anastassia Hamanov, Scientific Specialist

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

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

Page 1 of 2

CHAIN OF CUSTODY RECORD

INVOICE TO:		REPORT TO:		PROJECT INFORMATION:		Laboratory Use Only:	
Company Name:	#4398 Terrapex Environmental Ltd	Company Name:	TPBx	Quotation #:	C25103 TPEx SOA	Bureau Veritas Job #:	Bottle Order #:
Attention:	Accounts Payable	Attention:	Geoff Lussier	P.O. #:	—		939640
Address:	90 Scarsdale Rd Toronto ON M3B 2R7	Address:	65 Nebo Rd Hamilton	Project:	CH244.00	COC #:	Project Manager:
Tel:	(416) 245-0011 Fax: (416) 245-0012	Tel:	(647) 250-8231 Fax:	Project Name:	128 Queen St S, Mississauga	C#939640-02-01	Kudrat Bajwa
Email:	accounts.payable@terrapex.com	Email:	g.lussier@terrapex.com	Site #:	—		
				Sampled By:	GL		

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

Regulation 153 (2011): ☐ Table 1 ☒ Res/Park ☒ Medium/Fine ☐ Table 2 ☐ Ind/Comm ☐ Coarse ☒ Table 3 ☐ Agri/Other ☒ For RSC ☐ Table ___

Other Regulations: ☐ CCME ☐ Sanitary Sewer Bylaw ☐ Reg 558. ☐ Storm Sewer Bylaw ☐ MISA Municipality ☐ PWQO ☐ Reg 406 Table ☐ Other

Special Instructions

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

ANALYSIS REQUESTED (PLEASE BE SPECIFIC)

	Sample Barcode Label	Sample (Location) Identification	Date Sampled	Time Sampled	Matrix	Field Filtered (please circle): Metals / Hg / Cr VI	O.Reg 153 VOCs by HS & F1-F4	O.Reg 153 Metals & Inorganics Pkg (HWS Boron only)	O.Reg 153 PAHs	O.Reg 153 Semivolatiles Package	# of Bottles	Comments
1	BH110A-2		Jun20/23	9:30am	Soil			X			1	Analyse HWS Boron only
2	BH110B-2			9:45am				X			1	
3	BH110C-2			10:00am				X			1	
4	BH110D-2			10:15am				X			1	
5	BH110E-2			10:25am				X			1	
6	BH110F-2			10:40am				X			1	
7	BH114A-2			10:55am				X			1	
8	BH114A-Q2			10:55am				X			1	
9	BH114B-2			11:15am				X			1	
10	BH114C-2			11:30am				X			1	

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

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

Job Specific Rush TAT (if applies to entire submission)
Date Required: ___ Time Required: ___ ☐
Rush Confirmation Number: ___ *(call lab for #)*

22-Jun-23 15:54
Kudrat Bajwa
C3I3867
PDK ENV 420

* RELINQUISHED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	RECEIVED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	# jars used and not submitted	Laboratory Use Only				
GEOFF LUSSIER	23/06/21	12:30pm	SHAWNA PARR	20230621	15:53		Time Sensitive	Temperature (°C) on Recei 01110	Custody Seal Present ☑ Intact	Yes ☑	No ☐

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

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

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

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

White: Bureau Veritas Yellow: Client

Bureau Veritas Canada (2019) Inc.

#655357

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

CHAIN OF CUSTODY RECORD

Page 2 of 2

INVOICE TO:		REPORT TO:		PROJECT INFORMATION:	
Company Name:	#4398 Terrapex Environmental Ltd	Company Name:	#6839 Terrapex Environmental Ltd	Quotation #:	C25103 - TPEXO SOA
Attention:	Accounts Payable	Attention:	Geoff Lussier	P.O. #:	
Address:	90 Scarsdale Rd	Address:	65 Nebo Road	Project:	~~CH260.00~~ CH244.00
	Toronto ON M3B 2R7		Hamilton ON L8W 2C9	Project Name:	12 QUEEN STS
Tel:	(416) 245-0011 Fax: (416) 245-0012	Tel:	(905) 632-5939 Ext: 228 Fax: (905) 632-6793	Site #:	MISSISSAUGA
Email:	accounts.payable@terrapex.com	Email:	g.lussier@terrapex.com; EDD@terrapex.com	Sampled By:	KP

Laboratory Use Only:	
Bureau Veritas Job #:	Bottle Order #: 922657
COC #: C#922657-07-01	Project Manager: Kudrat Bajwa

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

Regulation 153 (2011): ☐ Table 1 ☒ Res/Park ☒ Medium/Fine ☐ Table 2 ☐ Ind/Comm ☐ Coarse ☒ Table 3 ☐ Agri/Other ☒ For RSC ☐ Table ___

Other Regulations: ☐ CCME ☐ Sanitary Sewer Bylaw ☐ Reg 558 ☐ Storm Sewer Bylaw ☐ MISA Municipality ___ ☐ PWQO ☐ Reg 406 Table ___ ☐ Other ___

Special Instructions:

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

ANALYSIS REQUESTED (PLEASE BE SPECIFIC): Field Filtered (please circle): Metals / Hg / Cr VI; O.Reg 153 VOCs by HS & F1-F4; O.Reg 153 PAHs; O.Reg 153 Metals & Inorganics Pkg (PLUS BORON ONLY); pH CaCl2 EXTRACT; Sieve, 75um

#	Sample Barcode Label	Sample (Location) Identification	Date Sampled	Time Sampled	Matrix	Field Filtered	O.Reg 153 VOCs by HS & F1-F4	O.Reg 153 PAHs	O.Reg 153 Metals & Inorganics Pkg (PLUS BORON ONLY)	pH CaCl2 EXTRACT	Sieve, 75um	# of Bottles	Comments
1		BH114D-2	June 20/23	12:45pm	Soil				X			1	
2		BH 114E-2	↓	1:00pm	↓				X			1	
3		BH 114F-2	↓	1:15pm	↓				X			1	
4													
5													
6													
7													
8													
9													
10													

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

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

Job Specific Rush TAT (if applies to entire submission)
Date Required: ___ Time Required: ___ ☐
Rush Confirmation Number: ___ *(call lab for #)*

* RELINQUISHED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	RECEIVED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	# jars used and not submitted
(GEOFF LUSSIER)	23/06/21	12:30pm	See Page 1			

Laboratory Use Only				
Time Sensitive	Temperature (°C) on Recei	Custody Seal	Yes	No
		Present		
		Intact		

White: Bureau Veritas Yellow: Client

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

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

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

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

Bureau Veritas Canada (2019) Inc.

Your Project #: CH244.00
Site Location: 128 QUEEN ST S, MISSISSAUGA
Your C.O.C. #: 937690-30-01

Attention: Samantha Beatty

Terrapex Environmental Ltd
90 Scarsdale Rd
Toronto, ON
CANADA M3B 2R7

Report Date: 2023/07/26
Report #: R7735214
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C3L1448
Received: 2023/07/17, 15:07

Sample Matrix: Soil
Samples Received: 4

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Hot Water Extractable Boron	4	2023/07/20	2023/07/21	CAM SOP-00408	R153 Ana. Prot. 2011

Remarks:

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

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

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

Solid sample results, except biota, are based on dry weight unless otherwise indicated. Organic analyses are not recovery corrected except for isotope dilution methods.
Results relate to samples tested. When sampling is not conducted by Bureau Veritas, results relate to the supplied samples tested.

Reference Method suffix “m” indicates test methods incorporate validated modifications from specific reference methods to improve performance.
* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.

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

Your Project #: CH244.00
Site Location: 128 QUEEN ST S, MISSISSAUGA
Your C.O.C. #: 937690-30-01

Attention: Samantha Beatty

Terrapex Environmental Ltd
90 Scarsdale Rd
Toronto, ON
CANADA M3B 2R7

Report Date: 2023/07/26
Report #: R7735214
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C3L1448
Received: 2023/07/17, 15:07

Encryption Key

Please direct all questions regarding this Certificate of Analysis to:
Kudrat Bajwa, B.Sc., Project Manager
Email: Kudrat.Bajwa@bureauveritas.com
Phone# (905)817-5755

==========

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

Bureau Veritas Job #: C3L1448
Report Date: 2023/07/26

Terrapex Environmental Ltd
Client Project #: CH244.00
Site Location: 128 QUEEN ST S, MISSISSAUGA
Sampler Initials: KB

ELEMENTS BY ATOMIC SPECTROSCOPY (SOIL)

Bureau Veritas ID		WKG598	WKG599	WKG600	WKG601	WKG601		
Sampling Date		2023/02/06 09:30	2023/02/06 09:35	2023/01/31 09:40	2023/01/31 09:45	2023/01/31 09:45		
COC Number		937690-30-01	937690-30-01	937690-30-01	937690-30-01	937690-30-01		
	UNITS	BH110-3	BH110-4	BH114-3	BH114-4	BH114-4 Lab-Dup	RDL	QC Batch
Metals								
Hot Water Ext. Boron (B)	ug/g	0.10	0.11	0.57	0.16	0.16	0.050	8801737

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate

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Bureau Veritas Job #: C3L1448
Report Date: 2023/07/26

Terrapex Environmental Ltd
Client Project #: CH244.00
Site Location: 128 QUEEN ST S, MISSISSAUGA
Sampler Initials: KB

TEST SUMMARY

Bureau Veritas ID: WKG598
Sample ID: BH110-3
Matrix: Soil
Collected: 2023/02/06
Shipped:
Received: 2023/07/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hot Water Extractable Boron	ICP	8801737	2023/07/20	2023/07/21	Medhat Nasr

Bureau Veritas ID: WKG599
Sample ID: BH110-4
Matrix: Soil
Collected: 2023/02/06
Shipped:
Received: 2023/07/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hot Water Extractable Boron	ICP	8801737	2023/07/20	2023/07/21	Medhat Nasr

Bureau Veritas ID: WKG600
Sample ID: BH114-3
Matrix: Soil
Collected: 2023/01/31
Shipped:
Received: 2023/07/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hot Water Extractable Boron	ICP	8801737	2023/07/20	2023/07/21	Medhat Nasr

Bureau Veritas ID: WKG601
Sample ID: BH114-4
Matrix: Soil
Collected: 2023/01/31
Shipped:
Received: 2023/07/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hot Water Extractable Boron	ICP	8801737	2023/07/20	2023/07/21	Medhat Nasr

Bureau Veritas ID: WKG601 Dup
Sample ID: BH114-4
Matrix: Soil
Collected: 2023/01/31
Shipped:
Received: 2023/07/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hot Water Extractable Boron	ICP	8801737	2023/07/20	2023/07/21	Medhat Nasr

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

GENERAL COMMENTS

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

Package 1	25.0°C

Results relate only to the items tested.

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

Bureau Veritas Job #: C3L1448
Report Date: 2023/07/26

QUALITY ASSURANCE REPORT

Terrapex Environmental Ltd
Client Project #: CH244.00
Site Location: 128 QUEEN ST S, MISSISSAUGA
Sampler Initials: KB

			Matrix Spike		SPIKED BLANK		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8801737	Hot Water Ext. Boron (B)	2023/07/21	111	75 - 125	105	75 - 125	<0.050	ug/g	1.9	40

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

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

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

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

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

Bureau Veritas Job #: C3L1448
Report Date: 2023/07/26

Terrapex Environmental Ltd
Client Project #: CH244.00
Site Location: 128 QUEEN ST S, MISSISSAUGA
Sampler Initials: KB

VALIDATION SIGNATURE PAGE

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

Cristina Carriere

Cristina Carriere, Senior Scientific Specialist

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

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

CHAIN OF CUSTODY RECORD

INVOICE TO:		REPORT TO:		PROJECT INFORMATION:		Laboratory Use Only:	
Company Name:	#4398 Terrapex Environmental Ltd	Company Name:	TPEX	Quotation #:	C25103	Bureau Veritas Job #:	Bottle Order #:
Attention:	Accounts Payable	Attention:	Samantha Beatty ; Geoff Lussier	P.O. #:	-		937690
Address:	90 Scarsdale Rd	Address:	65 Nebo Rd, Hamilton	Project:	CH244.00	COC #:	Project Manager:
	Toronto ON M3B 2R7			Project Name:	128 Queen St S, Mississauga	C#937690-30-01	Kudrat Bajwa
Tel:	(416) 245-0011 Fax: (416) 245-0012	Tel:	(416) 245-0011 Ext: 260 Fax:	Site #:	-		
Email:	accounts.payable@terrapex.com	Email:	s.beatty@terrapex.com; EDD@terrapex.com; g.lussier@terrapex.com	Sampled By:	KB		

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

Regulation 153 (2011): ☐ Table 1 ☒ Res/Park ☒ Medium/Fine ☐ Table 2 ☐ Ind/Comm ☐ Coarse ☒ Table 3 ☐ Agri/Other ☒ For RSC ☐ Table ___

Other Regulations: ☐ CCME ☐ Sanitary Sewer Bylaw ☐ Reg 558 ☐ Storm Sewer Bylaw ☐ MISA Municipality ______ ☐ PWQO ☐ Reg 406 Table ___ ☐ Other ______

Special Instructions:

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

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

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

Job Specific Rush TAT (if applies to entire submission)
Date Required: ______ Time Required: ______ ☐
Rush Confirmation Number: ______ *(call lab for #)*

ANALYSIS REQUESTED (PLEASE BE SPECIFIC)

	Sample Barcode Label	Sample (Location) Identification	Date Sampled	Time Sampled	Matrix	Field Filtered (please circle): Metals / Hg / Cr VI	O. Reg 153 Metals + inorganics (HWS Boron only)	# of Bottles	Comments
1	BH110-3		Feb 6/23	9:30am	Soil		X	1	*Analyse HWS Boron only*
2	BH110-4		↓	9:35am	↓		X	1	*Lab should hold samples*
3	BH114-3		Jan 31/23	9:40am	↓		X	1	
4	BH114-4		↓	9:45am	↓		X	1	
5									
6									
7									SWP
8									C3L1448
9									IONT-07-679
10									

* RELINQUISHED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	RECEIVED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	# jars used and not submitted	Laboratory Use Only
Nicolas Stewart / Nicolas Stewart	23/07/14	12:30	RAJMAKANZ	2023/07/17	1507		Time Sensitive; Temperature (°C) on Recei: 25 / 25 / 25; Custody Seal Present: Yes ✓; Intact: ✓
Fatima / Fatima Majeed	23/07/14	12:30					

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

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

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

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

White: Bureau Veritas Yellow: Client

Melted ice

Bureau Veritas Canada (2019) Inc.

Your Project #: CH244.00
Site Location: 128 QUEEN ST S MISS
Your C.O.C. #: 922657-10-01

Attention: Geoff Lussier

Terrapex Environmental Ltd
65 Nebo Road
Hamilton, ON
CANADA L8W 2C9

Report Date: 2023/07/21
Report #: R7729003
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C3L1872
Received: 2023/07/17, 16:01

Sample Matrix: Soil
Samples Received: 1

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Hot Water Extractable Boron	1	2023/07/20	2023/07/20	CAM SOP-00408	R153 Ana. Prot. 2011

Remarks:

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

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

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

Solid sample results, except biota, are based on dry weight unless otherwise indicated. Organic analyses are not recovery corrected except for isotope dilution methods.
Results relate to samples tested. When sampling is not conducted by Bureau Veritas, results relate to the supplied samples tested.

Reference Method suffix “m” indicates test methods incorporate validated modifications from specific reference methods to improve performance.
* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.

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Your Project #: CH244.00
Site Location: 128 QUEEN ST S MISS
Your C.O.C. #: 922657-10-01

Attention: Geoff Lussier

Terrapex Environmental Ltd
65 Nebo Road
Hamilton, ON
CANADA L8W 2C9

Report Date: 2023/07/21
Report #: R7729003
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C3L1872
Received: 2023/07/17, 16:01

Encryption Key

Please direct all questions regarding this Certificate of Analysis to:
Kudrat Bajwa, B.Sc., Project Manager
Email: Kudrat.Bajwa@bureauveritas.com
Phone# (905)817-5755

==========

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

Bureau Veritas Job #: C3L1872
Report Date: 2023/07/21

Terrapex Environmental Ltd
Client Project #: CH244.00
Site Location: 128 QUEEN ST S MISS
Sampler Initials: HB

ELEMENTS BY ATOMIC SPECTROSCOPY (SOIL)

Bureau Veritas ID		WKJ481		
Sampling Date		2023/06/21 13:53		
COC Number		922657-10-01		
	UNITS	MW205-3	RDL	QC Batch
Metals				
Hot Water Ext. Boron (B)	ug/g	0.78	0.050	8800669

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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

Bureau Veritas Job #: C3L1872
Report Date: 2023/07/21

Terrapex Environmental Ltd
Client Project #: CH244.00
Site Location: 128 QUEEN ST S MISS
Sampler Initials: HB

TEST SUMMARY

Bureau Veritas ID: WKJ481
Sample ID: MW205-3
Matrix: Soil

Collected: 2023/06/21
Shipped:
Received: 2023/07/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hot Water Extractable Boron	ICP	8800669	2023/07/20	2023/07/20	Gagandeep Rai

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

GENERAL COMMENTS

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

Package 1	7.7°C

Results relate only to the items tested.

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

QUALITY ASSURANCE REPORT

			Matrix Spike		SPIKED BLANK		Method Blank		RPD	
QC Batch	**Parameter**	**Date**	**% Recovery**	**QC Limits**	**% Recovery**	**QC Limits**	**Value**	**UNITS**	**Value (%)**	**QC Limits**
8800669	Hot Water Ext. Boron (B)	2023/07/20	104	75 - 125	100	75 - 125	<0.050	ug/g	18	40

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

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

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

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

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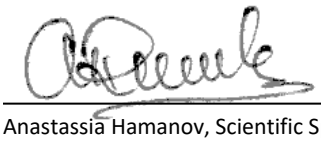
Bureau Veritas Job #: C3L1872
Report Date: 2023/07/21

Terrapex Environmental Ltd
Client Project #: CH244.00
Site Location: 128 QUEEN ST S MISS
Sampler Initials: HB

VALIDATION SIGNATURE PAGE

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



Anastassia Hamanov, Scientific Specialist

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

Page of

CHAIN OF CUSTODY RECORD

INVOICE TO:		REPORT TO:		PROJECT INFORMATION:		Laboratory Use Only:	
Company Name:	#4398 Terrapex Environmental Ltd	Company Name:	#6839 Terrapex Environmental Ltd	Quotation #:	~~Q85703~~ TPEX MSA	Bureau Veritas Job #:	Bottle Order #:
Attention:	Accounts Payable	Attention:	Geoff Lussier	P.O. #:			922657
Address:	90 Scarsdale Rd	Address:	65 Nebo Road	Project:	~~CH256.00~~ CH244.00	COC #:	Project Manager:
	Toronto ON M3B 2R7		Hamilton ON L8W 2C9	Project Name:	1280 Queen St S Mississ		
Tel:	(416) 245-0011 Fax: (416) 245-0012	Tel:	(905) 632-5939 Ext: 228 Fax: (905) 632-6793	Site #:		C#922657-10-01	Kudrat Bajwa
Email:	accounts.payable@terrapex.com	Email:	g.lussier@terrapex.com; EDD@terrapex.com	Sampled By:	KB		

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

Regulation 153 (2011)	Other Regulations	Special Instructions
☐ Table 1 ☒ Res/Park ☒ Medium/Fine	☐ CCME ☐ Sanitary Sewer Bylaw	
☐ Table 2 ☐ Ind/Comm ☐ Coarse	☐ Reg 558 ☐ Storm Sewer Bylaw	
☒ Table 3 ☐ Agri/Other ☒ For RSC	☐ MISA Municipality _____	
☐ Table ___	☐ PWQO ☐ Reg 406 Table _____	
	☐ Other _____	

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

Turnaround Time (TAT) Required:

Please provide advance notice for rush projects

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

Job Specific Rush TAT (if applies to entire submission)
Date Required: _____ Time Required: _____ ☐
Rush Confirmation Number: _____ *(call lab for #)*

	Sample Barcode Label	Sample (Location) Identification	Date Sampled	Time Sampled	Matrix	Field Filtered (please circle): Metals / Hg / Cr VI	O.Reg 153 VOCs by HS & F1-F4	O.Reg 153 PAHs	O.Reg 153 Metals & Inorganics Pkg	pH CaCl2 EXTRACT	Sieve, 75um	HWS Boron					# of Bottles	Comments
1		MW206-3	June 2/23	1:53pm	soil							X					1	
2																		
3																		
4																		
5																		
6																		
7																		
8																		
9																		
10																		

17-Jul-23 16:01
Kudrat Bajwa
C3L1872
AK0 ENV-1180

* RELINQUISHED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	RECEIVED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	# jars used and not submitted
Geoff Lussier	23/07/17	11:30am	[illegible]	2023/07/17	16:01	

Laboratory Use Only

Time Sensitive	Temperature (°C) on Recei	Custody Seal	Yes	No
	8/8/7	Present	=	
		Intact		

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

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

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

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

White: Bureau Veritas Yellow: Client

#692337

Bureau Veritas Canada (2019) Inc.

Your P.O. #: TPEX SOA
Your Project #: CH244.00
Site Location: QUEEN STREET S, MISSISSAUGA
Your C.O.C. #: 948478-01-01

Attention: Geoff Lussier

Terrapex Environmental Ltd
65 Nebo Road
Hamilton, ON
CANADA L8W 2C9

Report Date: 2023/08/30
Report #: R7788636
Version: 2 - Revision

CERTIFICATE OF ANALYSIS – REVISED REPORT

BUREAU VERITAS JOB #: C3O6894
Received: 2023/08/15, 16:20

Sample Matrix: Soil
Samples Received: 15

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Hot Water Extractable Boron	3	2023/08/17	2023/08/18	CAM SOP-00408	R153 Ana. Prot. 2011
Hot Water Extractable Boron	12	2023/08/18	2023/08/18	CAM SOP-00408	R153 Ana. Prot. 2011
Acid Extractable Metals by ICPMS	2	2023/08/26	2023/08/29	CAM SOP-00447	EPA 6020B m
Acid Extractable Metals by ICPMS	5	2023/08/28	2023/08/29	CAM SOP-00447	EPA 6020B m

Remarks:

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

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

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

Solid sample results, except biota, are based on dry weight unless otherwise indicated. Organic analyses are not recovery corrected except for isotope dilution methods.
Results relate to samples tested. When sampling is not conducted by Bureau Veritas, results relate to the supplied samples tested.

Reference Method suffix “m” indicates test methods incorporate validated modifications from specific reference methods to improve performance.
* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.

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

Your P.O. #: TPEX SOA
Your Project #: CH244.00
Site Location: QUEEN STREET S, MISSISSAUGA
Your C.O.C. #: 948478-01-01

Attention: Geoff Lussier

Terrapex Environmental Ltd
65 Nebo Road
Hamilton, ON
CANADA L8W 2C9

Report Date: 2023/08/30
Report #: R7788636
Version: 2 - Revision

CERTIFICATE OF ANALYSIS – REVISED REPORT

BUREAU VERITAS JOB #: C3O6894
Received: 2023/08/15, 16:20

Encryption Key

Please direct all questions regarding this Certificate of Analysis to:
Kudrat Bajwa, B.Sc., Project Manager
Email: Kudrat.Bajwa@bureauveritas.com
Phone# (905)817-5755

==========

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

ELEMENTS BY ATOMIC SPECTROSCOPY (SOIL)

Bureau Veritas ID		WRT397			WRT398			WRT399		
Sampling Date		2023/08/11 09:20			2023/08/11 09:25			2023/08/11 09:50		
COC Number		948478-01-01			948478-01-01			948478-01-01		
	UNITS	BH301-2	RDL	QC Batch	BH301-3	RDL	QC Batch	BH302-2	RDL	QC Batch
Metals										
Hot Water Ext. Boron (B)	ug/g	3.7	0.050	8861180	0.23	0.050	8861180	0.57	0.050	8861180
Acid Extractable Boron (B)	ug/g				9.7	5.0	8880348			

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Bureau Veritas ID		WRT400			WRT401		WRT402		
Sampling Date		2023/08/11 09:55			2023/08/11 09:55		2023/08/11 10:40		
COC Number		948478-01-01			948478-01-01		948478-01-01		
	UNITS	BH302-3	RDL	QC Batch	BH 3003	QC Batch	BH 303-2	RDL	QC Batch
Metals									
Hot Water Ext. Boron (B)	ug/g	0.16	0.050	8860300	0.43	8861180	1.5	0.050	8860300
Acid Extractable Boron (B)	ug/g	<5.0	5.0	8879578					

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Bureau Veritas ID		WRT403			WRT404			WRT405		
Sampling Date		2023/08/11 10:45			2023/08/11 11:15			2023/08/11 11:20		
COC Number		948478-01-01			948478-01-01			948478-01-01		
	UNITS	BH 303-3	RDL	QC Batch	BH 304-2	RDL	QC Batch	BH 304-3	RDL	QC Batch
Metals										
Hot Water Ext. Boron (B)	ug/g	1.1	0.050	8860300	0.90	0.050	8861180	0.43	0.050	8861180
Acid Extractable Boron (B)	ug/g	11	5.0	8880348				9.6	5.0	8880348

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Bureau Veritas Job #: C3O6894
Report Date: 2023/08/30

Terrapex Environmental Ltd
Client Project #: CH244.00
Site Location: QUEEN STREET S, MISSISSAUGA
Your P.O. #: TPEX SOA
Sampler Initials: WA

ELEMENTS BY ATOMIC SPECTROSCOPY (SOIL)

Bureau Veritas ID		WRT406			WRT407			WRT408	WRT408		
Sampling Date		2023/08/11 11:50			2023/08/11 11:55			2023/08/11 12:25	2023/08/11 12:25		
COC Number		948478-01-01			948478-01-01			948478-01-01	948478-01-01		
	UNITS	BH 305-2	RDL	QC Batch	BH 305-3	RDL	QC Batch	BH 306-2	BH 306-2 Lab-Dup	RDL	QC Batch
Metals											
Hot Water Ext. Boron (B)	ug/g	3.3	0.050	8861381	2.0	0.050	8861180	0.58	0.59	0.050	8861180
Acid Extractable Boron (B)	ug/g				13	5.0	8879578				

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate

Bureau Veritas ID		WRT409			WRT410			WRT411		
Sampling Date		2023/08/11 12:30			2023/08/11 12:50			2023/08/11 12:55		
COC Number		948478-01-01			948478-01-01			948478-01-01		
	UNITS	BH 306-3	RDL	QC Batch	BH 307-2	RDL	QC Batch	BH307-3	RDL	QC Batch
Metals										
Hot Water Ext. Boron (B)	ug/g	4.2	0.050	8861180	2.2	0.050	8861180	1.1	0.050	8861180
Acid Extractable Boron (B)	ug/g	8.8	5.0	8880348				8.9	5.0	8880348

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Bureau Veritas Job #: C3O6894
Report Date: 2023/08/30

Terrapex Environmental Ltd
Client Project #: CH244.00
Site Location: QUEEN STREET S, MISSISSAUGA
Your P.O. #: TPEX SOA
Sampler Initials: WA

TEST SUMMARY

Bureau Veritas ID: WRT397 **Collected:** 2023/08/11
Sample ID: BH301-2 **Shipped:**
Matrix: Soil **Received:** 2023/08/15

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hot Water Extractable Boron	ICP	8861180	2023/08/18	2023/08/18	Japneet Gill

Bureau Veritas ID: WRT398 **Collected:** 2023/08/11
Sample ID: BH301-3 **Shipped:**
Matrix: Soil **Received:** 2023/08/15

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hot Water Extractable Boron	ICP	8861180	2023/08/18	2023/08/18	Japneet Gill
Acid Extractable Metals by ICPMS	ICP/MS	8880348	2023/08/28	2023/08/29	Daniel Teclu

Bureau Veritas ID: WRT399 **Collected:** 2023/08/11
Sample ID: BH302-2 **Shipped:**
Matrix: Soil **Received:** 2023/08/15

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hot Water Extractable Boron	ICP	8861180	2023/08/18	2023/08/18	Japneet Gill

Bureau Veritas ID: WRT400 **Collected:** 2023/08/11
Sample ID: BH302-3 **Shipped:**
Matrix: Soil **Received:** 2023/08/15

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hot Water Extractable Boron	ICP	8860300	2023/08/17	2023/08/18	Japneet Gill
Acid Extractable Metals by ICPMS	ICP/MS	8879578	2023/08/26	2023/08/29	Daniel Teclu

Bureau Veritas ID: WRT401 **Collected:** 2023/08/11
Sample ID: BH 3003 **Shipped:**
Matrix: Soil **Received:** 2023/08/15

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hot Water Extractable Boron	ICP	8861180	2023/08/18	2023/08/18	Japneet Gill

Bureau Veritas ID: WRT402 **Collected:** 2023/08/11
Sample ID: BH 303-2 **Shipped:**
Matrix: Soil **Received:** 2023/08/15

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hot Water Extractable Boron	ICP	8860300	2023/08/17	2023/08/18	Japneet Gill

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Bureau Veritas Job #: C3O6894
Report Date: 2023/08/30

Terrapex Environmental Ltd
Client Project #: CH244.00
Site Location: QUEEN STREET S, MISSISSAUGA
Your P.O. #: TPEX SOA
Sampler Initials: WA

TEST SUMMARY

Bureau Veritas ID: WRT403 **Collected:** 2023/08/11
Sample ID: BH 303-3 **Shipped:**
Matrix: Soil **Received:** 2023/08/15

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hot Water Extractable Boron	ICP	8860300	2023/08/17	2023/08/18	Japneet Gill
Acid Extractable Metals by ICPMS	ICP/MS	8880348	2023/08/28	2023/08/29	Daniel Teclu

Bureau Veritas ID: WRT404 **Collected:** 2023/08/11
Sample ID: BH 304-2 **Shipped:**
Matrix: Soil **Received:** 2023/08/15

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hot Water Extractable Boron	ICP	8861180	2023/08/18	2023/08/18	Japneet Gill

Bureau Veritas ID: WRT405 **Collected:** 2023/08/11
Sample ID: BH 304-3 **Shipped:**
Matrix: Soil **Received:** 2023/08/15

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hot Water Extractable Boron	ICP	8861180	2023/08/18	2023/08/18	Japneet Gill
Acid Extractable Metals by ICPMS	ICP/MS	8880348	2023/08/28	2023/08/29	Daniel Teclu

Bureau Veritas ID: WRT406 **Collected:** 2023/08/11
Sample ID: BH 305-2 **Shipped:**
Matrix: Soil **Received:** 2023/08/15

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hot Water Extractable Boron	ICP	8861381	2023/08/18	2023/08/18	Japneet Gill

Bureau Veritas ID: WRT407 **Collected:** 2023/08/11
Sample ID: BH 305-3 **Shipped:**
Matrix: Soil **Received:** 2023/08/15

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hot Water Extractable Boron	ICP	8861180	2023/08/18	2023/08/18	Japneet Gill
Acid Extractable Metals by ICPMS	ICP/MS	8879578	2023/08/26	2023/08/29	Daniel Teclu

Bureau Veritas ID: WRT408 **Collected:** 2023/08/11
Sample ID: BH 306-2 **Shipped:**
Matrix: Soil **Received:** 2023/08/15

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hot Water Extractable Boron	ICP	8861180	2023/08/18	2023/08/18	Japneet Gill

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Bureau Veritas Job #: C3O6894
Report Date: 2023/08/30

Terrapex Environmental Ltd
Client Project #: CH244.00
Site Location: QUEEN STREET S, MISSISSAUGA
Your P.O. #: TPEX SOA
Sampler Initials: WA

TEST SUMMARY

Bureau Veritas ID: WRT408 Dup
Sample ID: BH 306-2
Matrix: Soil
Collected: 2023/08/11
Shipped:
Received: 2023/08/15

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hot Water Extractable Boron	ICP	8861180	2023/08/18	2023/08/18	Japneet Gill

Bureau Veritas ID: WRT409
Sample ID: BH 306-3
Matrix: Soil
Collected: 2023/08/11
Shipped:
Received: 2023/08/15

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hot Water Extractable Boron	ICP	8861180	2023/08/18	2023/08/18	Japneet Gill
Acid Extractable Metals by ICPMS	ICP/MS	8880348	2023/08/28	2023/08/29	Daniel Teclu

Bureau Veritas ID: WRT410
Sample ID: BH 307-2
Matrix: Soil
Collected: 2023/08/11
Shipped:
Received: 2023/08/15

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hot Water Extractable Boron	ICP	8861180	2023/08/18	2023/08/18	Japneet Gill

Bureau Veritas ID: WRT411
Sample ID: BH307-3
Matrix: Soil
Collected: 2023/08/11
Shipped:
Received: 2023/08/15

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hot Water Extractable Boron	ICP	8861180	2023/08/18	2023/08/18	Japneet Gill
Acid Extractable Metals by ICPMS	ICP/MS	8880348	2023/08/28	2023/08/29	Daniel Teclu

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Bureau Veritas Job #: C3O6894
Report Date: 2023/08/30

Terrapex Environmental Ltd
Client Project #: CH244.00
Site Location: QUEEN STREET S, MISSISSAUGA
Your P.O. #: TPEX SOA
Sampler Initials: WA

GENERAL COMMENTS

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

Package 1	6.0°C

Revised Report: Report re-issued to include ICPMS Metals (Boron) analysis, as per request.

Results relate only to the items tested.

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QUALITY ASSURANCE REPORT

			Matrix Spike		SPIKED BLANK		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8860300	Hot Water Ext. Boron (B)	2023/08/18	103	75 - 125	102	75 - 125	<0.050	ug/g	NC	40
8861180	Hot Water Ext. Boron (B)	2023/08/18	119	75 - 125	98	75 - 125	<0.050	ug/g	1.0	40
8861381	Hot Water Ext. Boron (B)	2023/08/18	115	75 - 125	97	75 - 125	<0.050	ug/g	4.6	40
8879578	Acid Extractable Boron (B)	2023/08/29	91	75 - 125	88	80 - 120	<5.0	ug/g	5.4	30
8880348	Acid Extractable Boron (B)	2023/08/29	102	75 - 125	93	80 - 120	<5.0	ug/g	7.8	30

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

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

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

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

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

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Bureau Veritas Job #: C3O6894
Report Date: 2023/08/30

Terrapex Environmental Ltd
Client Project #: CH244.00
Site Location: QUEEN STREET S, MISSISSAUGA
Your P.O. #: TPEX SOA
Sampler Initials: WA

VALIDATION SIGNATURE PAGE

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

Brad Newman, B.Sc., C.Chem., Scientific Service Specialist

Cristina Carriere, Senior Scientific Specialist

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

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

Page 1 of 2

IIONT-08-166

INVOICE TO:		REPORT TO:		PROJECT INFORMATION:	
Company Name:	#4398 Terrapex Environmental Ltd	Company Name:	Terrapex Environmental Ltd	Quotation #:	C25103
Attention:	Accounts Payable	Attention:	Geoff Lussier	P.O. #:	TPEX SOA
Address:	90 Scarsdale Rd	Address:	65 Nebo Road, Hamilton, ON	Project:	CH244.00
	Toronto ON M3B 2R7			Project Name:	Queen St S, Mississauga
Tel:	(416) 245-0011 Fax: (416) 245-0012	Tel:	(647) 250-8231 Fax:	Site #:	
Email:	accounts.payable@terrapex.com	Email:	g.lussier@terrapex.com	Sampled By:	WA

Bottle Order #: 948478
COC #: C#948478-01-01
Project Manager: Kudrat Bajwa

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

Regulation 153 (2011)
- [ ] Table 1 [X] Res/Park [X] Medium/Fine
- [ ] Table 2 [ ] Ind/Comm [ ] Coarse
- [X] Table 3 [ ] Agri/Other [X] For RSC
- [ ] Table ___

Other Regulations
- [ ] CCME [ ] Sanitary Sewer Bylaw
- [ ] Reg 558. [ ] Storm Sewer Bylaw
- [ ] MISA Municipality ______
- [ ] PWQO [ ] Reg 406 Table ______
- [ ] Other ______

Special Instructions

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

ANALYSIS REQUESTED (PLEASE BE SPECIFIC)

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

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

Job Specific Rush TAT (if applies to entire submission)
Date Required: ______ Time Required: ______
Rush Confirmation Number: ______ *(call lab for #)*

	Sample Barcode Label	Sample (Location) Identification	Date Sampled	Time Sampled	Matrix	Field Filtered (please circle):	Metals / Hg / Cr VI	HWS Boron only									# of Bottles	Comments
1		BH 301-2	Aug 11, 2023	9:20am	Soil			✓									1	
2		BH 301-3	↓	9:25am	↓			✓									↓	
3		BH302-2		9:50am				✓										
4		BH 302-3		9:55am				✓										
5		BH 3003		9:55am				✓										
6		BH 303-2		10:40am				✓										
7		BH303-3		10:45am				✓										
8		BH304-2		11:15am				✓										
9		BH 304-3		11:20am				✓										
10		BH 305-2	✓	11:50am	↓			✓									↓	

RELINQUISHED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	RECEIVED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	# jars used and not submitted
A S Walid Ahmed	23/08/15	7:00am	JASDEEP KAUR	2023/08/15	16:20	Ø

Laboratory Use Only

Time Sensitive	Temperature (°C) on Recei	Custody Seal	Yes	No
	9/5/4	Present	✓	
		Intact	✓	

Ice

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

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

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

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

White: Bureau Veritas Yellow: Client

695352

Bureau Veritas Canada (2019) Inc.

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

CHAIN OF CUSTODY RECORD

INVOICE TO:		REPORT TO:		PROJECT INFORMATION:		Laboratory Use Only:	
Company Name:	#4398 Terrapex Environmental Ltd	Company Name:	Terrapex Environmental Ltd.	Quotation #:	C25103	Bureau Veritas Job #:	Bottle Order #:
Attention:	Accounts Payable	Attention:	Geoff Lussier	P.O. #:	TPEX50A		948478
Address:	90 Scarsdale Rd	Address:	65 Nebo Road, Hamilton, ON	Project:	CH244.00	COC #:	Project Manager:
	Toronto ON M3B 2R7			Project Name:	Queen St. S, Mississauga	C#948478-05-01	Kudrat Bajwa
Tel:	(416) 245-0011 Fax: (416) 245-0012	Tel:	(647) 250-8231 Fax:	Site #:			
Email:	accounts.payable@terrapex.com	Email:	g.lussier@terrapex.com	Sampled By:	WA		

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

Regulation 153 (2011): ☐ Table 1 ☒ Res/Park ☒ Medium/Fine ☐ Table 2 ☐ Ind/Comm ☐ Coarse ☒ Table 3 ☐ Agri/Other ☒ For RSC ☐ Table ___

Other Regulations: ☐ CCME ☐ Sanitary Sewer Bylaw ☐ Reg 558. ☐ Storm Sewer Bylaw ☐ MISA Municipality ___ ☐ PWQO ☐ Reg 406 Table ___ ☐ Other ___

Special Instructions:

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

ANALYSIS REQUESTED (PLEASE BE SPECIFIC): Field Filtered (please circle): Metals / Hg / Cr VI; O.Reg 153 Metals (struck) – HWS Boron only

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

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

Job Specific Rush TAT (if applies to entire submission)
Date Required: ___ Time Required: ___
Rush Confirmation Number: ___ *(call lab for #)*

	Sample Barcode Label	Sample (Location) Identification	Date Sampled	Time Sampled	Matrix	Field Filtered	HWS Boron only	# of Bottles	Comments
1		BH305-3	Aug 11, 2023	11:55am	Soil		✓	1	
2		BH306-2	↓	12:25pm	↓		✓	↓	
3		BH306-3	↓	12:30pm	↓		✓	↓	
4		BH307-2	↓	12:50pm	↓		✓	↓	
5		BH307-3	↓	12:55pm	↓		✓	↓	
6									
7									
8									
9									
10									

* RELINQUISHED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	RECEIVED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	# jars used and not submitted	Laboratory Use Only
A S Walid Ahmed	23/08/15	7:00am	See page 1			Ø	Time Sensitive; Temperature (°C) on Recei; Custody Seal Yes / No: Present, Intact

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

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

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

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

White: Bureau Veritas Yellow: Client

Your P.O. #: TPEX MSA
Your Project #: CH244.00
Site#: MISSISAUGA
Site Location: 128 QUEEN ST S
Your C.O.C. #: 845457-11-01

Attention: Geoff Lussier

Terrapex Environmental Ltd
65 Nebo Road
Hamilton, ON
CANADA L8W 2C9

Report Date: 2023/10/18
Report #: R7866399
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C3V6275
Received: 2023/10/11, 13:15

Sample Matrix: Soil
Samples Received: 10

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Hot Water Extractable Boron	5	2023/10/14	2023/10/16	CAM SOP-00408	R153 Ana. Prot. 2011
Acid Extractable Metals by ICPMS	1	2023/10/14	2023/10/16	CAM SOP-00447	EPA 6020B m
Acid Extractable Metals by ICPMS	4	2023/10/14	2023/10/17	CAM SOP-00447	EPA 6020B m

Remarks:

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

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

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

Solid sample results, except biota, are based on dry weight unless otherwise indicated. Organic analyses are not recovery corrected except for isotope dilution methods.
Results relate to samples tested. When sampling is not conducted by Bureau Veritas, results relate to the supplied samples tested.

Reference Method suffix “m” indicates test methods incorporate validated modifications from specific reference methods to improve performance.
* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.

