De Zen Realty Company Ltd.

HYDROGEOLOGICAL ASSESSMENT

PROPOSED MIXED-USE DEVELOPMENT

120, 128, 142, 154, 158 Queen Street South, and 169 Crumbie Street
Mississauga, Ontario

23 February 2024

CH244.00

Digital Distribution
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EXECUTIVE SUMMARY

Terrapex Environmental Ltd. (Terrapex) was retained by De Zen Realty Company Ltd. to review hydrogeological conditions for the proposed redevelopment planned for the adjoining properties (the Site) of 120, 128, 142, 154, 158 Queen Street South and 169 Crumbie Street in Mississauga, Ontario.

Phase One of the development, also known as Buildings 1A and 1B complex, is the focus of construction dewatering and foundation drainage estimates herein. Additional buildings are planned for construction for the remainder of the site. These buildings will have separated underground parking garage structures that will each extend to three below grade levels.

A network of seventeen groundwater monitoring wells was drilled at thirteen locations with broad distribution across the Site. Groundwater levels were measured for between five and seven monitoring events. Single well hydraulic tests were performed on six monitoring wells. One groundwater sample was analysed for municipal bylaws that regulate discharges to sanitary and storm sewers.

For the Buildings 1A and 1B complex, the lowest P3 slab will be set at approximately 151.1 metres above sea level (masl). The depth of excavation will be approximately 11.4 metres below grade (mbg). The shallowest depth to the water table encountered was 0.3 mbg, indicating that the construction excavation and the underground parking structure will experience groundwater seepage that will need to be managed.

The anticipated maximum rate of groundwater seepage of 90,300 L/day and a larger stormwater event of 160,700 litres) to be managed during construction combined will be approximately 251,000 L/day, which will require an Environmental Activity and Sector Registry (EASR) to be issued by the provincial government. The foundation drains in post-construction could experience a maximum rate of 86,400 L/day, which is considered groundwater taking under provincial regulations, thus a Permit to Take Water (PTTW) will be required.

Groundwater quality was acceptable for discharge to the Peel Region's sanitary/combined sewer. Groundwater quality was acceptable for discharge to the City of Mississauga's storm sewer with treatment for manganese and phenolics. Elevated manganese and phenolics are widespread across the site. The elevated manganese is in dissolved form that would require ongoing chemical treatment. Monitoring for organic chemicals during construction is advised due to possible presence of contaminated groundwater on site or in the vicinity.

Pre-construction and post-construction consist of impervious cover over the entire site, both allowing negligible amounts of recharge. Low impact development (LID) measures to improve infiltration are not feasible due to the parking garages ultimately occupying the entire site. Also, the low permeability clayey soil would limit the success of attempts to achieve significant recharge.

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1.0 BACKGROUND

Terrapex Environmental Ltd. (Terrapex) was retained by De Zen Realty Company Limited to prepare this hydrogeological assessment for the proposed mixed-use development of the adjoining properties (site) of 120, 128, 142, 154, and 158 Queen Street South, and 169 Crumbie Street, in Mississauga, Ontario, which is in the Region of Peel. This assessment herein is intended to satisfy hydrogeological requirements that are part of the development submissions process administered by the municipality.

Companion studies were undertaken by Terrapex, including a Phase Two Environmental Site Assessment and a geotechnical study, which are reported under separate covers.

2.0 LOCATION AND SETTING

2.1 LOCATION AND PROPERTY DIMENSIONS

The Site is situated on the southwest side of Queen Street South. The general location is mapped on Figure 1. The Site is irregularly shaped, roughly rectangular, and covers an area of approximately 42,000 m^2, with dimensions of 312 m by 182 m, oriented northwest - southeast.

2.2 PRESENT LAND USE

The Site presently hosts various one and two-storey buildings with commercial use, which are located along the borders to the northwest, south, and east. The remaining central and eastern areas are mostly asphalt-paved open-air parking and driving lanes. Grass lawns with scattered trees, are located in the eastern portion and around buildings in the southern portion. The general Site layout is shown on Figures 2 and 4.

The surrounding area is developed with diverse mixed commercial, residential, and institutional uses. Conditions in the vicinity are shown at different scales on Figure 2 and 3. Local land uses essentially consist of the following features.

- ***Southeast:*** A mixture of single-family dwellings, low-rise commercial / retail buildings, and residential townhouse blocks. Further away is a mixture of single-family dwellings, low-rise commercial / retail buildings. Further east is Streetsville Memorial Park in a corridor flanking the Credit River.
- ***Northwest:*** Canadian Pacific Railway Tracks, followed by neighbourhoods of single-family dwellings and Dolphin Senior Public School.
- ***Northeast:*** Low-rise commercial along Queen Street South. Across Church Street is the Credit River and a corridor of treed areas. Some scattered single-family dwellings, retirement residences and townhouse blocks.
- ***Southwest:*** Canadian Pacific Railway and GO Transit railway. An apartment under development along Rutledge Road. A treed swale area corridor along Mullet Creek. A neighbourhood of single-family dwellings with some townhouse blocks. Light industrial uses west of the railway to Joymar Drive and south of Tannery Street.

2.3 PROPOSED DEVELOPMENT

The proposed development will demolish the existing buildings that will be replaced with eight buildings ranging in height from approximately 2 to 18 storeys. These structures will be constructed in several progressive phases. Phase One of the development, the Buildings 1A and 1B complex, will be the first portion to be constructed, which will rise to approximately six storeys above grade. The footprint of the garage underlying the Buildings 1A and 1B complex is approximately 6,430 m^2. The subsurface parking garage of Buildings 1A and 1B will extend down to three subsurface levels.