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

Your P.O. #: TPEX MSA
Your Project #: CH244.00
Site#: MISSISAUGA
Site Location: 128 QUEEN ST S
Your C.O.C. #: 845457-11-01

Attention: Geoff Lussier

Terrapex Environmental Ltd
65 Nebo Road
Hamilton, ON
CANADA L8W 2C9

Report Date: 2023/10/18
Report #: R7866399
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C3V6275
Received: 2023/10/11, 13:15

Encryption Key

Please direct all questions regarding this Certificate of Analysis to:
Kudrat Bajwa, B.Sc., Project Manager
Email: Kudrat.Bajwa@bureauveritas.com
Phone# (905)817-5755

==========

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

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

Bureau Veritas Job #: C3V6275
Report Date: 2023/10/18

Terrapex Environmental Ltd
Client Project #: CH244.00
Site Location: 128 QUEEN ST S
Your P.O. #: TPEX MSA
Sampler Initials: GL

ELEMENTS BY ATOMIC SPECTROSCOPY (SOIL)

Bureau Veritas ID		XGL965	XGL965			XGL966			XGL967		
Sampling Date		2023/10/06 09:30	2023/10/06 09:30			2023/10/06 09:40			2023/10/06 10:15		
COC Number		845457-11-01	845457-11-01			845457-11-01			845457-11-01		
	UNITS	BH401-2	BH401-2 Lab-Dup	RDL	QC Batch	BH401-4	RDL	QC Batch	BH402-2	RDL	QC Batch
Metals											
Hot Water Ext. Boron (B)	ug/g	0.46	0.49	0.050	8981689				0.90	0.050	8981689
Acid Extractable Boron (B)	ug/g					9.5	5.0	8982058			

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate

Bureau Veritas ID		XGL968			XGL975			XGL976		
Sampling Date		2023/10/06 10:25			2023/10/06 13:10			2023/10/06 13:20		
COC Number		845457-11-01			845457-11-01			845457-11-01		
	UNITS	BH402-4	RDL	QC Batch	BH406-2	RDL	QC Batch	BH406-4	RDL	QC Batch
Metals										
Hot Water Ext. Boron (B)	ug/g				0.82	0.050	8981689			
Acid Extractable Boron (B)	ug/g	9.0	5.0	8981413				11	5.0	8981413

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Bureau Veritas ID		XGL977			XGL978			XGL981		
Sampling Date		2023/10/06 13:50			2023/10/06 14:00			2023/10/06 13:10		
COC Number		845457-11-01			845457-11-01			845457-11-01		
	UNITS	BH407-2	RDL	QC Batch	BH407-4	RDL	QC Batch	BH4100-2	RDL	QC Batch
Metals										
Hot Water Ext. Boron (B)	ug/g	0.71	0.050	8981689				0.84	0.050	8981689
Acid Extractable Boron (B)	ug/g				11	5.0	8981413			

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Bureau Veritas ID		XGL982		
Sampling Date		2023/10/06 13:20		
COC Number		845457-11-01		
	UNITS	BH4100-4	RDL	QC Batch
Metals				
Acid Extractable Boron (B)	ug/g	11	5.0	8981413

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Bureau Veritas Job #: C3V6275
Report Date: 2023/10/18

Terrapex Environmental Ltd
Client Project #: CH244.00
Site Location: 128 QUEEN ST S
Your P.O. #: TPEX MSA
Sampler Initials: GL

TEST SUMMARY

Bureau Veritas ID: XGL965 **Collected:** 2023/10/06
Sample ID: BH401-2 **Shipped:**
Matrix: Soil **Received:** 2023/10/11

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hot Water Extractable Boron	ICP	8981689	2023/10/14	2023/10/16	Suban Kanapathippllai

Bureau Veritas ID: XGL965 Dup **Collected:** 2023/10/06
Sample ID: BH401-2 **Shipped:**
Matrix: Soil **Received:** 2023/10/11

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hot Water Extractable Boron	ICP	8981689	2023/10/14	2023/10/16	Suban Kanapathippllai

Bureau Veritas ID: XGL966 **Collected:** 2023/10/06
Sample ID: BH401-4 **Shipped:**
Matrix: Soil **Received:** 2023/10/11

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acid Extractable Metals by ICPMS	ICP/MS	8982058	2023/10/14	2023/10/16	Prempal Bhatti

Bureau Veritas ID: XGL967 **Collected:** 2023/10/06
Sample ID: BH402-2 **Shipped:**
Matrix: Soil **Received:** 2023/10/11

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hot Water Extractable Boron	ICP	8981689	2023/10/14	2023/10/16	Suban Kanapathippllai

Bureau Veritas ID: XGL968 **Collected:** 2023/10/06
Sample ID: BH402-4 **Shipped:**
Matrix: Soil **Received:** 2023/10/11

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acid Extractable Metals by ICPMS	ICP/MS	8981413	2023/10/14	2023/10/17	Daniel Teclu

Bureau Veritas ID: XGL975 **Collected:** 2023/10/06
Sample ID: BH406-2 **Shipped:**
Matrix: Soil **Received:** 2023/10/11

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hot Water Extractable Boron	ICP	8981689	2023/10/14	2023/10/16	Suban Kanapathippllai

Bureau Veritas ID: XGL976 **Collected:** 2023/10/06
Sample ID: BH406-4 **Shipped:**
Matrix: Soil **Received:** 2023/10/11

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acid Extractable Metals by ICPMS	ICP/MS	8981413	2023/10/14	2023/10/17	Daniel Teclu

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

Bureau Veritas Job #: C3V6275
Report Date: 2023/10/18

Terrapex Environmental Ltd
Client Project #: CH244.00
Site Location: 128 QUEEN ST S
Your P.O. #: TPEX MSA
Sampler Initials: GL

TEST SUMMARY

Bureau Veritas ID: XGL977 **Collected:** 2023/10/06
Sample ID: BH407-2 **Shipped:**
Matrix: Soil **Received:** 2023/10/11

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hot Water Extractable Boron	ICP	8981689	2023/10/14	2023/10/16	Suban Kanapathippllai

Bureau Veritas ID: XGL978 **Collected:** 2023/10/06
Sample ID: BH407-4 **Shipped:**
Matrix: Soil **Received:** 2023/10/11

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acid Extractable Metals by ICPMS	ICP/MS	8981413	2023/10/14	2023/10/17	Daniel Teclu

Bureau Veritas ID: XGL981 **Collected:** 2023/10/06
Sample ID: BH4100-2 **Shipped:**
Matrix: Soil **Received:** 2023/10/11

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hot Water Extractable Boron	ICP	8981689	2023/10/14	2023/10/16	Suban Kanapathippllai

Bureau Veritas ID: XGL982 **Collected:** 2023/10/06
Sample ID: BH4100-4 **Shipped:**
Matrix: Soil **Received:** 2023/10/11

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acid Extractable Metals by ICPMS	ICP/MS	8981413	2023/10/14	2023/10/17	Daniel Teclu

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GENERAL COMMENTS

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

Package 1	6.3°C

Results relate only to the items tested.

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QUALITY ASSURANCE REPORT

			Matrix Spike		SPIKED BLANK		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8981413	Acid Extractable Boron (B)	2023/10/16	92	75 - 125	97	80 - 120	<5.0	ug/g	NC	30
8981689	Hot Water Ext. Boron (B)	2023/10/16	100	75 - 125	99	75 - 125	<0.050	ug/g	6.9	40
8982058	Acid Extractable Boron (B)	2023/10/16	89	75 - 125	96	80 - 120	<5.0	ug/g	NC	30

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

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

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

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

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

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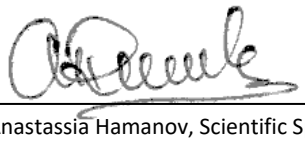
Bureau Veritas Job #: C3V6275
Report Date: 2023/10/18

Terrapex Environmental Ltd
Client Project #: CH244.00
Site Location: 128 QUEEN ST S
Your P.O. #: TPEX MSA
Sampler Initials: GL

VALIDATION SIGNATURE PAGE

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



Anastassia Hamanov, Scientific Specialist

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

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

CHAIN OF CUSTODY RECORD

INVOICE TO:		REPORT TO:		PROJECT INFORMATION:	
Company Name:	#4398 Terrapex Environmental Ltd	Company Name:	#6839 Terrapex Environmental Ltd	Quotation #:	C01024
Attention:	Accounts Payable	Attention:	~~Jeremy Wilson~~ Geoff Lussier	P.O. #:	Tpex MSA
Address:	90 Scarsdale Rd	Address:	65 Nebo Road	Project:	~~C0820.01~~ CH24400
	Toronto ON M3B 2R7		Hamilton ON L8W 2C9	Project Name:	178 Queen St S
Tel:	(416) 245-0011 Fax: (416) 245-0012	Tel:	(905) 632-5939 Ext: 227 Fax:	Site #:	Mississauga
Email:	accounts.payable@terrapex.com	Email:	~~jwilson@terrapex.com~~ g.lussier@terrapex.com	Sampled By:	GL

11-Oct-23 13:15
Ema Gitej
C3V6275
WP ENV-1360

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

Regulation 153 (2011)
- [ ] Table 1
- [ ] Table 2
- [x] Table 3
- [ ] Table ___
- [x] Res/Park
- [ ] Ind/Comm
- [ ] Agri/Other
- [x] Medium/Fine
- [ ] Coarse
- [x] For RSC

Other Regulations
- [ ] CCME
- [ ] Reg 558.
- [ ] MISA
- [ ] PWQO
- [ ] Other ___
- [ ] Sanitary Sewer Bylaw
- [ ] Storm Sewer Bylaw
- Municipality ___
- [ ] Reg 406 Table ___

Special Instructions

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

ANALYSIS REQUESTED (PLEASE BE SPECIFIC)

Please provide advance notice for rush projects

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

Job Specific Rush TAT (if applies to entire submission)
Date Required: ___ Time Required: ___ [ ]
Rush Confirmation Number: ___ *(call lab for #)*

	Sample Barcode Label	Sample (Location) Identification	Date Sampled	Time Sampled	Matrix	Field Filtered (please circle): Metals / Hg / Cr VI	O.Reg 153 VOCs by HS & F1-F4	O.Reg 153 Metals & Inorganics Pkg	O.Reg 153 PAHs	O.Reg 153 OC Pesticides	O.Reg 153 Semivolatiles Package (Water)	Reg 153 HWS Boron	Reg 153 Total Boron				# of Bottles	Comments
1		BH401-2	Oct6/23	9:30am	Soil	No						X					1	
2		BH401-4		9:40am									X					
3		BH402-2		10:15am								X						
4		BH402-4		10:25am									X					
5		BH403-2		10:55am								X						* hold *
6		BH403-4		11:05am									X					* hold *
7		BH404-2		11:30am								X						* hold *
8		BH404-4		11:40am									X					* hold *
9		BH405-2		12:30pm								X						* hold *
10		BH405-4		12:40pm									X					* hold *

RELINQUISHED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	RECEIVED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	# jars used and not submitted	Time Sensitive
/ Geoff Lussier	23/10/11	12:00pm	S. Selvan	2023/10/11	13:15		

Laboratory Use Only

Temperature (°C) on Recei	Custody Seal	Yes	No
7 / 6 / 6	Present	✓	
	Intact	✓	

White: BV Labs Yellow: Client

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

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

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

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

ON ICE

Bureau Veritas Canada (2019) Inc.

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

CHAIN OF CUSTODY RECORD

INVOICE TO:		REPORT TO:		PROJECT INFORMATION:		Laboratory Use Only:	
Company Name:	#4398 Terrapex Environmental Ltd	Company Name:	#6839 Terrapex Environmental Ltd	Quotation #:	C01024	BV Labs Job #:	Bottle Order #: 845457
Attention:	Accounts Payable	Attention:	~~Jeremy Wilson~~ Geoff Russier	P.O. #:	TPEX MSA		
Address:	90 Scarsdale Rd	Address:	65 Nebo Road	Project:	~~CO820.01~~ CW 244.00		
	Toronto ON M3B 2R7		Hamilton ON L8W 2C9	Project Name:	12E Queen St S	COC #: C#845457-12-01	Project Manager: Ema Gitej
Tel:	(416) 245-0011 Fax: (416) 245-0012	Tel:	(905) 632-5939 Ext: 227 Fax:	Site #:	Mississauga		
Email:	accounts.payable@terrapex.com	Email:	~~j.wilson@terrapex.com~~ g.russier@terrapex.com	Sampled By:	GS		

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

Regulation 153 (2011)	Other Regulations	Special Instructions
☐ Table 1 ☒ Res/Park ☑ Medium/Fine	☐ CCME ☐ Sanitary Sewer Bylaw	
☐ Table 2 ☐ Ind/Comm ☐ Coarse	☐ Reg 558. ☐ Storm Sewer Bylaw	
☑ Table 3 ☐ Agri/Other ☒ For RSC	☐ MISA Municipality	
☐ Table ___	☐ PWQO ☐ Reg 406 Table	
	☐ Other	

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

ANALYSIS REQUESTED (PLEASE BE SPECIFIC)

	Sample Barcode Label	Sample (Location) Identification	Date Sampled	Time Sampled	Matrix	Field Filtered (please circle): Metals / Hg / Cr VI	O.Reg 153 VOCs by HS & F1-F4	O.Reg 153 Metals & Inorganics Pkg	O.Reg 153 PAHs	O.Reg 153 OC Pesticides	O.Reg 153 Semivolatiles Package (Water)	Reg 153 HWS Boron	Reg 153 Total Boron	# of Bottles	Comments
1		BH406-2	02/6/23	1:10pm	Soil	NA						X		1	
2		BH406-4		1:20pm									X		
3		BH405-2		1:50pm								X			
4		BH405-4		2:00pm									X		
5		BH408-2		2:30pm								X			* hold *
6		BH408-4		2:40pm									X		* hold *
7		BH4100-2		1:10pm								X			
8		BH4100-4		1:20pm									X		
9															
10															

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

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

Job Specific Rush TAT (if applies to entire submission)
Date Required: ____ Time Required: ____ ☐
Rush Confirmation Number: ____ *(call lab for #)*

* RELINQUISHED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	RECEIVED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	# jars used and not submitted
Geoff Russier / Geoff Russier	23/10/11	12:00pm	S. SALVARI	2023/10/11	15:15	

Laboratory Use Only				
Time Sensitive	Temperature (°C) on Recei 7 / 6 / 6	Custody Seal Present	Yes	No
		Intact		

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

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

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

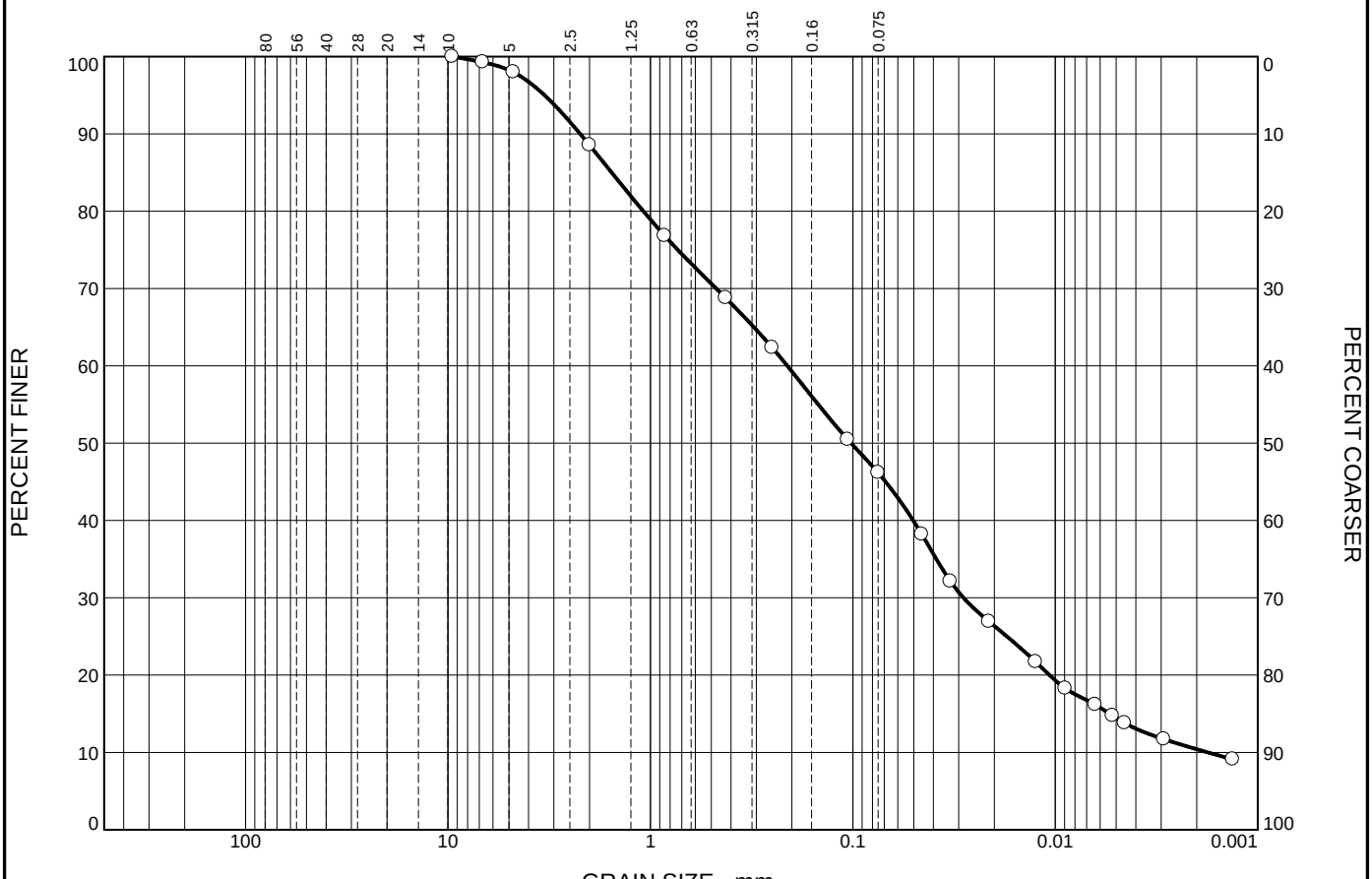
SAMPLES MUST BE KEPT COOL (< 10° C) FROM TIME OF SAMPLING UNTIL DELIVERY TO BV LABS

White: BV Labs Yellow: Client

8H ICE

Bureau Veritas Canada (2019) Inc.

Particle Size Distribution Report



	% +3"	% Gravel	% Sand		% Fines	
			Coarse	Fine	Silt	Clay
○	0.0	11.5	19.7	22.6	35.8	10.4

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○	16.4	12.1	1.5533	0.2107	0.1021	0.0284	0.0054	0.0018	2.17	119.28

Material Description	USCS	AASHTO
○ SAND AND SILT some gravel trace to some clay	SC-SM	A-4(0)

Project No. CH244.00 **Client:** De Zen Realty Company Ltd.

Project: 128 Queen St. S, and 169 Crumbie St, Mississauga

○ **Sample Number:** MW106, Sample 11

Terrapex

Toronto, Ontario

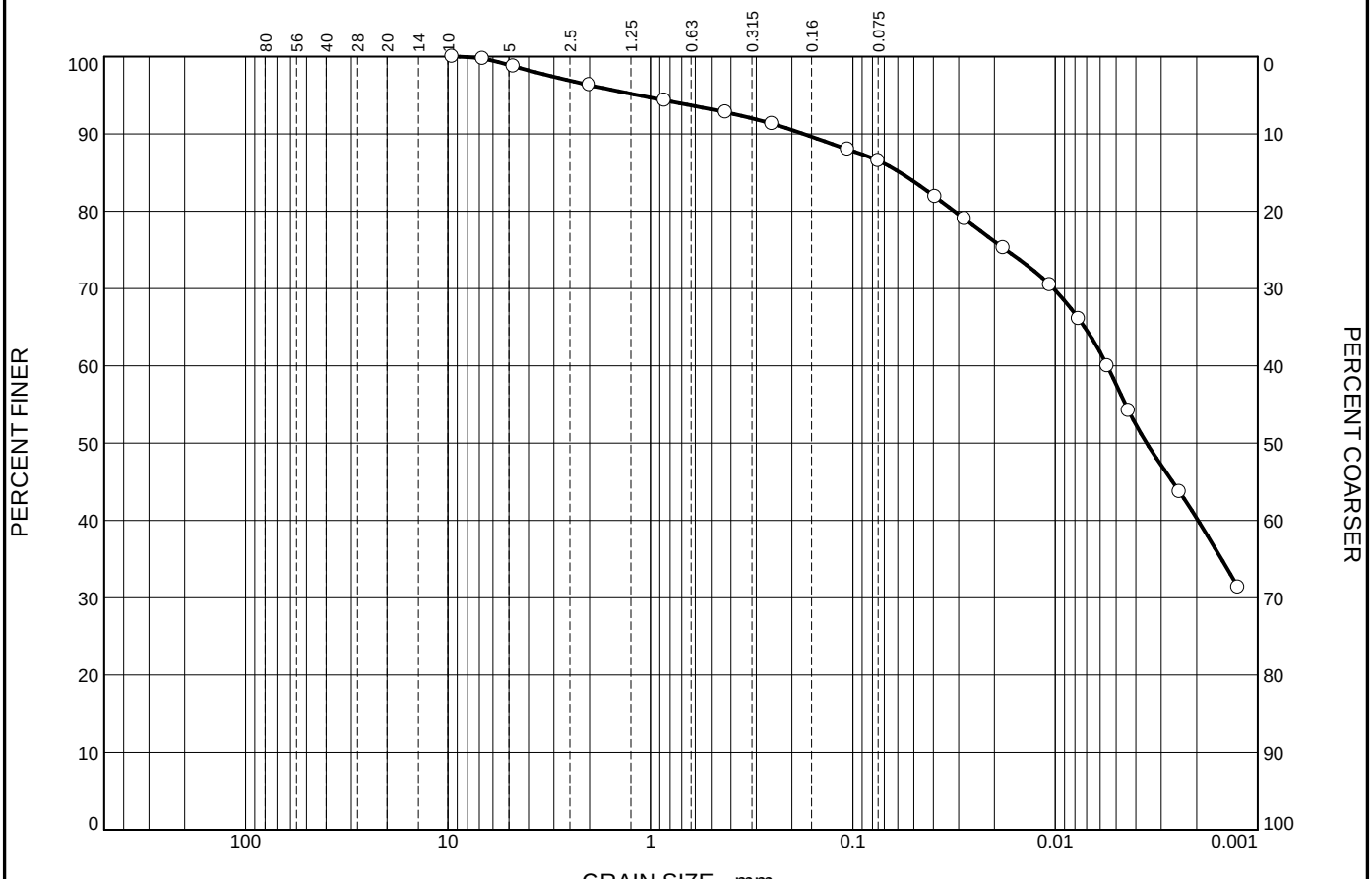
Remarks:

○HYDROMETER DETAILS: Spec. Grav. 2.75(assumed);Vb=53cm^3; L2=13.8cm; L1=10.7cm; hs= 0.16cm/Div; A=30.2cm^2; Mass of Disp. Agent=40g/1 Test Date: Feb 15, 2023

Figure 1

Tested By: AM

Particle Size Distribution Report



	% +3"	% Gravel	% Sand		% Fines	
			Coarse	Fine	Silt	Clay
○	0.0	3.7	3.5	6.3	46.2	40.3

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_C	C_u
○	34.4	18.9	0.0585	0.0055	0.0035					

Material Description	USCS	AASHTO
○ SILT AND CLAY trace sand trace gravel	CL	A-6(12)

Project No. CH244.00 **Client:** De Zen Realty Company Ltd.

Project: 128 Queen St. S, and 169 Crumbie St, Mississauga

○ **Sample Number:** MW107, Sample 5

Terrapex

Toronto, Ontario

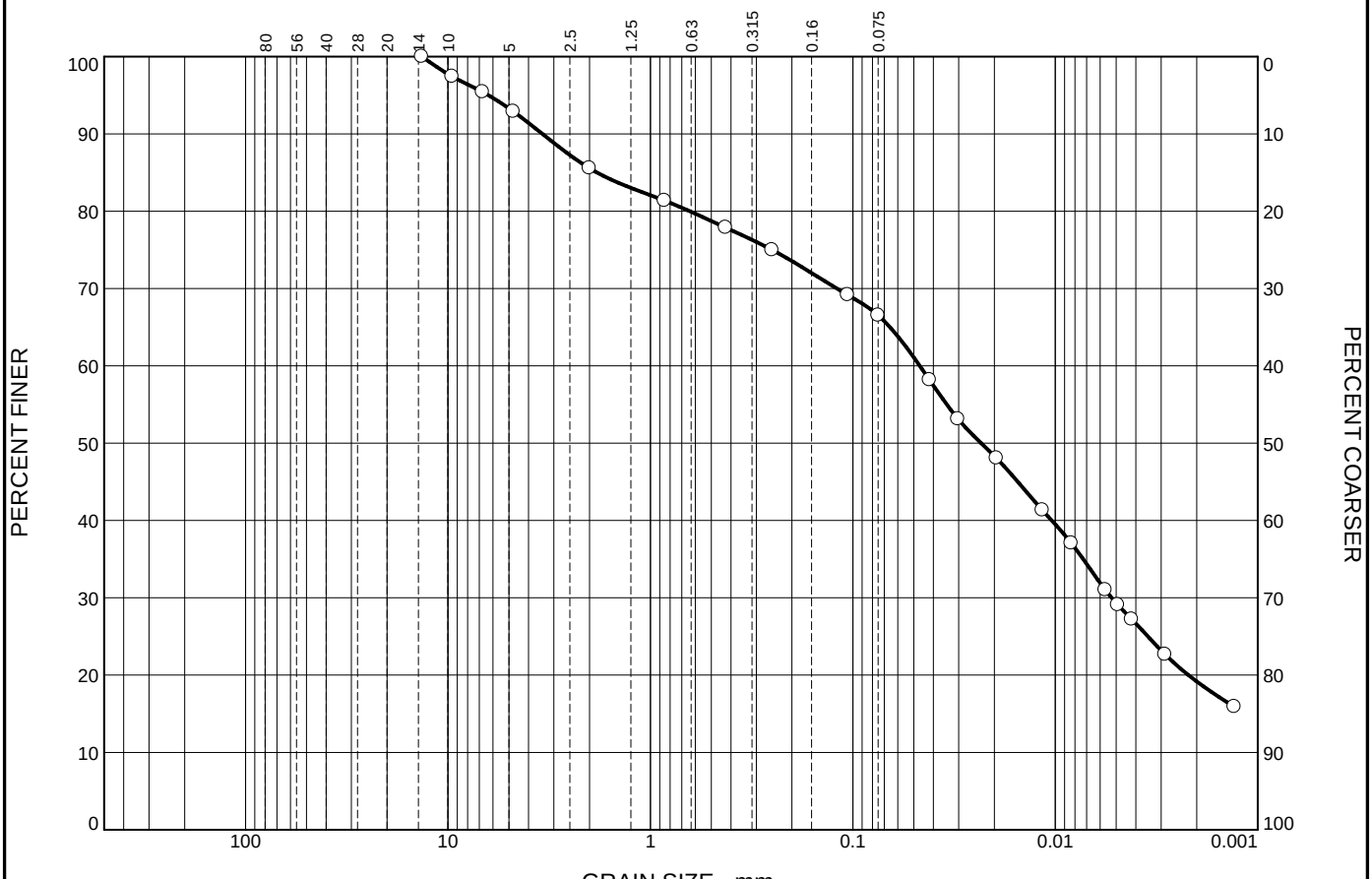
Remarks:

○HYDROMETER DETAILS: Spec. Grav. 2.75(assumed);Vb=53cm^3; L2=13.8cm; L1=10.7cm; hs= 0.16cm/Div; A=30.2cm^2; Mass of Disp. Agent=40g/1 Test Date: Feb 15, 2023

Figure 2

Tested By: AM

Particle Size Distribution Report



	% +3"	% Gravel	% Sand		% Fines	
			Coarse	Fine	Silt	Clay
○	0.0	14.4	7.7	11.4	47.3	19.2

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_C	C_u
○	21.9	14.5	1.8359	0.0467	0.0232	0.0053				

Material Description	USCS	AASHTO
○ SILT some sand some clay some gravel	CL	A-4(2)

Project No. CH244.00 **Client:** De Zen Realty Company Ltd.

Project: 128 Queen St. S, and 169 Crumbie St, Mississauga

○ **Sample Number:** MW107, Sample 8

Terrapex

Toronto, Ontario

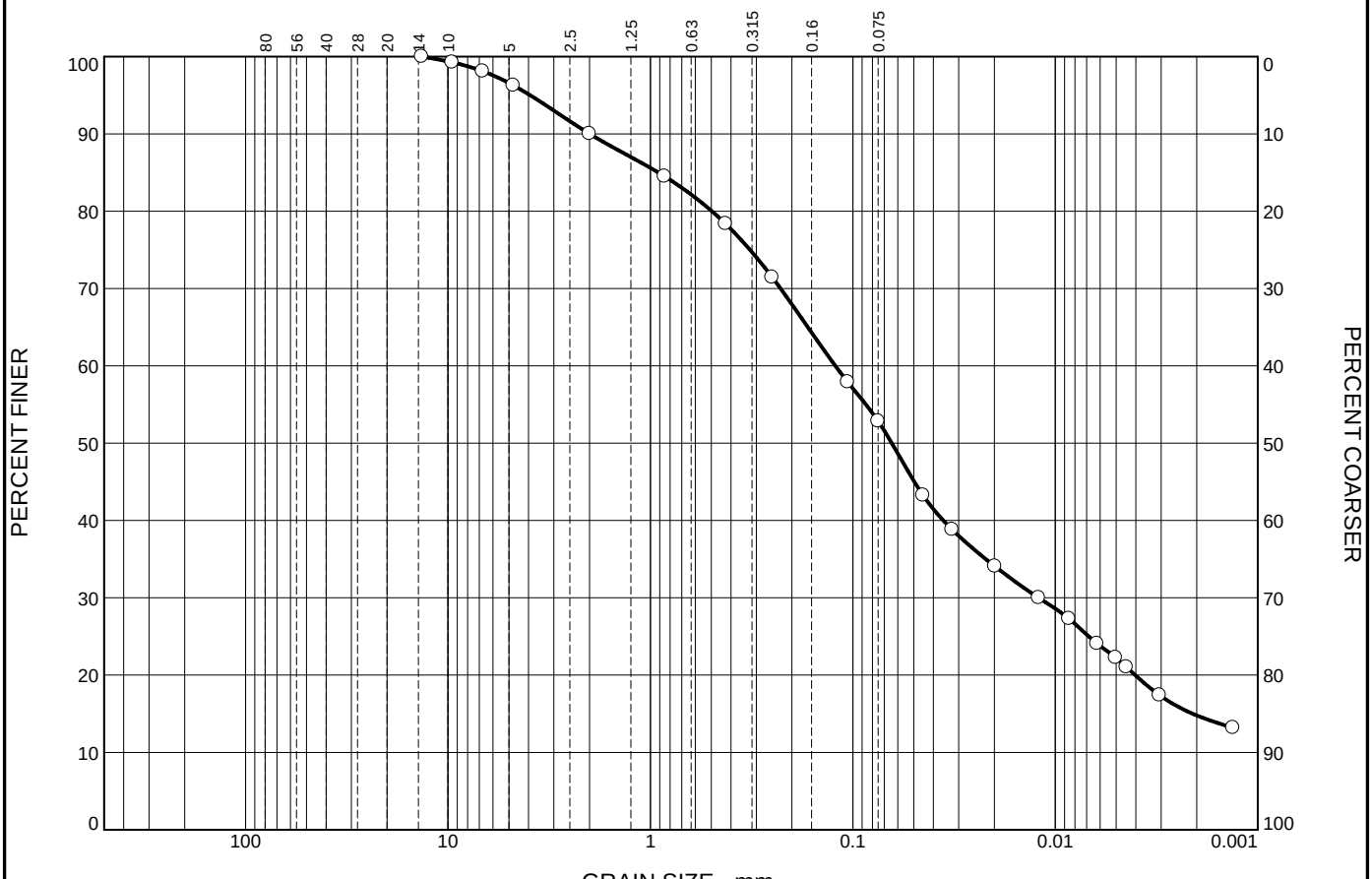
Remarks:

○HYDROMETER DETAILS: Spec. Grav. 2.75(assumed);Vb=53cm^3; L2=13.8cm; L1=10.7cm; hs= 0.16cm/Div; A=30.2cm^2; Mass of Disp. Agent=40g/1 Test Date: Feb 15, 2023

Figure 3

Tested By: AM

Particle Size Distribution Report



	% +3"	% Gravel	% Sand		% Fines	
			Coarse	Fine	Silt	Clay
○	0.0	10.0	11.6	25.6	38.0	14.8

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_C	C_u
○	17.5	11.5	0.9146	0.1221	0.0642	0.0121	0.0021			

Material Description	USCS	AASHTO
○ SAND AND SILT some clay trace to some gravel	CL-ML	A-4(0)

Project No. CH244.00 **Client:** De Zen Realty Company Ltd.

Project: 128 Queen St. S, and 169 Crumbie St, Mississauga

○ **Sample Number:** MW108, Sample 9

Terrapex

Toronto, Ontario

Remarks:

○HYDROMETER DETAILS: Spec. Grav. 2.75(assumed);Vb=53cm^3; L2=13.8cm; L1=10.7cm; hs= 0.16cm/Div; A=30.2cm^2; Mass of Disp. Agent=40g/1 Test Date: Feb 16, 2023

Figure 4

Tested By: AM

Your P.O. #: TPEX SO
Your Project #: CH244.00
Site Location: 120-158 QUEEN ST S, MISSISSAUGA
Your C.O.C. #: 924076-01-01

Attention: Geoff Lussier

Terrapex Environmental Ltd
90 Scarsdale Rd
Toronto, ON
CANADA M3B 2R7

Report Date: 2023/03/14
Report #: R7545837
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C367634
Received: 2023/03/09, 15:34

Sample Matrix: Water
Samples Received: 10

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
1,3-Dichloropropene Sum	10	N/A	2023/03/14		EPA 8260C m
Chloride by Automated Colourimetry	5	N/A	2023/03/13	CAM SOP-00463	SM 23 4500-Cl E m
Chromium (VI) in Water	5	N/A	2023/03/10	CAM SOP-00436	EPA 7199 m
Free (WAD) Cyanide	5	N/A	2023/03/10	CAM SOP-00457	OMOE E3015 m
Petroleum Hydrocarbons F2-F4 in Water (1)	1	2023/03/12	2023/03/12	CAM SOP-00316	CCME PHC-CWS m
Petroleum Hydrocarbons F2-F4 in Water (1)	8	2023/03/12	2023/03/13	CAM SOP-00316	CCME PHC-CWS m
Mercury	5	2023/03/10	2023/03/10	CAM SOP-00453	EPA 7470A m
Dissolved Metals by ICPMS	5	N/A	2023/03/13	CAM SOP-00447	EPA 6020B m
Volatile Organic Compounds and F1 PHCs	9	N/A	2023/03/14	CAM SOP-00230	EPA 8260C m
Volatile Organic Compounds in Water	1	N/A	2023/03/13	CAM SOP-00228	EPA 8260D

Remarks:

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

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

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

Solid sample results, except biota, are based on dry weight unless otherwise indicated. Organic analyses are not recovery corrected except for isotope dilution methods.
Results relate to samples tested. When sampling is not conducted by Bureau Veritas, results relate to the supplied samples tested.

Reference Method suffix “m” indicates test methods incorporate validated modifications from specific reference methods to improve performance.
* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.

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

Your P.O. #: TPEX SO
Your Project #: CH244.00
Site Location: 120-158 QUEEN ST S, MISSISSAUGA
Your C.O.C. #: 924076-01-01

Attention: Geoff Lussier

Terrapex Environmental Ltd
90 Scarsdale Rd
Toronto, ON
CANADA M3B 2R7

Report Date: 2023/03/14
Report #: R7545837
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C367634

Received: 2023/03/09, 15:34

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

Encryption Key

Please direct all questions regarding this Certificate of Analysis to:
Kudrat Bajwa, B.Sc., Project Manager
Email: Kudrat.Bajwa@bureauveritas.com
Phone# (905)817-5755

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

Bureau Veritas Job #: C367634
Report Date: 2023/03/14

Terrapex Environmental Ltd
Client Project #: CH244.00
Site Location: 120-158 QUEEN ST S, MISSISSAUGA
Your P.O. #: TPEX SO
Sampler Initials: AP

O.REG 153 METALS & INORGANICS PKG (WTR)

Bureau Veritas ID		VGD167	VGD169		VGD171			VGD171		
Sampling Date		2023/03/08 12:03	2023/03/08 11:30		2023/03/08 13:21			2023/03/08 13:21		
COC Number		924076-01-01	924076-01-01		924076-01-01			924076-01-01		
	UNITS	MW101 S	MW103 S	RDL	MW113 S	RDL	QC Batch	MW113 S Lab-Dup	RDL	QC Batch
Inorganics										
WAD Cyanide (Free)	ug/L	<1	<1	1	6	1	8545716	6	1	8545716
Dissolved Chloride (Cl-)	mg/L	62	130	1.0	5800	50	8546094			
Metals										
Chromium (VI)	ug/L	<0.50	<0.50	0.50	<0.50	0.50	8546062			
Mercury (Hg)	ug/L	<0.10	<0.10	0.10	<0.10	0.10	8545637			
Dissolved Antimony (Sb)	ug/L	<0.50	<0.50	0.50	0.97	0.50	8546228			
Dissolved Arsenic (As)	ug/L	<1.0	<1.0	1.0	2.5	1.0	8546228			
Dissolved Barium (Ba)	ug/L	58	79	2.0	140	2.0	8546228			
Dissolved Beryllium (Be)	ug/L	<0.40	<0.40	0.40	<0.40	0.40	8546228			
Dissolved Boron (B)	ug/L	430	140	10	150	10	8546228			
Dissolved Cadmium (Cd)	ug/L	<0.090	<0.090	0.090	0.44	0.090	8546228			
Dissolved Chromium (Cr)	ug/L	<5.0	<5.0	5.0	<5.0	5.0	8546228			
Dissolved Cobalt (Co)	ug/L	<0.50	<0.50	0.50	1.9	0.50	8546228			
Dissolved Copper (Cu)	ug/L	<0.90	1.1	0.90	1.6	0.90	8546228			
Dissolved Lead (Pb)	ug/L	<0.50	0.51	0.50	0.72	0.50	8546228			
Dissolved Molybdenum (Mo	ug/L	4.2	5.2	0.50	52	0.50	8546228			
Dissolved Nickel (Ni)	ug/L	1.4	1.7	1.0	3.6	1.0	8546228			
Dissolved Selenium (Se)	ug/L	<2.0	4.0	2.0	6.4	2.0	8546228			
Dissolved Silver (Ag)	ug/L	<0.090	<0.090	0.090	<0.090	0.090	8546228			
Dissolved Sodium (Na)	ug/L	100000	51000	100	3200000	1000	8546228			
Dissolved Thallium (Tl)	ug/L	<0.050	<0.050	0.050	0.16	0.050	8546228			
Dissolved Uranium (U)	ug/L	3.5	5.6	0.10	34	0.10	8546228			
Dissolved Vanadium (V)	ug/L	<0.50	<0.50	0.50	<0.50	0.50	8546228			
Dissolved Zinc (Zn)	ug/L	<5.0	<5.0	5.0	<5.0	5.0	8546228			

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate

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

Bureau Veritas Job #: C367634
Report Date: 2023/03/14

Terrapex Environmental Ltd
Client Project #: CH244.00
Site Location: 120-158 QUEEN ST S, MISSISSAUGA
Your P.O. #: TPEX SO
Sampler Initials: AP

O.REG 153 METALS & INORGANICS PKG (WTR)

Bureau Veritas ID		VGD173	VGD175		
Sampling Date		2023/03/08 15:04	2023/03/08 13:21		
COC Number		924076-01-01	924076-01-01		
	UNITS	MW118 S	MW1000	RDL	QC Batch
Inorganics					
WAD Cyanide (Free)	ug/L	<1	9	1	8545716
Dissolved Chloride (Cl-)	mg/L	6300	6200	50	8546094
Metals					
Chromium (VI)	ug/L	<0.50	<0.50	0.50	8546062
Mercury (Hg)	ug/L	<0.10	<0.10	0.10	8545637
Dissolved Antimony (Sb)	ug/L	0.74	0.97	0.50	8546228
Dissolved Arsenic (As)	ug/L	<1.0	2.4	1.0	8546228
Dissolved Barium (Ba)	ug/L	80	130	2.0	8546228
Dissolved Beryllium (Be)	ug/L	<0.40	<0.40	0.40	8546228
Dissolved Boron (B)	ug/L	270	150	10	8546228
Dissolved Cadmium (Cd)	ug/L	0.48	0.48	0.090	8546228
Dissolved Chromium (Cr)	ug/L	<5.0	<5.0	5.0	8546228
Dissolved Cobalt (Co)	ug/L	5.7	1.9	0.50	8546228
Dissolved Copper (Cu)	ug/L	2.3	1.5	0.90	8546228
Dissolved Lead (Pb)	ug/L	<0.50	0.75	0.50	8546228
Dissolved Molybdenum (Mo	ug/L	93	52	0.50	8546228
Dissolved Nickel (Ni)	ug/L	12	3.6	1.0	8546228
Dissolved Selenium (Se)	ug/L	75	6.3	2.0	8546228
Dissolved Silver (Ag)	ug/L	<0.090	<0.090	0.090	8546228
Dissolved Sodium (Na)	ug/L	3400000	3200000	1000	8546228
Dissolved Thallium (Tl)	ug/L	0.25	0.16	0.050	8546228
Dissolved Uranium (U)	ug/L	59	34	0.10	8546228
Dissolved Vanadium (V)	ug/L	<0.50	0.51	0.50	8546228
Dissolved Zinc (Zn)	ug/L	<5.0	<5.0	5.0	8546228

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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

Bureau Veritas Job #: C367634
Report Date: 2023/03/14

Terrapex Environmental Ltd
Client Project #: CH244.00
Site Location: 120-158 QUEEN ST S, MISSISSAUGA
Your P.O. #: TPEX SO
Sampler Initials: AP

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

Bureau Veritas ID		VGD167	VGD168	VGD169	VGD170	VGD171	VGD172		
Sampling Date		2023/03/08 12:03	2023/03/08 11:42	2023/03/08 11:30	2023/03/08 10:26	2023/03/08 13:21	2023/03/08 14:06		
COC Number		924076-01-01	924076-01-01	924076-01-01	924076-01-01	924076-01-01	924076-01-01		
	UNITS	MW101 S	MW101 D	MW103 S	MW103 D	MW113 S	MW113 D	RDL	QC Batch
Calculated Parameters									
1,3-Dichloropropene (cis+trans)	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	0.50	8544236
Volatile Organics									
Acetone (2-Propanone)	ug/L	<10	<10	16	<10	<10	<10	10	8543489
Benzene	ug/L	<0.17	0.22	<0.17	<0.17	<0.17	<0.17	0.17	8543489
Bromodichloromethane	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	0.50	8543489
Bromoform	ug/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	1.0	8543489
Bromomethane	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	0.50	8543489
Carbon Tetrachloride	ug/L	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	0.20	8543489
Chlorobenzene	ug/L	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	0.20	8543489
Chloroform	ug/L	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	0.20	8543489
Dibromochloromethane	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	0.50	8543489
1,2-Dichlorobenzene	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	0.50	8543489
1,3-Dichlorobenzene	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	0.50	8543489
1,4-Dichlorobenzene	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	0.50	8543489
Dichlorodifluoromethane (FREON 12)	ug/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	1.0	8543489
1,1-Dichloroethane	ug/L	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	0.20	8543489
1,2-Dichloroethane	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	0.50	8543489
1,1-Dichloroethylene	ug/L	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	0.20	8543489
cis-1,2-Dichloroethylene	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	0.50	8543489
trans-1,2-Dichloroethylene	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	0.50	8543489
1,2-Dichloropropane	ug/L	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	0.20	8543489
cis-1,3-Dichloropropene	ug/L	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	0.30	8543489
trans-1,3-Dichloropropene	ug/L	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	0.40	8543489
Ethylbenzene	ug/L	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	0.20	8543489
Ethylene Dibromide	ug/L	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	0.20	8543489
Hexane	ug/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	1.0	8543489
Methylene Chloride(Dichloromethane	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	2.0	8543489
Methyl Ethyl Ketone (2-Butanone)	ug/L	<10	<10	<10	<10	<10	<10	10	8543489
Methyl Isobutyl Ketone	ug/L	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	5.0	8543489
Methyl t-butyl ether (MTBE)	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	0.50	8543489