The reminder of the site will eventually include underground parking garage structures that will extend to three levels below grade. The layouts of the additional garages are still in a preliminary design stage.

2.4 SITE TOPOGRAPHY

Topographic mapping indicates the grade descends southward, from approximately 163.7 metres above sea level (masl) at the northeast corner to approximately 159.7 masl at the southwestern corner (David B. Searles Surveying Ltd., 2023). The grade elevations at the borehole locations ranged between 160.0 masl to 163.7 masl, as surveyed by Terrapex using a Global Navigation Satellite System (GNSS) receiver relative to a local geodetic datum.

2.5 DRAINAGE

Surface water features are absent on site. Stormwater is managed by the municipal stormwater management system of catch basins and piped drainage.

Surface water features within 500 m include the Credit River that is located approximately 265 m to the east and Mullet Creek that is located approximately 150 m to the west. Mullet Creek discharges into the Credit River, which discharges to Lake Ontario.

2.6 REGIONAL GEOLOGY

The Site is mapped as resting upon clay to silt textured till derived from glacial lake deposits or shale (Ontario Geological Survey, 2010). See Section 5.1 for soil conditions encountered, which is consistent with the information reported in the available mapping.

The underlying bedrock is the Georgian Bay Formation that is dominantly shale and limestone (Ontario Geological Survey, 2007). Shale is found in deeper boreholes across the site, as described in Section 5.1.

Additional information on soils in the vicinity of the Site is also available from reports of wells in the database maintained by the Ministry of the Environment, Conservation and Parks (MECP).

2.7 SENSITIVE ECOLOGICAL RECEIVERS

Designated sensitive ecological areas, such as Areas of Natural and Scientific Interest (ANSI) or Environmentally Significant Areas (ESA's), are absent within 500 m of the Site. Undesignated

woodlands are present approximately 30 m to the west and 100 m to the east. There are no wetlands with or without special designation in proximity.

2.8 GROUNDWATER SUPPLY WELLS

A review of the MECP water well database reports two historic wells within approximately 500 metres of the subject property, which included one commercial well supply (No. 4902143). This well was installed in September 1963 prior to local urbanization. The supply wells are likely demolished and so no longer in use to be adversely affected.

The site was reviewed under the provincial Source Water Protection mapping (MECP, 2023) for possible location inside various types of sensitive groundwater classifications. The Site rests on an aquifer classified as a Highly Vulnerable Aquifer, with a score of 6. No layer that could function as an aquifer was encountered by on-site drilling down to bedrock.

3.0 FIELD PROGRAM

The following describes the methodology and locations of investigation in the field program. Observations are provided in Section 4 and interpretations are provided in Section 5.

3.1 DRILLING AND BOREHOLES

Eighteen (18) boreholes were advanced by Profile Drilling Inc., under the supervision of Terrapex personnel between 16 January and 9 February 2023. All boreholes were drilled using hollow stem augers with split spoon sampling method to approximate depths ranging from 10.1 to 13.9 metres below ground (mbg).

Grain-size analyses were carried out on four soil samples using sieve and hydrometer methods by Terrapex's geotechnical laboratory.

Various consultants drilled on Site between 1988 and 2014 advanced sixty (60) boreholes to depths ranging from 1.2 to 10.9 mbg. However, those boreholes were not reviewed for this study.

3.2 MONITORING WELLS

Terrapex installed seventeen (17) monitoring wells at thirteen (13) different locations that are designated MW101, MW101(S), MW102, MW103, MW103(S), MW104 through MW108, MW112, MW113, MW113(S), MW115, MW116, MW118, and MW118(S). The suffix of "S" designates a well installed at a shallower depth beside the adjacent deeper well of the same name. The bottoms of well screens ranged in depth from 4.5 to 11.2 mbg.

Monitoring wells constructed in Terrapex programs used environmental grade, 50 mm diameter, Schedule 40, PVC piping with machine-slotted (10 slot) screens at the bottom. Each monitoring well was covered by a flush-mount casing, except for wells MW103, MW103(S), and MW104, which were covered by monument casings. The well components and their relationships to adjacent stratigraphy are shown in the borehole records provided in Appendix III and well construction details are reported in Table 1.

The well locations and elevations of the top of the standpipe and grade were surveyed by Terrapex using a Global Navigation Satellite System (GNSS) receiver. The GNSS model used was a Topcon HiPer V GNSS Receiver.

Previous consultants installed twelve piezometers and six monitoring wells between February 1988 and March 2014. These piezometers and wells were not a part of this assessment. Refer to the original reports for well construction details by other consultants.

Monitoring wells, when no longer useful, must eventually be abandoned by a licensed water well contractor. Abandonment must proceed in accordance with Regulation 903 and its amendments issued under the Ontario Water Resources Act. The monitoring wells should remain until the time of construction to be available for observing future seasonal groundwater conditions closer to the time of construction for dewatering planning.

3.3 GROUNDWATER LEVEL MEASUREMENTS

Suites of groundwater levels were measured in the Terrapex monitoring well network on 28 February, 8 and 15 March 2023. Additional measurements occurred either on 4, 18 and/or 30 May 2023 for certain wells. Levels were measured using an electric sounder device with graduated tape. See Table 2 for specific dates for each well.

3.4 GROUNDWATER SAMPLING

The monitoring well selected for groundwater sampling was MW103, which is located at 146 Queen Street South in the northeastern part of the property where formerly was a gas station. The well was developed three times to dry using Waterra tubing and a foot valve prior to sampling on 8 March 2023. The sample was extracted using a low-flow peristaltic pump. Sample water was discharged directly without filtering to pre-cleaned bottles supplied by the laboratory with preservatives as appropriate for parameters. These bottles were iced and held in a cooler under Chain of Custody protocols prior to delivery.

Water quality analysis was performed by AGAT Laboratory of Mississauga, Ontario that is accredited by the Canadian Association for Laboratory Accreditation Inc. (CALA). The analysis suite consisted of the parameters specified under the Regional Municipality of Peel's bylaw 53-2010 for discharging to sewers and the City of Mississauga's bylaw 0046-2022 for discharging to a storm sewer.

To confirm if the exceedances of phenolics and manganese observed in MW103 were representative across the site, additional samples were obtained from MW103, MW101S, MW113S, MW115, and MW118(S). The wells were developed three times to dry using Waterra tubing and a foot valve prior to sampling on 30 May 2023. These bottles were iced and held in a cooler under Chain of Custody protocols prior to delivery to AGAT.

3.5 HYDRAULIC CONDUCTIVITY TESTS

Single well response tests to assess the hydraulic conductivity of formations were performed on monitoring wells MW101S, MW102, MW105, MW113, MW115, and MW118. The test method

applied was a bail test, which is a rapid removal of a volume of water using an elongated bailer. The ensuing rising recovery to static level is observed over time using manual methods and by using Solinst brand leveloggers that were installed to record responses. The loggers recorded at 10 second intervals for 3.5 to 5 hours. A barometric logger was also installed on site to allow removal of barometric pressure effects from the levelogger record.

Test data were analysed using the Aqtesolv software package by the Bouwer and Rice method.

4.0 OBSERVATIONS

4.1 SUBSURFACE MATERIALS AND HYDROSTRATIGRAPHY

The subsurface conditions encountered at each borehole are detailed on the borehole records provided in Appendix III. The following is a summary of stratigraphic layers encountered.

- *Asphaltic concrete, sub-base*. Apart from MW103 and MW104, all other boreholes encountered asphaltic concrete pavement with a thickness of approximately 0.1 m, with a granular base.
- *Fill*. Fill is present at all boreholes except MW101, extending to approximate depths ranging from 0.7 to 2.9 mbg. The fill texture widely varied, which included crushed limestone, silty sand, sand and gravel, and clayey silt soils. Inclusions of organic material and construction debris were sometimes encountered.
- *Clayey silt till*. Extending below the fill and rests on bedrock. Thickness varies from 8.6 to 11.5 m. Minor sand and gravel content increased downward the bedrock.
- *Bedrock*. Weathered shale was encountered at depths ranging from 10.9 to 13.7 mbg. The corresponding elevations of top of bedrock ranged from 149.1 to 152.7 masl.

The above stratigraphic description is a generalization. Variations could occur in thickness, depth, presence, and texture of units. Granular lenses, although not encountered, are possible. Constructors and dewatering contractors should review the nearest borehole records for specific locations and, if necessary, drill to confirm conditions if critical to their activities.

Sieve and hydrometer grain size analyses were carried out on four soil samples. The curves from the test are provided in Appendix V and size percentages are summarized below.

Borehole Number	Sample Depth and No.	Textural Description	Gravel %	Sand %	Silt %	Clay %
MW106	10.7 mbg (11)	Sand and silt, some gravel, trace to some clay	11.5	42.3	35.8	10.4
MW107	3.1 mbg (5)	Silt and clay, trace sand, trace gravel	3.7	9.8	46.2	40.3
MW107	6.1 mbg (8)	Silt, some sand, some clay, some gravel	14.4	19.1	47.3	19.2
MW108	7.6 mbg (9)	Sand and silt, some clay, trace to some gravel	10	37.2	38.0	14.8

Hydrostratigraphic profiles were prepared for perpendicular orientations in Figures 7 and 8.

4.2 GROUNDWATER LEVELS

Groundwater level observations are presented as depths and as elevations on Table 2. The shallower wells include MW101(S), MW103(S), MW113(S), and MW118(S). The deeper wells include MW101 to MW108, MW112, MW113, MW115, MW116, and MW118. The water table is reflected in wells shallower than 7 mbg.

The average depth to the water table in the shallower wells was 2.8 mbg and the average depth to the water table in the deeper wells 3.5 mbg. The shallowest depth to the water table observed was 0.27 mbg in MW102 in the east-central portion along the northeastern property boundary.

The average elevation of the water table in the shallower wells was 159.5 masl, with the highest observed elevation of the water table was 162.8 masl at MW101S. The average elevation of piezometric head in the deeper wells was 158.7 masl, while the highest observed elevation piezometric head was MW101 at 162.6 masl. The water table geographic trends, as presented on Figure 5, suggest that groundwater rises as high as 162.8 masl in the northern corner and as low as 157.9 masl in the southern corner. The similar geographic trend for the deeper wells is presented in Figure 6.