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Bureau Veritas Job #: C367634
Report Date: 2023/03/14

Terrapex Environmental Ltd
Client Project #: CH244.00
Site Location: 120-158 QUEEN ST S, MISSISSAUGA
Your P.O. #: TPEX SO
Sampler Initials: AP

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

Bureau Veritas ID		VGD167	VGD168	VGD169	VGD170	VGD171	VGD172		
Sampling Date		2023/03/08 12:03	2023/03/08 11:42	2023/03/08 11:30	2023/03/08 10:26	2023/03/08 13:21	2023/03/08 14:06		
COC Number		924076-01-01	924076-01-01	924076-01-01	924076-01-01	924076-01-01	924076-01-01		
	UNITS	MW101 S	MW101 D	MW103 S	MW103 D	MW113 S	MW113 D	RDL	QC Batch
Styrene	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	0.50	8543489
1,1,1,2-Tetrachloroethane	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	0.50	8543489
1,1,2,2-Tetrachloroethane	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	0.50	8543489
Tetrachloroethylene	ug/L	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	0.20	8543489
Toluene	ug/L	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	0.20	8543489
1,1,1-Trichloroethane	ug/L	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	0.20	8543489
1,1,2-Trichloroethane	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	0.50	8543489
Trichloroethylene	ug/L	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	0.20	8543489
Trichlorofluoromethane (FREON 11)	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	0.50	8543489
Vinyl Chloride	ug/L	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	0.20	8543489
p+m-Xylene	ug/L	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	0.20	8543489
o-Xylene	ug/L	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	0.20	8543489
Total Xylenes	ug/L	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	0.20	8543489
F1 (C6-C10)	ug/L	<25	<25	<25	<25	<25	<25	25	8543489
F1 (C6-C10) - BTEX	ug/L	<25	<25	<25	<25	<25	<25	25	8543489
F2-F4 Hydrocarbons									
F2 (C10-C16 Hydrocarbons)	ug/L	<100	<100	<100	<100	<100	<100	100	8548089
F3 (C16-C34 Hydrocarbons)	ug/L	<200	<200	320	<200	<200	<200	200	8548089
F4 (C34-C50 Hydrocarbons)	ug/L	<200	<200	<200	<200	<200	<200	200	8548089
Reached Baseline at C50	ug/L	Yes	Yes	Yes	Yes	Yes	Yes		8548089
Surrogate Recovery (%)									
o-Terphenyl	%	99	99	98	100	98	100		8548089
4-Bromofluorobenzene	%	73	71	73	72	74	73		8543489
D4-1,2-Dichloroethane	%	117	118	115	113	120	115		8543489
D8-Toluene	%	96	98	98	99	96	98		8543489

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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

Bureau Veritas ID		VGD173	VGD174	VGD175		
Sampling Date		2023/03/08 15:04	2023/03/08 15:30	2023/03/08 13:21		
COC Number		924076-01-01	924076-01-01	924076-01-01		
	UNITS	MW118 S	MW118 D	MW1000	RDL	QC Batch
Calculated Parameters						
1,3-Dichloropropene (cis+trans)	ug/L	<0.50	<0.50	<0.50	0.50	8544557
Volatile Organics						
Acetone (2-Propanone)	ug/L	<10	<10	<10	10	8543489
Benzene	ug/L	<0.17	<0.17	<0.17	0.17	8543489
Bromodichloromethane	ug/L	<0.50	<0.50	<0.50	0.50	8543489
Bromoform	ug/L	<1.0	<1.0	<1.0	1.0	8543489
Bromomethane	ug/L	<0.50	<0.50	<0.50	0.50	8543489
Carbon Tetrachloride	ug/L	<0.20	<0.20	<0.20	0.20	8543489
Chlorobenzene	ug/L	<0.20	<0.20	<0.20	0.20	8543489
Chloroform	ug/L	<0.20	<0.20	<0.20	0.20	8543489
Dibromochloromethane	ug/L	<0.50	<0.50	<0.50	0.50	8543489
1,2-Dichlorobenzene	ug/L	<0.50	<0.50	<0.50	0.50	8543489
1,3-Dichlorobenzene	ug/L	<0.50	<0.50	<0.50	0.50	8543489
1,4-Dichlorobenzene	ug/L	<0.50	<0.50	<0.50	0.50	8543489
Dichlorodifluoromethane (FREON 12)	ug/L	<1.0	<1.0	<1.0	1.0	8543489
1,1-Dichloroethane	ug/L	<0.20	<0.20	<0.20	0.20	8543489
1,2-Dichloroethane	ug/L	<0.50	<0.50	<0.50	0.50	8543489
1,1-Dichloroethylene	ug/L	<0.20	<0.20	<0.20	0.20	8543489
cis-1,2-Dichloroethylene	ug/L	<0.50	<0.50	<0.50	0.50	8543489
trans-1,2-Dichloroethylene	ug/L	<0.50	<0.50	<0.50	0.50	8543489
1,2-Dichloropropane	ug/L	<0.20	<0.20	<0.20	0.20	8543489
cis-1,3-Dichloropropene	ug/L	<0.30	<0.30	<0.30	0.30	8543489
trans-1,3-Dichloropropene	ug/L	<0.40	<0.40	<0.40	0.40	8543489
Ethylbenzene	ug/L	<0.20	<0.20	<0.20	0.20	8543489
Ethylene Dibromide	ug/L	<0.20	<0.20	<0.20	0.20	8543489
Hexane	ug/L	<1.0	<1.0	<1.0	1.0	8543489
Methylene Chloride(Dichloromethane	ug/L	<2.0	<2.0	<2.0	2.0	8543489
Methyl Ethyl Ketone (2-Butanone)	ug/L	<10	<10	<10	10	8543489
Methyl Isobutyl Ketone	ug/L	<5.0	<5.0	<5.0	5.0	8543489
Methyl t-butyl ether (MTBE)	ug/L	<0.50	<0.50	<0.50	0.50	8543489

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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

Bureau Veritas ID		VGD173	VGD174	VGD175		
Sampling Date		2023/03/08 15:04	2023/03/08 15:30	2023/03/08 13:21		
COC Number		924076-01-01	924076-01-01	924076-01-01		
	UNITS	MW118 S	MW118 D	MW1000	RDL	QC Batch
Styrene	ug/L	<0.50	<0.50	<0.50	0.50	8543489
1,1,1,2-Tetrachloroethane	ug/L	<0.50	<0.50	<0.50	0.50	8543489
1,1,2,2-Tetrachloroethane	ug/L	<0.50	<0.50	<0.50	0.50	8543489
Tetrachloroethylene	ug/L	<0.20	<0.20	<0.20	0.20	8543489
Toluene	ug/L	<0.20	<0.20	<0.20	0.20	8543489
1,1,1-Trichloroethane	ug/L	<0.20	<0.20	<0.20	0.20	8543489
1,1,2-Trichloroethane	ug/L	<0.50	<0.50	<0.50	0.50	8543489
Trichloroethylene	ug/L	<0.20	<0.20	<0.20	0.20	8543489
Trichlorofluoromethane (FREON 11)	ug/L	<0.50	<0.50	<0.50	0.50	8543489
Vinyl Chloride	ug/L	<0.20	<0.20	<0.20	0.20	8543489
p+m-Xylene	ug/L	<0.20	<0.20	<0.20	0.20	8543489
o-Xylene	ug/L	<0.20	<0.20	<0.20	0.20	8543489
Total Xylenes	ug/L	<0.20	<0.20	<0.20	0.20	8543489
F1 (C6-C10)	ug/L	<25	<25	<25	25	8543489
F1 (C6-C10) - BTEX	ug/L	<25	<25	<25	25	8543489
F2-F4 Hydrocarbons						
F2 (C10-C16 Hydrocarbons)	ug/L	<100	<100	<100	100	8548089
F3 (C16-C34 Hydrocarbons)	ug/L	<200	<200	<200	200	8548089
F4 (C34-C50 Hydrocarbons)	ug/L	<200	<200	<200	200	8548089
Reached Baseline at C50	ug/L	Yes	Yes	Yes		8548089
Surrogate Recovery (%)						
o-Terphenyl	%	99	100	103		8548089
4-Bromofluorobenzene	%	74	74	73		8543489
D4-1,2-Dichloroethane	%	122	118	120		8543489
D8-Toluene	%	96	97	97		8543489

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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O.REG 153 VOCS BY HS (WATER)

Bureau Veritas ID		VGD176		
Sampling Date		2023/03/08		
COC Number		924076-01-01		
	UNITS	TBLK-F1BTEX/VOC-23-0209	RDL	QC Batch
Calculated Parameters				
1,3-Dichloropropene (cis+trans)	ug/L	<0.50	0.50	8544236
Volatile Organics				
Acetone (2-Propanone)	ug/L	<10	10	8545888
Benzene	ug/L	<0.20	0.20	8545888
Bromodichloromethane	ug/L	<0.50	0.50	8545888
Bromoform	ug/L	<1.0	1.0	8545888
Bromomethane	ug/L	<0.50	0.50	8545888
Carbon Tetrachloride	ug/L	<0.19	0.19	8545888
Chlorobenzene	ug/L	<0.20	0.20	8545888
Chloroform	ug/L	<0.20	0.20	8545888
Dibromochloromethane	ug/L	<0.50	0.50	8545888
1,2-Dichlorobenzene	ug/L	<0.40	0.40	8545888
1,3-Dichlorobenzene	ug/L	<0.40	0.40	8545888
1,4-Dichlorobenzene	ug/L	<0.40	0.40	8545888
Dichlorodifluoromethane (FREON 12)	ug/L	<1.0	1.0	8545888
1,1-Dichloroethane	ug/L	<0.20	0.20	8545888
1,2-Dichloroethane	ug/L	<0.49	0.49	8545888
1,1-Dichloroethylene	ug/L	<0.20	0.20	8545888
cis-1,2-Dichloroethylene	ug/L	<0.50	0.50	8545888
trans-1,2-Dichloroethylene	ug/L	<0.50	0.50	8545888
1,2-Dichloropropane	ug/L	<0.20	0.20	8545888
cis-1,3-Dichloropropene	ug/L	<0.30	0.30	8545888
trans-1,3-Dichloropropene	ug/L	<0.40	0.40	8545888
Ethylbenzene	ug/L	<0.20	0.20	8545888
Ethylene Dibromide	ug/L	<0.19	0.19	8545888
Hexane	ug/L	<1.0	1.0	8545888
Methylene Chloride(Dichloromethane	ug/L	<2.0	2.0	8545888
Methyl Ethyl Ketone (2-Butanone)	ug/L	<10	10	8545888
Methyl Isobutyl Ketone	ug/L	<5.0	5.0	8545888
Methyl t-butyl ether (MTBE)	ug/L	<0.50	0.50	8545888
Styrene	ug/L	<0.40	0.40	8545888

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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O.REG 153 VOCS BY HS (WATER)

Bureau Veritas ID		VGD176		
Sampling Date		2023/03/08		
COC Number		924076-01-01		
	UNITS	**TBLK-F1BTEX/VOC-23-0209**	**RDL**	**QC Batch**
1,1,1,2-Tetrachloroethane	ug/L	<0.50	0.50	8545888
1,1,2,2-Tetrachloroethane	ug/L	<0.40	0.40	8545888
Tetrachloroethylene	ug/L	<0.20	0.20	8545888
Toluene	ug/L	<0.20	0.20	8545888
1,1,1-Trichloroethane	ug/L	<0.20	0.20	8545888
1,1,2-Trichloroethane	ug/L	<0.40	0.40	8545888
Trichloroethylene	ug/L	<0.20	0.20	8545888
Trichlorofluoromethane (FREON 11)	ug/L	<0.50	0.50	8545888
Vinyl Chloride	ug/L	<0.20	0.20	8545888
p+m-Xylene	ug/L	<0.20	0.20	8545888
o-Xylene	ug/L	<0.20	0.20	8545888
Total Xylenes	ug/L	<0.20	0.20	8545888
Surrogate Recovery (%)				
4-Bromofluorobenzene	%	87		8545888
D4-1,2-Dichloroethane	%	121		8545888
D8-Toluene	%	95		8545888

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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TEST SUMMARY

Bureau Veritas ID: VGD167 **Collected:** 2023/03/08
Sample ID: MW101 S **Shipped:**
Matrix: Water **Received:** 2023/03/09

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
1,3-Dichloropropene Sum	CALC	8544236	N/A	2023/03/14	Automated Statchk
Chloride by Automated Colourimetry	KONE	8546094	N/A	2023/03/13	Yogesh Patel
Chromium (VI) in Water	IC	8546062	N/A	2023/03/10	Theodora Luck
Free (WAD) Cyanide	SKAL/CN	8545716	N/A	2023/03/10	Kruti Jitesh Patel
Petroleum Hydrocarbons F2-F4 in Water	GC/FID	8548089	2023/03/12	2023/03/12	Emir Danisman
Mercury	CV/AA	8545637	2023/03/10	2023/03/10	Japneet Gill
Dissolved Metals by ICPMS	ICP/MS	8546228	N/A	2023/03/13	Rupinder Gill
Volatile Organic Compounds and F1 PHCs	GC/MSFD	8543489	N/A	2023/03/14	Jett Wu

Bureau Veritas ID: VGD168 **Collected:** 2023/03/08
Sample ID: MW101 D **Shipped:**
Matrix: Water **Received:** 2023/03/09

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
1,3-Dichloropropene Sum	CALC	8544236	N/A	2023/03/14	Automated Statchk
Petroleum Hydrocarbons F2-F4 in Water	GC/FID	8548089	2023/03/12	2023/03/13	Emir Danisman
Volatile Organic Compounds and F1 PHCs	GC/MSFD	8543489	N/A	2023/03/14	Jett Wu

Bureau Veritas ID: VGD169 **Collected:** 2023/03/08
Sample ID: MW103 S **Shipped:**
Matrix: Water **Received:** 2023/03/09

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
1,3-Dichloropropene Sum	CALC	8544236	N/A	2023/03/14	Automated Statchk
Chloride by Automated Colourimetry	KONE	8546094	N/A	2023/03/13	Yogesh Patel
Chromium (VI) in Water	IC	8546062	N/A	2023/03/10	Theodora Luck
Free (WAD) Cyanide	SKAL/CN	8545716	N/A	2023/03/10	Kruti Jitesh Patel
Petroleum Hydrocarbons F2-F4 in Water	GC/FID	8548089	2023/03/12	2023/03/13	Emir Danisman
Mercury	CV/AA	8545637	2023/03/10	2023/03/10	Japneet Gill
Dissolved Metals by ICPMS	ICP/MS	8546228	N/A	2023/03/13	Rupinder Gill
Volatile Organic Compounds and F1 PHCs	GC/MSFD	8543489	N/A	2023/03/14	Jett Wu

Bureau Veritas ID: VGD170 **Collected:** 2023/03/08
Sample ID: MW103 D **Shipped:**
Matrix: Water **Received:** 2023/03/09

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
1,3-Dichloropropene Sum	CALC	8544236	N/A	2023/03/14	Automated Statchk
Petroleum Hydrocarbons F2-F4 in Water	GC/FID	8548089	2023/03/12	2023/03/13	Emir Danisman
Volatile Organic Compounds and F1 PHCs	GC/MSFD	8543489	N/A	2023/03/14	Jett Wu

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Bureau Veritas Job #: C367634
Report Date: 2023/03/14

Terrapex Environmental Ltd
Client Project #: CH244.00
Site Location: 120-158 QUEEN ST S, MISSISSAUGA
Your P.O. #: TPEX SO
Sampler Initials: AP

TEST SUMMARY

Bureau Veritas ID: VGD171
Sample ID: MW113 S
Matrix: Water

Collected: 2023/03/08
Shipped:
Received: 2023/03/09

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
1,3-Dichloropropene Sum	CALC	8544236	N/A	2023/03/14	Automated Statchk
Chloride by Automated Colourimetry	KONE	8546094	N/A	2023/03/13	Yogesh Patel
Chromium (VI) in Water	IC	8546062	N/A	2023/03/10	Theodora Luck
Free (WAD) Cyanide	SKAL/CN	8545716	N/A	2023/03/10	Kruti Jitesh Patel
Petroleum Hydrocarbons F2-F4 in Water	GC/FID	8548089	2023/03/12	2023/03/13	Emir Danisman
Mercury	CV/AA	8545637	2023/03/10	2023/03/10	Japneet Gill
Dissolved Metals by ICPMS	ICP/MS	8546228	N/A	2023/03/13	Rupinder Gill
Volatile Organic Compounds and F1 PHCs	GC/MSFD	8543489	N/A	2023/03/14	Jett Wu

Bureau Veritas ID: VGD171 Dup
Sample ID: MW113 S
Matrix: Water

Collected: 2023/03/08
Shipped:
Received: 2023/03/09

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Free (WAD) Cyanide	SKAL/CN	8545716	N/A	2023/03/10	Kruti Jitesh Patel

Bureau Veritas ID: VGD172
Sample ID: MW113 D
Matrix: Water

Collected: 2023/03/08
Shipped:
Received: 2023/03/09

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
1,3-Dichloropropene Sum	CALC	8544236	N/A	2023/03/14	Automated Statchk
Petroleum Hydrocarbons F2-F4 in Water	GC/FID	8548089	2023/03/12	2023/03/13	Emir Danisman
Volatile Organic Compounds and F1 PHCs	GC/MSFD	8543489	N/A	2023/03/14	Jett Wu

Bureau Veritas ID: VGD173
Sample ID: MW118 S
Matrix: Water

Collected: 2023/03/08
Shipped:
Received: 2023/03/09

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
1,3-Dichloropropene Sum	CALC	8544557	N/A	2023/03/14	Automated Statchk
Chloride by Automated Colourimetry	KONE	8546094	N/A	2023/03/13	Yogesh Patel
Chromium (VI) in Water	IC	8546062	N/A	2023/03/10	Theodora Luck
Free (WAD) Cyanide	SKAL/CN	8545716	N/A	2023/03/10	Kruti Jitesh Patel
Petroleum Hydrocarbons F2-F4 in Water	GC/FID	8548089	2023/03/12	2023/03/13	Emir Danisman
Mercury	CV/AA	8545637	2023/03/10	2023/03/10	Japneet Gill
Dissolved Metals by ICPMS	ICP/MS	8546228	N/A	2023/03/13	Rupinder Gill
Volatile Organic Compounds and F1 PHCs	GC/MSFD	8543489	N/A	2023/03/14	Jett Wu

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Bureau Veritas Job #: C367634
Report Date: 2023/03/14

Terrapex Environmental Ltd
Client Project #: CH244.00
Site Location: 120-158 QUEEN ST S, MISSISSAUGA
Your P.O. #: TPEX SO
Sampler Initials: AP

TEST SUMMARY

Bureau Veritas ID: VGD174
Sample ID: MW118 D
Matrix: Water

Collected: 2023/03/08
Shipped:
Received: 2023/03/09

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
1,3-Dichloropropene Sum	CALC	8544557	N/A	2023/03/14	Automated Statchk
Petroleum Hydrocarbons F2-F4 in Water	GC/FID	8548089	2023/03/12	2023/03/13	Emir Danisman
Volatile Organic Compounds and F1 PHCs	GC/MSFD	8543489	N/A	2023/03/14	Jett Wu

Bureau Veritas ID: VGD175
Sample ID: MW1000
Matrix: Water

Collected: 2023/03/08
Shipped:
Received: 2023/03/09

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
1,3-Dichloropropene Sum	CALC	8544557	N/A	2023/03/14	Automated Statchk
Chloride by Automated Colourimetry	KONE	8546094	N/A	2023/03/13	Yogesh Patel
Chromium (VI) in Water	IC	8546062	N/A	2023/03/10	Theodora Luck
Free (WAD) Cyanide	SKAL/CN	8545716	N/A	2023/03/10	Kruti Jitesh Patel
Petroleum Hydrocarbons F2-F4 in Water	GC/FID	8548089	2023/03/12	2023/03/13	Emir Danisman
Mercury	CV/AA	8545637	2023/03/10	2023/03/10	Japneet Gill
Dissolved Metals by ICPMS	ICP/MS	8546228	N/A	2023/03/13	Rupinder Gill
Volatile Organic Compounds and F1 PHCs	GC/MSFD	8543489	N/A	2023/03/14	Jett Wu

Bureau Veritas ID: VGD176
Sample ID: TBLK-F1BTEX/VOC-23-0209
Matrix: Water

Collected: 2023/03/08
Shipped:
Received: 2023/03/09

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
1,3-Dichloropropene Sum	CALC	8544236	N/A	2023/03/14	Automated Statchk
Volatile Organic Compounds in Water	GC/MS	8545888	N/A	2023/03/13	Karen Hughes

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GENERAL COMMENTS

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

Package 1	4.0°C

Results relate only to the items tested.

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QUALITY ASSURANCE REPORT

			Matrix Spike		SPIKED BLANK		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8543489	4-Bromofluorobenzene	2023/03/13	93	70 - 130	92	70 - 130	77	%		
8543489	D4-1,2-Dichloroethane	2023/03/13	104	70 - 130	105	70 - 130	110	%		
8543489	D8-Toluene	2023/03/13	104	70 - 130	107	70 - 130	96	%		
8545888	4-Bromofluorobenzene	2023/03/13	96	70 - 130	96	70 - 130	91	%		
8545888	D4-1,2-Dichloroethane	2023/03/13	115	70 - 130	109	70 - 130	108	%		
8545888	D8-Toluene	2023/03/13	100	70 - 130	104	70 - 130	99	%		
8548089	o-Terphenyl	2023/03/12	102	60 - 130	101	60 - 130	102	%		
8543489	1,1,1,2-Tetrachloroethane	2023/03/13	111	70 - 130	105	70 - 130	<0.50	ug/L	NC	30
8543489	1,1,1-Trichloroethane	2023/03/13	102	70 - 130	101	70 - 130	<0.20	ug/L	NC	30
8543489	1,1,2,2-Tetrachloroethane	2023/03/13	105	70 - 130	96	70 - 130	<0.50	ug/L	NC	30
8543489	1,1,2-Trichloroethane	2023/03/13	115	70 - 130	106	70 - 130	<0.50	ug/L	NC	30
8543489	1,1-Dichloroethane	2023/03/13	102	70 - 130	101	70 - 130	<0.20	ug/L	NC	30
8543489	1,1-Dichloroethylene	2023/03/13	96	70 - 130	96	70 - 130	<0.20	ug/L	NC	30
8543489	1,2-Dichlorobenzene	2023/03/13	106	70 - 130	99	70 - 130	<0.50	ug/L	NC	30
8543489	1,2-Dichloroethane	2023/03/13	98	70 - 130	92	70 - 130	<0.50	ug/L	NC	30
8543489	1,2-Dichloropropane	2023/03/13	107	70 - 130	99	70 - 130	<0.20	ug/L	NC	30
8543489	1,3-Dichlorobenzene	2023/03/13	106	70 - 130	100	70 - 130	<0.50	ug/L	NC	30
8543489	1,4-Dichlorobenzene	2023/03/13	115	70 - 130	108	70 - 130	<0.50	ug/L	NC	30
8543489	Acetone (2-Propanone)	2023/03/13	100	60 - 140	95	60 - 140	<10	ug/L	5.9	30
8543489	Benzene	2023/03/13	96	70 - 130	92	70 - 130	<0.17	ug/L	NC	30
8543489	Bromodichloromethane	2023/03/13	109	70 - 130	100	70 - 130	<0.50	ug/L	NC	30
8543489	Bromoform	2023/03/13	105	70 - 130	94	70 - 130	<1.0	ug/L	NC	30
8543489	Bromomethane	2023/03/13	95	60 - 140	88	60 - 140	<0.50	ug/L	NC	30
8543489	Carbon Tetrachloride	2023/03/13	101	70 - 130	101	70 - 130	<0.20	ug/L	NC	30
8543489	Chlorobenzene	2023/03/13	104	70 - 130	97	70 - 130	<0.20	ug/L	NC	30
8543489	Chloroform	2023/03/13	101	70 - 130	96	70 - 130	<0.20	ug/L	NC	30
8543489	cis-1,2-Dichloroethylene	2023/03/13	100	70 - 130	95	70 - 130	<0.50	ug/L	NC	30
8543489	cis-1,3-Dichloropropene	2023/03/13	95	70 - 130	79	70 - 130	<0.30	ug/L	NC	30
8543489	Dibromochloromethane	2023/03/13	104	70 - 130	95	70 - 130	<0.50	ug/L	NC	30
8543489	Dichlorodifluoromethane (FREON 12)	2023/03/13	103	60 - 140	86	60 - 140	<1.0	ug/L	NC	30

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QUALITY ASSURANCE REPORT(CONT'D)

			Matrix Spike		SPIKED BLANK		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8543489	Ethylbenzene	2023/03/13	91	70 - 130	86	70 - 130	<0.20	ug/L	NC	30
8543489	Ethylene Dibromide	2023/03/13	100	70 - 130	90	70 - 130	<0.20	ug/L	NC	30
8543489	F1 (C6-C10) - BTEX	2023/03/13					<25	ug/L	NC	30
8543489	F1 (C6-C10)	2023/03/13	97	60 - 140	92	60 - 140	<25	ug/L	NC	30
8543489	Hexane	2023/03/13	105	70 - 130	102	70 - 130	<1.0	ug/L	NC	30
8543489	Methyl Ethyl Ketone (2-Butanone)	2023/03/13	104	60 - 140	93	60 - 140	<10	ug/L	NC	30
8543489	Methyl Isobutyl Ketone	2023/03/13	102	70 - 130	90	70 - 130	<5.0	ug/L	NC	30
8543489	Methyl t-butyl ether (MTBE)	2023/03/13	84	70 - 130	81	70 - 130	<0.50	ug/L	NC	30
8543489	Methylene Chloride(Dichloromethane)	2023/03/13	106	70 - 130	102	70 - 130	<2.0	ug/L	NC	30
8543489	o-Xylene	2023/03/13	92	70 - 130	87	70 - 130	<0.20	ug/L	NC	30
8543489	p+m-Xylene	2023/03/13	92	70 - 130	86	70 - 130	<0.20	ug/L	NC	30
8543489	Styrene	2023/03/13	100	70 - 130	92	70 - 130	<0.50	ug/L	NC	30
8543489	Tetrachloroethylene	2023/03/13	96	70 - 130	94	70 - 130	<0.20	ug/L	NC	30
8543489	Toluene	2023/03/13	98	70 - 130	94	70 - 130	<0.20	ug/L	3.8	30
8543489	Total Xylenes	2023/03/13					<0.20	ug/L	NC	30
8543489	trans-1,2-Dichloroethylene	2023/03/13	101	70 - 130	99	70 - 130	<0.50	ug/L	NC	30
8543489	trans-1,3-Dichloropropene	2023/03/13	103	70 - 130	86	70 - 130	<0.40	ug/L	NC	30
8543489	Trichloroethylene	2023/03/13	102	70 - 130	98	70 - 130	<0.20	ug/L	NC	30
8543489	Trichlorofluoromethane (FREON 11)	2023/03/13	93	70 - 130	93	70 - 130	<0.50	ug/L	NC	30
8543489	Vinyl Chloride	2023/03/13	95	70 - 130	91	70 - 130	<0.20	ug/L	NC	30
8545637	Mercury (Hg)	2023/03/10	101	75 - 125	106	80 - 120	<0.10	ug/L	NC	20
8545716	WAD Cyanide (Free)	2023/03/10	98	80 - 120	96	80 - 120	<1	ug/L	1.8	20
8545888	1,1,1,2-Tetrachloroethane	2023/03/13	92	70 - 130	101	70 - 130	<0.50	ug/L	NC	30
8545888	1,1,1-Trichloroethane	2023/03/13	88	70 - 130	96	70 - 130	<0.20	ug/L	NC	30
8545888	1,1,2,2-Tetrachloroethane	2023/03/13	106	70 - 130	110	70 - 130	<0.40	ug/L	NC	30
8545888	1,1,2-Trichloroethane	2023/03/13	109	70 - 130	114	70 - 130	<0.40	ug/L	NC	30
8545888	1,1-Dichloroethane	2023/03/13	93	70 - 130	98	70 - 130	<0.20	ug/L	NC	30
8545888	1,1-Dichloroethylene	2023/03/13	91	70 - 130	98	70 - 130	<0.20	ug/L	NC	30
8545888	1,2-Dichlorobenzene	2023/03/13	89	70 - 130	98	70 - 130	<0.40	ug/L	NC	30
8545888	1,2-Dichloroethane	2023/03/13	100	70 - 130	100	70 - 130	<0.49	ug/L	NC	30

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QUALITY ASSURANCE REPORT(CONT'D)

			Matrix Spike		SPIKED BLANK		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8545888	1,2-Dichloropropane	2023/03/13	97	70 - 130	101	70 - 130	<0.20	ug/L	NC	30
8545888	1,3-Dichlorobenzene	2023/03/13	84	70 - 130	95	70 - 130	<0.40	ug/L	NC	30
8545888	1,4-Dichlorobenzene	2023/03/13	97	70 - 130	108	70 - 130	<0.40	ug/L	NC	30
8545888	Acetone (2-Propanone)	2023/03/13	128	60 - 140	124	60 - 140	<10	ug/L	NC	30
8545888	Benzene	2023/03/13	86	70 - 130	90	70 - 130	<0.20	ug/L	NC	30
8545888	Bromodichloromethane	2023/03/13	98	70 - 130	102	70 - 130	<0.50	ug/L	NC	30
8545888	Bromoform	2023/03/13	98	70 - 130	102	70 - 130	<1.0	ug/L	NC	30
8545888	Bromomethane	2023/03/13	89	60 - 140	93	60 - 140	<0.50	ug/L	NC	30
8545888	Carbon Tetrachloride	2023/03/13	85	70 - 130	92	70 - 130	<0.19	ug/L	NC	30
8545888	Chlorobenzene	2023/03/13	90	70 - 130	98	70 - 130	<0.20	ug/L	NC	30
8545888	Chloroform	2023/03/13	93	70 - 130	97	70 - 130	<0.20	ug/L	NC	30
8545888	cis-1,2-Dichloroethylene	2023/03/13	98	70 - 130	101	70 - 130	<0.50	ug/L	NC	30
8545888	cis-1,3-Dichloropropene	2023/03/13	94	70 - 130	95	70 - 130	<0.30	ug/L	NC	30
8545888	Dibromochloromethane	2023/03/13	94	70 - 130	100	70 - 130	<0.50	ug/L	NC	30
8545888	Dichlorodifluoromethane (FREON 12)	2023/03/13	86	60 - 140	94	60 - 140	<1.0	ug/L	NC	30
8545888	Ethylbenzene	2023/03/13	80	70 - 130	89	70 - 130	<0.20	ug/L	NC	30
8545888	Ethylene Dibromide	2023/03/13	93	70 - 130	96	70 - 130	<0.19	ug/L	NC	30
8545888	Hexane	2023/03/13	87	70 - 130	95	70 - 130	<1.0	ug/L	NC	30
8545888	Methyl Ethyl Ketone (2-Butanone)	2023/03/13	133	60 - 140	128	60 - 140	<10	ug/L	NC	30
8545888	Methyl Isobutyl Ketone	2023/03/13	113	70 - 130	110	70 - 130	<5.0	ug/L	NC	30
8545888	Methyl t-butyl ether (MTBE)	2023/03/13	84	70 - 130	86	70 - 130	<0.50	ug/L	NC	30
8545888	Methylene Chloride(Dichloromethane)	2023/03/13	96	70 - 130	98	70 - 130	<2.0	ug/L	NC	30
8545888	o-Xylene	2023/03/13	79	70 - 130	91	70 - 130	<0.20	ug/L	NC	30
8545888	p+m-Xylene	2023/03/13	82	70 - 130	92	70 - 130	<0.20	ug/L	NC	30
8545888	Styrene	2023/03/13	91	70 - 130	102	70 - 130	<0.40	ug/L	NC	30
8545888	Tetrachloroethylene	2023/03/13	79	70 - 130	89	70 - 130	<0.20	ug/L	NC	30
8545888	Toluene	2023/03/13	86	70 - 130	96	70 - 130	<0.20	ug/L	NC	30
8545888	Total Xylenes	2023/03/13					<0.20	ug/L	NC	30
8545888	trans-1,2-Dichloroethylene	2023/03/13	96	70 - 130	101	70 - 130	<0.50	ug/L	NC	30
8545888	trans-1,3-Dichloropropene	2023/03/13	112	70 - 130	113	70 - 130	<0.40	ug/L	NC	30

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QUALITY ASSURANCE REPORT(CONT'D)

			Matrix Spike		SPIKED BLANK		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8545888	Trichloroethylene	2023/03/13	90	70 - 130	96	70 - 130	<0.20	ug/L	NC	30
8545888	Trichlorofluoromethane (FREON 11)	2023/03/13	83	70 - 130	91	70 - 130	<0.50	ug/L	NC	30
8545888	Vinyl Chloride	2023/03/13	81	70 - 130	87	70 - 130	<0.20	ug/L	NC	30
8546062	Chromium (VI)	2023/03/10	103	80 - 120	104	80 - 120	<0.50	ug/L	NC	20
8546094	Dissolved Chloride (Cl-)	2023/03/13	NC	80 - 120	100	80 - 120	<1.0	mg/L	2.6	20
8546228	Dissolved Antimony (Sb)	2023/03/13	113	80 - 120	104	80 - 120	<0.50	ug/L	6.1	20
8546228	Dissolved Arsenic (As)	2023/03/13	107	80 - 120	99	80 - 120	<1.0	ug/L	NC	20
8546228	Dissolved Barium (Ba)	2023/03/13	109	80 - 120	102	80 - 120	<2.0	ug/L	8.5	20
8546228	Dissolved Beryllium (Be)	2023/03/13	107	80 - 120	99	80 - 120	<0.40	ug/L	NC	20
8546228	Dissolved Boron (B)	2023/03/13	104	80 - 120	97	80 - 120	<10	ug/L	9.0	20
8546228	Dissolved Cadmium (Cd)	2023/03/13	108	80 - 120	101	80 - 120	<0.090	ug/L	NC	20
8546228	Dissolved Chromium (Cr)	2023/03/13	101	80 - 120	97	80 - 120	<5.0	ug/L	8.0	20
8546228	Dissolved Cobalt (Co)	2023/03/13	105	80 - 120	100	80 - 120	<0.50	ug/L	NC	20
8546228	Dissolved Copper (Cu)	2023/03/13	115	80 - 120	106	80 - 120	<0.90	ug/L	8.9	20
8546228	Dissolved Lead (Pb)	2023/03/13	103	80 - 120	98	80 - 120	<0.50	ug/L	NC	20
8546228	Dissolved Molybdenum (Mo)	2023/03/13	112	80 - 120	104	80 - 120	<0.50	ug/L	7.0	20
8546228	Dissolved Nickel (Ni)	2023/03/13	102	80 - 120	97	80 - 120	<1.0	ug/L	NC	20
8546228	Dissolved Selenium (Se)	2023/03/13	108	80 - 120	100	80 - 120	<2.0	ug/L	NC	20
8546228	Dissolved Silver (Ag)	2023/03/13	100	80 - 120	96	80 - 120	<0.090	ug/L	NC	20
8546228	Dissolved Sodium (Na)	2023/03/13	NC	80 - 120	105	80 - 120	<100	ug/L	8.2	20
8546228	Dissolved Thallium (Tl)	2023/03/13	102	80 - 120	102	80 - 120	<0.050	ug/L	NC	20
8546228	Dissolved Uranium (U)	2023/03/13	105	80 - 120	97	80 - 120	<0.10	ug/L	9.5	20
8546228	Dissolved Vanadium (V)	2023/03/13	104	80 - 120	98	80 - 120	<0.50	ug/L	5.0	20
8546228	Dissolved Zinc (Zn)	2023/03/13	105	80 - 120	99	80 - 120	<5.0	ug/L	NC	20
8548089	F2 (C10-C16 Hydrocarbons)	2023/03/12	102	60 - 130	94	60 - 130	<100	ug/L	NC	30
8548089	F3 (C16-C34 Hydrocarbons)	2023/03/12	110	60 - 130	108	60 - 130	<200	ug/L	NC	30

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QUALITY ASSURANCE REPORT(CONT'D)

			Matrix Spike		SPIKED BLANK		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8548089	F4 (C34-C50 Hydrocarbons)	2023/03/12	110	60 - 130	110	60 - 130	<200	ug/L	NC	30

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

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

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

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

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

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

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

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VALIDATION SIGNATURE PAGE

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

Cristina Carriere

Cristina Carriere, Senior Scientific Specialist

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

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CH

09-Mar-23 15:34
Kudrat Bajwa
C367634

Page 1 of 1

INVOICE TO:		REPORT TO:		PROJECT INFORMATION:		
Company Name:	#4398 Terrapex Environmental Ltd	Company Name:		Quotation #:	C25103	le Order #:
Attention:	Accounts Payable	Attention:	Geoff Lussier	P.O. #:	TPEX 50	
Address:	90 Scarsdale Rd Toronto ON M3B 2R7	Address:		Project:	CH244.00	MUM ENV-615
Tel:	(416) 245-0011 Fax: (416) 245-0012	Tel:	(647) 250-8231 Fax:	Project Name:	120-158 Queen st. South Mississanga	924076
Email:	accounts.payable@terrapex.com	Email:	g.lussier@terrapex.com	Site #:		COC #: / Project Manager:
				Sampled By:	AP/KP	C#924076-01-01 / Kudrat Bajwa

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

Regulation 153 (2011)
- [ ] Table 1 [ ] Res/Park [ ] Medium/Fine
- [X] Table 2 [X] Ind/Comm [ ] Coarse
- [ ] Table 3 [ ] Agri/Other [X] For RSC
- [ ] Table ___

Other Regulations
- [ ] CCME [ ] Sanitary Sewer Bylaw
- [ ] Reg 558 [ ] Storm Sewer Bylaw
- [ ] MISA Municipality ____
- [ ] PWQO [ ] Reg 406 Table ____
- [ ] Other ____

Special Instructions

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

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

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

Job Specific Rush TAT (if applies to entire submission)
Date Required: ____ Time Required: ____ [ ]
Rush Confirmation Number: ____ *(call lab for #)*

	Sample Barcode Label	Sample (Location) Identification	Date Sampled	Time Sampled	Matrix	Field Filtered (please circle): Metals / Hg / Cr VI	O.Reg 153 VOCs by HS & F1-F4	O.Reg 153 Metals & Inorganics Pkg	Reg 153 VOCs	# of Bottles	Comments
1		MW101S	March 8/23	12:03	GW	Y	X	X		9	
2		MW101D		11:42		N	X			4	
3		MW103S		11:30		Y	X	X		9	
4		MW103D		10:26		N	X			4	
5		MW113S		13:21		Y	X	X		9	
6		MW113D		14:06		N	X			4	
7		MW118S		15:04		Y	X	X		9	
8		MW118D		15:30		N	X			4	
9		MW1000		13:21		Y	X	X		9	
10		TBLK-ABTEX/VOC-23-0209		—		N	X		X	2	

* RELINQUISHED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	RECEIVED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	# jars used and not submitted
Alex Parniak AP	23/03/09	9:15	Rupinder / RUPINDER	2023/03/09	15:24	0

Laboratory Use Only

Time Sensitive	Temperature (°C) on Recei	Custody Seal	Yes	No
	5/3/4	Present		
		Intact	E	

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

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

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

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

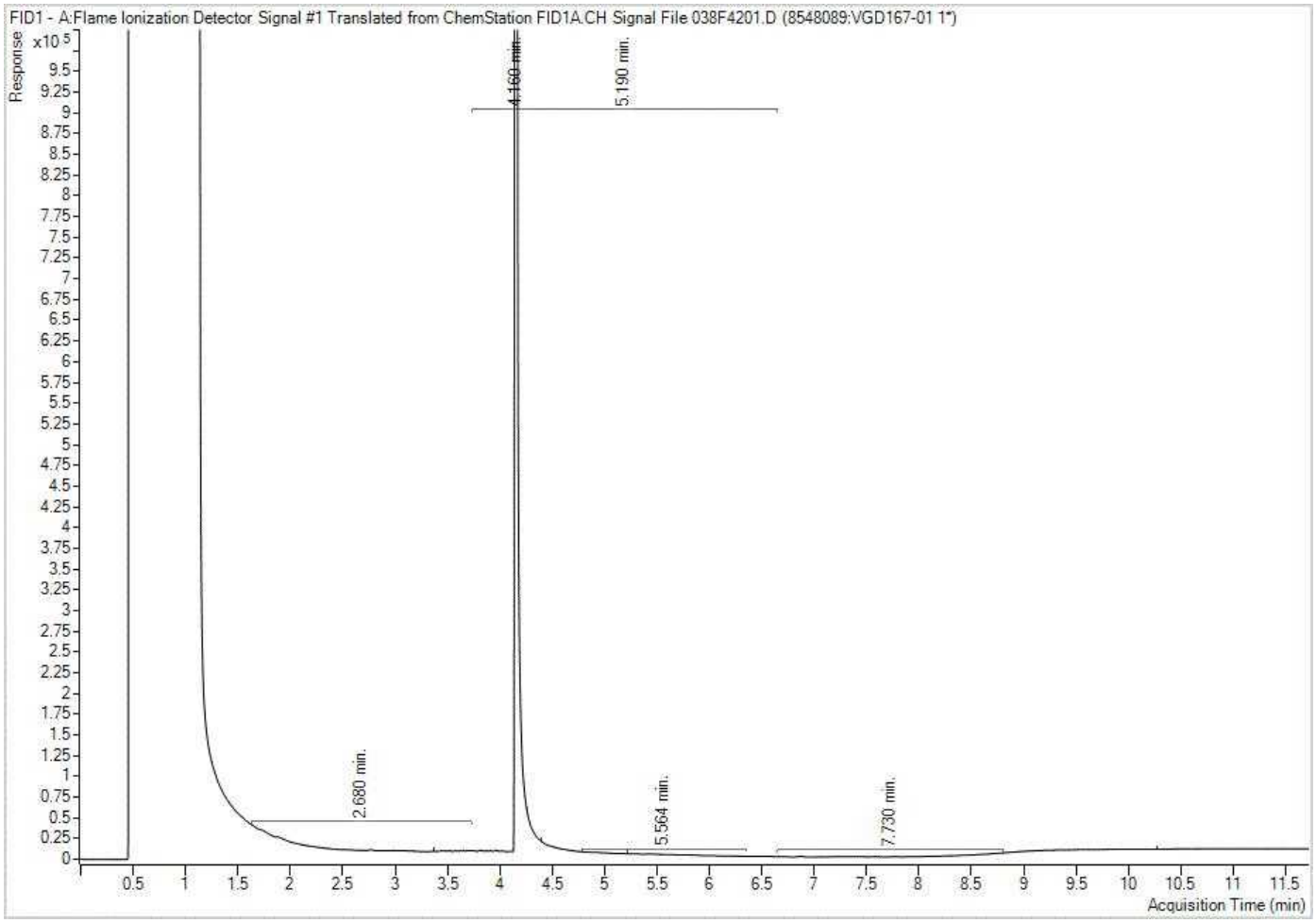
White: Bureau Veritas Yellow: Client

Bureau Veritas Canada (2019) Inc.