Groundwater levels naturally fluctuate in response to seasons, to annual variations, and possibly to major storm events. The measurements reported herein occurred during spring, which is typically when is the shallowest depth and highest elevation in the annual seasonal cycle. It is possible that the water table elevation could rise further (become shallower depth) to peak during a wetter period. A suite of groundwater measurements should be obtained in spring 2024 to confirm levels.

5.0 ANALYSIS

5.1 HYDRAULIC CONDUCTIVITY

Hydraulic conductivity is a parameter for quantifying the ability of a soil unit to transmit water. This parameter is necessary for predicting the rates of seepage into excavations to be collected by dewatering efforts during construction and ongoing by foundation drains in post-construction.

The bail tests were interpreted; analysis curves are presented in Appendix VI. The resulting interpreted hydraulic conductivity values are listed below:

- MW101S, 9.3 x 10^{-9} m/s
- MW102, 1.2 x 10^{-8} m/s
- MW105, 4.1 x 10^{-10} m/s
- MW113, 3.4 x 10^{-9} m/s
- MW115, 2.2 x 10^{-9} m/s
- MW118, 1.8 x 10^{-7} m/s

The above monitoring wells were screened in a clayey silt till.

5.2 HYDRAULIC GRADIENT

The water table surface is commonly a subdued reflection of the overlying ground surface with shallow groundwater movement parallel to the overlying general grade and toward watercourses. Based on this interpretation and local topography, shallow groundwater in the vicinity of the Site is anticipated to move southeastward.

Equipotential contours of the water table were interpreted using shallower wells, as illustrated on Figure 5. The horizontal hydraulic gradient descends towards the southeast with an average magnitude of approximately 0.03 m/m. As illustrated on Figure 6, the horizontal hydraulic gradient of the deeper groundwater regime also descends towards the south and southeast. Given that watercourses are present offsite to the northeast and southwest, a groundwater flow divide with directions toward the watercourses may be possible within the site but could not be resolved with the network density.

Local variations in topography, soil type, deeper building foundation drains and buried utilities trenches can influence the direction of the horizontal gradient.

Vertical hydraulic gradients were measured by the clusters of MW101, MW103, MW113, and MW118. The two screens were separated by a range of approximately 2 to 5 m in elevation. The gradient direction was consistently downward, which indicates the site functions as a recharge area. Two measurements are suspect (MW118(S) and MW101, both on 18 May 2023, possibly in relation to previous sampling efforts and slow recovery. The average magnitudes of the vertical hydraulic gradient varied from 0.14 m/m at MW113 to 0.55 m/m at MW101.

5.3 GROUNDWATER QUALITY

The reported concentrations of tested parameters for the sample obtained from MW103 are provided in Table 3. The Certificate of Analysis issued by AGAT is provided in Appendix IV. The Certificate of Analysis issued by AGAT for the additional sampling for exceedances is also provided in Appendix IV.

The groundwater quality was acceptable with respect to the criteria for discharge to the Peel Region sanitary sewer without treatment.

The following parameters exceeded the criteria specified under the Peel Region and City of Mississauga bylaw for storm sewer.

- At MW103, total manganese was at a concentration of 0.094 mg/L in March 2023 and 0.056 mg/L in May 2023, which exceed the storm sewer criterion of 0.05 mg/L. The filtered sample in May 2023 was 0.013 mg/L that is acceptable for discharge.
- At MW101(S), MW113(S), MW115 and MW118(S), the total manganese concentration ranged between 0.096 to 0.719 mg/L and the dissolved manganese concentration ranged from 0.088 to 0.702 mg/L. The total and dissolved values for these wells all exceeded the storm sewer criterion of 0.05 mg/L.

- At MW103, the phenolics concentration was 0.061 mg/L in March 2023 and was 0.009 mg/L in May 2023, which exceed the storm sewer criterion of 0.008 mg/L.
- At MW101(S), MW113(S), and MW118(S), the phenolics concentration ranged between 0.009 to 0.011 mg/L, which exceed the storm sewer criterion of 0.008 mg/L. The phenolics concentration MW115 was 0.006 mg/L, which is acceptable.

Thus, for across the site, groundwater quality can be discharged to the storm sewer with treatment for manganese and phenolics.

The datalogger in wells MW101S, MW102, MW105, MW113, and MW118, recorded average groundwater temperatures that were stable, with values ranging from 11.9 to 13.9 °C, depending on the individual well.

5.4 BUILDING GEOMETRY AND HYDROGEOLOGY

The parking garages will extend to three subsurface levels. For the Buildings 1A and 1B complex, the floor elevation of the P3 basement garage slab will be set at approximately 151.1 masl. The surface grade will be at approximately 162.5 masl.

Building footings and elevator cores are typically constructed to a depth of 1.5 m below the lowest slab level. The excavation base elevation for the Buildings 1A and 1B garage is thus anticipated to be at 149.6 masl, with a depth of approximately 12.9 mbg. The excavation for the Buildings 1A and 1B garage will cut from 0.2 0 to 2.0 m into the shale bedrock.

Based on available stratigraphy, some of the other garage excavations extending to three levels may also cut by 1.0 to 2.0 m into the underlying shale bedrock.

Overall for the site, the average depth to water table observed to date was approximately 2.8 mbg, with variation. Thus, the excavation depths will cut deep into the saturated zone, so will require dewatering during construction. Similarly, the finished garages will also be set below the water table, so foundation drains will also receive ongoing groundwater seepage that will need to be discharged to a sewer.

The planned development will include buried municipal infrastructure, such as piped sanitary sewer, storm sewer and potable water. Construction will require excavation trenches, for which the depths are presently not determined.

6.0 DEWATERING AND FOUNDATION DRAINAGE

6.1 RATES PREDICTIONS

The MECP requires a Permit to Take Water (PTTW) or an Environmental Activity and Sector Registry (EASR) for groundwater takings exceeding 50,000 litres per day (L/day). For the purpose of construction, a PTTW is required for dewatering extraction rate for groundwater seepage that exceeds 400,000 L/day. An EASR is required for a rate between 50,000 and 400,000 L/day.

Estimation of the rate of dewatering to counteract groundwater inflows is based on mathematical analogy to a circular well (Powers et al, 2007). The Buildings 1A and 1B garage will be slightly

“C” shaped, with overall dimensions within a rectangle a length of 96.2 m and a width of 77 m. The equivalent radius is based on the excavation footprint area of 6,429 m^2.

The water level target is 1.0 m below the base of excavation. The calculations anticipate that the subsurface will respond with hydrogeological behaviour similarly to an unconfined aquifer. The formula anticipated geometric conditions, and input values in calculating construction dewatering are specified on Table 4.

The predicted maximum rate of groundwater seepage during construction is 90,300 L/day. This rate should be anticipated as possible on days without precipitation.

The open excavation for the Buildings 1A and 1B garage will capture incident precipitation. The excavation area of 6,429 m^2 and a relatively large precipitation event of 25 mm will capture approximately 160,725 litres. Such precipitation events are anticipated to recur four to five times per year. Obviously, larger precipitation events would produce larger amounts to manage, although occurring less frequently.

Construction dewatering should anticipate the combined amount of the precipitation rate and the groundwater seepage rate in the application, which is 241,000 L/day. Construction dewatering will require an EASR.

The maximum amount that will be received by foundation drains was calculated using the analysis and values shown on Table 5. The calculation method applied was similar to the construction dewatering calculations except that the water level target is the foundation drain that is typically placed at a depth of 0.3 m below the P3 foundation slab. The forecasted maximum amount of groundwater seepage that will feed foundation drains is 86,400 L/day. The amount assumes that there are no contributions to the foundation drain by stormwater to ventilation or roof components or from a low impact development infiltration measure. The ongoing collection of groundwater by foundation drains is considered a groundwater taking under provincial regulations, so a PTTW will be required.

The methods of dewatering of adjacent soils and bedrock, such as by wellpoints or by collection from sumps within the excavations, should be decided by the construction and dewatering contractors. Berms, ditches, and/or grading should be used during construction to divert stormwater flows from reaching the excavation that would otherwise require pumping.

The calculations are based on conservative assumptions that predict relatively high rates that are less likely but remain possible. The shallowest water table with a vertical buffer for an extreme year was assumed. The hydraulic conductivity that is the highest observed was input, whereas average conditions are more likely to prevail. The values incorporate a factor of safety of 2.0 to allow for unknown conditions, such as a permeable soil horizon between boreholes or just beyond the excavation walls.

The cumulative amounts pumped from the excavation and finished garage structure must be monitored daily to confirm that the requested pumping rates limits stated in the EASR and PTTW are not exceeded. Approval will have to be obtained from the municipality to allow dewatering discharge to the storm sewer or to the sanitary sewer, whichever outlet is proposed as a receiver.

6.2 RADIUS OF INFLUENCE AND SENSITIVE RECEIVERS

The radius of influence is the distance range beyond which the drawdown on groundwater caused by dewatering is not expected to be detectable. The radius of influence is commonly estimated using the formula of Sichart and Kryieleis (Powers et al, 2007), which is noted in Tables 4 and 5.

The radius of influence is anticipated to occur during construction. The radius will be 18 m from the excavation boundary for the Buildings 1A and 1B garage. Some existing buildings across Queen Street South may be within the radius of influence, so should be monitored. No sensitive ecological receivers are situated within the radius of influence. Dewatering activities are not anticipated to adversely affect adjacent properties.

6.3 WATER QUALITY OF DISCHARGE

As noted in Section 5.3, collected groundwater can be discharged to the sanitary sewer without treatment. Collected groundwater can be discharged to the storm sewer with treatment for manganese and phenolics.

The manganese concentration was elevated above the storm sewer criterion in both total and dissolved forms at four of the five monitoring wells tested, indicating that the distribution of elevated manganese is widespread across the site. This result indicates that chemical treatment would be required to sufficiently lower the manganese concentration. Settlement and filtering are likely to be ineffective in lowering the manganese concentration to below the storm sewer criterion.

The phenolics concentration was elevated above the storm sewer criterion at four of the five monitoring wells tested, indicating that the distribution of elevated phenolics is widespread across the site.

Although the phenolics and manganese concentrations were acceptable at one exceptional location for each, due to the widespread presence, elevated phenolics and manganese should still be anticipated for all locations on site.

7.0 WATER BALANCE ASPECTS

7.1 PRE-CONSTRUCTION AND POST-CONSTRUCTION INFILTRATION

Typically, incident precipitation infiltrates through a pervious soil surface, then moves down through the unsaturated zone and then recharges the shallow groundwater. In turn, this shallow groundwater moves toward watercourses to contribute to baseflow or to replenish aquifers, if present. Impervious surfaces of buildings or paving block infiltration and divert precipitation to become runoff that is then directed to storm sewers.