Bureau Veritas Job #: C367634
Report Date: 2023/03/14
Bureau Veritas Sample: VGD167

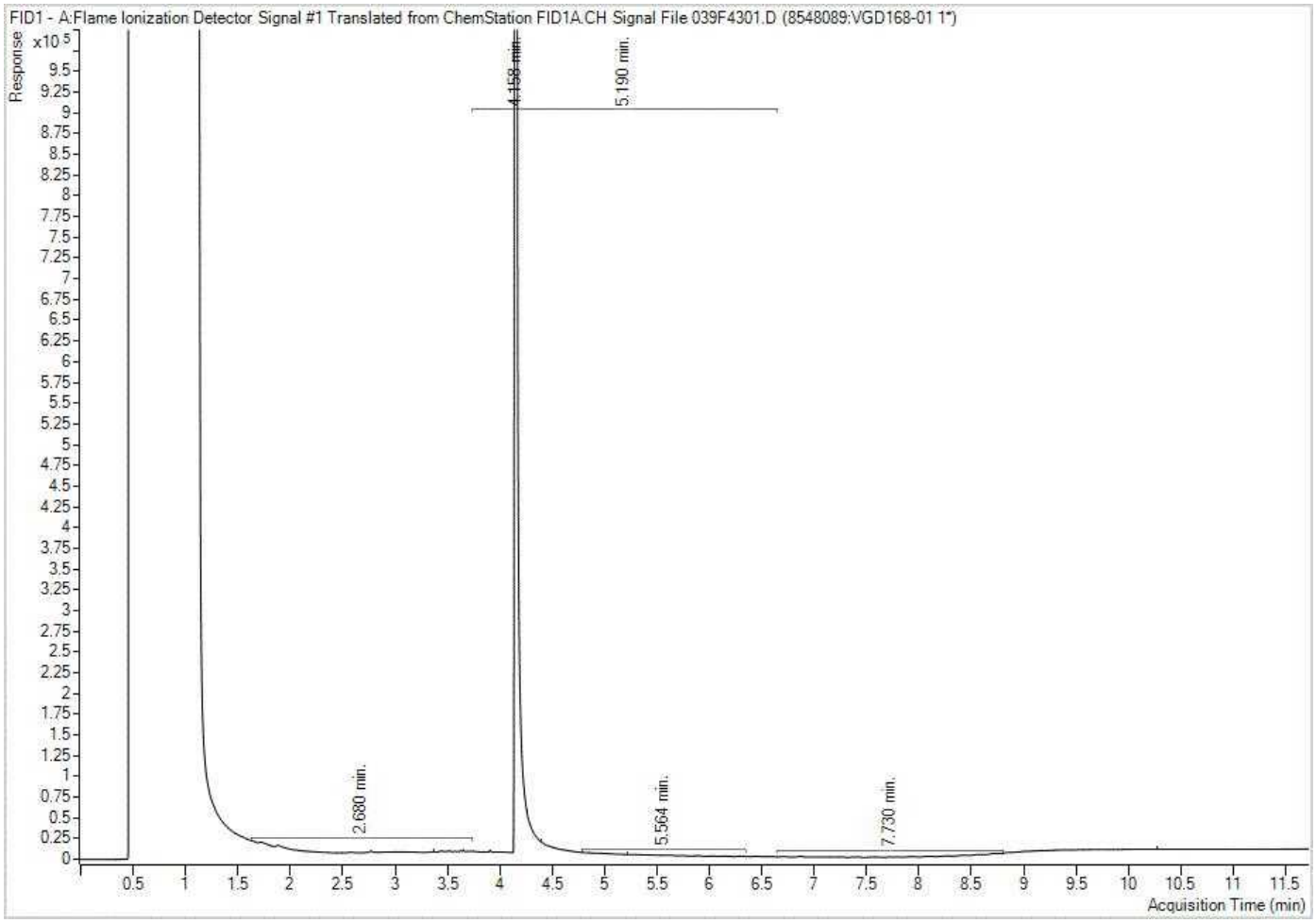
Terrapex Environmental Ltd
Client Project #: CH244.00
Project name: 120-158 QUEEN ST S, MISSISSAUGA
Client ID: MW101 S

Petroleum Hydrocarbons F2-F4 in Water Chromatogram



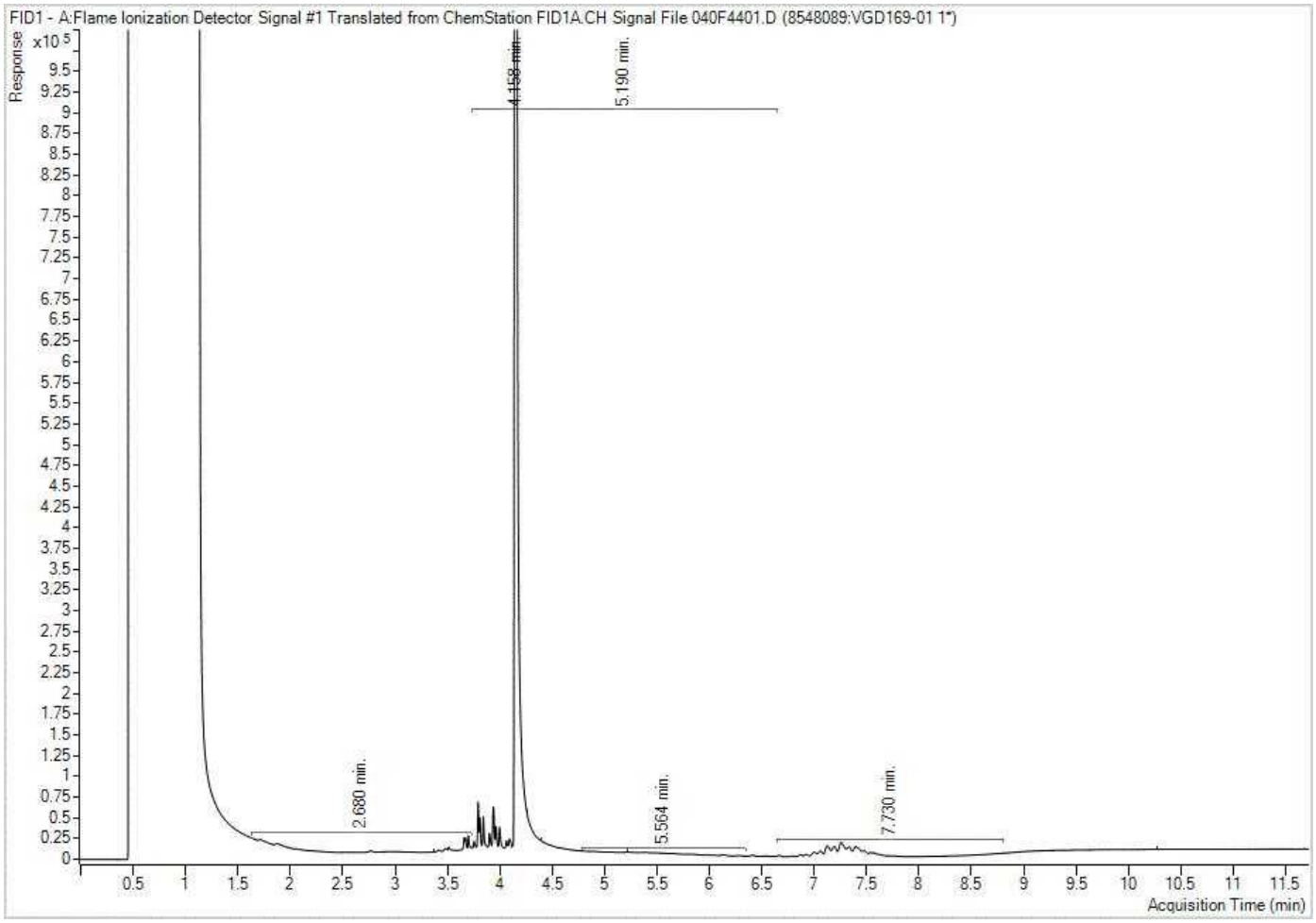
Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Petroleum Hydrocarbons F2-F4 in Water Chromatogram



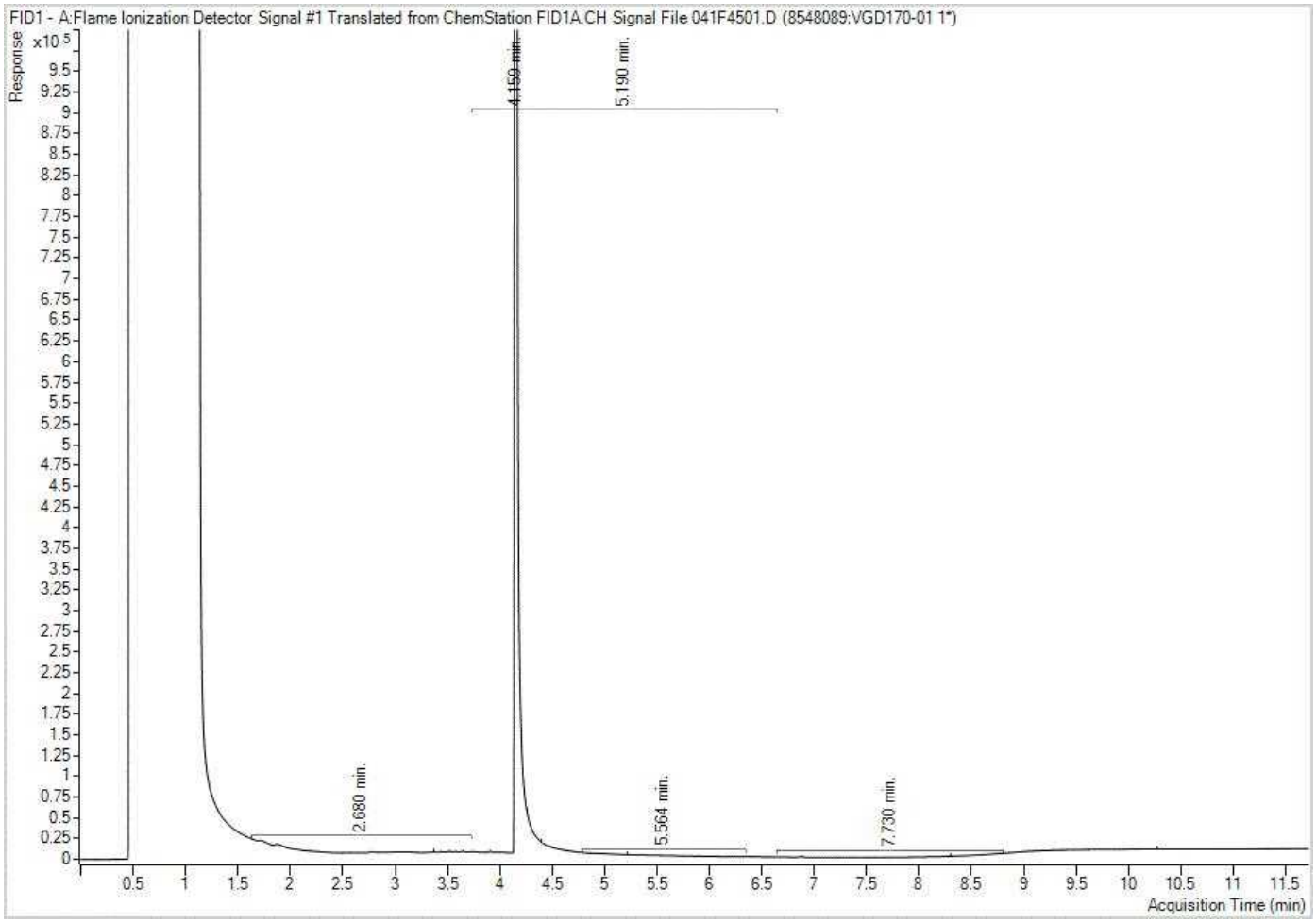
Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Petroleum Hydrocarbons F2-F4 in Water Chromatogram



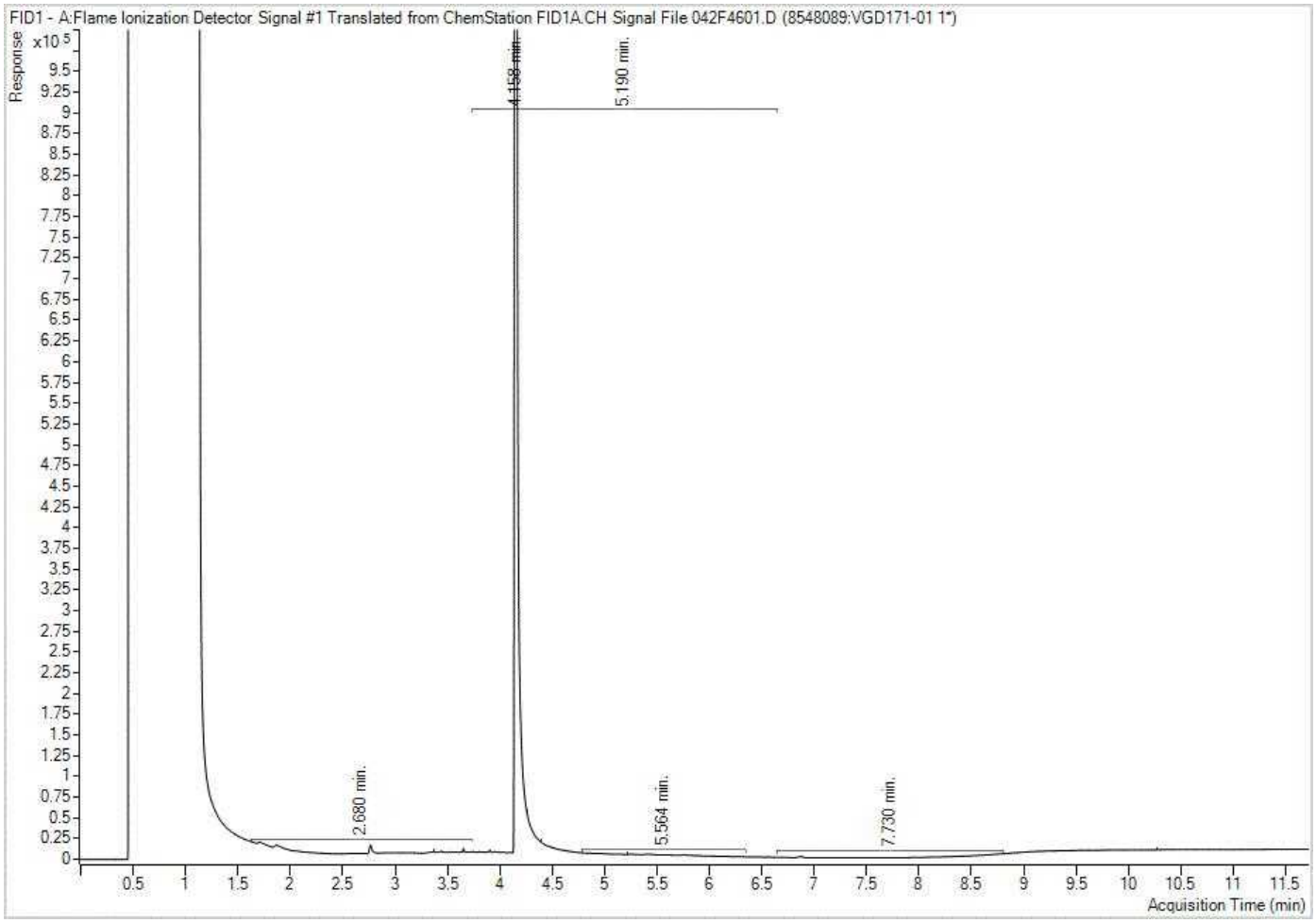
Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Petroleum Hydrocarbons F2-F4 in Water Chromatogram



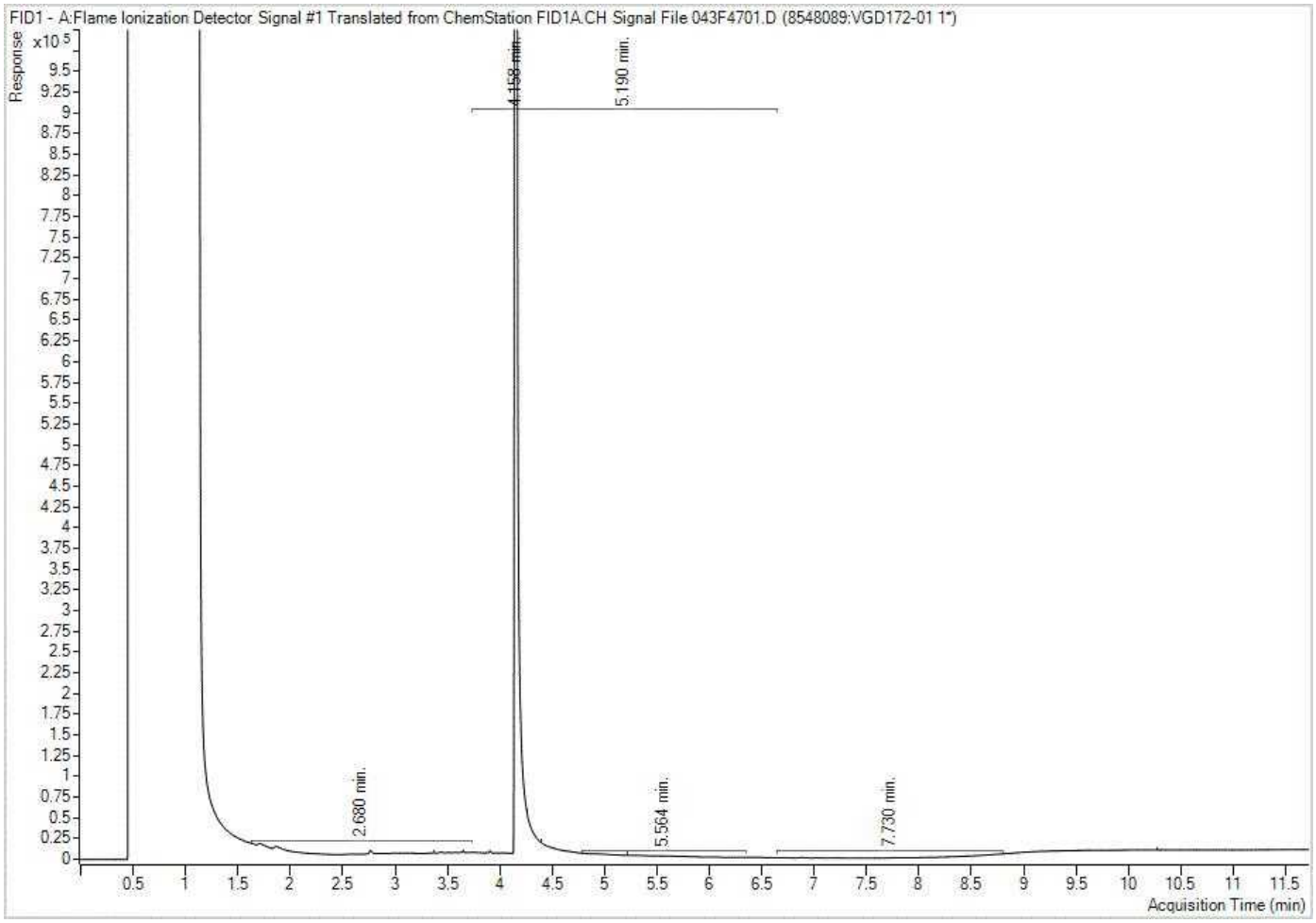
Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Petroleum Hydrocarbons F2-F4 in Water Chromatogram



Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Petroleum Hydrocarbons F2-F4 in Water Chromatogram

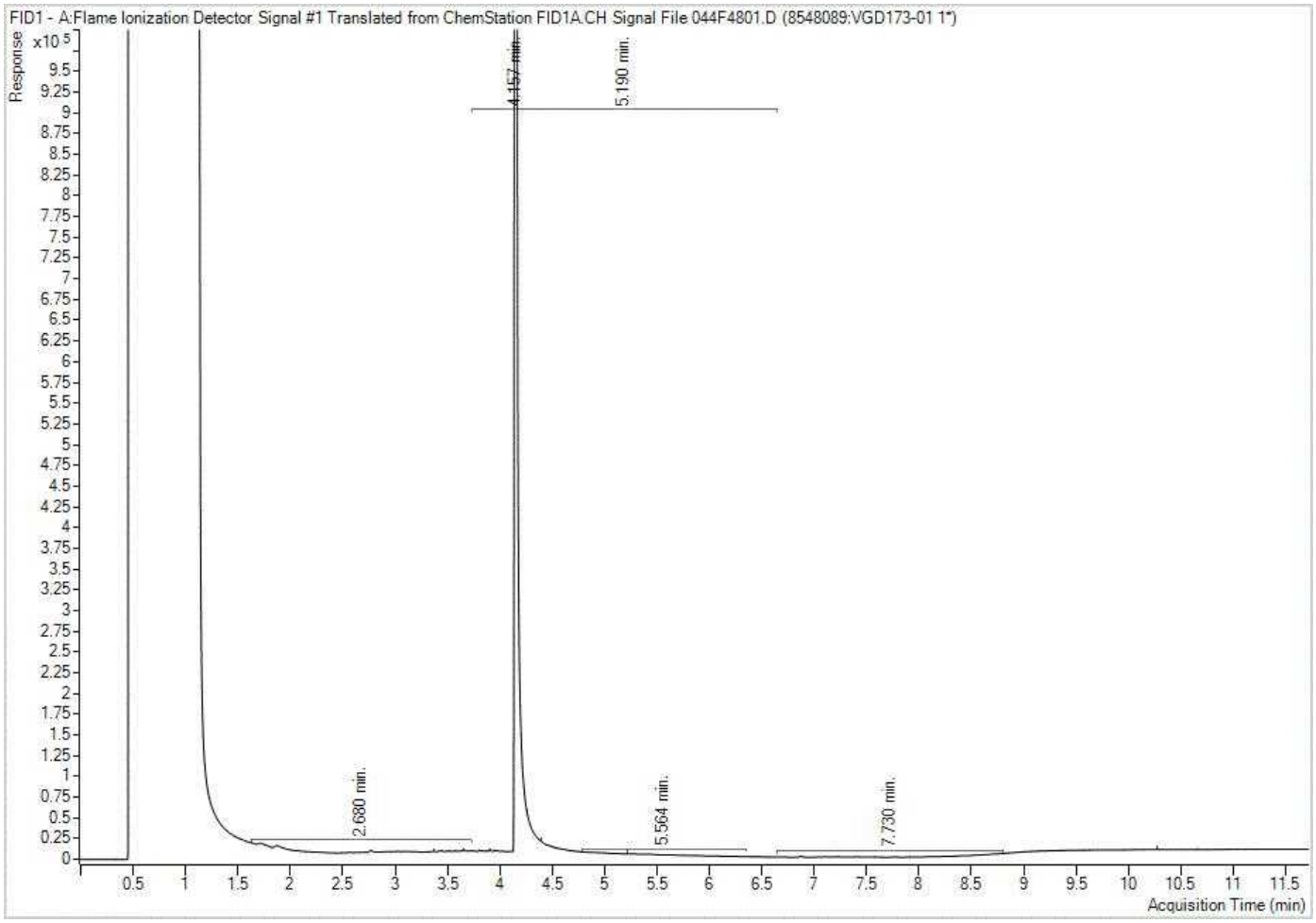


Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Bureau Veritas Job #: C367634
Report Date: 2023/03/14
Bureau Veritas Sample: VGD173

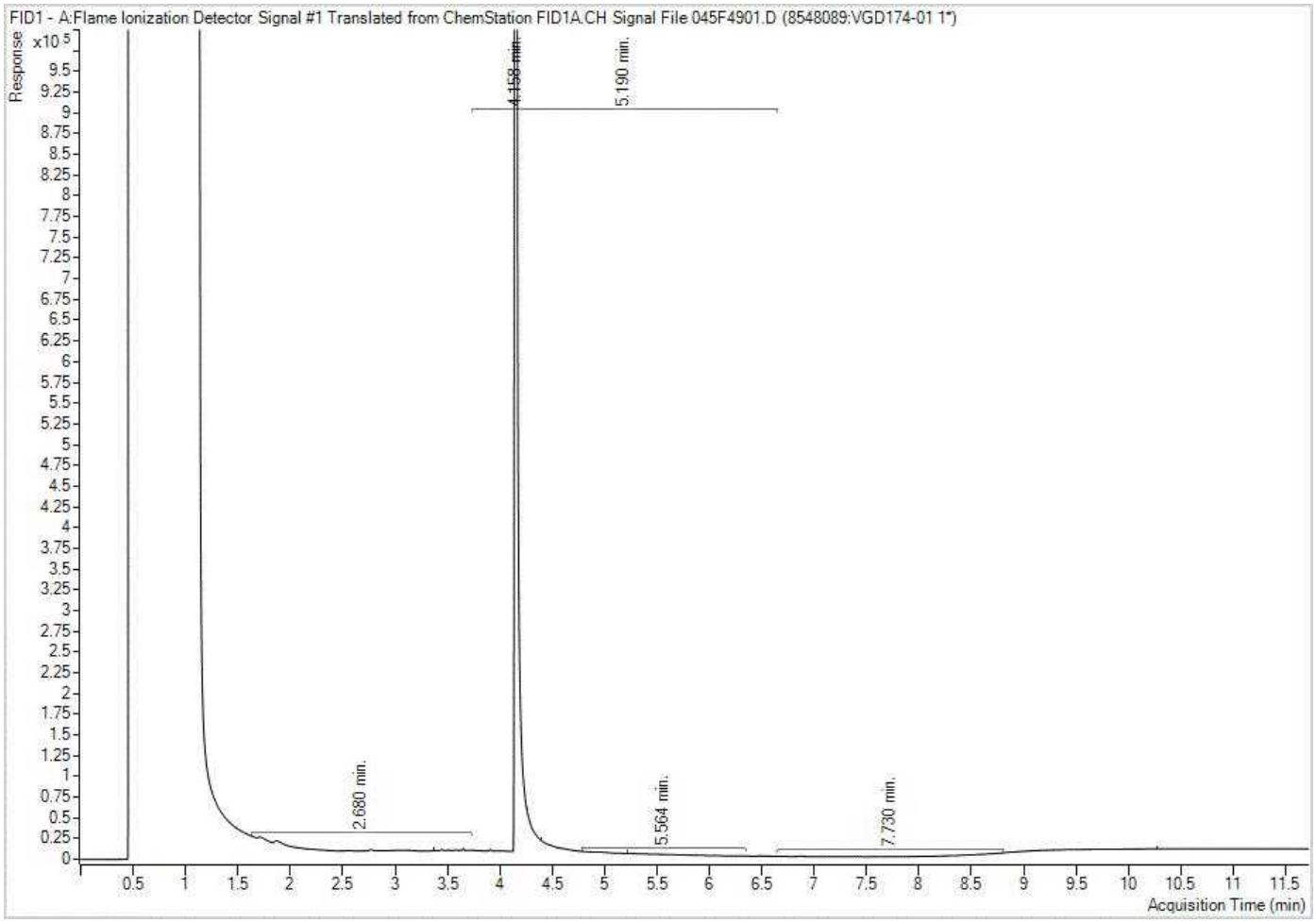
Terrapex Environmental Ltd
Client Project #: CH244.00
Project name: 120-158 QUEEN ST S, MISSISSAUGA
Client ID: MW118 S

Petroleum Hydrocarbons F2-F4 in Water Chromatogram



Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Petroleum Hydrocarbons F2-F4 in Water Chromatogram

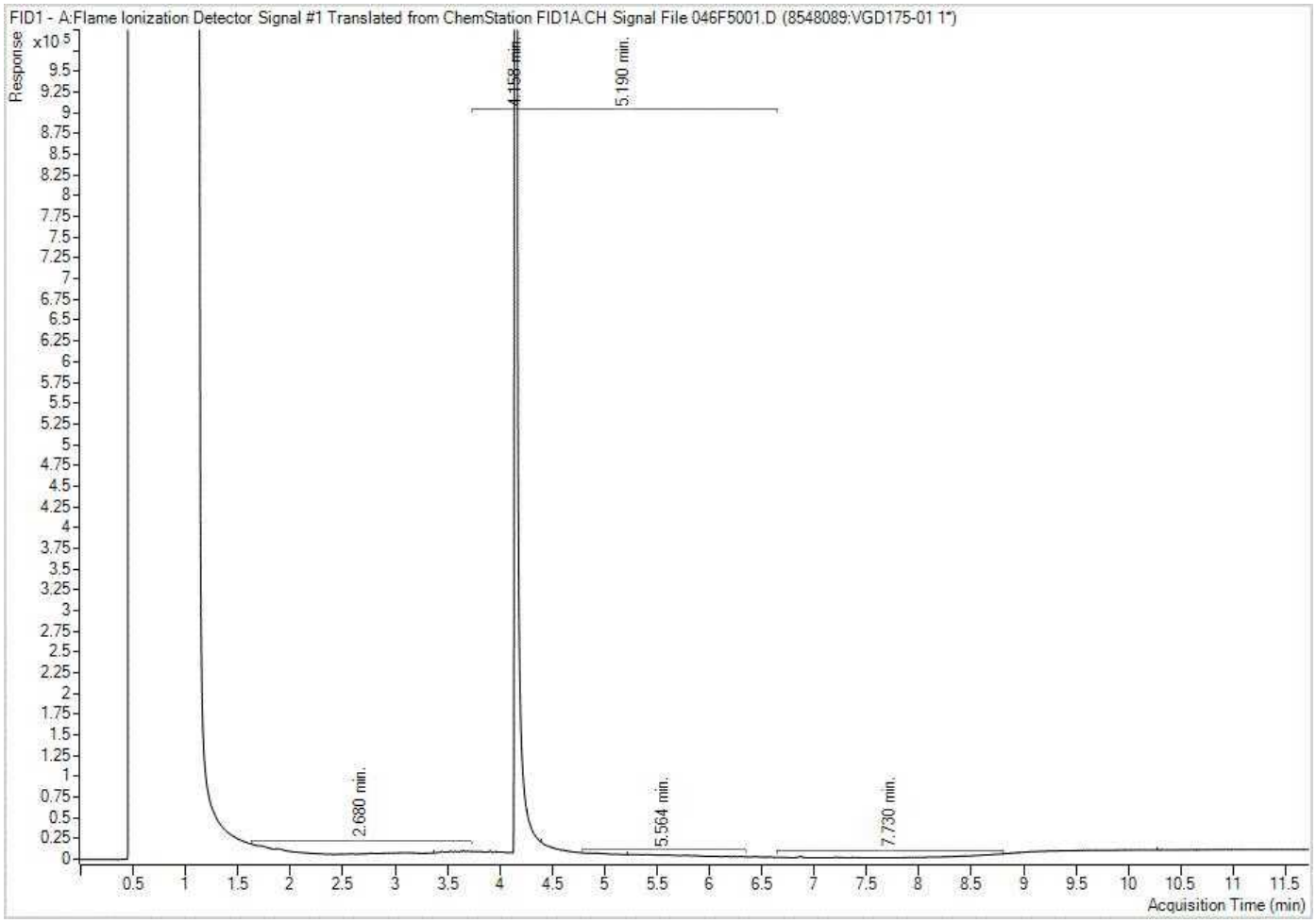


Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Bureau Veritas Job #: C367634
Report Date: 2023/03/14
Bureau Veritas Sample: VGD175

Terrapex Environmental Ltd
Client Project #: CH244.00
Project name: 120-158 QUEEN ST S, MISSISSAUGA
Client ID: MW1000

Petroleum Hydrocarbons F2-F4 in Water Chromatogram



Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Your Project #: CH244.00
Site Location: 120 -158 QUEEN STREET SOUTH, MISSISSAUGA
Your C.O.C. #: 939640-01-01

Attention: Geoff Lussier

Terrapex Environmental Ltd
90 Scarsdale Rd
Toronto, ON
CANADA M3B 2R7

Report Date: 2023/06/28
Report #: R7692941
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C3I0354
Received: 2023/06/20, 15:50

Sample Matrix: Water
Samples Received: 9

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Methylnaphthalene Sum	2	N/A	2023/06/26	CAM SOP-00301	EPA 8270D m
Methylnaphthalene Sum	6	N/A	2023/06/27	CAM SOP-00301	EPA 8270D m
ABN Compounds in Water by SIM GC/MS	1	2023/06/26	2023/06/27	CAM SOP-00301	EPA 8270 m
1,3-Dichloropropene Sum	7	N/A	2023/06/28		EPA 8260C m
Chloride by Automated Colourimetry	7	N/A	2023/06/26	CAM SOP-00463	SM 23 4500-Cl E m
Chromium (VI) in Water	7	N/A	2023/06/23	CAM SOP-00436	EPA 7199 m
Free (WAD) Cyanide	7	N/A	2023/06/22	CAM SOP-00457	OMOE E3015 m
Dinitrotoluene Sum	1	N/A	2023/06/27	CAM SOP - 00301	EPA 8270
Petroleum Hydrocarbons F2-F4 in Water (1)	7	2023/06/22	2023/06/23	CAM SOP-00316	CCME PHC-CWS m
Mercury	7	2023/06/25	2023/06/26	CAM SOP-00453	EPA 7470A m
Dissolved Metals by ICPMS	7	N/A	2023/06/26	CAM SOP-00447	EPA 6020B m
PAH Compounds in Water by GC/MS (SIM)	2	2023/06/22	2023/06/23	CAM SOP-00318	EPA 8270E
PAH Compounds in Water by GC/MS (SIM)	5	2023/06/22	2023/06/24	CAM SOP-00318	EPA 8270E
Polychlorinated Biphenyl in Water	3	2023/06/22	2023/06/23	CAM SOP-00309	EPA 8082A m
Volatile Organic Compounds and F1 PHCs	7	N/A	2023/06/27	CAM SOP-00230	EPA 8260C m

Remarks:

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

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

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

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

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

Your Project #: CH244.00
Site Location: 120 -158 QUEEN STREET SOUTH, MISSISSAUGA
Your C.O.C. #: 939640-01-01

Attention: Geoff Lussier

Terrapex Environmental Ltd
90 Scarsdale Rd
Toronto, ON
CANADA M3B 2R7

Report Date: 2023/06/28
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Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C3I0354
Received: 2023/06/20, 15:50

dilution methods.

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

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

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

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

Encryption Key

Please direct all questions regarding this Certificate of Analysis to:
Kudrat Bajwa, B.Sc., Project Manager
Email: Kudrat.Bajwa@bureauveritas.com
Phone# (905)817-5755

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

O.REG 153 METALS & INORGANICS PKG (WTR)

Bureau Veritas ID		WDV801			WDV801			WDV802		
Sampling Date		2023/06/16 12:07			2023/06/16 12:07			2023/06/16 01:03		
COC Number		939640-01-01			939640-01-01			939640-01-01		
	UNITS	MW 201	RDL	QC Batch	MW 201 Lab-Dup	RDL	QC Batch	MW 202	RDL	QC Batch
Inorganics										
WAD Cyanide (Free)	ug/L	<1	1	8746228				<1	1	8746228
Dissolved Chloride (Cl-)	mg/L	85	1.0	8750090				540	10	8750090
Metals										
Chromium (VI)	ug/L	<0.50	0.50	8747610	<0.50	0.50	8747610	<0.50	0.50	8747610
Mercury (Hg)	ug/L	<0.10	0.10	8751216				<0.10	0.10	8751216
Dissolved Antimony (Sb)	ug/L	<0.50	0.50	8751229				0.70	0.50	8751229
Dissolved Arsenic (As)	ug/L	<1.0	1.0	8751229				<1.0	1.0	8751229
Dissolved Barium (Ba)	ug/L	100	2.0	8751229				210	2.0	8751229
Dissolved Beryllium (Be)	ug/L	<0.40	0.40	8751229				<0.40	0.40	8751229
Dissolved Boron (B)	ug/L	250	10	8751229				150	10	8751229
Dissolved Cadmium (Cd)	ug/L	<0.090	0.090	8751229				<0.090	0.090	8751229
Dissolved Chromium (Cr)	ug/L	<5.0	5.0	8751229				<5.0	5.0	8751229
Dissolved Cobalt (Co)	ug/L	<0.50	0.50	8751229				0.62	0.50	8751229
Dissolved Copper (Cu)	ug/L	1.2	0.90	8751229				3.8	0.90	8751229
Dissolved Lead (Pb)	ug/L	<0.50	0.50	8751229				<0.50	0.50	8751229
Dissolved Molybdenum (Mo)	ug/L	2.6	0.50	8751229				3.5	0.50	8751229
Dissolved Nickel (Ni)	ug/L	<1.0	1.0	8751229				<1.0	1.0	8751229
Dissolved Selenium (Se)	ug/L	<2.0	2.0	8751229				<2.0	2.0	8751229
Dissolved Silver (Ag)	ug/L	<0.090	0.090	8751229				<0.090	0.090	8751229
Dissolved Sodium (Na)	ug/L	83000	100	8751229				130000	100	8751229
Dissolved Thallium (Tl)	ug/L	<0.050	0.050	8751229				<0.050	0.050	8751229
Dissolved Uranium (U)	ug/L	4.9	0.10	8751229				2.7	0.10	8751229
Dissolved Vanadium (V)	ug/L	0.90	0.50	8751229				0.80	0.50	8751229
Dissolved Zinc (Zn)	ug/L	<5.0	5.0	8751229				<5.0	5.0	8751229

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate

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Bureau Veritas Job #: C3I0354
Report Date: 2023/06/28

Terrapex Environmental Ltd
Client Project #: CH244.00
Site Location: 120 -158 QUEEN STREET SOUTH, MISSISSAUGA
Sampler Initials: GS

O.REG 153 METALS & INORGANICS PKG (WTR)

Bureau Veritas ID		WDV803			WDV803			WDV804	WDV805		
Sampling Date		2023/06/16 09:33			2023/06/16 09:33			2023/06/16 10:01	2023/06/16 11:25		
COC Number		939640-01-01			939640-01-01			939640-01-01	939640-01-01		
	UNITS	MW 203	RDL	QC Batch	MW 203 Lab-Dup	RDL	QC Batch	MW 206	MW 207	RDL	QC Batch
Inorganics											
WAD Cyanide (Free)	ug/L	<1	1	8746228				<1	<1	1	8746228
Dissolved Chloride (Cl-)	mg/L	1100	20	8750090	1100	20	8750090	98	130	1.0	8750090
Metals											
Chromium (VI)	ug/L	<0.50	0.50	8747610				<0.50	<0.50	0.50	8747610
Mercury (Hg)	ug/L	<0.10	0.10	8751216				<0.10	<0.10	0.10	8751216
Dissolved Antimony (Sb)	ug/L	<0.50	0.50	8751229				<0.50	0.52	0.50	8751229
Dissolved Arsenic (As)	ug/L	<1.0	1.0	8751229				<1.0	<1.0	1.0	8751229
Dissolved Barium (Ba)	ug/L	190	2.0	8751229				85	53	2.0	8751229
Dissolved Beryllium (Be)	ug/L	<0.40	0.40	8751229				<0.40	<0.40	0.40	8751229
Dissolved Boron (B)	ug/L	170	10	8751229				300	350	10	8751229
Dissolved Cadmium (Cd)	ug/L	<0.090	0.090	8751229				<0.090	<0.090	0.090	8751229
Dissolved Chromium (Cr)	ug/L	<5.0	5.0	8751229				<5.0	<5.0	5.0	8751229
Dissolved Cobalt (Co)	ug/L	2.1	0.50	8751229				1.2	2.2	0.50	8751229
Dissolved Copper (Cu)	ug/L	2.2	0.90	8751229				3.6	1.4	0.90	8751229
Dissolved Lead (Pb)	ug/L	<0.50	0.50	8751229				<0.50	<0.50	0.50	8751229
Dissolved Molybdenum (Mo)	ug/L	3.1	0.50	8751229				6.3	6.8	0.50	8751229
Dissolved Nickel (Ni)	ug/L	2.5	1.0	8751229				3.2	3.7	1.0	8751229
Dissolved Selenium (Se)	ug/L	<2.0	2.0	8751229				<2.0	<2.0	2.0	8751229
Dissolved Silver (Ag)	ug/L	<0.090	0.090	8751229				<0.090	<0.090	0.090	8751229
Dissolved Sodium (Na)	ug/L	290000	100	8751229				76000	150000	100	8751229
Dissolved Thallium (Tl)	ug/L	<0.050	0.050	8751229				<0.050	<0.050	0.050	8751229
Dissolved Uranium (U)	ug/L	5.0	0.10	8751229				6.7	11	0.10	8751229
Dissolved Vanadium (V)	ug/L	0.72	0.50	8751229				0.81	0.70	0.50	8751229
Dissolved Zinc (Zn)	ug/L	<5.0	5.0	8751229				5.5	<5.0	5.0	8751229

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate

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O.REG 153 METALS & INORGANICS PKG (WTR)