The pre-construction land use is mostly impervious cover, as occupied by buildings, asphalt-paved driving lanes and paved parking areas, which blocks infiltration. Minor areas of pervious cover, such as grasses and gravel strips, that are present permit only limited rates of infiltration. The post-construction land usage will be entirely covered by impervious surfaces of the new buildings, underlying parking garages, internal roads and driveways.

Since, pre-construction and post-construction both allow negligible recharge of the shallow groundwater regime, there will be no significant change to recharge due to development.

The area of open soil near MW103 and MW208 in the northeast is a result of demolition of past structures so is considered temporary. Over the long-term it was considered as paved and built upon.

7.2 LOW IMPACT DEVELOPMENT / AUGMENTED INFILTRATION

Low impact development (LID) measures to promote infiltration are not feasible since the garages and building footprints will essentially span the entire site, along with internal roads. Although the average water table depth of approximately 2.8 mbg might allow sufficient vertical setback for a buried stormwater system, the native soils are dominantly clayey silt that is low permeability, so an LID measure would achieve very limited amounts of infiltration.

8.0 CLOSURE

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

The reported information is believed to provide a reasonable representation of the general hydrogeological 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. Where applicable, the assessment of the environmental quality of groundwater was 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 Limited. Terrapex 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 Limited.

Respectfully submitted,
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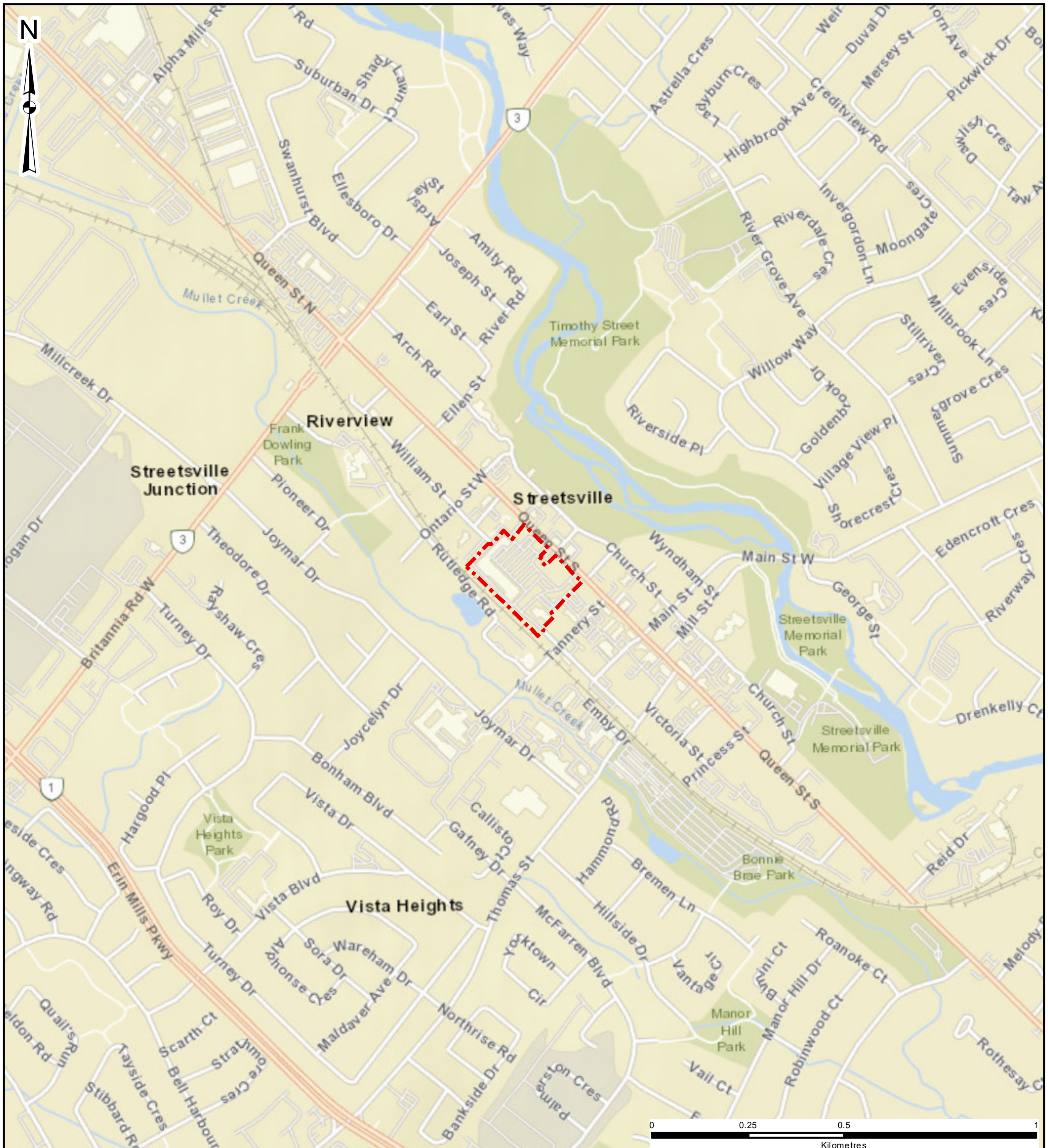
SRM. January 24, 2024. Underground P3. 146 Queen Street South, Mississauga, ON. File D2034. Part of Phase 01 Drawings.

SRM. January 24, 2024. Master Plan. 142-148 Queen Street South, Mississauga, ON. File D2034 Part of Entre Plaza Redevelopment-Streetsville.

APPENDIX I
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: BDT
REVISION: 00	DATE: FEBRUARY 2024	**FIGURE: 1**

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

N

ONTARIO ST W
RUTLEDGE RD
CAROLINE ST
ONTARIO CT
KERR ST
WATER ST
CHURCH ST
MAIDEN LN
QUEEN ST S
TANNERY ST
CRUMBIE ST
BROADWAY ST
PEARL ST
Canadian Pacific Railway
Streetsville Lit

LEGEND

SITE BOUNDARY

100m RADIUS FROM SITE BOUNDARY

0 25 50 75 100

Metres

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

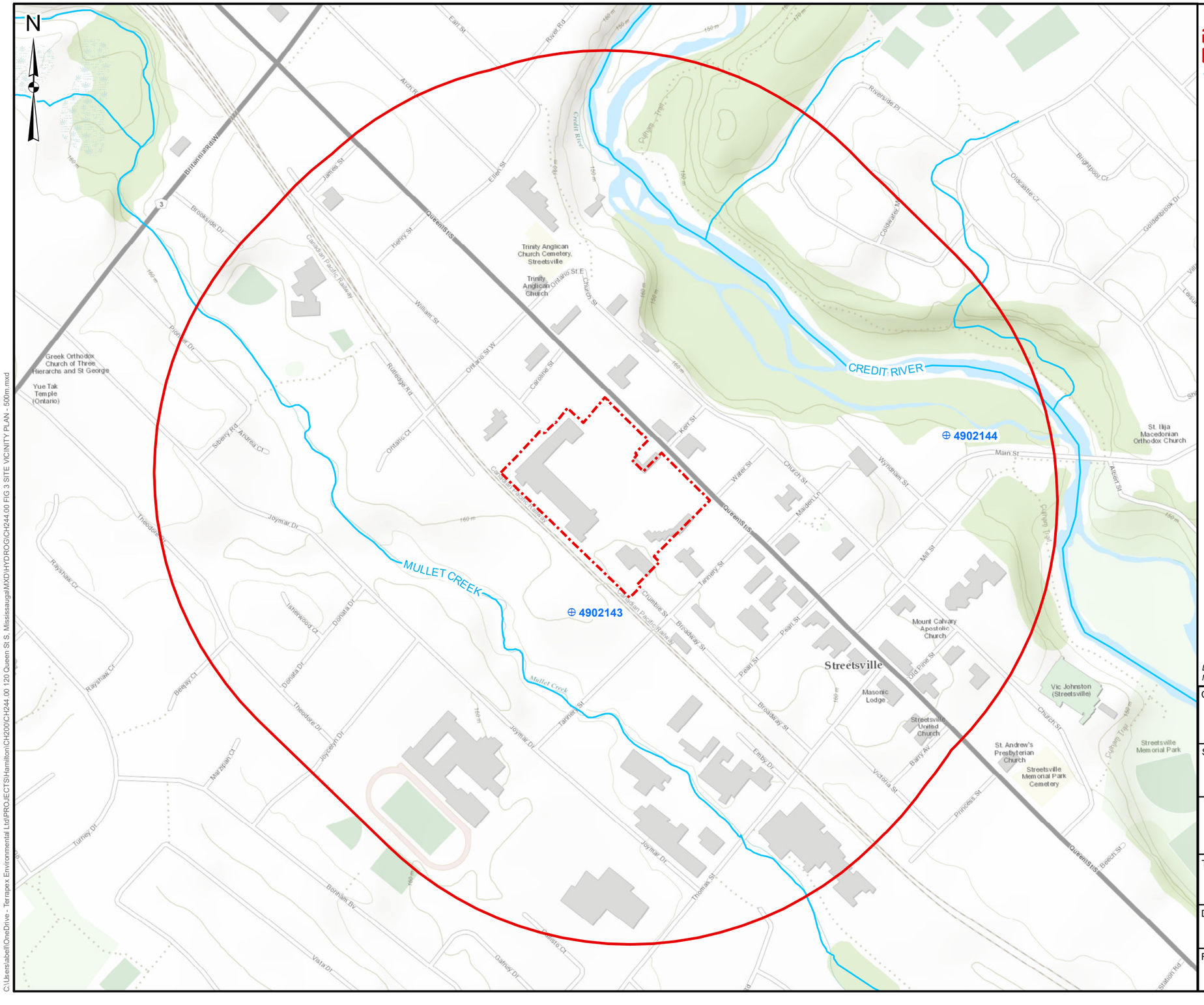
TERRAPEX

TITLE:

SITE VICINITY PLAN WITH 100m

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

C:\Users\JSeiroul\OneDrive - Terrapex Environmental Ltd\PROJECTS\Hamilton\CH200\CH244.00 120 Queen St S, Mississauga\MXD\HYDROG\CH244.00 FIG 2 SITE VICINITY PLAN - 100m.mxd



C:\Users\abell\OneDrive - Terrapex Environmental Ltd\PROJECTS\Hamilton\CH200\CH244.00 120 Queen St S, Mississauga\MXD\HYDRO\CH244.00 FIG 3 SITE VICINITY PLAN - 500m.mxd