Bureau Veritas ID		WDV806		WDV808		
Sampling Date		2023/06/16 10:50		2023/06/16 09:55		
COC Number		939640-01-01		939640-01-01		
	UNITS	MW 208	RDL	MW 1000	RDL	QC Batch
Inorganics						
WAD Cyanide (Free)	ug/L	<1	1	<1	1	8746228
Dissolved Chloride (Cl-)	mg/L	31	1.0	1100	20	8750090
Metals						
Chromium (VI)	ug/L	<0.50	0.50	<0.50	0.50	8747610
Mercury (Hg)	ug/L	<0.10	0.10	<0.10	0.10	8751216
Dissolved Antimony (Sb)	ug/L	<0.50	0.50	<0.50	0.50	8751229
Dissolved Arsenic (As)	ug/L	<1.0	1.0	<1.0	1.0	8751229
Dissolved Barium (Ba)	ug/L	92	2.0	190	2.0	8751229
Dissolved Beryllium (Be)	ug/L	<0.40	0.40	<0.40	0.40	8751229
Dissolved Boron (B)	ug/L	320	10	180	10	8751229
Dissolved Cadmium (Cd)	ug/L	<0.090	0.090	<0.090	0.090	8751229
Dissolved Chromium (Cr)	ug/L	<5.0	5.0	<5.0	5.0	8751229
Dissolved Cobalt (Co)	ug/L	2.8	0.50	2.0	0.50	8751229
Dissolved Copper (Cu)	ug/L	0.94	0.90	2.0	0.90	8751229
Dissolved Lead (Pb)	ug/L	<0.50	0.50	<0.50	0.50	8751229
Dissolved Molybdenum (Mo)	ug/L	4.6	0.50	3.1	0.50	8751229
Dissolved Nickel (Ni)	ug/L	4.1	1.0	2.5	1.0	8751229
Dissolved Selenium (Se)	ug/L	<2.0	2.0	<2.0	2.0	8751229
Dissolved Silver (Ag)	ug/L	<0.090	0.090	<0.090	0.090	8751229
Dissolved Sodium (Na)	ug/L	72000	100	290000	100	8751229
Dissolved Thallium (Tl)	ug/L	<0.050	0.050	<0.050	0.050	8751229
Dissolved Uranium (U)	ug/L	8.2	0.10	5.0	0.10	8751229
Dissolved Vanadium (V)	ug/L	<0.50	0.50	0.68	0.50	8751229
Dissolved Zinc (Zn)	ug/L	<5.0	5.0	<5.0	5.0	8751229

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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O.REG 153 PAHS (WATER)

Bureau Veritas ID		WDV801	WDV802			WDV802		
Sampling Date		2023/06/16 12:07	2023/06/16 01:03			2023/06/16 01:03		
COC Number		939640-01-01	939640-01-01			939640-01-01		
	UNITS	MW 201	MW 202	RDL	QC Batch	MW 202 Lab-Dup	RDL	QC Batch
Calculated Parameters								
Methylnaphthalene, 2-(1-)	ug/L	<0.071	<0.071	0.071	8742022			
Polyaromatic Hydrocarbons								
Acenaphthene	ug/L	<0.050	<0.050	0.050	8745435	<0.050	0.050	8745435
Acenaphthylene	ug/L	<0.050	<0.050	0.050	8745435	<0.050	0.050	8745435
Anthracene	ug/L	<0.050	<0.050	0.050	8745435	<0.050	0.050	8745435
Benzo(a)anthracene	ug/L	<0.050	<0.050	0.050	8745435	<0.050	0.050	8745435
Benzo(a)pyrene	ug/L	<0.0090	<0.0090	0.0090	8745435	<0.0090	0.0090	8745435
Benzo(b/j)fluoranthene	ug/L	<0.050	<0.050	0.050	8745435	<0.050	0.050	8745435
Benzo(g,h,i)perylene	ug/L	<0.050	<0.050	0.050	8745435	<0.050	0.050	8745435
Benzo(k)fluoranthene	ug/L	<0.050	<0.050	0.050	8745435	<0.050	0.050	8745435
Chrysene	ug/L	<0.050	<0.050	0.050	8745435	<0.050	0.050	8745435
Dibenzo(a,h)anthracene	ug/L	<0.050	<0.050	0.050	8745435	<0.050	0.050	8745435
Fluoranthene	ug/L	<0.050	<0.050	0.050	8745435	<0.050	0.050	8745435
Fluorene	ug/L	<0.050	<0.050	0.050	8745435	<0.050	0.050	8745435
Indeno(1,2,3-cd)pyrene	ug/L	<0.050	<0.050	0.050	8745435	<0.050	0.050	8745435
1-Methylnaphthalene	ug/L	<0.050	<0.050	0.050	8745435	<0.050	0.050	8745435
2-Methylnaphthalene	ug/L	<0.050	<0.050	0.050	8745435	<0.050	0.050	8745435
Naphthalene	ug/L	<0.050	<0.050	0.050	8745435	<0.050	0.050	8745435
Phenanthrene	ug/L	0.032	0.051	0.030	8745435	0.048	0.030	8745435
Pyrene	ug/L	<0.050	<0.050	0.050	8745435	<0.050	0.050	8745435
Surrogate Recovery (%)								
D10-Anthracene	%	105	110		8745435	106		8745435
D14-Terphenyl (FS)	%	101	105		8745435	102		8745435
D8-Acenaphthylene	%	98	102		8745435	101		8745435

RDL = Reportable Detection Limit
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O.REG 153 PAHS (WATER)

Bureau Veritas ID		WDV803	WDV804	WDV805	WDV806	WDV808		
Sampling Date		2023/06/16 09:33	2023/06/16 10:01	2023/06/16 11:25	2023/06/16 10:50	2023/06/16 09:55		
COC Number		939640-01-01	939640-01-01	939640-01-01	939640-01-01	939640-01-01		
	UNITS	MW 203	MW 206	MW 207	MW 208	MW 1000	RDL	QC Batch
Calculated Parameters								
Methylnaphthalene, 2-(1-)	ug/L	<0.071	<0.071	<0.071	<0.071	<0.071	0.071	8742022
Polyaromatic Hydrocarbons								
Acenaphthene	ug/L	<0.050	<0.050	<0.050	<0.050	<0.050	0.050	8745435
Acenaphthylene	ug/L	<0.050	<0.050	<0.050	<0.050	<0.050	0.050	8745435
Anthracene	ug/L	<0.050	<0.050	<0.050	<0.050	<0.050	0.050	8745435
Benzo(a)anthracene	ug/L	<0.050	<0.050	<0.050	<0.050	<0.050	0.050	8745435
Benzo(a)pyrene	ug/L	<0.0090	<0.0090	<0.0090	<0.0090	<0.0090	0.0090	8745435
Benzo(b/j)fluoranthene	ug/L	<0.050	<0.050	<0.050	<0.050	<0.050	0.050	8745435
Benzo(g,h,i)perylene	ug/L	<0.050	<0.050	<0.050	<0.050	<0.050	0.050	8745435
Benzo(k)fluoranthene	ug/L	<0.050	<0.050	<0.050	<0.050	<0.050	0.050	8745435
Chrysene	ug/L	<0.050	<0.050	<0.050	<0.050	<0.050	0.050	8745435
Dibenzo(a,h)anthracene	ug/L	<0.050	<0.050	<0.050	<0.050	<0.050	0.050	8745435
Fluoranthene	ug/L	<0.050	<0.050	<0.050	<0.050	<0.050	0.050	8745435
Fluorene	ug/L	<0.050	<0.050	<0.050	<0.050	<0.050	0.050	8745435
Indeno(1,2,3-cd)pyrene	ug/L	<0.050	<0.050	<0.050	<0.050	<0.050	0.050	8745435
1-Methylnaphthalene	ug/L	<0.050	<0.050	<0.050	<0.050	<0.050	0.050	8745435
2-Methylnaphthalene	ug/L	<0.050	<0.050	<0.050	<0.050	<0.050	0.050	8745435
Naphthalene	ug/L	<0.050	<0.050	<0.050	<0.050	<0.050	0.050	8745435
Phenanthrene	ug/L	<0.030	<0.030	<0.030	<0.030	<0.030	0.030	8745435
Pyrene	ug/L	<0.050	<0.050	<0.050	<0.050	<0.050	0.050	8745435
Surrogate Recovery (%)								
D10-Anthracene	%	106	104	105	107	105		8745435
D14-Terphenyl (FS)	%	95	89	99	97	96		8745435
D8-Acenaphthylene	%	100	96	99	101	98		8745435

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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O.REG 153 PCBS (WATER)

Bureau Veritas ID		WDV806	WDV807	WDV809		
Sampling Date		2023/06/16 10:50	2023/06/16 02:00	2023/06/16 11:10		
COC Number		939640-01-01	939640-01-01	939640-01-01		
	UNITS	MW 208	MW 118S	MW 2000	RDL	QC Batch
PCBs						
Aroclor 1242	ug/L	<0.05	<0.05	<0.05	0.05	8746172
Aroclor 1248	ug/L	<0.05	<0.05	<0.05	0.05	8746172
Aroclor 1254	ug/L	<0.05	<0.05	<0.05	0.05	8746172
Aroclor 1260	ug/L	<0.05	<0.05	<0.05	0.05	8746172
Total PCB	ug/L	<0.05	<0.05	<0.05	0.05	8746172
Surrogate Recovery (%)						
Decachlorobiphenyl	%	76	72	72		8746172

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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

Bureau Veritas ID		WDV801	WDV802			WDV802		
Sampling Date		2023/06/16 12:07	2023/06/16 01:03			2023/06/16 01:03		
COC Number		939640-01-01	939640-01-01			939640-01-01		
	UNITS	MW 201	MW 202	RDL	QC Batch	MW 202 Lab-Dup	RDL	QC Batch
Calculated Parameters								
1,3-Dichloropropene (cis+trans)	ug/L	<0.50	<0.50	0.50	8741578			
Volatile Organics								
Acetone (2-Propanone)	ug/L	<10	<10	10	8747747	<10	10	8747747
Benzene	ug/L	<0.17	<0.17	0.17	8747747	<0.17	0.17	8747747
Bromodichloromethane	ug/L	<0.50	<0.50	0.50	8747747	<0.50	0.50	8747747
Bromoform	ug/L	<1.0	<1.0	1.0	8747747	<1.0	1.0	8747747
Bromomethane	ug/L	<0.50	<0.50	0.50	8747747	<0.50	0.50	8747747
Carbon Tetrachloride	ug/L	<0.20	<0.20	0.20	8747747	<0.20	0.20	8747747
Chlorobenzene	ug/L	<0.20	<0.20	0.20	8747747	<0.20	0.20	8747747
Chloroform	ug/L	<0.20	<0.20	0.20	8747747	<0.20	0.20	8747747
Dibromochloromethane	ug/L	<0.50	<0.50	0.50	8747747	<0.50	0.50	8747747
1,2-Dichlorobenzene	ug/L	<0.50	<0.50	0.50	8747747	<0.50	0.50	8747747
1,3-Dichlorobenzene	ug/L	<0.50	<0.50	0.50	8747747	<0.50	0.50	8747747
1,4-Dichlorobenzene	ug/L	<0.50	<0.50	0.50	8747747	<0.50	0.50	8747747
Dichlorodifluoromethane (FREON 12)	ug/L	<1.0	<1.0	1.0	8747747	<1.0	1.0	8747747
1,1-Dichloroethane	ug/L	<0.20	<0.20	0.20	8747747	<0.20	0.20	8747747
1,2-Dichloroethane	ug/L	<0.50	<0.50	0.50	8747747	<0.50	0.50	8747747
1,1-Dichloroethylene	ug/L	<0.20	<0.20	0.20	8747747	<0.20	0.20	8747747
cis-1,2-Dichloroethylene	ug/L	<0.50	<0.50	0.50	8747747	<0.50	0.50	8747747
trans-1,2-Dichloroethylene	ug/L	<0.50	<0.50	0.50	8747747	<0.50	0.50	8747747
1,2-Dichloropropane	ug/L	<0.20	<0.20	0.20	8747747	<0.20	0.20	8747747
cis-1,3-Dichloropropene	ug/L	<0.30	<0.30	0.30	8747747	<0.30	0.30	8747747
trans-1,3-Dichloropropene	ug/L	<0.40	<0.40	0.40	8747747	<0.40	0.40	8747747
Ethylbenzene	ug/L	<0.20	<0.20	0.20	8747747	<0.20	0.20	8747747
Ethylene Dibromide	ug/L	<0.20	<0.20	0.20	8747747	<0.20	0.20	8747747
Hexane	ug/L	<1.0	<1.0	1.0	8747747	<1.0	1.0	8747747
Methylene Chloride(Dichloromethane)	ug/L	<2.0	<2.0	2.0	8747747	<2.0	2.0	8747747
Methyl Ethyl Ketone (2-Butanone)	ug/L	<10	<10	10	8747747	<10	10	8747747
Methyl Isobutyl Ketone	ug/L	<5.0	<5.0	5.0	8747747	<5.0	5.0	8747747

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate

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

Bureau Veritas ID		WDV801	WDV802			WDV802		
Sampling Date		2023/06/16 12:07	2023/06/16 01:03			2023/06/16 01:03		
COC Number		939640-01-01	939640-01-01			939640-01-01		
	UNITS	**MW 201**	**MW 202**	**RDL**	**QC Batch**	**MW 202 Lab-Dup**	**RDL**	**QC Batch**
Methyl t-butyl ether (MTBE)	ug/L	<0.50	<0.50	0.50	8747747	<0.50	0.50	8747747
Styrene	ug/L	<0.50	<0.50	0.50	8747747	<0.50	0.50	8747747
1,1,1,2-Tetrachloroethane	ug/L	<0.50	<0.50	0.50	8747747	<0.50	0.50	8747747
1,1,2,2-Tetrachloroethane	ug/L	<0.50	<0.50	0.50	8747747	<0.50	0.50	8747747
Tetrachloroethylene	ug/L	<0.20	<0.20	0.20	8747747	<0.20	0.20	8747747
Toluene	ug/L	<0.20	<0.20	0.20	8747747	<0.20	0.20	8747747
1,1,1-Trichloroethane	ug/L	<0.20	<0.20	0.20	8747747	<0.20	0.20	8747747
1,1,2-Trichloroethane	ug/L	<0.50	<0.50	0.50	8747747	<0.50	0.50	8747747
Trichloroethylene	ug/L	<0.20	<0.20	0.20	8747747	<0.20	0.20	8747747
Trichlorofluoromethane (FREON 11)	ug/L	<0.50	<0.50	0.50	8747747	<0.50	0.50	8747747
Vinyl Chloride	ug/L	<0.20	<0.20	0.20	8747747	<0.20	0.20	8747747
p+m-Xylene	ug/L	<0.20	<0.20	0.20	8747747	<0.20	0.20	8747747
o-Xylene	ug/L	<0.20	<0.20	0.20	8747747	<0.20	0.20	8747747
Total Xylenes	ug/L	<0.20	<0.20	0.20	8747747	<0.20	0.20	8747747
F1 (C6-C10)	ug/L	<25	<25	25	8747747	<25	25	8747747
F1 (C6-C10) - BTEX	ug/L	<25	<25	25	8747747	<25	25	8747747
F2-F4 Hydrocarbons								
F2 (C10-C16 Hydrocarbons)	ug/L	<100	<100	100	8745436	<100	100	8745436
F3 (C16-C34 Hydrocarbons)	ug/L	<200	<200	200	8745436	<200	200	8745436
F4 (C34-C50 Hydrocarbons)	ug/L	<200	<200	200	8745436	<200	200	8745436
Reached Baseline at C50	ug/L	Yes	Yes		8745436	Yes		8745436
Surrogate Recovery (%)								
o-Terphenyl	%	95	98		8745436	95		8745436
4-Bromofluorobenzene	%	100	102		8747747	102		8747747
D4-1,2-Dichloroethane	%	100	103		8747747	100		8747747
D8-Toluene	%	99	94		8747747	98		8747747

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate

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

Bureau Veritas ID		WDV803	WDV804	WDV805	WDV806	WDV808		
Sampling Date		2023/06/16 09:33	2023/06/16 10:01	2023/06/16 11:25	2023/06/16 10:50	2023/06/16 09:55		
COC Number		939640-01-01	939640-01-01	939640-01-01	939640-01-01	939640-01-01		
	UNITS	MW 203	MW 206	MW 207	MW 208	MW 1000	RDL	QC Batch
Calculated Parameters								
1,3-Dichloropropene (cis+trans)	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	0.50	8741578
Volatile Organics								
Acetone (2-Propanone)	ug/L	<10	<10	<10	<10	<10	10	8747747
Benzene	ug/L	<0.17	<0.17	<0.17	<0.17	<0.17	0.17	8747747
Bromodichloromethane	ug/L	<0.50	0.99	<0.50	<0.50	<0.50	0.50	8747747
Bromoform	ug/L	<1.0	<1.0	<1.0	<1.0	<1.0	1.0	8747747
Bromomethane	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	0.50	8747747
Carbon Tetrachloride	ug/L	<0.20	<0.20	<0.20	<0.20	<0.20	0.20	8747747
Chlorobenzene	ug/L	<0.20	<0.20	<0.20	<0.20	<0.20	0.20	8747747
Chloroform	ug/L	<0.20	2.4	<0.20	<0.20	<0.20	0.20	8747747
Dibromochloromethane	ug/L	<0.50	0.54	<0.50	<0.50	<0.50	0.50	8747747
1,2-Dichlorobenzene	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	0.50	8747747
1,3-Dichlorobenzene	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	0.50	8747747
1,4-Dichlorobenzene	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	0.50	8747747
Dichlorodifluoromethane (FREON 12)	ug/L	<1.0	<1.0	<1.0	<1.0	<1.0	1.0	8747747
1,1-Dichloroethane	ug/L	<0.20	<0.20	<0.20	<0.20	<0.20	0.20	8747747
1,2-Dichloroethane	ug/L	<0.50	<0.50	<0.50	0.71	<0.50	0.50	8747747
1,1-Dichloroethylene	ug/L	<0.20	<0.20	<0.20	<0.20	<0.20	0.20	8747747
cis-1,2-Dichloroethylene	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	0.50	8747747
trans-1,2-Dichloroethylene	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	0.50	8747747
1,2-Dichloropropane	ug/L	<0.20	<0.20	<0.20	<0.20	<0.20	0.20	8747747
cis-1,3-Dichloropropene	ug/L	<0.30	<0.30	<0.30	<0.30	<0.30	0.30	8747747
trans-1,3-Dichloropropene	ug/L	<0.40	<0.40	<0.40	<0.40	<0.40	0.40	8747747
Ethylbenzene	ug/L	<0.20	<0.20	<0.20	<0.20	<0.20	0.20	8747747
Ethylene Dibromide	ug/L	<0.20	<0.20	<0.20	<0.20	<0.20	0.20	8747747
Hexane	ug/L	<1.0	<1.0	<1.0	<1.0	<1.0	1.0	8747747
Methylene Chloride(Dichloromethane)	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	2.0	8747747
Methyl Ethyl Ketone (2-Butanone)	ug/L	<10	<10	<10	<10	<10	10	8747747
Methyl Isobutyl Ketone	ug/L	<5.0	<5.0	<5.0	<5.0	<5.0	5.0	8747747
Methyl t-butyl ether (MTBE)	ug/L	<0.50	<0.50	<0.50	2.2	<0.50	0.50	8747747

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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

Bureau Veritas ID		WDV803	WDV804	WDV805	WDV806	WDV808		
Sampling Date		2023/06/16 09:33	2023/06/16 10:01	2023/06/16 11:25	2023/06/16 10:50	2023/06/16 09:55		
COC Number		939640-01-01	939640-01-01	939640-01-01	939640-01-01	939640-01-01		
	UNITS	MW 203	MW 206	MW 207	MW 208	MW 1000	RDL	QC Batch
Styrene	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	0.50	8747747
1,1,1,2-Tetrachloroethane	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	0.50	8747747
1,1,2,2-Tetrachloroethane	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	0.50	8747747
Tetrachloroethylene	ug/L	<0.20	<0.20	<0.20	<0.20	<0.20	0.20	8747747
Toluene	ug/L	<0.20	<0.20	<0.20	0.24	<0.20	0.20	8747747
1,1,1-Trichloroethane	ug/L	<0.20	<0.20	<0.20	<0.20	<0.20	0.20	8747747
1,1,2-Trichloroethane	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	0.50	8747747
Trichloroethylene	ug/L	<0.20	<0.20	<0.20	<0.20	<0.20	0.20	8747747
Trichlorofluoromethane (FREON 11)	ug/L	<0.50	<0.50	<0.50	<0.50	<0.50	0.50	8747747
Vinyl Chloride	ug/L	<0.20	<0.20	<0.20	<0.20	<0.20	0.20	8747747
p+m-Xylene	ug/L	<0.20	<0.20	<0.20	<0.20	<0.20	0.20	8747747
o-Xylene	ug/L	<0.20	<0.20	<0.20	<0.20	<0.20	0.20	8747747
Total Xylenes	ug/L	<0.20	<0.20	<0.20	<0.20	<0.20	0.20	8747747
F1 (C6-C10)	ug/L	<25	<25	<25	<25	<25	25	8747747
F1 (C6-C10) - BTEX	ug/L	<25	<25	<25	<25	<25	25	8747747
F2-F4 Hydrocarbons								
F2 (C10-C16 Hydrocarbons)	ug/L	<100	<100	<100	<100	<100	100	8745436
F3 (C16-C34 Hydrocarbons)	ug/L	<200	<200	<200	<200	<200	200	8745436
F4 (C34-C50 Hydrocarbons)	ug/L	<200	<200	<200	<200	<200	200	8745436
Reached Baseline at C50	ug/L	Yes	Yes	Yes	Yes	Yes		8745436
Surrogate Recovery (%)								
o-Terphenyl	%	97	98	97	96	97		8745436
4-Bromofluorobenzene	%	100	103	101	102	102		8747747
D4-1,2-Dichloroethane	%	101	100	102	100	101		8747747
D8-Toluene	%	99	98	100	98	96		8747747

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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O.REG 153 SEMIVOLATILES PACKAGE (WATER)

Bureau Veritas ID		WDV807		
Sampling Date		2023/06/16 02:00		
COC Number		939640-01-01		
	UNITS	MW 118S	RDL	QC Batch
Semivolatile Organics				
1,2,4-Trichlorobenzene	ug/L	<0.1	0.1	8753211
1-Methylnaphthalene	ug/L	<0.2	0.2	8753211
2,4,5-Trichlorophenol	ug/L	<0.2	0.2	8753211
2,4,6-Trichlorophenol	ug/L	<0.2	0.2	8753211
2,4-Dichlorophenol	ug/L	<0.1	0.1	8753211
2,4-Dimethylphenol	ug/L	<0.5	0.5	8753211
2,4-Dinitrophenol	ug/L	<2	2	8753211
2,4-Dinitrotoluene	ug/L	<0.3	0.3	8753211
2,6-Dinitrotoluene	ug/L	<0.3	0.3	8753211
2-Chlorophenol	ug/L	<0.1	0.1	8753211
2-Methylnaphthalene	ug/L	<0.2	0.2	8753211
3,3'-Dichlorobenzidine	ug/L	<0.5	0.5	8753211
Acenaphthene	ug/L	<0.2	0.2	8753211
Acenaphthylene	ug/L	<0.2	0.2	8753211
Anthracene	ug/L	<0.05	0.05	8753211
Benzo(a)anthracene	ug/L	<0.05	0.05	8753211
Benzo(a)pyrene	ug/L	<0.01	0.01	8753211
Benzo(b/j)fluoranthene	ug/L	<0.05	0.05	8753211
Benzo(g,h,i)perylene	ug/L	<0.05	0.05	8753211
Benzo(k)fluoranthene	ug/L	<0.05	0.05	8753211
Biphenyl	ug/L	<0.1	0.1	8753211
Bis(2-chloroethyl)ether	ug/L	<0.5	0.5	8753211
Bis(2-chloroisopropyl)ether	ug/L	<0.5	0.5	8753211
Bis(2-ethylhexyl)phthalate	ug/L	<1	1	8753211
Chrysene	ug/L	<0.05	0.05	8753211
Dibenzo(a,h)anthracene	ug/L	<0.1	0.1	8753211
Diethyl phthalate	ug/L	<0.1	0.1	8753211
Dimethyl phthalate	ug/L	<0.1	0.1	8753211
Fluoranthene	ug/L	<0.2	0.2	8753211
Fluorene	ug/L	<0.2	0.2	8753211
Indeno(1,2,3-cd)pyrene	ug/L	<0.1	0.1	8753211

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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O.REG 153 SEMIVOLATILES PACKAGE (WATER)

Bureau Veritas ID		WDV807		
Sampling Date		2023/06/16 02:00		
COC Number		939640-01-01		
	UNITS	**MW 118S**	**RDL**	**QC Batch**
Naphthalene	ug/L	<0.2	0.2	8753211
p-Chloroaniline	ug/L	<1	1	8753211
Pentachlorophenol	ug/L	<0.1	0.1	8753211
Phenanthrene	ug/L	<0.1	0.1	8753211
Phenol	ug/L	<0.5	0.5	8753211
Pyrene	ug/L	<0.05	0.05	8753211
2,3,4,6 + 2,3,4,5-Tetrachlorophenol	ug/L	<1	1	8753211
Calculated Parameters				
2,4- & 2,6-Dinitrotoluene	ug/L	<0.35	0.35	8742543
Methylnaphthalene, 2-(1-)	ug/L	<0.28	0.28	8742022
Surrogate Recovery (%)				
2,4,6-Tribromophenol	%	101		8753211
2-Fluorobiphenyl	%	62		8753211
D14-Terphenyl (FS)	%	99		8753211
D5-Nitrobenzene	%	87		8753211

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Bureau Veritas Job #: C3I0354
Report Date: 2023/06/28

Terrapex Environmental Ltd
Client Project #: CH244.00
Site Location: 120 -158 QUEEN STREET SOUTH, MISSISSAUGA
Sampler Initials: GS

TEST SUMMARY

Bureau Veritas ID: WDV801
Sample ID: MW 201
Matrix: Water

Collected: 2023/06/16
Shipped:
Received: 2023/06/20

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	8742022	N/A	2023/06/27	Automated Statchk
1,3-Dichloropropene Sum	CALC	8741578	N/A	2023/06/28	Automated Statchk
Chloride by Automated Colourimetry	KONE	8750090	N/A	2023/06/26	Massarat Jan
Chromium (VI) in Water	IC	8747610	N/A	2023/06/23	Theodora Luck
Free (WAD) Cyanide	SKAL/CN	8746228	N/A	2023/06/22	Prgya Panchal
Petroleum Hydrocarbons F2-F4 in Water	GC/FID	8745436	2023/06/22	2023/06/23	Emir Danisman
Mercury	CV/AA	8751216	2023/06/25	2023/06/26	Japneet Gill
Dissolved Metals by ICPMS	ICP/MS	8751229	N/A	2023/06/26	Prempal Bhatti
PAH Compounds in Water by GC/MS (SIM)	GC/MS	8745435	2023/06/22	2023/06/24	Mitesh Raj
Volatile Organic Compounds and F1 PHCs	GC/MSFD	8747747	N/A	2023/06/27	Dina Wang

Bureau Veritas ID: WDV801 Dup
Sample ID: MW 201
Matrix: Water

Collected: 2023/06/16
Shipped:
Received: 2023/06/20

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Chromium (VI) in Water	IC	8747610	N/A	2023/06/23	Theodora Luck

Bureau Veritas ID: WDV802
Sample ID: MW 202
Matrix: Water

Collected: 2023/06/16
Shipped:
Received: 2023/06/20

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	8742022	N/A	2023/06/26	Automated Statchk
1,3-Dichloropropene Sum	CALC	8741578	N/A	2023/06/28	Automated Statchk
Chloride by Automated Colourimetry	KONE	8750090	N/A	2023/06/26	Massarat Jan
Chromium (VI) in Water	IC	8747610	N/A	2023/06/23	Theodora Luck
Free (WAD) Cyanide	SKAL/CN	8746228	N/A	2023/06/22	Prgya Panchal
Petroleum Hydrocarbons F2-F4 in Water	GC/FID	8745436	2023/06/22	2023/06/23	Emir Danisman
Mercury	CV/AA	8751216	2023/06/25	2023/06/26	Japneet Gill
Dissolved Metals by ICPMS	ICP/MS	8751229	N/A	2023/06/26	Prempal Bhatti
PAH Compounds in Water by GC/MS (SIM)	GC/MS	8745435	2023/06/22	2023/06/23	Mitesh Raj
Volatile Organic Compounds and F1 PHCs	GC/MSFD	8747747	N/A	2023/06/27	Dina Wang

Bureau Veritas ID: WDV802 Dup
Sample ID: MW 202
Matrix: Water

Collected: 2023/06/16
Shipped:
Received: 2023/06/20

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Petroleum Hydrocarbons F2-F4 in Water	GC/FID	8745436	2023/06/22	2023/06/23	Emir Danisman
PAH Compounds in Water by GC/MS (SIM)	GC/MS	8745435	2023/06/22	2023/06/23	Mitesh Raj
Volatile Organic Compounds and F1 PHCs	GC/MSFD	8747747	N/A	2023/06/27	Dina Wang

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TEST SUMMARY

Bureau Veritas ID: WDV803
Sample ID: MW 203
Matrix: Water

Collected: 2023/06/16
Shipped:
Received: 2023/06/20

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	8742022	N/A	2023/06/27	Automated Statchk
1,3-Dichloropropene Sum	CALC	8741578	N/A	2023/06/28	Automated Statchk
Chloride by Automated Colourimetry	KONE	8750090	N/A	2023/06/26	Massarat Jan
Chromium (VI) in Water	IC	8747610	N/A	2023/06/23	Theodora Luck
Free (WAD) Cyanide	SKAL/CN	8746228	N/A	2023/06/22	Prgya Panchal
Petroleum Hydrocarbons F2-F4 in Water	GC/FID	8745436	2023/06/22	2023/06/23	Emir Danisman
Mercury	CV/AA	8751216	2023/06/25	2023/06/26	Japneet Gill
Dissolved Metals by ICPMS	ICP/MS	8751229	N/A	2023/06/26	Prempal Bhatti
PAH Compounds in Water by GC/MS (SIM)	GC/MS	8745435	2023/06/22	2023/06/24	Mitesh Raj
Volatile Organic Compounds and F1 PHCs	GC/MSFD	8747747	N/A	2023/06/27	Dina Wang

Bureau Veritas ID: WDV803 Dup
Sample ID: MW 203
Matrix: Water

Collected: 2023/06/16
Shipped:
Received: 2023/06/20

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Chloride by Automated Colourimetry	KONE	8750090	N/A	2023/06/26	Massarat Jan

Bureau Veritas ID: WDV804
Sample ID: MW 206
Matrix: Water

Collected: 2023/06/16
Shipped:
Received: 2023/06/20

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	8742022	N/A	2023/06/27	Automated Statchk
1,3-Dichloropropene Sum	CALC	8741578	N/A	2023/06/28	Automated Statchk
Chloride by Automated Colourimetry	KONE	8750090	N/A	2023/06/26	Massarat Jan
Chromium (VI) in Water	IC	8747610	N/A	2023/06/23	Theodora Luck
Free (WAD) Cyanide	SKAL/CN	8746228	N/A	2023/06/22	Prgya Panchal
Petroleum Hydrocarbons F2-F4 in Water	GC/FID	8745436	2023/06/22	2023/06/23	Emir Danisman
Mercury	CV/AA	8751216	2023/06/25	2023/06/26	Japneet Gill
Dissolved Metals by ICPMS	ICP/MS	8751229	N/A	2023/06/26	Prempal Bhatti
PAH Compounds in Water by GC/MS (SIM)	GC/MS	8745435	2023/06/22	2023/06/24	Mitesh Raj
Volatile Organic Compounds and F1 PHCs	GC/MSFD	8747747	N/A	2023/06/27	Dina Wang

Bureau Veritas ID: WDV805
Sample ID: MW 207
Matrix: Water

Collected: 2023/06/16
Shipped:
Received: 2023/06/20

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	8742022	N/A	2023/06/26	Automated Statchk
1,3-Dichloropropene Sum	CALC	8741578	N/A	2023/06/28	Automated Statchk
Chloride by Automated Colourimetry	KONE	8750090	N/A	2023/06/26	Massarat Jan
Chromium (VI) in Water	IC	8747610	N/A	2023/06/23	Theodora Luck
Free (WAD) Cyanide	SKAL/CN	8746228	N/A	2023/06/22	Prgya Panchal

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Bureau Veritas Job #: C3I0354
Report Date: 2023/06/28

Terrapex Environmental Ltd
Client Project #: CH244.00
Site Location: 120 -158 QUEEN STREET SOUTH, MISSISSAUGA
Sampler Initials: GS

TEST SUMMARY

Bureau Veritas ID: WDV805
Sample ID: MW 207
Matrix: Water

Collected: 2023/06/16
Shipped:
Received: 2023/06/20

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Petroleum Hydrocarbons F2-F4 in Water	GC/FID	8745436	2023/06/22	2023/06/23	Emir Danisman
Mercury	CV/AA	8751216	2023/06/25	2023/06/26	Japneet Gill
Dissolved Metals by ICPMS	ICP/MS	8751229	N/A	2023/06/26	Prempal Bhatti
PAH Compounds in Water by GC/MS (SIM)	GC/MS	8745435	2023/06/22	2023/06/23	Mitesh Raj
Volatile Organic Compounds and F1 PHCs	GC/MSFD	8747747	N/A	2023/06/27	Dina Wang

Bureau Veritas ID: WDV806
Sample ID: MW 208
Matrix: Water

Collected: 2023/06/16
Shipped:
Received: 2023/06/20

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	8742022	N/A	2023/06/27	Automated Statchk
1,3-Dichloropropene Sum	CALC	8741578	N/A	2023/06/28	Automated Statchk
Chloride by Automated Colourimetry	KONE	8750090	N/A	2023/06/26	Massarat Jan
Chromium (VI) in Water	IC	8747610	N/A	2023/06/23	Theodora Luck
Free (WAD) Cyanide	SKAL/CN	8746228	N/A	2023/06/22	Prgya Panchal
Petroleum Hydrocarbons F2-F4 in Water	GC/FID	8745436	2023/06/22	2023/06/23	Emir Danisman
Mercury	CV/AA	8751216	2023/06/25	2023/06/26	Japneet Gill
Dissolved Metals by ICPMS	ICP/MS	8751229	N/A	2023/06/26	Prempal Bhatti
PAH Compounds in Water by GC/MS (SIM)	GC/MS	8745435	2023/06/22	2023/06/24	Mitesh Raj
Polychlorinated Biphenyl in Water	GC/ECD	8746172	2023/06/22	2023/06/23	Li Peng
Volatile Organic Compounds and F1 PHCs	GC/MSFD	8747747	N/A	2023/06/27	Dina Wang

Bureau Veritas ID: WDV807
Sample ID: MW 118S
Matrix: Water

Collected: 2023/06/16
Shipped:
Received: 2023/06/20

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	8742022	N/A	2023/06/27	Automated Statchk
ABN Compounds in Water by SIM GC/MS	GC/MS	8753211	2023/06/26	2023/06/27	Mohamed Elwaraky
Dinitrotoluene Sum	CALC	8742543	N/A	2023/06/27	Automated Statchk
Polychlorinated Biphenyl in Water	GC/ECD	8746172	2023/06/22	2023/06/23	Li Peng

Bureau Veritas ID: WDV808
Sample ID: MW 1000
Matrix: Water

Collected: 2023/06/16
Shipped:
Received: 2023/06/20

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	8742022	N/A	2023/06/27	Automated Statchk
1,3-Dichloropropene Sum	CALC	8741578	N/A	2023/06/28	Automated Statchk
Chloride by Automated Colourimetry	KONE	8750090	N/A	2023/06/26	Massarat Jan
Chromium (VI) in Water	IC	8747610	N/A	2023/06/23	Theodora Luck
Free (WAD) Cyanide	SKAL/CN	8746228	N/A	2023/06/22	Prgya Panchal
Petroleum Hydrocarbons F2-F4 in Water	GC/FID	8745436	2023/06/22	2023/06/23	Emir Danisman

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Bureau Veritas Job #: C3I0354
Report Date: 2023/06/28

Terrapex Environmental Ltd
Client Project #: CH244.00
Site Location: 120 -158 QUEEN STREET SOUTH, MISSISSAUGA
Sampler Initials: GS

TEST SUMMARY

Bureau Veritas ID: WDV808
Sample ID: MW 1000
Matrix: Water

Collected: 2023/06/16
Shipped:
Received: 2023/06/20

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Mercury	CV/AA	8751216	2023/06/25	2023/06/26	Japneet Gill
Dissolved Metals by ICPMS	ICP/MS	8751229	N/A	2023/06/26	Prempal Bhatti
PAH Compounds in Water by GC/MS (SIM)	GC/MS	8745435	2023/06/22	2023/06/24	Mitesh Raj
Volatile Organic Compounds and F1 PHCs	GC/MSFD	8747747	N/A	2023/06/27	Dina Wang

Bureau Veritas ID: WDV809
Sample ID: MW 2000
Matrix: Water

Collected: 2023/06/16
Shipped:
Received: 2023/06/20

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Polychlorinated Biphenyl in Water	GC/ECD	8746172	2023/06/22	2023/06/23	Li Peng

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GENERAL COMMENTS

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

Package 1	1.3°C

O.REG 153 PCBS (WATER)

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

Results relate only to the items tested.

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QUALITY ASSURANCE REPORT

			Matrix Spike		SPIKED BLANK		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8745435	D10-Anthracene	2023/06/23	107	50 - 130	108	50 - 130	108	%		
8745435	D14-Terphenyl (FS)	2023/06/23	104	50 - 130	103	50 - 130	110	%		
8745435	D8-Acenaphthylene	2023/06/23	101	50 - 130	102	50 - 130	100	%		
8745436	o-Terphenyl	2023/06/22	99	60 - 130	95	60 - 130	105	%		
8746172	Decachlorobiphenyl	2023/06/23	64	60 - 130	73	60 - 130	78	%		
8747747	4-Bromofluorobenzene	2023/06/27	102	70 - 130	101	70 - 130	100	%		
8747747	D4-1,2-Dichloroethane	2023/06/27	102	70 - 130	99	70 - 130	98	%		
8747747	D8-Toluene	2023/06/27	100	70 - 130	100	70 - 130	100	%		
8753211	2,4,6-Tribromophenol	2023/06/27	109	50 - 130	105	50 - 130	87	%		
8753211	2-Fluorobiphenyl	2023/06/27	72	50 - 130	57	50 - 130	50	%		
8753211	D14-Terphenyl (FS)	2023/06/27	102	50 - 130	103	50 - 130	97	%		
8753211	D5-Nitrobenzene	2023/06/27	91	50 - 130	84	50 - 130	82	%		
8745435	1-Methylnaphthalene	2023/06/23	122	50 - 130	122	50 - 130	<0.050	ug/L	NC	30
8745435	2-Methylnaphthalene	2023/06/23	111	50 - 130	112	50 - 130	<0.050	ug/L	NC	30
8745435	Acenaphthene	2023/06/23	112	50 - 130	112	50 - 130	<0.050	ug/L	NC	30
8745435	Acenaphthylene	2023/06/23	114	50 - 130	113	50 - 130	<0.050	ug/L	NC	30
8745435	Anthracene	2023/06/23	113	50 - 130	114	50 - 130	<0.050	ug/L	NC	30
8745435	Benzo(a)anthracene	2023/06/23	106	50 - 130	107	50 - 130	<0.050	ug/L	NC	30
8745435	Benzo(a)pyrene	2023/06/23	94	50 - 130	95	50 - 130	<0.0090	ug/L	NC	30
8745435	Benzo(b/j)fluoranthene	2023/06/23	99	50 - 130	100	50 - 130	<0.050	ug/L	NC	30
8745435	Benzo(g,h,i)perylene	2023/06/23	100	50 - 130	101	50 - 130	<0.050	ug/L	NC	30
8745435	Benzo(k)fluoranthene	2023/06/23	95	50 - 130	97	50 - 130	<0.050	ug/L	NC	30
8745435	Chrysene	2023/06/23	101	50 - 130	102	50 - 130	<0.050	ug/L	NC	30
8745435	Dibenzo(a,h)anthracene	2023/06/23	85	50 - 130	85	50 - 130	<0.050	ug/L	NC	30
8745435	Fluoranthene	2023/06/23	123	50 - 130	123	50 - 130	<0.050	ug/L	NC	30
8745435	Fluorene	2023/06/23	113	50 - 130	114	50 - 130	<0.050	ug/L	NC	30
8745435	Indeno(1,2,3-cd)pyrene	2023/06/23	94	50 - 130	96	50 - 130	<0.050	ug/L	NC	30
8745435	Naphthalene	2023/06/23	108	50 - 130	107	50 - 130	<0.050	ug/L	NC	30
8745435	Phenanthrene	2023/06/23	113	50 - 130	113	50 - 130	<0.030	ug/L	5.4	30
8745435	Pyrene	2023/06/23	118	50 - 130	119	50 - 130	<0.050	ug/L	NC	30
8745436	F2 (C10-C16 Hydrocarbons)	2023/06/23	100	60 - 130	94	60 - 130	<100	ug/L	NC	30

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QUALITY ASSURANCE REPORT(CONT'D)

			Matrix Spike		SPIKED BLANK		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8745436	F3 (C16-C34 Hydrocarbons)	2023/06/23	101	60 - 130	97	60 - 130	<200	ug/L	NC	30
8745436	F4 (C34-C50 Hydrocarbons)	2023/06/23	97	60 - 130	92	60 - 130	<200	ug/L	NC	30
8746172	Aroclor 1242	2023/06/23					<0.05	ug/L	NC	30
8746172	Aroclor 1248	2023/06/23					<0.05	ug/L	2.1	30
8746172	Aroclor 1254	2023/06/23					<0.05	ug/L	41 (1)	30
8746172	Aroclor 1260	2023/06/23	69	60 - 130	84	60 - 130	<0.05	ug/L	101 (1)	30
8746172	Total PCB	2023/06/23	69	60 - 130	84	60 - 130	<0.05	ug/L	25	40
8746228	WAD Cyanide (Free)	2023/06/22	100	80 - 120	103	80 - 120	<1	ug/L	NC	20
8747610	Chromium (VI)	2023/06/23	99	80 - 120	99	80 - 120	<0.50	ug/L	NC	20
8747747	1,1,1,2-Tetrachloroethane	2023/06/27	96	70 - 130	94	70 - 130	<0.50	ug/L	NC	30
8747747	1,1,1-Trichloroethane	2023/06/27	93	70 - 130	96	70 - 130	<0.20	ug/L	NC	30
8747747	1,1,2,2-Tetrachloroethane	2023/06/27	100	70 - 130	93	70 - 130	<0.50	ug/L	NC	30
8747747	1,1,2-Trichloroethane	2023/06/27	99	70 - 130	97	70 - 130	<0.50	ug/L	NC	30
8747747	1,1-Dichloroethane	2023/06/27	90	70 - 130	92	70 - 130	<0.20	ug/L	NC	30
8747747	1,1-Dichloroethylene	2023/06/27	93	70 - 130	96	70 - 130	<0.20	ug/L	NC	30
8747747	1,2-Dichlorobenzene	2023/06/27	101	70 - 130	93	70 - 130	<0.50	ug/L	NC	30
8747747	1,2-Dichloroethane	2023/06/27	92	70 - 130	92	70 - 130	<0.50	ug/L	NC	30
8747747	1,2-Dichloropropane	2023/06/27	91	70 - 130	93	70 - 130	<0.20	ug/L	NC	30
8747747	1,3-Dichlorobenzene	2023/06/27	99	70 - 130	92	70 - 130	<0.50	ug/L	NC	30
8747747	1,4-Dichlorobenzene	2023/06/27	119	70 - 130	108	70 - 130	<0.50	ug/L	NC	30
8747747	Acetone (2-Propanone)	2023/06/27	96	60 - 140	97	60 - 140	<10	ug/L	NC	30
8747747	Benzene	2023/06/27	90	70 - 130	92	70 - 130	<0.17	ug/L	NC	30
8747747	Bromodichloromethane	2023/06/27	93	70 - 130	93	70 - 130	<0.50	ug/L	NC	30
8747747	Bromoform	2023/06/27	94	70 - 130	89	70 - 130	<1.0	ug/L	NC	30
8747747	Bromomethane	2023/06/27	95	60 - 140	99	60 - 140	<0.50	ug/L	NC	30
8747747	Carbon Tetrachloride	2023/06/27	94	70 - 130	96	70 - 130	<0.20	ug/L	NC	30
8747747	Chlorobenzene	2023/06/27	96	70 - 130	94	70 - 130	<0.20	ug/L	NC	30
8747747	Chloroform	2023/06/27	94	70 - 130	94	70 - 130	<0.20	ug/L	NC	30
8747747	cis-1,2-Dichloroethylene	2023/06/27	97	70 - 130	97	70 - 130	<0.50	ug/L	NC	30
8747747	cis-1,3-Dichloropropene	2023/06/27	91	70 - 130	90	70 - 130	<0.30	ug/L	NC	30
8747747	Dibromochloromethane	2023/06/27	92	70 - 130	90	70 - 130	<0.50	ug/L	NC	30

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QUALITY ASSURANCE REPORT(CONT'D)

			Matrix Spike		SPIKED BLANK		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8747747	Dichlorodifluoromethane (FREON 12)	2023/06/27	90	60 - 140	105	60 - 140	<1.0	ug/L	NC	30
8747747	Ethylbenzene	2023/06/27	95	70 - 130	95	70 - 130	<0.20	ug/L	NC	30
8747747	Ethylene Dibromide	2023/06/27	93	70 - 130	91	70 - 130	<0.20	ug/L	NC	30
8747747	F1 (C6-C10) - BTEX	2023/06/27					<25	ug/L	NC	30
8747747	F1 (C6-C10)	2023/06/27	95	60 - 140	94	60 - 140	<25	ug/L	NC	30
8747747	Hexane	2023/06/27	92	70 - 130	96	70 - 130	<1.0	ug/L	NC	30
8747747	Methyl Ethyl Ketone (2-Butanone)	2023/06/27	88	60 - 140	87	60 - 140	<10	ug/L	NC	30
8747747	Methyl Isobutyl Ketone	2023/06/27	89	70 - 130	87	70 - 130	<5.0	ug/L	NC	30
8747747	Methyl t-butyl ether (MTBE)	2023/06/27	89	70 - 130	91	70 - 130	<0.50	ug/L	NC	30
8747747	Methylene Chloride(Dichloromethane)	2023/06/27	96	70 - 130	97	70 - 130	<2.0	ug/L	NC	30
8747747	o-Xylene	2023/06/27	84	70 - 130	83	70 - 130	<0.20	ug/L	NC	30
8747747	p+m-Xylene	2023/06/27	95	70 - 130	95	70 - 130	<0.20	ug/L	NC	30
8747747	Styrene	2023/06/27	95	70 - 130	93	70 - 130	<0.50	ug/L	NC	30
8747747	Tetrachloroethylene	2023/06/27	88	70 - 130	87	70 - 130	<0.20	ug/L	NC	30
8747747	Toluene	2023/06/27	94	70 - 130	94	70 - 130	<0.20	ug/L	NC	30
8747747	Total Xylenes	2023/06/27					<0.20	ug/L	NC	30
8747747	trans-1,2-Dichloroethylene	2023/06/27	96	70 - 130	97	70 - 130	<0.50	ug/L	NC	30
8747747	trans-1,3-Dichloropropene	2023/06/27	95	70 - 130	94	70 - 130	<0.40	ug/L	NC	30
8747747	Trichloroethylene	2023/06/27	100	70 - 130	99	70 - 130	<0.20	ug/L	NC	30
8747747	Trichlorofluoromethane (FREON 11)	2023/06/27	95	70 - 130	100	70 - 130	<0.50	ug/L	NC	30
8747747	Vinyl Chloride	2023/06/27	92	70 - 130	98	70 - 130	<0.20	ug/L	NC	30
8750090	Dissolved Chloride (Cl-)	2023/06/26	NC	80 - 120	100	80 - 120	90, RDL=1.0	mg/L	1.7	20
8751216	Mercury (Hg)	2023/06/26	98	75 - 125	100	80 - 120	<0.10	ug/L	NC	20
8751229	Dissolved Antimony (Sb)	2023/06/26	105	80 - 120	101	80 - 120	<0.50	ug/L	NC	20
8751229	Dissolved Arsenic (As)	2023/06/26	102	80 - 120	100	80 - 120	<1.0	ug/L	17	20
8751229	Dissolved Barium (Ba)	2023/06/26	100	80 - 120	98	80 - 120	<2.0	ug/L	4.1	20
8751229	Dissolved Beryllium (Be)	2023/06/26	100	80 - 120	98	80 - 120	<0.40	ug/L	NC	20
8751229	Dissolved Boron (B)	2023/06/26	96	80 - 120	96	80 - 120	<10	ug/L	1.2	20
8751229	Dissolved Cadmium (Cd)	2023/06/26	101	80 - 120	97	80 - 120	<0.090	ug/L	NC	20
8751229	Dissolved Chromium (Cr)	2023/06/26	99	80 - 120	97	80 - 120	<5.0	ug/L	NC	20
8751229	Dissolved Cobalt (Co)	2023/06/26	98	80 - 120	97	80 - 120	<0.50	ug/L	NC	20

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QUALITY ASSURANCE REPORT(CONT'D)

			Matrix Spike		SPIKED BLANK		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8751229	Dissolved Copper (Cu)	2023/06/26	100	80 - 120	100	80 - 120	<0.90	ug/L	NC	20
8751229	Dissolved Lead (Pb)	2023/06/26	99	80 - 120	96	80 - 120	<0.50	ug/L	NC	20
8751229	Dissolved Molybdenum (Mo)	2023/06/26	106	80 - 120	102	80 - 120	<0.50	ug/L	5.0	20
8751229	Dissolved Nickel (Ni)	2023/06/26	98	80 - 120	97	80 - 120	<1.0	ug/L	NC	20
8751229	Dissolved Selenium (Se)	2023/06/26	102	80 - 120	98	80 - 120	<2.0	ug/L	NC	20
8751229	Dissolved Silver (Ag)	2023/06/26	97	80 - 120	99	80 - 120	<0.090	ug/L	NC	20
8751229	Dissolved Sodium (Na)	2023/06/26	99	80 - 120	99	80 - 120	<100	ug/L	2.1	20
8751229	Dissolved Thallium (Tl)	2023/06/26	101	80 - 120	97	80 - 120	<0.050	ug/L	NC	20
8751229	Dissolved Uranium (U)	2023/06/26	100	80 - 120	95	80 - 120	<0.10	ug/L	3.9	20
8751229	Dissolved Vanadium (V)	2023/06/26	100	80 - 120	98	80 - 120	<0.50	ug/L	NC	20
8751229	Dissolved Zinc (Zn)	2023/06/26	96	80 - 120	97	80 - 120	<5.0	ug/L	NC	20
8753211	1,2,4-Trichlorobenzene	2023/06/27	51	50 - 130	37 (1)	50 - 130	<0.1	ug/L	7.7	30
8753211	1-Methylnaphthalene	2023/06/27	76	50 - 130	60	50 - 130	<0.2	ug/L	8.9	30
8753211	2,3,4,6 + 2,3,4,5-Tetrachlorophenol	2023/06/27	95	30 - 130	93	30 - 130	<1	ug/L	1.4	40
8753211	2,4,5-Trichlorophenol	2023/06/27	92	50 - 130	88	50 - 130	<0.2	ug/L	4.9	30
8753211	2,4,6-Trichlorophenol	2023/06/27	89	50 - 130	86	50 - 130	<0.2	ug/L	4.1	30
8753211	2,4-Dichlorophenol	2023/06/27	85	50 - 130	83	50 - 130	<0.1	ug/L	0.93	30
8753211	2,4-Dimethylphenol	2023/06/27	52	30 - 130	80	30 - 130	<0.5	ug/L	3.9	30
8753211	2,4-Dinitrophenol	2023/06/27	113	30 - 130	99	30 - 130	<2	ug/L	8.4	30
8753211	2,4-Dinitrotoluene	2023/06/27	93	50 - 130	91	50 - 130	<0.3	ug/L	2.6	30
8753211	2,6-Dinitrotoluene	2023/06/27	91	50 - 130	87	50 - 130	<0.3	ug/L	4.2	30
8753211	2-Chlorophenol	2023/06/27	83	50 - 130	77	50 - 130	<0.1	ug/L	4.9	30
8753211	2-Methylnaphthalene	2023/06/27	68	50 - 130	53	50 - 130	<0.2	ug/L	9.3	30
8753211	3,3'-Dichlorobenzidine	2023/06/27	58	30 - 130	78	30 - 130	<0.5	ug/L	0.77	30
8753211	Acenaphthene	2023/06/27	73	50 - 130	62	50 - 130	<0.2	ug/L	4.9	30
8753211	Acenaphthylene	2023/06/27	72	50 - 130	62	50 - 130	<0.2	ug/L	5.4	30
8753211	Anthracene	2023/06/27	77	50 - 130	75	50 - 130	<0.05	ug/L	2.4	30
8753211	Benzo(a)anthracene	2023/06/27	85	50 - 130	85	50 - 130	<0.05	ug/L	0.54	30
8753211	Benzo(a)pyrene	2023/06/27	87	50 - 130	86	50 - 130	<0.01	ug/L	0.97	30
8753211	Benzo(b/j)fluoranthene	2023/06/27	88	50 - 130	86	50 - 130	<0.05	ug/L	2.8	30
8753211	Benzo(g,h,i)perylene	2023/06/27	61	50 - 130	74	50 - 130	<0.05	ug/L	12	30

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QUALITY ASSURANCE REPORT(CONT'D)

			Matrix Spike		SPIKED BLANK		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8753211	Benzo(k)fluoranthene	2023/06/27	94	50 - 130	95	50 - 130	<0.05	ug/L	4.7	30
8753211	Biphenyl	2023/06/27	82	50 - 130	65	50 - 130	<0.1	ug/L	6.9	30
8753211	Bis(2-chloroethyl)ether	2023/06/27	67	50 - 130	64	50 - 130	<0.5	ug/L	1.1	30
8753211	Bis(2-chloroisopropyl)ether	2023/06/27	66	50 - 130	60	50 - 130	<0.5	ug/L	2.2	30
8753211	Bis(2-ethylhexyl)phthalate	2023/06/27	77	50 - 130	74	50 - 130	<1	ug/L	1.8	30
8753211	Chrysene	2023/06/27	82	50 - 130	82	50 - 130	<0.05	ug/L	0.012	30
8753211	Dibenzo(a,h)anthracene	2023/06/27	67	50 - 130	77	50 - 130	<0.1	ug/L	6.4	30
8753211	Diethyl phthalate	2023/06/27	79	50 - 130	78	50 - 130	<0.1	ug/L	0.36	30
8753211	Dimethyl phthalate	2023/06/27	87	50 - 130	85	50 - 130	<0.1	ug/L	0.88	30
8753211	Fluoranthene	2023/06/27	92	50 - 130	91	50 - 130	<0.2	ug/L	1.2	30
8753211	Fluorene	2023/06/27	83	50 - 130	75	50 - 130	<0.2	ug/L	4.1	30
8753211	Indeno(1,2,3-cd)pyrene	2023/06/27	65	50 - 130	74	50 - 130	<0.1	ug/L	3.9	30
8753211	Naphthalene	2023/06/27	80	50 - 130	58	50 - 130	<0.2	ug/L	13	30
8753211	p-Chloroaniline	2023/06/27	58	30 - 130	50	30 - 130	<1	ug/L	9.6	30
8753211	Pentachlorophenol	2023/06/27	58	50 - 130	63	50 - 130	<0.1	ug/L	0.74	30
8753211	Phenanthrene	2023/06/27	78	50 - 130	75	50 - 130	<0.1	ug/L	2.7	30
8753211	Phenol	2023/06/27	33	30 - 130	30	30 - 130	<0.5	ug/L	6.2	30
8753211	Pyrene	2023/06/27	91	50 - 130	90	50 - 130	<0.05	ug/L	2.6	30

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

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

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

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

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

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

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

(1) Recovery or RPD for this parameter is outside control limits. The overall quality control for this analysis meets acceptability criteria.

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VALIDATION SIGNATURE PAGE

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

Anastassia Hamanov, Scientific Specialist

Cristina Carriere, Senior Scientific Specialist

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

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Page of

CHAIN OF CUSTODY RECORD

20-Jun-23 15:50
Kudrat Bajwa
C3I0354
SWP ENV-1679

INVOICE TO:		REPORT TO:		PROJECT INFORMATION:	
Company Name:	#4398 Terrapex Environmental Ltd	Company Name:		Quotation #:	C25103
Attention:	Accounts Payable	Attention:	Geoff Lussier	P.O. #:	
Address:	90 Scarsdale Rd Toronto ON M3B 2R7	Address:		Project:	CH244.00
Tel:	(416) 245-0011 Fax: (416) 245-0012	Tel:	(647) 250-8231 Fax:	Project Name:	120-158 Queen St, South Mississauga
Email:	accounts.payable@terrapex.com	Email:	g.lussier@terrapex.com	Site #:	
				Sampled By:	KB/GS

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

Regulation 153 (2011)
- ☐ Table 1 ☐ Res/Park ☐ Medium/Fine
- ☑ Table 2 ☑ Ind/Comm ☐ Coarse
- ☐ Table 3 ☐ Agri/Other ☐ For RSC
- ☐ Table ___

Other Regulations
- ☐ CCME ☐ Sanitary Sewer Bylaw
- ☐ Reg 558. ☐ Storm Sewer Bylaw
- ☐ MISA Municipality ___
- ☐ PWQO ☐ Reg 406 Table ___
- ☐ Other ___

Special Instructions

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

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

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

Job Specific Rush TAT (if applies to entire submission)
Date Required: ___ Time Required: ___
Rush Confirmation Number: ___ *(call lab for #)*

	Sample Barcode Label	Sample (Location) Identification	Date Sampled	Time Sampled	Matrix	Field Filtered (please circle): Metals / Hg / Cr VI	ANALYSIS REQUESTED (PLEASE BE SPECIFIC): O.Reg 153 VOCs by HS & F1-F4	O.Reg 153 Metals & Inorganics Pkg	O.Reg 153 PAHs	O.Reg 153 Semivolatiles Package	BTEX, PHCs, VOCs	PCBs					# of Bottles	Comments
1		MW 201	June 16 2023	12:07	GW	✓	✓	✓	✓		✓						9	
2		MW 202	"	1:03	GW	✓		✓	✓		✓						9	
3		MW 203	"	9:33	GW	✓		✓	✓		✓						9	
4		MW 206	"	10:01	GW	✓		✓	✓		✓						9	
5		MW 207	"	11:25	GW	✓		✓	✓		✓						9	
6		MW 208	"	10:50	GW	✓		✓	✓		✓	✓					11	
7		MW 118S	"	2:00	GW					✓		✓					4	
8		~~Dup~~ MW 1000	"	9:55	GW	✓		✓	✓		✓						9	
9		MW 2000	"	11:10	GW							✓					2	
10																		

* RELINQUISHED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	RECEIVED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	# jars used and not submitted
Gurmeewale Singh GS	23/06/19	12:30	Rupinder RUPINDER	2023/06/20	15:50	

Laboratory Use Only

Time Sensitive	Temperature (°C) on Recei	Custody Seal	Yes	No
	2/1/1	Present	✓	
		Intact	✓	

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

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

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

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

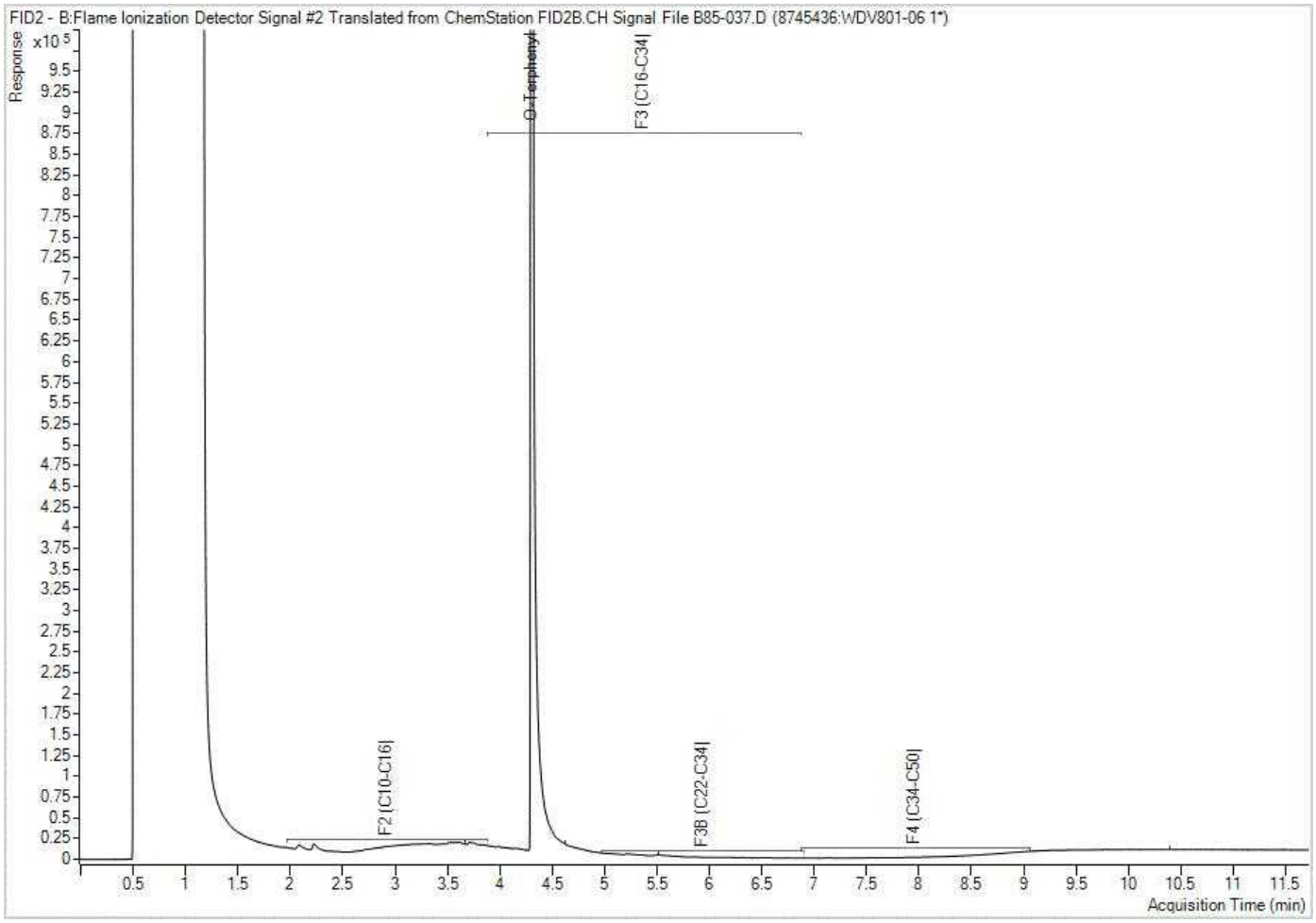
White: Bureau Veritas Yellow: Client

Bureau Veritas Canada (2019) Inc.

Bureau Veritas Job #: C3I0354
Report Date: 2023/06/28
Bureau Veritas Sample: WDV801

Terrapex Environmental Ltd
Client Project #: CH244.00
Project name: 120 -158 QUEEN STREET SOUTH, MISSISSAUGA
Client ID: MW 201

Petroleum Hydrocarbons F2-F4 in Water Chromatogram

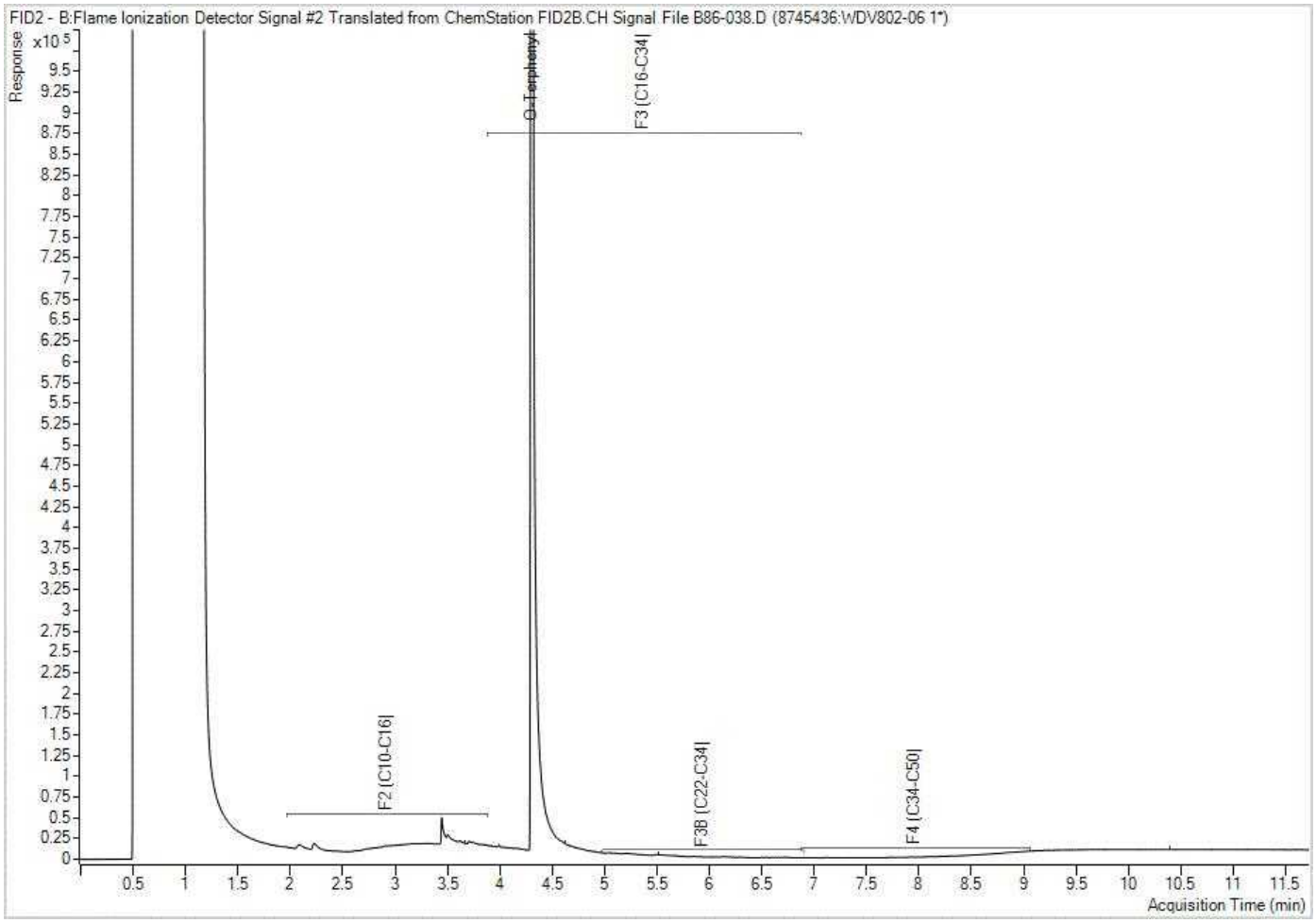


Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Bureau Veritas Job #: C3I0354
Report Date: 2023/06/28
Bureau Veritas Sample: WDV802

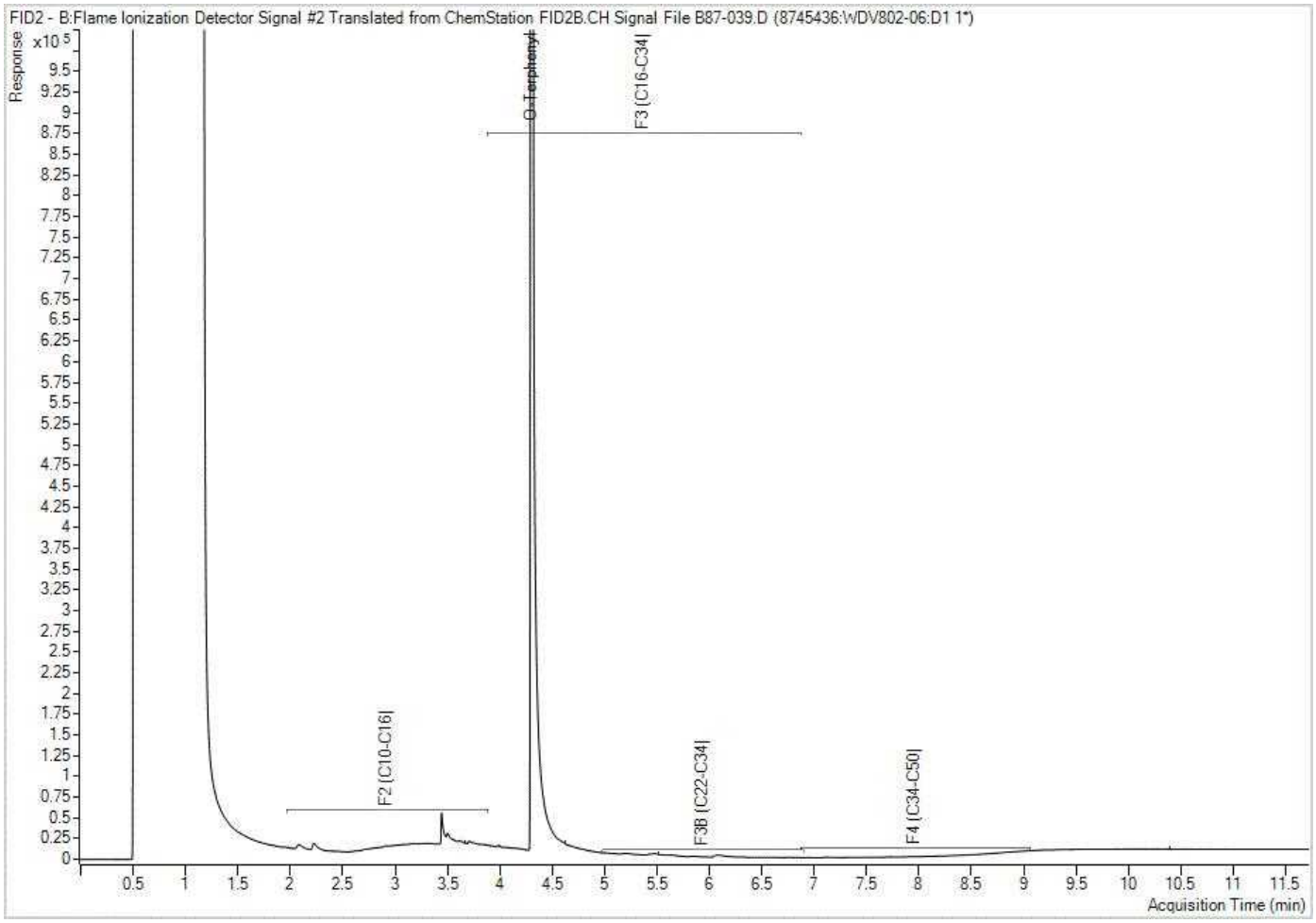
Terrapex Environmental Ltd
Client Project #: CH244.00
Project name: 120 -158 QUEEN STREET SOUTH, MISSISSAUGA
Client ID: MW 202

Petroleum Hydrocarbons F2-F4 in Water Chromatogram



Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Petroleum Hydrocarbons F2-F4 in Water Chromatogram

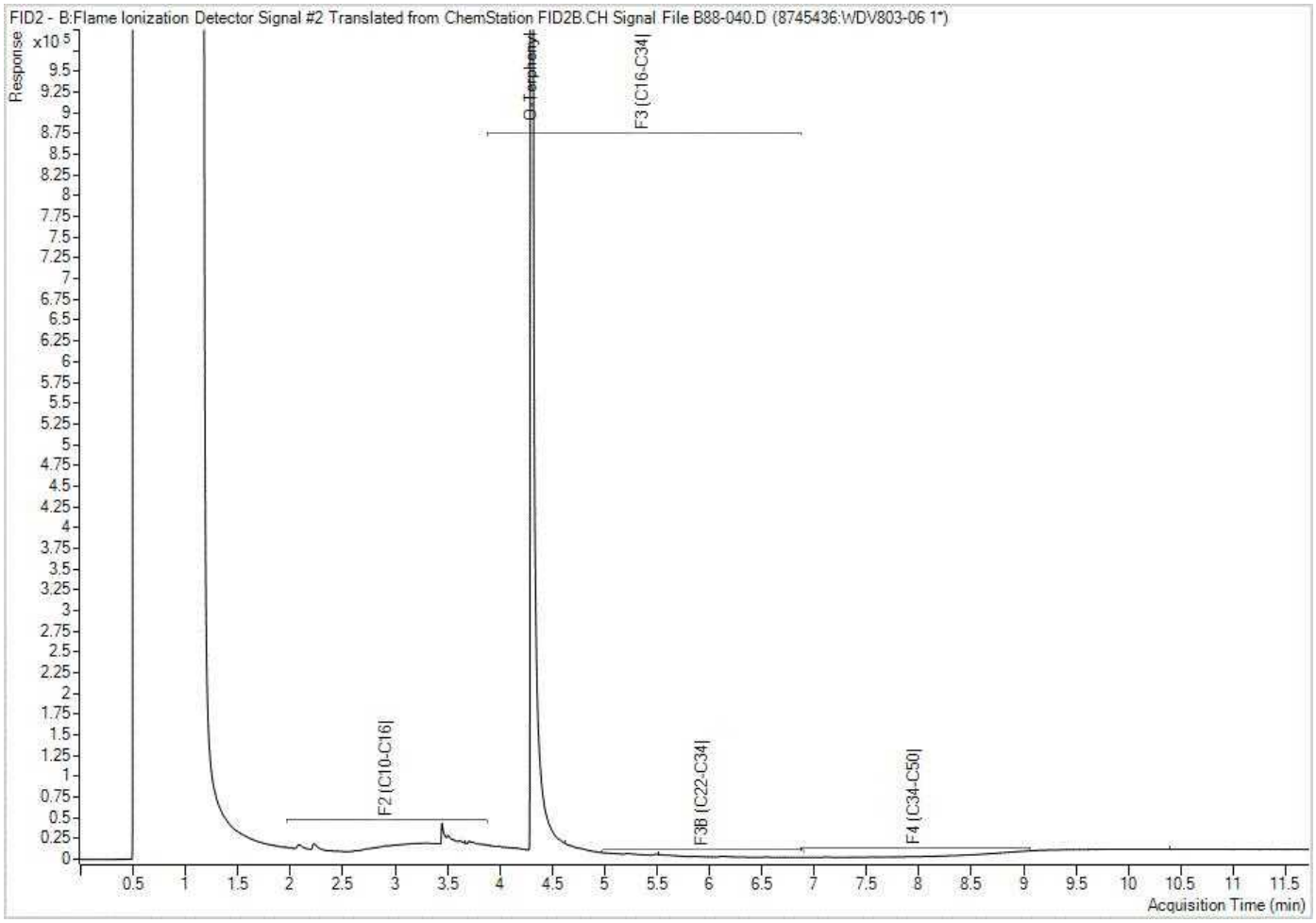


Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Bureau Veritas Job #: C3I0354
Report Date: 2023/06/28
Bureau Veritas Sample: WDV803

Terrapex Environmental Ltd
Client Project #: CH244.00
Project name: 120 -158 QUEEN STREET SOUTH, MISSISSAUGA
Client ID: MW 203

Petroleum Hydrocarbons F2-F4 in Water Chromatogram

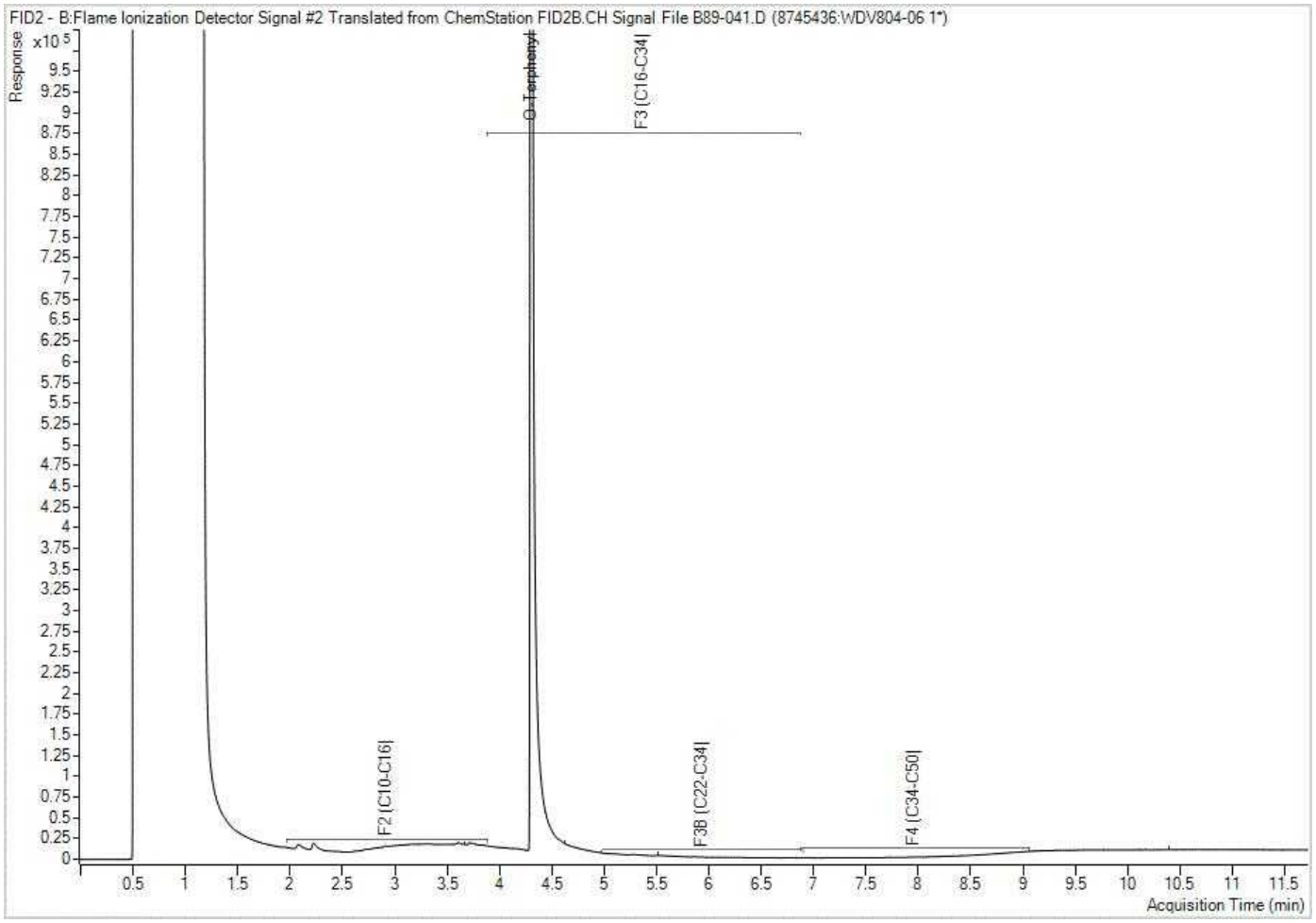


Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Bureau Veritas Job #: C3I0354
Report Date: 2023/06/28
Bureau Veritas Sample: WDV804

Terrapex Environmental Ltd
Client Project #: CH244.00
Project name: 120 -158 QUEEN STREET SOUTH, MISSISSAUGA
Client ID: MW 206

Petroleum Hydrocarbons F2-F4 in Water Chromatogram

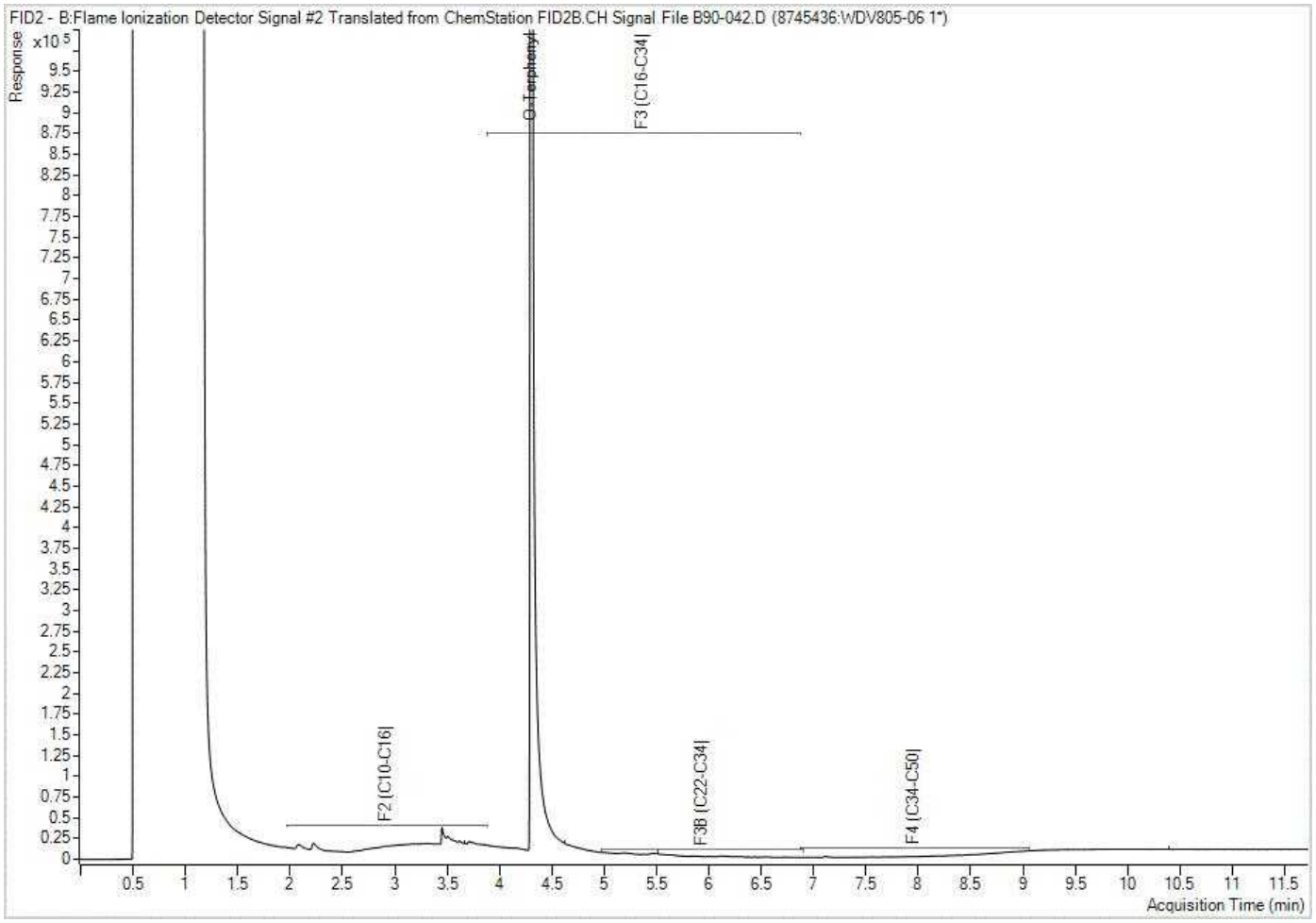


Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Bureau Veritas Job #: C3I0354
Report Date: 2023/06/28
Bureau Veritas Sample: WDV805

Terrapex Environmental Ltd
Client Project #: CH244.00
Project name: 120 -158 QUEEN STREET SOUTH, MISSISSAUGA
Client ID: MW 207

Petroleum Hydrocarbons F2-F4 in Water Chromatogram

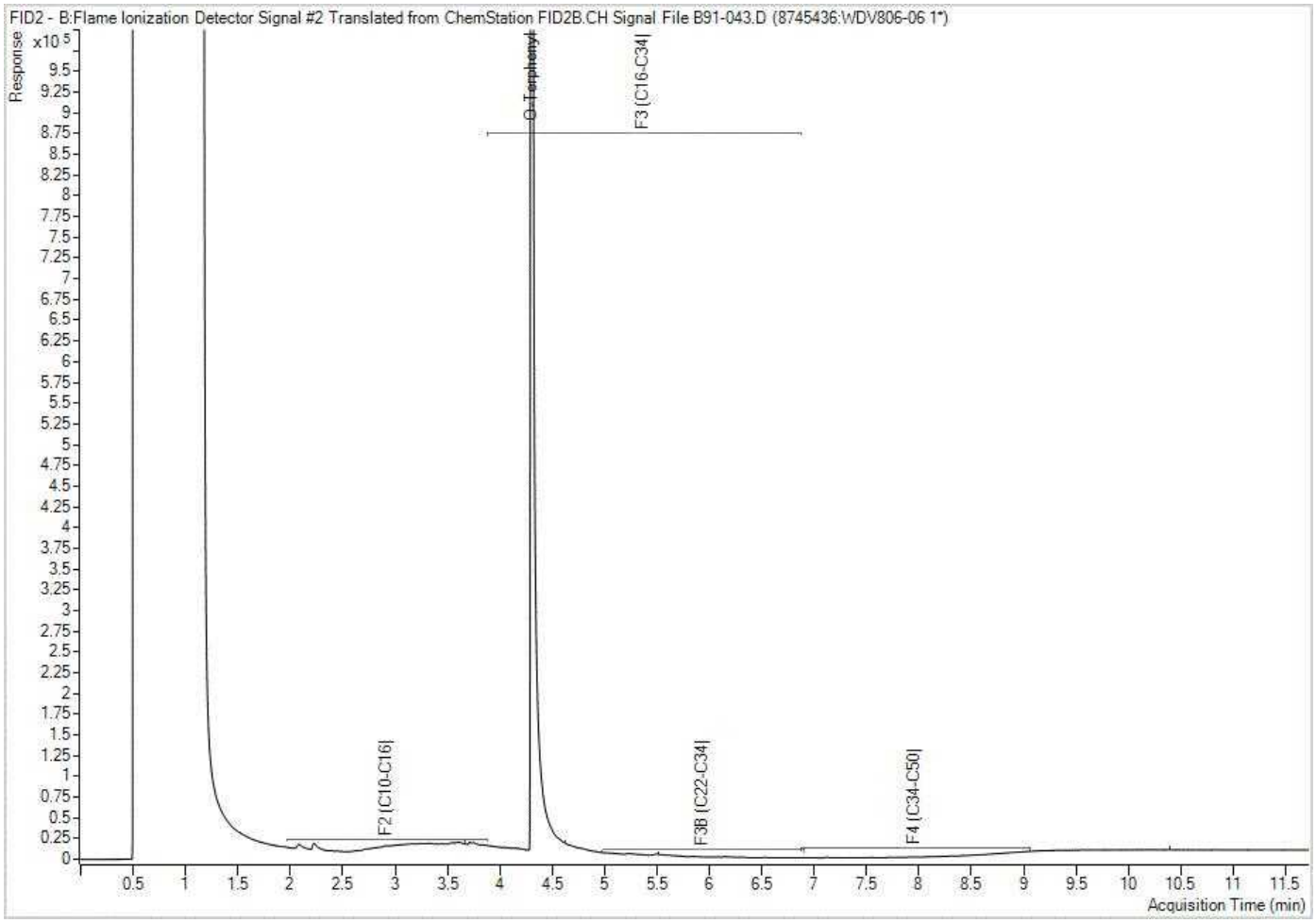


Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Bureau Veritas Job #: C3I0354
Report Date: 2023/06/28
Bureau Veritas Sample: WDV806

Terrapex Environmental Ltd
Client Project #: CH244.00
Project name: 120 -158 QUEEN STREET SOUTH, MISSISSAUGA
Client ID: MW 208

Petroleum Hydrocarbons F2-F4 in Water Chromatogram

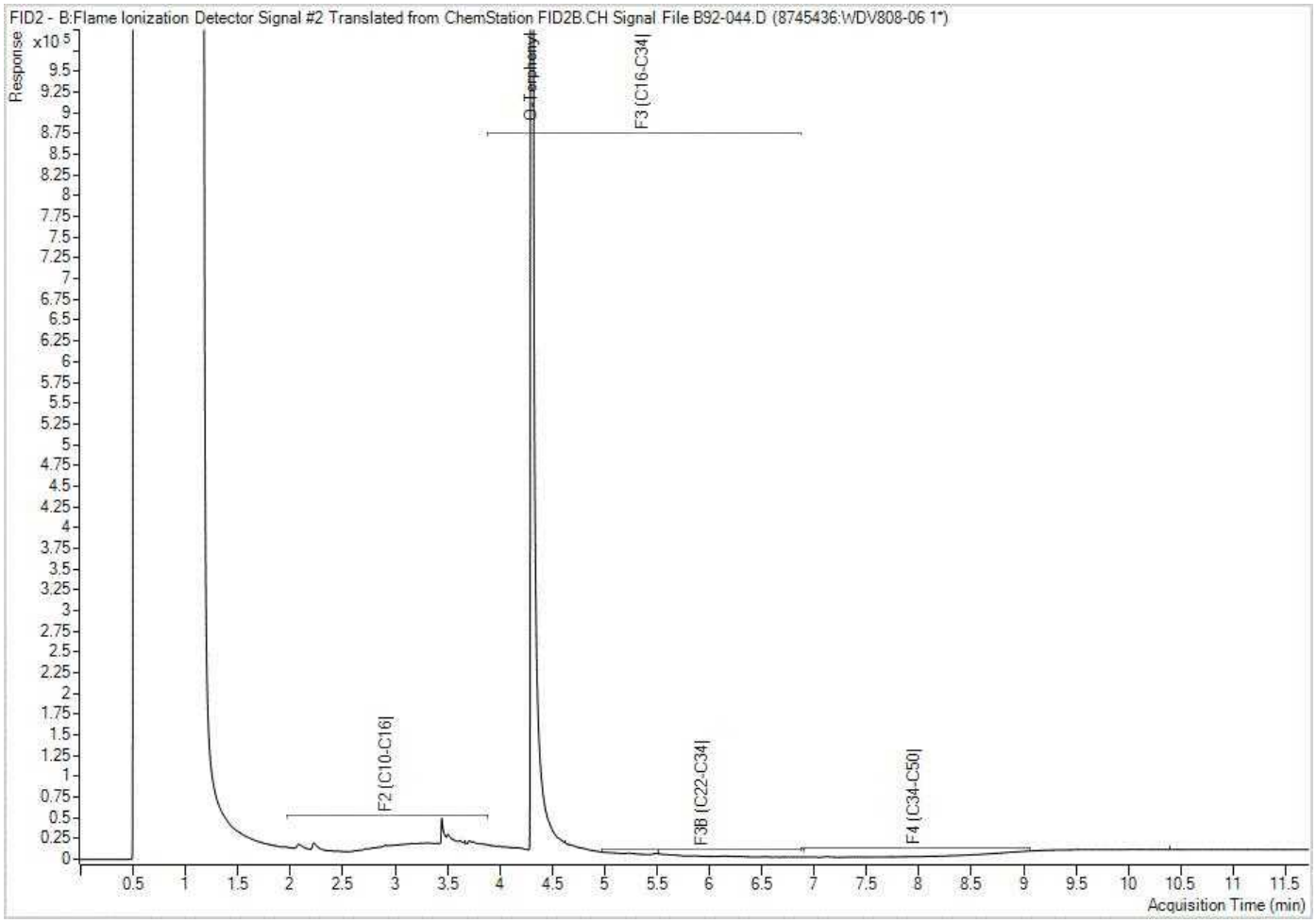


Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Bureau Veritas Job #: C3I0354
Report Date: 2023/06/28
Bureau Veritas Sample: WDV808

Terrapex Environmental Ltd
Client Project #: CH244.00
Project name: 120 -158 QUEEN STREET SOUTH, MISSISSAUGA
Client ID: MW 1000

Petroleum Hydrocarbons F2-F4 in Water Chromatogram



Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Your Project #: CH244.00
Site Location: 120-158 QUEEN ST,SOUTH,MISSISSAUGA
Your C.O.C. #: N/A

Attention: Geoff Lussier

Terrapex Environmental Ltd
90 Scarsdale Rd
Toronto, ON
CANADA M3B 2R7

Report Date: 2023/08/03
Report #: R7749793
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C3M5649
Received: 2023/07/27, 16:40

Sample Matrix: Water
Samples Received: 1

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Dissolved Metals by ICPMS	1	N/A	2023/08/02	CAM SOP-00447	EPA 6020B m

Remarks:

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

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

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

Solid sample results, except biota, are based on dry weight unless otherwise indicated. Organic analyses are not recovery corrected except for isotope dilution methods.
Results relate to samples tested. When sampling is not conducted by Bureau Veritas, results relate to the supplied samples tested.

Reference Method suffix “m” indicates test methods incorporate validated modifications from specific reference methods to improve performance.
* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.

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Your Project #: CH244.00
Site Location: 120-158 QUEEN ST,SOUTH,MISSISSAUGA
Your C.O.C. #: N/A

Attention: Geoff Lussier

Terrapex Environmental Ltd
90 Scarsdale Rd
Toronto, ON
CANADA M3B 2R7

Report Date: 2023/08/03
Report #: R7749793
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C3M5649
Received: 2023/07/27, 16:40

Encryption Key

Please direct all questions regarding this Certificate of Analysis to:
Kudrat Bajwa, B.Sc., Project Manager
Email: Kudrat.Bajwa@bureauveritas.com
Phone# (905)817-5755

==========

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Bureau Veritas Job #: C3M5649
Report Date: 2023/08/03

Terrapex Environmental Ltd
Client Project #: CH244.00
Site Location: 120-158 QUEEN ST,SOUTH,MISSISSAUGA
Sampler Initials: GL

ELEMENTS BY ATOMIC SPECTROSCOPY (WATER)

Bureau Veritas ID		WNG136		
Sampling Date		2023/07/27 15:50		
COC Number		N/A		
	UNITS	**MW1185**	**RDL**	**QC Batch**
Metals				
Dissolved Selenium (Se)	ug/L	32	10	8822704

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Bureau Veritas Job #: C3M5649
Report Date: 2023/08/03

Terrapex Environmental Ltd
Client Project #: CH244.00
Site Location: 120-158 QUEEN ST,SOUTH,MISSISSAUGA
Sampler Initials: GL

TEST SUMMARY

Bureau Veritas ID: WNG136
Sample ID: MW1185
Matrix: Water

Collected: 2023/07/27
Shipped:
Received: 2023/07/27

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Dissolved Metals by ICPMS	ICP/MS	8822704	N/A	2023/08/02	Nan Raykha

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GENERAL COMMENTS

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

Package 1	13.0°C

Sample WNG136 [MW1185] : Due to the sample matrix, sample required dilution. Detection limit was adjusted accordingly.

Results relate only to the items tested.

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Bureau Veritas Job #: C3M5649
Report Date: 2023/08/03

QUALITY ASSURANCE REPORT

Terrapex Environmental Ltd
Client Project #: CH244.00
Site Location: 120-158 QUEEN ST,SOUTH,MISSISSAUGA
Sampler Initials: GL

			Matrix Spike		SPIKED BLANK		Method Blank		RPD	
QC Batch	**Parameter**	**Date**	**% Recovery**	**QC Limits**	**% Recovery**	**QC Limits**	**Value**	**UNITS**	**Value (%)**	**QC Limits**
8822704	Dissolved Selenium (Se)	2023/08/02	104	80 - 120	101	80 - 120	<2.0	ug/L	NC	20

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

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

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

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

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

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Bureau Veritas Job #: C3M5649
Report Date: 2023/08/03

Terrapex Environmental Ltd
Client Project #: CH244.00
Site Location: 120-158 QUEEN ST,SOUTH,MISSISSAUGA
Sampler Initials: GL

VALIDATION SIGNATURE PAGE

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

Cristina Carriere

Cristina Carriere, Senior Scientific Specialist

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Phone: 905-817-5700 Fax: 905-817-5779 Toll Free: 800-563-6266

CHAIN OF CUSTODY RECORD

ENV COC - 00014v3

Invoice Information		Report Information (if differs from invoice)		Project Information	
Invoice to (requires report) ☐					
Company:	#4398 Terraplex Environ	Company:		Quotation #:	
Contact Name:	Accounts Payable	Contact Name:	Geoff Lussier	P.O. #/ AFE#:	
Street Address:	90 Scarsdale Rd	Street Address:		Project #:	CM244.00
City:	Toronto Prov: ON Postal Code: M3B 2R7	City:	Prov: Postal Code:	Site #:	
Phone:	416 245-0011	Phone:	647 250-8231	Site Location:	120-158 Queen St South, Mississauga
Email:	accounts.payable@terraplex.com	Email:	g.lussier@terraplex.com	Site Location Province:	
Copies:		Copies:		Sampled By:	GLWI

LAB USE ONLY - PLACE STICKER HERE

Rush Confirmation #:

Regulatory Criteria

REG 153: ☐ Table 1 ☐ Table 2 ☐ Table 3 ☐ Table _____ ☐ Res/Park ☐ Ind/Comm ☐ Agri/other ☐ Med/Fine ☐ Course ☐ For RSC

OTHER: ☐ ECME ☐ Reg 558* ☐ *min 3 day TAT ☐ MISA ☐ PWQO ☐ Reg 406, Table: _____ ☐ Sanitary Sewer Bylaw ☐ Storm Sewer Bylaw Municipality _____ ☐ Other: _____

Include Criteria on Certificate of Analysis (check if yes): ☐

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

	Sample Identification	Date Sampled YY	MM	DD	Time (24hr) HH	MM	Matrix	1 FIELD FILTERED	2 FIELD PRESERVED	3 LAB FILTRATION REQUIRED	4 BTEX/F1	5 F2-F4	6 VOCs	7 Reg 153 metals and inorganics	8 Reg 153 ICPMS metals	9 Reg 153 metals (Hg, Cr VI, ICPMS metals, HWS-B)	10 Selenium	11	12	13	14	15	16	17	18	19	20	21 # OF CONTAINERS SUBMITTED	22 HOLD - DO NOT ANALYZE
1	MW118S	23	07	27	15	50	GW	✓									✓											1	
2																													
3																													
4																													
5																													
6																													
7																													
8																													
9																													
10																													
11																													
12																													

Regular Turnaround Time (TAT)

☑ 5 to 7 Day ☐ 10 Day

Rush Turnaround Time (TAT) Surcharges apply

☐ Same Day ☐ 1 Day ☐ 2 Day ☐ 3 Day ☐ 4 Day

Date Required: YY MM DD

Comments

27-Jul-23 16:40
Kudrat Bajwa
C3M5649
WP ENV-1545

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LAB USE ONLY	Yes	No	°C				LAB USE ONLY	Yes	No	°C				LAB USE ONLY	Yes	No	°C				Temperature reading by:
Seal present		✓					Seal present							Seal present							
Seal intact							Seal intact							Seal intact							
Cooling media present				13	13	13	Cooling media present							Cooling media present							
				1	2	3					1	2	3					1	2	3	

	Relinquished by: (Signature/ Print)	Date YY	MM	DD	Time HH	MM	Received by: (Signature/ Print)	Date YY	MM	DD	Time HH	MM	Special Instructions
1	Geoff Lussier	23	07	27	16	43PM	1						
2							2						

Your Project #: CH244.00
Site Location: 120-158 QUEEN ST SOUTH, MISSISSAUGA
Your C.O.C. #: n/a

Attention: Geoff Lussier

Terrapex Environmental Ltd
65 Nebo Road
Hamilton, ON
CANADA L8W 2C9

Report Date: 2023/11/10
Report #: R7906562
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C3Y8843
Received: 2023/11/07, 15:15

Sample Matrix: Water
Samples Received: 1

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Dissolved Metals by ICPMS	1	N/A	2023/11/09	CAM SOP-00447	EPA 6020B m

Remarks:

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

Reference Method suffix “m” indicates test methods incorporate validated modifications from specific reference methods to improve performance.
* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.

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Your Project #: CH244.00
Site Location: 120-158 QUEEN ST SOUTH, MISSISSAUGA
Your C.O.C. #: n/a

Attention: Geoff Lussier

Terrapex Environmental Ltd
65 Nebo Road
Hamilton, ON
CANADA L8W 2C9

Report Date: 2023/11/10
Report #: R7906562
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C3Y8843
Received: 2023/11/07, 15:15

Encryption Key

Please direct all questions regarding this Certificate of Analysis to:
Kudrat Bajwa, B.Sc., Project Manager
Email: Kudrat.Bajwa@bureauveritas.com
Phone# (905)817-5755

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Bureau Veritas Job #: C3Y8843
Report Date: 2023/11/10

Terrapex Environmental Ltd
Client Project #: CH244.00
Site Location: 120-158 QUEEN ST SOUTH, MISSISSAUGA
Sampler Initials: JF

ELEMENTS BY ATOMIC SPECTROSCOPY (WATER)

Bureau Veritas ID		XNL289		
Sampling Date		2023/11/06 11:35		
COC Number		n/a		
	UNITS	MW1185	RDL	QC Batch
Metals				
Dissolved Selenium (Se)	ug/L	22	2.0	9038660

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Bureau Veritas Job #: C3Y8843
Report Date: 2023/11/10

Terrapex Environmental Ltd
Client Project #: CH244.00
Site Location: 120-158 QUEEN ST SOUTH, MISSISSAUGA
Sampler Initials: JF

TEST SUMMARY

Bureau Veritas ID: XNL289
Sample ID: MW1185
Matrix: Water

Collected: 2023/11/06
Shipped:
Received: 2023/11/07

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Dissolved Metals by ICPMS	ICP/MS	9038660	N/A	2023/11/09	Nan Raykha

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GENERAL COMMENTS

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

Package 1	1.3°C

Results relate only to the items tested.

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Bureau Veritas Job #: C3Y8843
Report Date: 2023/11/10

QUALITY ASSURANCE REPORT

Terrapex Environmental Ltd
Client Project #: CH244.00
Site Location: 120-158 QUEEN ST SOUTH, MISSISSAUGA
Sampler Initials: JF

			Matrix Spike		SPIKED BLANK		Method Blank		RPD	
QC Batch	**Parameter**	**Date**	**% Recovery**	**QC Limits**	**% Recovery**	**QC Limits**	**Value**	**UNITS**	**Value (%)**	**QC Limits**
9038660	Dissolved Selenium (Se)	2023/11/10	99	80 - 120	101	80 - 120	<2.0	ug/L	7.2	20

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

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

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

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

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Bureau Veritas Job #: C3Y8843
Report Date: 2023/11/10

Terrapex Environmental Ltd
Client Project #: CH244.00
Site Location: 120-158 QUEEN ST SOUTH, MISSISSAUGA
Sampler Initials: JF

VALIDATION SIGNATURE PAGE

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

Cristina Carriere

Cristina Carriere, Senior Scientific Specialist

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Phone: 905-817-5700 Fax: 905-817-5779 Toll Free: 800-563-6266

CHAIN OF CUSTODY RECORD

ENV COC - 00014v3

07-Nov-23 15:15
Kudrat Bajwa
C3Y8843
RPK ENV-981

Invoice Information		Report Information (if differs from invoice)		Project Information	
Invoice to (requires report) ☐					
Company:	#10476 Terrapex Environmental LTD	Company:	#10476 Terrapex Environmental LTD	Quotation #:	
Contact Name:	accounts payable	Contact Name:	Geoff Lussier	P.O. #/ AFE#:	
Street Address:	90 Scarsdale rd	Street Address:	65 Nebo Road	Project #:	CH244.00
City: Toronto Prov: ON Postal Code:	L0R 2H0	City: Hamilton Prov: ON Postal Code:	L8W2C9	Site #:	
Phone:	416-245-0011	Phone:	905-632-5939 x 228	Site Location:	120-158 Queen st south, Mississauga
Email:	accounts.payable@terrapex.com	Email:	g.lussier@terrapex.com	Site Location Province:	ON
Copies:		Copies:		Sampled By:	JF

Regulatory Criteria

REG 153: ☐ Table 1 ☐ Table 2 ☑ Table 3 ☐ Table ____ | ☐ Res/Park ☑ Ind/Comm ☐ Agri/other | ☐ Med/Fine ☑ Course ☑ For RSC

OTHER: ☐ CCME ☐ Reg 558* *min 3 day TAT ☐ MISA ☐ PWQO | ☐ Reg 406, Table: ____ ☐ Sanitary Sewer Bylaw ☐ Storm Sewer Bylaw Municipality ____ ☐ Other:

Include Criteria on Certificate of Analysis (check if yes): ☐

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

	Sample Identification	Date Sampled YY	MM	DD	Time (24hr) HH	MM	Matrix	1 FIELD FILTERED	2 FIELD PRESERVED	3 LAB FILTRATION REQUIRED	4 BTEX/ F1	5 F2 - F4	6 VOCs	7 Reg 153 metals and inorganics	8 Reg 153 ICPMS metals	9 Reg 153 metals (Hg, Cr VI, ICPMS metals, HWS - B)	10 PAHs	11 Mercury	12 Cr 6	13 Selenium	14	15	16	17	18	19	20	21 # OF CONTAINERS SUBMITTED	22 HOLD - DO NOT ANALYZE	Comments
1	MW118S	23	11	06	11	35	Water - Ground	x	x											x								1		
2																														
3																														
4																														
5																														
6																														
7																														
8																														
9																														
10																														
11																														
12																														

Regular Turnaround Time (TAT)
☑ 5 to 7 Day ☐ 10 Day

Rush Turnaround Time (TAT) Surcharges apply
☐ Same Day ☐ 1 Day ☐ 2 Day ☐ 3 Day ☐ 4 Day

Date Required: YY ____ MM ____ DD ____

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LAB USE ONLY	Yes	No	°C	1	2	3
Seal present	✓					
Seal intact	✓					
Cooling media present	✓					
				2	2	0

LAB USE ONLY	Yes	No	°C	1	2	3
Seal present						
Seal intact						
Cooling media present						

LAB USE ONLY	Yes	No	°C	1	2	3	Temperature reading by:
Seal present							
Seal intact							
Cooling media present							

	Relinquished by: (Signature/ Print)	Date YY	MM	DD	Time HH	MM	Received by: (Signature/ Print)	Date YY	MM	DD	Time HH	MM	Special instructions
1	Jesse Fortier	23	11	07	9	00	RAJ MASANI	2023	11	07	15	15	
2													

BV

APPENDIX VI
PHASE TWO CONCEPTUAL SITE MODEL

PHASE TWO CONCEPTUAL SITE MODEL

120-158 Queen Street South and 169 Crumbie Street, Mississauga, 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, one contaminant of concern, specifically HWS boron in soil, was found to exceed the Table 3 SCS. No contaminants of concern were found in groundwater exceeding the Table 3 SCS.

Remediation of the soil impacted with HWS boron is planned to address the impact identified during the Phase Two ESA. The Record of Site Conditions to be filed will incorporate the results of the proposed remedial program, and in some cases, data from the remedial program will be used to augment the Phase Two ESA. The proposed remedial excavation program will remove all the contaminated in soil from the Site for disposal at a licensed facility.

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.

OVERVIEW

Site Description

The Site is located on the west side of Queen Street South, Mississauga, in an area of predominately light industrial land use, with residential land use to the west. The Site is an irregular shaped parcel of land measuring approximately 4.3 hectares (10.6 acres).

The Site is occupied by various businesses including: three multi-unit commercial buildings located at 128 Queen Street South (Streetsville Centre Plaza), 158 Queen Street South (Winchester Place), and 169 Crumbie Street; two free-standing restaurants located at 120 Queen Street South (Tim Hortons) and 154 Queen Street South (Cuchulainn's Irish Pub); and, associated paved parking areas.

The Site also includes a vacant, fenced lot which was previously a retail gasoline station located at 142 and 148 Queen Street South. There is mix of residential and commercial buildings to the

north, east, and south. Railway tracks are located to the west of the Site, followed by residential properties.

The site location is shown in Figure 1. The general site layout and structures are shown in Figure 2A, while Figures 4 and 5A show the potential contaminating activities (PCAs) and APECs identified by the Phase One ESA.

Assessment Criteria

The generic MECP Site Condition Standards determined to be applicable to the intended use of the Site are those for residential/parkland/institutional property use, medium to fine textured soil, in a non-potable groundwater situation (Table 3 Site Condition Standards). The Site is not environmentally sensitive per the definition of O. Reg. 153/04.

Section 1 PCAs and APECs

Potentially Contaminating Activities (PCAs)

During the Phase One ESA, four Potentially Contaminating Activities (PCAs) were identified within the Phase One Study Area. The approximate locations of the PCAs and PCA types are shown on Figure 4 and summarized in the table below.

POTENTIALLY CONTAMINATING ACTIVITIES ON, IN OR UNDER THE PHASE ONE PROPERTY

PCA[1]	POTENTIALLY CONTAMINATING ACTIVITY[2]	DESCRIPTION	SOURCE/ REFERENCE	LIKELIHOOD TO CONTRIBUTE TO AN APEC[3]	UNCERTAINTY
PCA 1	30 - Importation of Fill Material of Unknown Quality	The previous Phase II ESA identified fill material from surface to between 0.8 and 2.7 m bg.	Previous reports	Yes. APEC 1	Confirmed – impacts to fill material were identified during previous intrusive investigations. No details on the origin of the fill material.
PCA 2	31 - Ink Manufacturing, Processing and Bulk Storage	A commercial printing and lithographic facility formerly operated at 128 Queen Street South, northwest portion of the Site.	ERIS	Yes. APEC 2	No details of the storage and disposal practices.

PCA[1]	POTENTIALLY CONTAMINATING ACTIVITY[2]	DESCRIPTION	SOURCE/ REFERENCE	LIKELIHOOD TO CONTRIBUTE TO AN APEC[3]	UNCERTAINTY
PCA 3	19 - Electronic and Computer Equipment Manufacturing	A magnetic and optical media manufacturer and reproducer company was operated in the mid-1980s at 128 Queen Street South, northwest portion of the Site.	ERIS	Yes. APEC 3	No details of the storage and disposal practices
PCA 4	55 - Transformer Manufacturing, Processing and Use	Pole mounted transformer is present in the parking lot in front of 169 Crumbie Street building.	Site Visit	Yes. APEC 4	No details on the facility housekeeping, clean up procedure is available.
PCA 5	42 - Pharmaceutical Manufacturing and Processing	A pharmacy was operating at 128 Queen Street South in the 1990s and generated pharmaceutical wastes.	ERIS	Yes. APEC 5	No details of the storage and disposal practices.
PCA 6	33 - Metal Treatment, Coating, Plating and Finishing	A jewellery and silverware manufacturer were operating at 128 Queen Street South in the 1990s.	ERIS	Yes. APEC 6	No details on the facility housekeeping, storage practices, or waste storage is available.
PCA 7	42 - Pharmaceutical Manufacturing and Processing	A pharmacy is operating at 128 Queen Street South from 2015 to present and generates pharmaceutical wastes.	ERIS	Yes. APEC 7	No details of the storage and disposal practices.
PCA 8	37 - Operation of Dry-Cleaning Equipment (where chemicals are used)	Two dry cleaning services operated at 128 Queen Street South.	City Directory	Possible, APEC 8	Use of chemicals cannot be confirmed for historical operation of a dry cleaners at the Site
PCA 9	52 - Storage, maintenance, fuelling and repair of equipment, vehicles, and material used to maintain transportation systems	An automobile service operated at 128 Queen Street South in 1980s.	City Directory	Yes. APEC 9	No details on the facility housekeeping, storage practices, or waste storage is available.

PCA[1]	POTENTIALLY CONTAMINATING ACTIVITY[2]	DESCRIPTION	SOURCE/ REFERENCE	LIKELIHOOD TO CONTRIBUTE TO AN APEC[3]	UNCERTAINTY
PCA 10	28 - Gasoline and Associated Products Storage in Fixed Tanks	Historical heating oil UST reportedly located at 142 Queen Street South.	Previous Reports	Possible. APEC 10	Risk for soil or groundwater contamination is low as RSC#223395 filed for the property in 2017 indicated the identified PCA and associated APEC had been investigated and all COCs were less the applicable Table 3 R/P/I Standards.
PCA 11A	28 - Gasoline and Associated Products Storage in Fixed Tanks	A gasoline service center with fuel tanks was present at 148 Queen Street South until mid 1990s.	ERIS Previous reports Aerials City Directory Chain of Title	Possible. APEC 11A	Risk for soil or groundwater contamination is low as RSC#223395 filed for the property in 2017 indicated the identified PCAs and associated APECs had been investigated and all COCs were less the applicable Table 3 R/P/I Standards.
PCA 11B	52 - Storage, maintenance, fuelling and repair of equipment, vehicles, and material used to maintain transportation systems	An auto centre was present at 148 Queen Street South in 1990s.	ERIS Previous reports Aerials City Directory Chain of Title	Possible. APEC 11B	
PCA 12	31 - Ink Manufacturing, Processing and Bulk Storage	A printing service operated at 169 Crumbie Street.	ERIS City Directory	Yes. APEC 12	No details on the facility housekeeping, storage practices, or waste storage is available.
PCA 13	8 - Chemical Manufacturing, Processing and Bulk Storage	An ambulance service was operating at 169 Crumbie Street and generated inorganic wastes.	ERIS	Possible. APEC 13	No details on the facility housekeeping, storage practices, or waste storage is available.
PCA 14	Other - Spills	Tim Hortons located at 120 Queen Street reported hydraulic oil spill in 2007.	ERIS	Yes. APEC 14	No details of quantity of contaminants were given.
PCA 15	52 - Storage, maintenance, fuelling and repair of equipment, vehicles, and material used to maintain transportation systems	Auto garage currently and historically operated at 169 Crumbie Street	City Directory Site Visit	Yes. APEC 15	No details on the facility housekeeping, storage practices, or waste storage is available.
PCA 16	28 - Gasoline and Associated Products Storage in Fixed Tanks	An above ground waste oil storage tank located at unit 8, JJ's Auto Service of 169 Crumbie Street.	Site Visit	Possible. APEC 16	No cracks or staining were visible during the Site visit. Waste oil removal and disposal is done by professional services.

PCA[1]	POTENTIALLY CONTAMINATING ACTIVITY[2]	DESCRIPTION	SOURCE/ REFERENCE	LIKELIHOOD TO CONTRIBUTE TO AN APEC[3]	UNCERTAINTY
PCA 17	10 - Commercial Autobody Shops	An Autobody shop was historically operated at 169 Crumbie Street.	City Directory	Yes APEC 17	No details on the facility housekeeping, storage practices, or waste storage is available.

[1] As shown on Figure 4.

[2] As set out in Table 2 in Schedule D of O. Reg. 153/04.

[3] Area of potential environmental concern (APEC)

POTENTIALLY CONTAMINATING ACTIVITIES WITHIN THE PHASE ONE STUDY AREA

PCA[1]	POTENTIALLY CONTAMINATING ACTIVITY[2]	ADDRESS/ LOCATION	DESCRIPTION	SOURCE/ REFERENCE	LIKELIHOOD TO CONTRIBUTE TO AN APEC[3]	UNCERTAINTY
PCA 18	46 - Rail Yards, Tracks and Spurs	No municipal address Adjacent, west and southwest	Railway lines are present immediately to the west and southwest of the Site.	FIPs Aerial photographs Site visit	Yes. APEC 18	Exact location impact is unknown.
PCA 19	31 - Ink Manufacturing, Processing and Bulk Storage	131 Queen Street South 20m east	A printing facility formerly operated at the property in the late 1930s.	FIPs	Yes. APEC 19	No details on the types of products being used or storage/ handling practices.
PCA 20	37 - Operation of Dry-Cleaning Equipment (where chemicals are used)	111 Queen Street South 20m north	A dry cleaner operated at the property in the late 1990s.	City directory	Possible. APEC 20	No details on the facility housekeeping, storage practices, or waste storage is available.
PCA 21	19 - Electronic and Computer Equipment Manufacturing	143 Queen Street South 22m east	A radio parts manufacturing facility formerly operated at the property in the late 1930s.	FIPs	Possible. APEC 21	No details on the types of products being used or storage/ handling practices.
PCA 22	31 - Ink Manufacturing, Processing and Bulk Storage	135 Queen Street South 20m northeast	A publishing company operated at this property in the early 1970s.	City Directory	Possible. APEC 22	No details on the chemicals used, storage, handling, or disposal practices.

PCA[1]	POTENTIALLY CONTAMINATING ACTIVITY[2]	ADDRESS/ LOCATION	DESCRIPTION	SOURCE/ REFERENCE	LIKELIHOOD TO CONTRIBUTE TO AN APEC[3]	UNCERTAINTY
PCA 23	37 - Operation of Dry-Cleaning Equipment (where chemicals are used)	136 Queen Street South Adjacent	Dry cleaning services operated at this property from the mid 1990s to mid 2010s and generated halogenated wastes.	ERIS	Yes. APEC 23	No details on the chemical's storage, handling, or disposal practices.
PCA 24	55 - Transformer Manufacturing, Processing and Use	145 Queen Street South 20 m east	Canada Post was registered as a PCB storage facility containing PCB containing light ballast in 1990s.	ERIS	Yes. APEC 24	No details on the storage and handling of the PCB containing equipment.
PCA 25	39 - Paints Manufacturing, Processing and Bulk Storage		A paint and coating manufacturer was operated at the property in the mid 1990s.		Yes. APEC 25	No details on the chemicals used, storage, handling, or disposal practices.
PCA 26	8 - Chemical Manufacturing, Processing and Bulk Storage	168 Queen Street South Adjacent southeast	An office is operating from mid 1990s to present time and generates inorganic laboratory chemicals.	ERIS	Yes. APEC 26	No details on the chemicals used, storage, handling, or disposal practices.
PCA 27	50 - Soap and Detergent Manufacturing, Processing and Bulk Storage		A manufacturer of soap and cleaning compound was operating at the property in 1960s.		Yes. APEC 27	No details on the chemicals used, storage, handling, or disposal practices.
PCA 28	33 - Metal Treatment, Coating, Plating and Finishing		A metalworking machinery and commercial and service industry machinery manufacturer was operating at the property in 1960s.		Yes. APEC 28	No details on the chemicals used, storage, handling, or disposal practices.

PCA[1]	POTENTIALLY CONTAMINATING ACTIVITY[2]	ADDRESS/ LOCATION	DESCRIPTION	SOURCE/ REFERENCE	LIKELIHOOD TO CONTRIBUTE TO AN APEC[3]	UNCERTAINTY
PCA 29	8 - Chemical Manufacturing, Processing and Bulk Storage	52 Tannery Court 35 m southwest	A company was operating at the address and generated inorganics from early 1990s to early 2000s.	ERIS	Yes. APEC 29	An RSC submitted in 2013 identified metal and inorganic parameter exceedance in post remediation soil and groundwater samples.
PCA 30	58 - Waste Disposal and Waste Management, including thermal treatment, landfilling and transfer of waste, other than use of biosoils as soil conditioners		275057 Ontario Limited applied for waste processing facility at part of east half of lot 4.	ERIS	Yes. APEC 30	No details on the facility housekeeping, storage practices, or waste storage is available.
PCA 31	40 - Pesticides (including Herbicides, Fungicides and Anti-Fouling Agents) Manufacturing, Processing, Bulk Storage and Large-Scale Applications	167 Queen Street South 25 m east	A pesticide vendor was operated at this property.	ERIS	Unlikely – downgradient location	No details on the facility housekeeping, storage practices, or waste storage is available.
PCA 32	28 - Gasoline and Associated Products Storage in Fixed Tanks	51 Tannery Street 75 m South	A company was operating at the address and generated light fuels in mid 2010s.	ERIS	Unlikely – downgradient location and intervening distance.	No details on the facility housekeeping, storage practices, or waste storage is available.
PCA 33	11 - Commercial Trucking and Container Terminals	61 Tannery Street 185 m South	Trucking services operated at the property in 1980s.	City Directory	Unlikely – downgradient location and intervening distance.	No details on the facility housekeeping, storage practices, or waste storage is available.
PCA 34	52 - Storage, maintenance, fuelling and repair of equipment, vehicles, and material used to maintain transportation systems	29 Tannery Street 80 m South	An auto parts and an automotive supply companies operated at the property.	City Directory	Unlikely – downgradient location and intervening distance.	No details on the facility housekeeping, storage practices, or waste storage is available.
PCA 35	19 - Electronic and Computer Equipment Manufacturing	6 Maiden Lane 85 m southeast	A dental lab was at this property in the early 1980s and manufacturer medical equipment and supplies	ERIS	Unlikely – cross gradient location and intervening distance.	No details on the chemicals used, storage, handling, or disposal practices.

PCA[1]	POTENTIALLY CONTAMINATING ACTIVITY[2]	ADDRESS/ LOCATION	DESCRIPTION	SOURCE/ REFERENCE	LIKELIHOOD TO CONTRIBUTE TO AN APEC[3]	UNCERTAINTY
PCA 36	39 - Paints Manufacturing, Processing and Bulk Storage		A pigment and chemical manufacturing company operated at the property in the early 1970s.	City Directory	Unlikely – cross gradient location and intervening distance.	No details on the facility housekeeping, storage practices, or waste storage is available.
PCA 37	Other - Spills	180 Rutledge Road 110 m South	A development company reported spill of douse water to nearby Mullet creek	ERIS	Unlikely – cross gradient location and intervening distance.	Exact location is not known
PCA 38	28 - Gasoline and Associated Products Storage in Fixed Tanks		A demolition company generated light fuels in 2018.	ERIS	Unlikely – cross gradient location and intervening distance.	No details on the facility housekeeping, storage practices, or waste storage is available.
PCA 39	8 - Chemical Manufacturing, Processing and Bulk Storage	190 Queen Street South 120 m east	A company was operating at the address and generated inorganic wastes in 2022	ERIS	Unlikely – downgradient location and intervening distance.	No details on the facility housekeeping, storage practices, or waste storage is available.
PCA 40	1 - Acid and Alkali Manufacturing, Processing and Bulk Storage	20 Ontario Street West 140 m northwest	The company operated at the address from mid 1990s to late 2010s generated acid and alkaline wastes containing heavy metals.	ERIS	Unlikely – intervening distance.	No details on the facility housekeeping, storage practices, or waste storage is available.
PCA 41	28 - Gasoline and Associated Products Storage in Fixed Tanks	22 Pearl Street 145 m south	A fuel oil tank was present at this property from early 2010s to 2021.	ERIS	Unlikely – downgradient location and intervening distance.	No details on any secondary containment, leak testing, or maintenance.
PCA 42	12 - Concrete, Cement and Lime Manufacturing	208 Emby Drive 160 m south	A concrete products manufacturing company operated at this property in 1970s.	ERIS	Unlikely – downgradient location and intervening distance.	No details on the chemicals used, storage, handling, or disposal practices.

PCA[1]	POTENTIALLY CONTAMINATING ACTIVITY[2]	ADDRESS/ LOCATION	DESCRIPTION	SOURCE/ REFERENCE	LIKELIHOOD TO CONTRIBUTE TO AN APEC[3]	UNCERTAINTY
PCA 43	8 - Chemical Manufacturing, Processing and Bulk Storage		A chemical manufacturing company in 1970s and a furniture repair and refinishing company from early 1990s to early 2000s operated at the property and manufactured chemical products.	ERIS	Unlikely – downgradient location and intervening distance.	No details on the facility housekeeping, storage practices, or waste storage is available.
PCA 44	52 - Storage, maintenance, fuelling and repair of equipment, vehicles, and material used to maintain transportation systems		An automobile parts and supplies use, and rebuilt company was operated at this address from early 1990s to early 2000s.	ERIS	Unlikely – downgradient location and intervening distance.	No details on the chemicals used, storage, handling, or disposal practices.
PCA 45	28 - Gasoline and Associated Products Storage in Fixed Tanks		A liquid fuel outlet was present at this property in the late 1980s.	ERIS	Unlikely – downgradient location and intervening distance.	No details on any secondary containment, leak testing, or maintenance.
PCA 46	37 - Operation of Dry-Cleaning Equipment (where chemicals are used)	204 Queen Street South 170 m southwest	Dry cleaning company operated at the property from mid 1980s to mid 2000s.	ERIS City Directory	Unlikely – downgradient location and intervening distance.	No details on the facility housekeeping, storage practices, or waste storage is available.
PCA 47	40 - Pesticides (including Herbicides, Fungicides and Anti-Fouling Agents) Manufacturing, Processing, Bulk Storage and Large-Scale Applications		A lawncare company operated at the property in the 1980s.	City Directory	Unlikely – downgradient location and intervening distance.	No details on the facility housekeeping, storage practices, or waste storage is available.
PCA 48	29 - Glass Manufacturing	206 Queen Street South 165 m southwest	A glass works company operated at the property from early 1980s to early 1990s.	City Directory	Unlikely – downgradient location and intervening distance.	No details on the facility housekeeping, storage practices, or waste storage is available.
PCA 49	40 - Pesticides (including Herbicides, Fungicides and Anti-Fouling Agents) Manufacturing, Processing, Bulk Storage and Large-Scale Applications	208 Queen Street South 165 m southwest	A weed and turf service company operated at the property in the early 1970s.	City Directory	Unlikely – downgradient location and intervening distance.	No details on the facility housekeeping, storage practices, or waste storage is available.

PCA[1]	POTENTIALLY CONTAMINATING ACTIVITY[2]	ADDRESS/ LOCATION	DESCRIPTION	SOURCE/ REFERENCE	LIKELIHOOD TO CONTRIBUTE TO AN APEC[3]	UNCERTAINTY
PCA 50	52 - Storage, maintenance, fuelling and repair of equipment, vehicles, and material used to maintain transportation systems	214 Queen Street South 120 m southwest	An auto parts and an automotive supply companies operated at the property in the 1970s.	City Directory	Unlikely – downgradient location and intervening distance.	No details on the facility housekeeping, storage practices, or waste storage is available.
PCA 51	8 - Chemical Manufacturing, Processing and Bulk Storage	10 Main Street 190 m east	A company operated at the property generated paint, pigments and coating residues from late 1980s to late 1990s.	ERIS	Unlikely – downgradient location and intervening distance.	No details on the facility housekeeping, storage practices, or waste storage is available.
PCA 52	42 - Pharmaceutical Manufacturing and Processing		A pharmacy operating at the property generated pharmaceutical wastes in 2020-2021.	ERIS	Unlikely – downgradient location and intervening distance.	No details on the facility housekeeping, storage practices, or waste storage is available.
PCA 53	31 - Ink Manufacturing, Processing and Bulk Storage		A photo service operated at the property from late 1960s to mid 1990s..	City Directory	Unlikely – downgradient location and intervening distance.	No details on the facility housekeeping, storage practices, or waste storage is available.
PCA 54	31 - Ink Manufacturing, Processing and Bulk Storage	95 Joymar drive 235 m south	A commercial printing and lithographic company were operated at this property in the mid 1990s.	ERIS	Unlikely – cross-gradient location and intervening distance.	No details regarding operations and waste storage and disposal at the property.
PCA 55	33 - Metal Treatment, Coating, Plating and Finishing		A hardware, metal products, iron and steel pipes and tubes, metalworks machinery manufacturing company operated at this property in mid 1990s.	ERIS	Unlikely – cross-gradient location and intervening distance.	No details regarding operations and waste storage and disposal at the property.

PCA[1]	POTENTIALLY CONTAMINATING ACTIVITY[2]	ADDRESS/ LOCATION	DESCRIPTION	SOURCE/ REFERENCE	LIKELIHOOD TO CONTRIBUTE TO AN APEC[3]	UNCERTAINTY
PCA 56	18 - Electricity Generation, Transformation and Power Stations		A power line company operated at the property and generated aromatic solvents, petroleum distillates, waste oil and lubricants from mid 1990s to mid 2010s.	ERIS	Unlikely – cross-gradient location and intervening distance.	No details on the facility housekeeping, storage practices, or waste storage is available.
PCA 57	28 - Gasoline and Associated Products Storage in Fixed Tanks		Various companies operated at the property from late 2000s to present time generated waste oils and lubricants	ERIS	Unlikely – cross-gradient location and intervening distance.	No details on the facility housekeeping, storage practices, or waste storage is available.
PCA 58	40 - Pesticides (including Herbicides, Fungicides and Anti-Fouling Agents) Manufacturing, Processing, Bulk Storage and Large-Scale Applications		A pesticide operator was listed at this property.	ERIS	Unlikely – cross-gradient location and intervening distance.	No details on the facility housekeeping, storage practices, or waste storage is available.

[1] As shown on Figure 4.

[2] As set out in Table 2 in Schedule D of O. Reg. 153/04.

[3] Area of potential environmental concern (APEC)

Overall, a total of 59 PCAs were identified on the Phase One property and within the Phase One Study Area, of which 31 may be contributing to an area of potential environmental concern (APECs) at the Site.

It should be noted that de-icing activities (salt application) for the safety of vehicular or pedestrian traffic under conditions of snow or ice, or both, are known to have occurred at the Site.

Areas of Potential Environmental Concern

An APEC, as defined in O. Reg. 153/04, is the area on, in, or under a Phase One property where one or more contaminants are potentially present, as determined through the Phase One ESA, including through, (a) identification of past or present uses on, in or under the Phase One property and (b) identification of potentially contaminating activity. APECs are summarized in the Table below, and shown on Figure 5A.

AREAS OF POTENTIAL ENVIRONMENTAL CONCERN

APEC[1]	LOCATION OF APEC ON PHASE ONE PROPERTY	POTELTIALLY CONTAMINATING ACTIVITY[2]	LOCATION OF PCA (ON-SITE or OFF-SITE)	CONTAMINANTS OF POTENTIAL CONCERN[3]	MEDIA POTENTIALLY IMPACTED (Ground water, Soil, and/or Sediment)
APEC 1	Entire property	30 - Importation of Fill Material of Unknown Quality	On-Site PCA 1	PHCs PAHs Metals Hydride-forming metals (As, Sb, Se) Other regulated parameters (B-HWS, CrVI, CN-, Hg)	Soil Groundwater
APEC 2	128 Queen Street South, Northwest portion of the Site	31 - Ink Manufacturing, Processing and Bulk Storage	On-Site PCA 2	VOCs Metals Hydride-forming metals (As, Sb, Se) Other regulated parameters (B-HWS, CrVI, CN-, Hg)	Soil Groundwater
APEC 3	128 Queen Street South, Northwest portion of the Site	19 - Electronic and Computer Equipment Manufacturing	On-Site PCA 3	VOCs Metals Hydride-forming metals (As, Sb, Se) Other regulated parameters (B-HWS, CrVI, CN-, Hg)	Soil Groundwater
APEC 4	169 Crumbie Street, Northwest portion of the Site	55 - Transformer Manufacturing, Processing and Use	On-Site PCA 4	PCBs ABNs CPs	Soil Groundwater
APEC 5	128 Queen Street South, Northwest portion of the Site	42 - Pharmaceutical Manufacturing and Processing	On-Site PCA 5	VOCs Metals Hydride-forming metals (As, Sb, Se) Other regulated parameters (B-HWS, CrVI, CN-, Hg)	Soil Groundwater
APEC 6	128 Queen Street South, Northwest portion of the Site	33 - Metal Treatment, Coating, Plating and Finishing	On-Site PCA 6	VOCs PHCs Metals Hydride-forming metals (As, Sb, Se) Other regulated parameters (B-HWS, CrVI, CN-, Hg)	Soil Groundwater
APEC 7	128 Queen Street South, Northwest portion of the Site	42 - Pharmaceutical Manufacturing and Processing	On-Site PCA 7	VOCs Metals Hydride-forming metals (As, Sb, Se) Other regulated parameters (B-HWS, CrVI, CN-, Hg)	Soil Groundwater

APEC[1]	LOCATION OF APEC ON PHASE ONE PROPERTY	POTELTIALLY CONTAMINATING ACTIVITY[2]	LOCATION OF PCA (ON-SITE or OFF-SITE)	CONTAMINANTS OF POTENTIAL CONCERN[3]	MEDIA POTENTIALLY IMPACTED (Ground water, Soil, and/or Sediment)
APEC 8	128 Queen Street South, Northwest portion of the Site	37 - Operation of Dry-Cleaning Equipment (where chemicals are used)	On-Site PCA 8	VOCs	Soil Groundwater
APEC 9	128 Queen Street South, Northwest portion of the Site	52 - Storage, maintenance, fuelling and repair of equipment, vehicles, and material used to maintain transportation systems	On-Site PCA 9	VOCs BTEX PHCs PAHs Metals Hydride-forming metals (As, Sb, Se) Other regulated parameters (B-HWS, CrVI, CN-, Hg)	Soil Groundwater
APEC 10	142 Queen Street South, Eastern portion of the Site	28 - Gasoline and Associated Products Storage in Fixed Tanks	On-Site PCA 10	BTEX PHCs PAHs	Soil Groundwater
APEC 11A	148 Queen Street South, Eastern portion of the Site	28 - Gasoline and Associated Products Storage in Fixed Tanks	On-Site PCA 11A	BTEX PHCs	Soil Groundwater
APEC 11B		52 - Storage, maintenance, fuelling and repair of equipment, vehicles, and material used to maintain transportation systems	On-Site PCA 11B	VOCs BTEX PHCs Metals Hydride-forming metals (As, Sb, Se) Other regulated parameters (B-HWS, CrVI, CN-, Hg)	Soil Groundwater
APEC 12	169 Crumbie Street, Southwest portion of the Site	31 - Ink Manufacturing, Processing and Bulk Storage	On-Site PCA 12	VOCs Metals Hydride-forming metals (As, Sb, Se) Other regulated parameters (B-HWS, CrVI, CN-, Hg)	Groundwater
APEC 13	169 Crumbie Street, Southwest portion of the Site	8 - Chemical Manufacturing, Processing and Bulk Storage	On-Site PCA 13	Metals Hydride-forming metals (As, Sb, Se) Other regulated parameters (B-HWS, CrVI, CN-, Hg)	Groundwater
APEC 14	120 Queen Street South, Northeast property boundary of the Site	Other- Spills	On-Site PCA 14	BTEX PHCs PAHs	Groundwater

APEC[1]	LOCATION OF APEC ON PHASE ONE PROPERTY	POTELTIALLY CONTAMINATING ACTIVITY[2]	LOCATION OF PCA (ON-SITE or OFF-SITE)	CONTAMINANTS OF POTENTIAL CONCERN[3]	MEDIA POTENTIALLY IMPACTED (Ground water, Soil, and/or Sediment)
APEC 15	169 Crumbie Street, Southwest portion of the Site	52 - Storage, maintenance, fuelling and repair of equipment, vehicles, and material used to maintain transportation systems	On-Site PCA 15	VOCs BTEX PHCs PAHs Metals Hydride-forming metals (As, Sb, Se) Other regulated parameters (B-HWS, CrVI, CN-, Hg)	Soil Groundwater
APEC 16	169 Crumbie Street, Southwest portion of the Site	28 - Gasoline and Associated Products Storage in Fixed Tanks	On-Site PCA 16	BTEX PHCs PAHs	Soil Groundwater
APEC 17	169 Crumbie Street, Southwest portion of the Site	10 - Commercial Autobody Shops	On-Site PCA 17	VOCs BTEX PHCs PAHs Metals Hydride-forming metals (As, Sb, Se) Other regulated parameters (B-HWS, CrVI, CN-, Hg)	Soil Groundwater
APEC 18	Adjacent, west and southwest of the property boundary	46 - Rail Yards, Tracks and Spurs	Off-Site PCA 18 (adjacent west)	BTEX PHCs PAHs Metals Hydride-forming metals (As, Sb, Se) Other regulated parameters (B-HWS, CrVI, CN-, Hg)	Soil Groundwater
APEC 19	131 Queen Street, east of the Site	31 - Ink Manufacturing, Processing and Bulk Storage	Off-Site PCA 19 (20m east)	VOCs Metals Hydride-forming metals (As, Sb, Se) Other regulated parameters (B-HWS, CrVI, CN-, Hg)	Groundwater
APEC 20	111 Queen Street South, north of the Site	37 - Operation of Dry-Cleaning Equipment (where chemicals are used)	Off-Site PCA 20 (20m north)	VOCs	Groundwater

APEC[1]	LOCATION OF APEC ON PHASE ONE PROPERTY	POTELTIALLY CONTAMINATING ACTIVITY[2]	LOCATION OF PCA (ON-SITE or OFF-SITE)	CONTAMINANTS OF POTENTIAL CONCERN[3]	MEDIA POTENTIALLY IMPACTED (Ground water, Soil, and/or Sediment)
APEC 21	143 Queen Street South, east of the Site	19 - Electronic and Computer Equipment Manufacturing	Off-Site PCA 21 (22 m east)	VOCs Metals Hydride-forming metals (As, Sb, Se) Other regulated parameters (B-HWS, CrVI, CN-, Hg)	Groundwater
APEC 22	135 Queen Street South, northeast of the Site	31 - Ink Manufacturing, Processing and Bulk Storage	Off-Site PCA 22 (20 m northeast)	VOCs Metals Hydride-forming metals (As, Sb, Se) Other regulated parameters (B-HWS, CrVI, CN-, Hg)	Groundwater
APEC 23	136 Queen Street South, adjacent of the Site	37 - Operation of Dry-Cleaning Equipment (where chemicals are used)	Off-Site PCA 23 (Adjacent)	VOCs	Soil Groundwater
APEC 24	145 Queen Street South, east of the Site	55 - Transformer Manufacturing, Processing and Use	Off-Site PCA 24 (20m east)	PCBs	Groundwater
APEC 25	145 Queen Street South, east of the Site	39 - Paints Manufacturing, Processing and Bulk Storage	Off-Site PCA 25 (20m east)	VOCs BTEX PHCs Metals Hydride-forming metals (As, Sb, Se) Other regulated parameters (B-HWS, CrVI, CN-, Hg)	Groundwater
APEC 26	168 Queen Street South, adjacent southeast of the Site	8 - Chemical Manufacturing, Processing and Bulk Storage	Off-Site PCA 26 (adjacent southeast)	Metals Hydride-forming metals (As, Sb, Se) Other regulated parameters (B-HWS, CrVI, CN-, Hg)	Soil Groundwater
APEC 27	168 Queen Street South, adjacent southeast of the Site	50 - Soap and Detergent Manufacturing, Processing and Bulk Storage	Off-Site PCA 27 (adjacent southeast)	VOCs BTEX PHCs PAHs Metals Hydride-forming metals (As, Sb, Se) Other regulated parameters (B-HWS, CrVI, CN-, Hg)	Soil Groundwater

APEC[1]	LOCATION OF APEC ON PHASE ONE PROPERTY	POTELTIALLY CONTAMINATING ACTIVITY[2]	LOCATION OF PCA (ON-SITE or OFF-SITE)	CONTAMINANTS OF POTENTIAL CONCERN[3]	MEDIA POTENTIALLY IMPACTED (Ground water, Soil, and/or Sediment)
APEC 28	168 Queen Street South, adjacent southeast of the Site	33 - Metal Treatment, Coating, Plating and Finishing	Off-Site PCA 28 (adjacent southeast)	VOCs PHCs Metals Hydride-forming metals (As, Sb, Se) Other regulated parameters (B-HWS, CrVI, CN-, Hg)	Soil Groundwater
APEC 29	52 Tannery Court, southwest of the Site	8 - Chemical Manufacturing, Processing and Bulk Storage	Off-Site PCA 29 (35m southwest)	VOCs BTEX PHCs Metals Hydride-forming metals (As, Sb, Se) Other regulated parameters (B-HWS, CrVI, CN-, Hg)	Groundwater
APEC 30	52 Tannery Court, southwest of the Site	58 - Waste Disposal and Waste Management, including thermal treatment, landfilling and transfer of waste, other than use of biosoils as soil conditioners	Off-Site PCA 30 (35m southwest)	VOCs BTEX PHCs Metals Hydride-forming metals (As, Sb, Se) Other regulated parameters (B-HWS, CrVI, CN-, Hg)	Groundwater

[1] Areas of potential environmental concern (APEC) means the area on, in or under a Phase One property where one or more contaminants are potentially present, as determined through the Phase One environmental site assessment, including through,
(a) identification of past or present uses on, in or under the Phase One property, and
(b) identification of potentially contaminating activity.

[2] As set out in Column A of Table 2 of Schedule D.

[3] Contaminants of potential concern (COPC) according to the Method Groups as identified in the "Protocol for in the Assessment of Properties under Part XV.1 of the Environmental Protection Act", March 9, 2004, amended as of July 1, 2011:

BTEX: benzene, toluene, ethylbenzene, xylenes	Hg: mercury	As: arsenic	Cl: chloride
PHCs: petroleum hydrocarbons (F1-F4)	B-HWS: boron, hot water soluble	Sb: antimony	EC: electrical conductivity
VOCs: volatile organic compounds	Cr (VI): chromium (hexavalent)	Se: selenium	SAR: sodium adsorption ratio
PAHs: polycyclic aromatic hydrocarbons	CN-: cyanide	Na: sodium	PCBs: polychlorinated biphenyls
ABNs: Acid/Base/Neutral Compounds	CPs: Chlorophenols		

Accordingly, 31 APECs were determined to exist for the 18 PCAs identified on the Site, and the 13 PCAs identified on surrounding properties within the Phase One Study Area which were considered to represent a potential concern for the environmental quality of soil and/or groundwater at the Site.

Subsurface Structures and Utilities Affecting 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 (True North Locates) was also retained to provide clearance with respect to buried services in the drill areas. Underground utilities at the Phase Two Property including gas, water, sewer, communication, and electrical lines were located within the property boundaries of 120-158 Queen Street West and 169 Crumbie Street.

In general, potential preferential migration pathways for sub-surface contaminants at a site comprise buried utilities, naturally occurring sand seams, or other subsurface areas of increased permeability.

These utilities are typically at depths ranging from 0.3 to 3 m below ground surface, it is anticipated that shallow utilities at the Site will act as potential migration pathways.

Although subsurface structures and underground utilities were identified at the Site, the Phase Two ESA findings suggests that these features did not influence the distribution/migration of contaminants at the Site. The soil impacts extended to a maximum depth of 1.5 m bg and the depth of groundwater in the vicinity of the impacted area observed to be greater than 1.5 m bg. In addition, the results of the Phase Two ESA indicate that the groundwater conditions at the Phase Two Property meet the Table 3 SCS.

Section 2 Physical Setting of the Phase II ESA Property

Stratigraphy

The Site is located in a physiographic region known as Peel Plain, comprising till moraines. Quaternary geology mapping confirms that the Site is located in an area of predominantly silt to silty clay, high in matrix carbonate and is clast poor. Bedrock geology consists of Upper Ordovician shale, limestone, dolostone, and siltstone of the Queenston Formation. Depth to bedrock is approximately 10-12 m bg based on available water well records.

The stratigraphy encountered at the Site during the Phase Two ESA comprised asphalt paving all drilling locations except MW103S, MW103D, MW104 and MW208 which comprised topsoil and MW206 which comprised concrete. The surface material was underlain by fill material consisting of clayey silt with some sand and gravel extending to depths ranging from 0.7 m to 2.9 m bg. The fill material is underlain by a clayey silt till with varying sand and gravel content to a maximum depth of 13.7 m bg. No deleterious material was observed in samples of fill collected during drilling.

Saturated conditions or changes in soil colour indicative of the apparent shallow water table were observed at a depth of approximately 3.7 m to 5.5 m bg in the clayey silt till stratum. Shale bedrock was encountered in fourteen of the boreholes at depths ranging from 10.9 m to 13.7 m bg.

Refer to Figure 2A for the borehole locations, Figures 28 to 68 for the cross sections showing the soil stratigraphy of the Phase Two Property, and borehole logs for soil stratigraphy encountered in the boreholes.

Hydrogeology

The closest waterbody is Mullet Creek located approximately 135 m southwest of the Site at its closest point. Mullet Creek is a tributary of the Credit River, which discharges into Lake Ontario, located approximately 11 km to the south.

Based on the measured groundwater elevations on April 18, 2023, the average horizontal hydraulic gradient over the area assessed was calculated as approximately 0.03 m/m.

Based on hydraulic conductivity tests conducted on March 15, 2023, the interpreted hydraulic conductivity values for the Site are as follows:

- MS101S, 9.3×10^{-9} m/s
- MW102, 1.2×10^{-8} m/s
- MW105, 4.1×10^{-10} m/s
- MW113D, 3.4×10^{-9} m/s
- MW115, 2.2×10^{-9} m/s
- MW118D, 1.8×10^{-7} m/s

The vertical gradient was measured at the monitoring well clusters MW101S/MW101D, MW103S/MW103D, MW113S/MW113D and MW118S/MW118D. The vertical gradient varied from 0.14 m/m at MW113 to 0.55 m/m at MW101 m/m downward.

Depth to Bedrock

Bedrock geology consists of Upper Ordovician shale, limestone, dolostone, and siltstone of the Queenston Formation. Depth to bedrock is approximately 10-12 m bg based on available water well records. During the Phase Two ESA, bedrock was encountered in fourteen of the boreholes at depths ranging from 10.9 m to 13.7 m bg.

Approximate Depth to Water Table

Monitoring wells MW101S, MW103S, MW113S, MW118S, MW201 to MW204, and MW206 to MW208 were screened to intercept the apparent water table with either 1.5 m or 3.05 m screens with the top of the screen depths ranging between 1.5 m and 3.1 m bg. The remaining monitoring wells were screened to assess deeper saturated conditions with the top of the 1.52 m or 3.05 m screen depths ranging between 6.6 m at 9.7 m bg.

Depths to groundwater within the monitoring wells measured are summarized as follows:

- March 8, 2023 - ranged between 0.41 m bg at MW102 to 10.16 m bg at MW101D;
- March 15, 2023 - ranged between 0.35 m bg at MW102 to 8.94 m bg at MW101D;
- April 18, 2023 - ranged between 0.77 m bg at MW101S to 5.11 m bg at MW108; and,
- June 16, 2023 – ranged between 0.58 m bg at MW202 to 3.69 m bg at MW207.

LNAPL was not observed during monitoring, purging, or sampling of the monitoring wells during this work program.

Groundwater elevations for the shallow and deep groundwater tables were calculated based on the water level data from April 18, 2023. Interpreted shallow and deep groundwater table contours based on these calculations are shown in Figure 3A and 3B, respectively. The direction of groundwater flow was interpreted to be to the south/southeast. As the groundwater table is fairly shallow, the direction of groundwater flow may be somewhat influenced by seasonal factors.

Applicability of Section 41 or Section 43.1

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.

The Phase Two Property does not contain any areas of natural significance, nor are there any within 30 m of Site. The pH of the soil is between 5 and 9, which is within the acceptable range. The Site does not display any conditions of an environmentally sensitive site.

O.Reg. 153/04 also specifies SCS for properties that have more than one-third of the area with less than 2 m of soil. Overburden depths at the Site were greater than 2 m across the entire Site.

O.Reg. 153/04 also specifies SCS for properties where there is a water body within 30 m of the Site. There is no water body within 30 m of 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 or brought from another property following completion of the Phase Two ESA. As such, confirmation sampling of imported soil was not conducted.

Historic excess soils brought from another property to the Site (i.e., fill materials) have been encountered over the entirety of the Site during the intrusive investigation at the Site, to depths

between 0.7 and 2.9 m bg at all locations. Fill materials are believed to have been imported to the Site for general site grading, and construction purposes. As such, the importation of fill material of unknown quality was considered a potentially contaminating activity (and subsequently, an area of potential environmental concern) at the Site.

Locations of Proposed Buildings and Structures

At the time of this investigation, the Site is occupied by various businesses including:

- three multi-unit commercial buildings located at 128 Queen Street South (Streetsville Centre Plaza), 158 Queen Street South (Winchester Place), and 169 Crumbie Street; and,
- two free-standing restaurants located at 120 Queen Street South (Tim Hortons) and 154 Queen Street South (Cuchulainn's Irish Pub).

The Site will be developed with a several multi-storey residential condominium buildings and three basement levels for vehicle parking. Two roads and a public park are proposed to be conveyed to the City of Mississauga.

Section 3 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. Phase Two ESA sampling locations are shown on Figures 2.

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.

INVESTIGATION OF AREAS OF POTENTIAL ENVIRONMENTAL CONCERN

APEC	MEDIA POTENTIALLY IMPACTED	CONTAMINANTS OF POTENTIAL CONCERN	SAMPLING LOCATIONS
APEC 1	Soil	BTEX, PHCs, Metals, Hydride-Forming Metals, HWS Boron, Cyanide, Hg, CrVI, EC, SAR	MW101D, MW102, MW103D, MW104, MW105, MW106, MW107, MW08, BH109, BH110, MW111, MW113D, BH114, MW115MW116, BH115, BH116, BH117, MW118D, MW206
		HWS Boron, Total Boron	BH110A, BH110B, BH110C, BH110D, BH110E, BH110F, BH114A, BH114B, BH114C, BH114D, BH114E, BH114F, BH301, BH302, BH303, BH304, BH305, BH306, BH401, BH042, BH406, BH407
	Groundwater	BTEX, PHCs, VOCs, PAHs, Metals, Hydride-Forming Metals, Cyanide, Hg, CrVI, Cl, Na	MW101S, MW103S, MW113S, MW118S, MW201, MW202, MW203, MW204, MW206, MW207, MW208
APEC 2	Soil	Metals, Hydride-Forming Metals, HWS Boron, Cyanide, Hg, CrVI, EC, SAR	MW106, BH109, MW113D, BH114, MW115, MW116, BH117

APEC	MEDIA POTENTIALLY IMPACTED	CONTAMINANTS OF POTENTIAL CONCERN	SAMPLING LOCATIONS
		VOCs	BH109, MW113D, MW115, BH117
	Groundwater	VOCs, Metals, Hydride-Forming Metals, Cyanide, Hg, CrVI, Cl, Na	MW113S, MW113D, MW202, MW203, MW204
APEC 3	Soil	Metals, Hydride-Forming Metals, HWS Boron, Cyanide, Hg, CrVI, EC, SAR	MW106, BH109, MW113D, BH114, MW115, MW116, BH117
		VOCs	BH109, MW113D, MW115, BH117
	Groundwater	VOCs, Metals, Hydride-Forming Metals, Cyanide, Hg, CrVI, Cl, Na	MW113S, MW113D, MW202, MW203, MW204
APEC 4	Soil	ABNs, CPs, PCBs	BH205
	Groundwater	ABNs, CPs, PCBs	MW118S
APEC 5	Soil	Metals, Hydride-Forming Metals, HWS Boron, Cyanide, Hg, CrVI, EC, SAR	MW106, BH109, MW113D, BH114, MW115, MW116, BH117
		VOCs	BH109, MW113D, MW115, BH117
	Groundwater	VOCs, Metals, Hydride-Forming Metals, Cyanide, Hg, CrVI, Cl, Na	MW113S, MW113D, MW202, MW203, MW204
APEC 6	Soil	BTEX, PHCs, Metals, Hydride-Forming Metals, HWS Boron, Cyanide, Hg, CrVI, EC, SAR	MW106, BH109, MW113D, BH114, MW115, MW116, BH117
		VOCs	BH109, MW113D, MW115, BH117
	Groundwater	VOCs, Metals, Hydride-Forming Metals, Cyanide, Hg, CrVI, Cl, Na	MW113S, MW113D, MW202, MW203, MW204
APEC 7	Soil	Metals, Hydride-Forming Metals, HWS Boron, Cyanide, Hg, CrVI, EC, SAR	MW106, BH109, MW113D, BH114, MW115, MW116, BH117
		VOCs	BH109, MW113D, MW115, BH117
	Groundwater	VOCs, Metals, Hydride-Forming Metals, Cyanide, Hg, CrVI, Cl, Na	MW113S, MW113D, MW202, MW203, MW204
APEC 8	Soil	VOCs	BH109, MW113D, MW115, BH117
	Groundwater	VOCs	MW113S, MW113D, MW202, MW203, MW204
APEC 9	Soil	BTEX, PHCs, Metals, Hydride-Forming Metals, HWS Boron, Cyanide, Hg, CrVI, EC, SAR	MW106, BH109, MW113D, BH114, MW115, MW116, BH117
		VOCs	BH109, MW113D, MW115, BH117
		PAHs	MW115, BH116, MW117

APEC	MEDIA POTENTIALLY IMPACTED	CONTAMINANTS OF POTENTIAL CONCERN	SAMPLING LOCATIONS
	Groundwater	BTEX, PHCs, VOCs, Metals, Hydride-Forming Metals, Cyanide, Hg, CrVI, Cl, Na	MW113SS, MW202, MW203, MW204
APEC 10	Soil	BTEX, PHCs, PAHs	MW103D
	Groundwater	BTEX, PHCs	MW103S, MW103D
APEC 11A	Soil	BTEX, PHCs	MW104
	Groundwater	BTEX, PHCs	MW208
APEC 11B	Soil	BTEX, PHCs, Metals, Hydride-Forming Metals, HWS Boron, Cyanide, Hg, CrVI, EC, SAR	MW104
	Groundwater	BTEX, PHCs, VOCs, Metals, Hydride-Forming Metals, Cyanide, Hg, CrVI, Cl, Na	MW208
APEC 12	Groundwater	VOCs, Metals, Hydride-Forming Metals, Cyanide, Hg, CrVI, Cl, Na	MW118S, MW206
APEC 13	Groundwater	Metals, Hydride-Forming Metals, Cyanide, Hg, CrVI, Cl, Na	MW118S, MW206
APEC 14	Groundwater	BTEX, PHCs	MW101S, MW101D
APEC 15	Soil	BTEX, PHCs, Metals, Hydride-Forming Metals, HWS Boron, Cyanide, Hg, CrVI, EC, SAR	BH111, BH114, MW118D, MW206
		VOCs, PAHs	BH111, MW118D, MW206
	Groundwater	BTEX, PHCs, VOCs, Metals, Hydride-Forming Metals, Cyanide, Hg, CrVI, Cl, Na	MW118S, MW206
APEC 16	Soil	BTEX, PHCs, PAHs	MW206
	Groundwater	BTEX, PHCs, PAHs	MW206
APEC 17	Soil	BTEX, PHCs, Metals, Hydride-Forming Metals, HWS Boron, Cyanide, Hg, CrVI, EC, SAR	BH111, BH114, MW118D, MW206
		VOCs, PAHs	BH111, MW118D, MW206
	Groundwater	BTEX, PHCs, VOCs, PAHs, Metals, Hydride-Forming Metals, Cyanide, Hg, CrVI, Cl, Na	MW118S, MW206

APEC	MEDIA POTENTIALLY IMPACTED	CONTAMINANTS OF POTENTIAL CONCERN	SAMPLING LOCATIONS
APEC 18	Soil	BTEX, PHCs, PAHs, Metals, Hydride-Forming Metals, HWS Boron, Cyanide, Hg, CrVI, EC, SAR	MW115, MW116, BH117, MW118D, BH205
		VOCs	MW115, MW116, MW118D, BH205
	Groundwater	BTEX, PHCs, VOCs, Metals, Hydride-Forming Metals, Cyanide, Hg, CrVI, Cl, Na	MW203, MW204, MW118S
APEC 19	Groundwater	VOCs, Metals, Hydride-Forming Metals, Cyanide, Hg, CrVI, Cl, Na	MW101S, MW201
		VOC	MW101D
APEC 20	Groundwater	VOCs	MW101S, MW201
		VOCs	MW101D
APEC 21	Groundwater	VOCs, Metals, Hydride-Forming Metals, Cyanide, Hg, CrVI, Cl, Na	MW103S, MW208
		VOCs	MW103D
APEC 22	Groundwater	VOCs, Metals, Hydride-Forming Metals, Cyanide, Hg, CrVI, Cl, Na	MW101S, MW201
		VOCs	MW101D
APEC 23	Soil	VOCs	MW103D
	Groundwater	VOCs	MW103S, MW103D, MW201
APEC 24	Groundwater	PCBs	MW208
APEC 25	Groundwater	BTEX, PHCs, VOCs, Metals, Hydride-Forming Metals, Cyanide, Hg, CrVI, Cl, Na	MW103S, MW208
		BTEX, PHCs, VOCs	MW103D
APEC 26	Soil	Metals, Hydride-Forming Metals, HWS Boron, Cyanide, Hg, CrVI, EC, SAR	MW105
	Groundwater	Metals, Hydride-Forming Metals, Cyanide, Hg, CrVI, Cl, Na	MW207
APEC 27	Soil	BTEX, PHCs, VOCs, PAHs, Metals, Hydride-Forming Metals, HWS Boron, Cyanide, Hg, CrVI, EC, SAR	MW105
	Groundwater	BTEX, PHCs, VOCs, Metals, Hydride-Forming Metals, Cyanide, Hg, CrVI, Cl, Na	MW207

APEC	MEDIA POTENTIALLY IMPACTED	CONTAMINANTS OF POTENTIAL CONCERN	SAMPLING LOCATIONS
APEC 28	Soil	BTEX, PHCs, VOCs, Metals, Hydride-Forming Metals, HWS Boron, Cyanide, Hg, CrVI, EC, SAR	MW105
	Groundwater	BTEX, PHCs, VOCs, Metals, Hydride-Forming Metals, Cyanide, Hg, CrVI, Cl, Na	MW207
APEC 29	Groundwater	BTEX, PHCs, VOCs, Metals, Hydride-Forming Metals, Cyanide, Hg, CrVI, Cl, Na	MW118S, MW206
		BTEX, PHCs, VOCs	MW118D
APEC 30	Groundwater	BTEX, PHCs, VOCs, Metals, Hydride-Forming Metals, Cyanide, Hg, CrVI, Cl, Na	MW118S, MW206
		BTEX, PHCs, VOCs	MW118D

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, chloride and sodium

Identification of Contaminants of Concern

Soil

The laboratory results from current Phase Two ESA indicate that the concentrations of all parameters analysed at the Site were less than the applicable Table 3 SCS at the locations tested, except the following:

- MW101, MW102, MW105, MW107, MW108, BH109, BH110, MW113, BH114, BH117 and BH205, concentrations of electrical conductivity (EC) and sodium adsorption ratio (SAR) exceeded the Table 3 SCS in soil samples collected from 0.8 m to 1.4 m bg;
- MW106 and BH111, concentrations of EC and SAR exceeded the Table 3 SCS in a soil sample collected from 0 m to 0.6 m bg;
- MW115, concentrations of EC and SAR exceeded the Table 3 SCS in a soil sample collected from 1.5 m to 2.1 m bg;

- MW116 and MW118, concentrations of EC exceeded the Table 3 SCS in a soil sample collected from 0.8 m to 1.4 m bg;
- BH110, BH114 and BH205, concentration of hot water soluble (HWS) boron exceeded the Table 3 SCS in soil samples collected from 0.8 m to 1.4 m bg;
- BH110A, BH110D, BH110E, BH114C, BH114D, BH114F, BH301, BH305, and BH307, concentration of HWS boron exceeded the Table 3 SCS in soil samples collected from 0.6 m to 1.2 m bg; and,
- BH305 and BH306, concentration of HWS boron exceeded the Table 3 SCS in soil samples collected from 1.5 m to 1.8 m bg.

The horizontal extent of contamination was interpreted as extending to the next clean borehole in the areas surrounding BH110 (Area 1), BH114 (Area 2) and BH205 (Area 3). The vertical extent of contamination was delineated at each area and extended to a depth of 1.5 m bg. The horizontal and vertical extent of HWS boron impacted soil is shown in Figure 27, as well as cross-section Figures 32, 34, 42, and 44 through 48.

For concentrations of HWS boron in soil samples collected from BH305 and BH306 at depths of 1.5 m to 1.8 m bg, the applicable Table 3 SCS have not been deemed to be exceeded as the HWS boron standard applies to surface soil (soil <1.5 m in depth) only and the total boron standard would be applicable to subsurface soils (soils >1.5 m in depth). Concentrations of total boron in both soil samples were less than the applicable Table 3 SCS.

The locations where an elevated level of EC and SAR in soil has been identified at the Site are in areas that have had road salt applied or are immediately adjacent to those that are likely to have received road salt application. On this basis, the QP_{ESA} has determined that the levels of SAR and EC in soil exceeded the applicable Site Condition Standards solely due to the application of road salt for the purposes of ensuring the safety of vehicular or pedestrian traffic under snow or ice or both. As a result, per Paragraph 1 of Section 49.1 of O. Reg. 153/04, the applicable Site Condition Standards for SAR and EC in soil have not been deemed to be exceeded for the purpose of the Environmental Protection Act, and as a result, have not been considered COCs with the current Phase Two CSM.

The sampling locations investigated for potential contaminants of concern in soil have been illustrated in plan view in Figures 7 through Figure 16 and in cross sections Figures 28 through 48.

Groundwater

The laboratory results from current Phase Two ESA indicate that the concentrations of all parameters analysed at the Site were less than the applicable Table 3 SCS at the locations tested, except the following:

- sodium and chloride in monitoring wells MW113S and MW118S; and,
- selenium in monitoring well MW118S.

Monitoring well MW118S was re-sampled for selenium on July 27, 2023 and November 6, 2023 and had concentrations of the analysed parameter less than the applicable Table 3 SCS. Based on the two additional sampling results for selenium in groundwater the QP_{ESA} has determined that the initial result was anomalous and is not considered as an exceedance.

The level of sodium and chloride in groundwater was found to be in excess of the applicable Table 3 SCS at two locations. These chemical parameters are often associated with the application of road salt for the purposes of ensuring the safety of vehicular or pedestrian traffic under snow or ice or both. Based on the parking areas associated with the existing commercial plaza at the Site, the location of the Site being adjacent to Queen Street South to the east, it is known that that road salt has been used at the Site and adjacent to the Site for the above-stated purposes.

The locations where elevated levels of sodium and chloride in groundwater have been identified at the Site are in areas that have had road salt applied or are immediately adjacent to those that are likely to have received road salt application. On this basis, the QP_{ESA} has determined that the levels of sodium and chloride in groundwater exceeded the applicable Site Condition Standards solely due to the application of road salt for the purposes of ensuring the safety of vehicular or pedestrian traffic under snow or ice or both. As a result, per Paragraph 1 of Section 49.1 of O. Reg. 153/04, the applicable Site Condition Standards for sodium and chloride in groundwater have not been deemed to be exceeded for the purpose of the Environmental Protection Act, and as a result, have not been considered COCs.

The sampling locations investigated for potential contaminants of concern in groundwater have been illustrated in plan view on Figure 17 through Figure 26 and in cross sections on Figures 49 through Figure 66.

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. The environmental quality of sediment was not investigated due to the absence of sediment at the Site.

Based on this investigation, no environmental impacts were found in groundwater at the Site.

However, three zones of HWS boron impact in soil were identified in the vicinity of BH110 in the central portion of the Site and in the vicinity of BH114 and BH205 in the southern portion of the Site, as shown on Figure 27.

Details of Contaminated Areas

The HWS boron contaminated areas are in the vicinity of BH110 (Area 1), BH114 (Area 2) and BH205 (Area 3). The contaminated areas are assumed to extend to the next sampling location which passed the Table 3 SCS. The maximum estimated impacted areas in soil were calculated to be approximately 143 m^2 for Area 1, 17 m^2 for Area 2, and 490 m^2 for Area 3. The depth of the contaminated areas is estimated to extend from near surface to 1.5 m bg. Therefore, the estimated volume of HWS boron impacted soil is 214.5 m^3 at Area 1, 25.5 m^3 at Area 2, and 735 m^3 at Area 3. The horizontal and vertical extent of HWS boron impacted soil is shown in Figure 27, as well as cross-section Figures 32, 34, 42, and 44 through 48.

As groundwater impacts were not identified at the Site, an estimated amount of impacted groundwater was not calculated for the Site.

Distribution of Contaminants

The concentrations of contaminants at sampling points within the contaminated areas are shown in Figures 11, 13, 32, 34, 42, and 44 through 48. The estimated volume of media impacted is discussed in the previous section. The estimated area of impacts is based on the assumption that the impacts extend to the next sampling location where concentrations of COCs were less than the SCS. The actual volume of impacted soil may be more or less than estimated.

Origin of Contaminants

Based on the investigative programs conducted at the Site, it is likely the HWS boron impact characterized at the Site originated solely from an on-site PCA, namely, importation of fill of unknown quality. The impact is limited to fill material less than 1.5 m bg and was not identified in native soils or in groundwater.

The data collected during the Phase Two ESA did not suggest any actual contaminants resulting from any of the off-site PCAs identified in the Phase One ESA.

Migration of Contaminants

In general, potential preferential migration pathways for sub-surface contaminants at a Site comprise buried utilities, naturally occurring sand seams, or other subsurface areas of increased permeability. Based on the nature and distribution of contaminants identified during the Phase Two ESA, migration of contaminants is not a concern.

Climatic or Meteorological Impacts on Contaminant Migration

While slight fluctuations in water table elevation have undoubtedly occurred over time due to climatic or meteorological changes, it is expected that these fluctuations in water levels would be

seasonal and regional in nature. Meteorological and Climatic trends will have influence on potentially contaminating activities, with winter conditions resulting in periods of road salt application to the ground surfaces of the Site. However, strictly speaking, meteorological conditions themselves would not have significantly 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.

Section 4 Cross Sections

Lateral and Vertical Distribution of Contaminants

As shown on Figure 27, HWS boron impacted areas in soil were found to be present at the Site.

The impacts are assumed to extend to the next sampling location where concentrations of COCs were less than the SCS. The depth of the contaminated areas ranged from near surface to approximately 1.5 m bg.

Vertical representation of the HWS boron contaminated areas is shown in the cross-sections in Figures 11, 13, 32, 34, 42, and 44 through 48. The total estimated HWS boron impacted volume of soil for Areas 1, 2 and 3 was calculated to be approximately 975 m^3.

No impacts in groundwater were identified on-site during the Phase Two ESA.

Depth to Water in Contaminated Areas

The depth to groundwater in the contaminated areas was measured in the nearest monitoring wells MW107, MW108, MW113S and MW118S and ranged from 1.42 to 5.01 m bg.

Stratigraphy in Contaminated Areas

Substrate encountered during the drilling program was generally comprised a layer of asphalt underlain by fill material consisting of clayey silt with some sand and gravel extending to depths ranging from 0.7 m to 2.9 m bg. The fill material is underlain by a clayey silt till with varying sand and gravel content to a depth of 13.7 m bg. No deleterious material was observed in samples of fill collected during drilling. Shale bedrock was encountered at depths ranging from 10.9 m to 13.9 m bg. Overall, overburden was greater than 2 m bg at over two-thirds of the Site. Stratigraphic cross-sections are shown in Figures 28 through 48.

Subsurface Structures and Utilities in Contaminated Areas

Subsurface utilities including hydro, water, sanitary sewer and storm sewers were identified within in the HWS boron impacted areas. In addition, the slab on grade building foundation at 169 Crumbie Street is partially located within the HWS boron impacted area identified as Area 3. Given that the HWS boron impact is associated with the soil (likely imported fill material) rather than groundwater, near surface infrastructure or utilities are not considered to have an influence on contaminant migration.

Vertical representations of the contaminated areas are shown in the cross-sections Figures 11, 13, 32, 34, 42, and 44 through 48.

Section 5 Risk Analysis

Release Mechanisms

Based on the investigative program conducted at the Site, the release mechanism for EC, SAR sodium and chloride are associated with use of salt for de-icing. HWS boron soil is not known to be associated with a particular release mechanism but likely originated solely from an on-site PCA, namely, historic importation of fill of unknown quality.

The data collected during the Phase Two ESA did not suggest any actual contaminants resulting from any of the off-site PCAs identified in the Phase One ESA.

Contaminant Transport Pathways

Based on the areal and vertical distribution of contaminants shown during the Phase Two ESA it is apparent that primary migration/dispersion mechanism for contaminants at the Site was deposition in soils.

With respect to receptor transport pathways, these are conceptually represented in Figures 67 and 68, and may potentially include:

- ingestion of contaminated soil;
- skin contact with contaminated soil;
- inhalation of dust from contaminated soil; and,
- transport into vegetation by root uptake.

Human and Ecological Receptors

As shown conceptually on Figure 67, human receptors could potentially include:

- outdoor worker (assuming landscape or maintenance worker);
- indoor worker

- residents (adult and toddler);
- property visitor;
- trespasser; and,
- subsurface worker (construction/excavation workers at the Site, short term).

As shown in Figure 67, subsurface workers, outdoor workers, indoor worker, residents, and property visitors at the Site are considered potential receptors at the Site, assuming the intended future residential land use.

As shown conceptually on Figure 68, ecological receptors could potentially include:

- terrestrial plants and soil invertebrates;
- birds and mammals, and,
- off-site aquatic receptors.

As shown on Figure 68, soil invertebrates, terrestrial plants, and birds and mammals are considered potential receptors at the Site. Aquatic receptors are not considered as there are no water bodies on or adjacent to the Site.

Receptor Exposure Points

Human receptor exposure points may potentially include:

- consumption of vegetation;
- direct interaction with in-situ soils;
- inhalation of wind-borne particulates; and,
- ingestion of soils.

As shown in Figure 67, only direct contact, inhalation of dust and ingestion exposure pathways are valid for at least one receptor type at the Site.

Ecological receptor exposure points typically include:

- ingestion;
- inhalation of dust; and,
- ingestion of vegetation or prey.

As shown on Figure 68, these pathways exist with limited effect on several potential receptors given the existing Site development, as well as the future proposed redevelopment plans. Soil invertebrates, birds and mammals are considered to have direct and inhalation based exposures.

Please note that Generic Site Condition Standards developed by the Ministry of Environment, Conservation and Parks (MECP) were considered applicable for assessment of this Site and were selected based on procedures outlined in Ontario Regulation 153/04 and its amendments. The

MECP generic standards were created using risk-based models which supersede the previous qualitative risk analysis.

Subsequent Remedial Activities and Current Site Conditions

The preceding CSM has been prepared to reflect investigations and site conditions that were conducted prior to remediation of impacts at the Site. Following the completion of the Phase Two investigation, it is expected that remediation activities will be conducted to remove impacted soils encountered at the Site. It is assumed data collected during the remedial activities will be used to augment the Phase Two ESA.

As impacts in groundwater are not present at the Site prior to the remedial program, no post-remediation groundwater sampling program will be conducted.