LEGEND

- SITE BOUNDARY
- 500m RADIUS FROM SITE BOUNDARY
- WATERCOURSE
- ⊕ WATER SUPPLY WELL

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

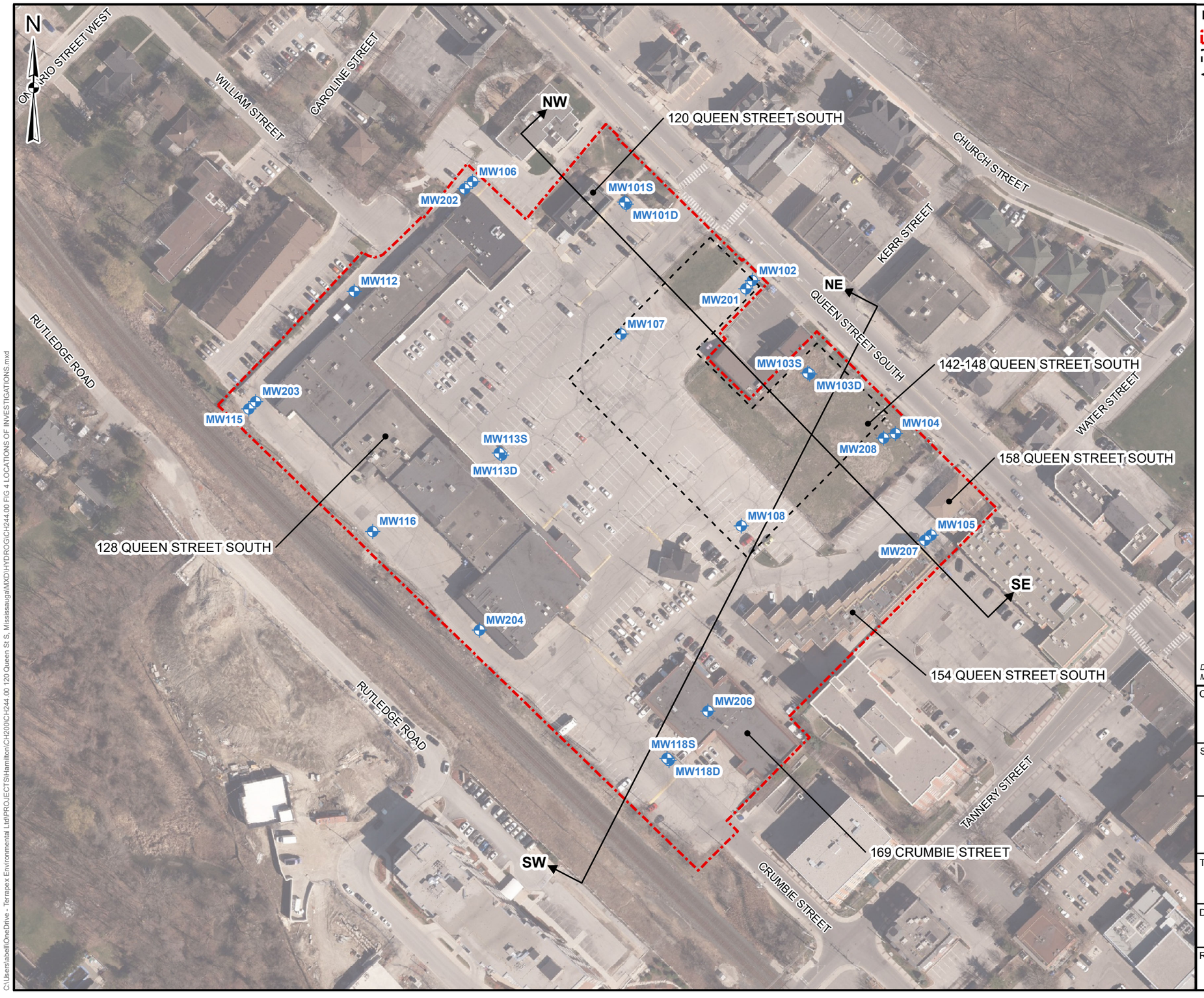
CLIENT:
DE ZEN REALTY COMPANY LTD.

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

TERRAPEX

TITLE:
SITE VICINITY PLAN WITH 500m

DRAWN BY:	PROJECT NO.:	CHECKED BY:
JS/ SW/ AB	CH244.00	BDT
REVISION: 00	DATE: FEBRUARY 2024	FIGURE: **3**



LEGEND

- SITE BOUNDARY
- PROPOSED PARKING GARAGE FOOTPRINT
- CROSS SECTION
- MONITORING WELL

0 20 40 60
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:
LOCATIONS OF INVESTIGATIONS

DRAWN BY:	PROJECT NO.:	CHECKED BY:
JS/ SW/ AB	CH244.00	BDT
REVISION:	DATE:	FIGURE:
00	FEBRUARY 2024	**4**

C:\Users\abell\OneDrive - Terrapex Environmental Ltd\PROJECTS\Hamilton\CH200\CH244.00 120 Queen St S, Mississauga\MXD\HYDROGIC\H244.00 FIG 4 LOCATIONS OF INVESTIGATIONS.mxd

LEGEND

- SITE BOUNDARY
- MONITORING WELL
- PROPOSED PARKING GARAGE FOOTPRINT
- EQUIPOTENTIAL CONTOUR
- INTERPRETED DIRECTION OF GROUNDWATER MOVEMENT
- 222.86 STATIC WATER LEVEL (18 APRIL 2023) (masl)

0 20 40 60
Metres

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

CLIENT:
DE ZEN REALTY COMPANY LTD.

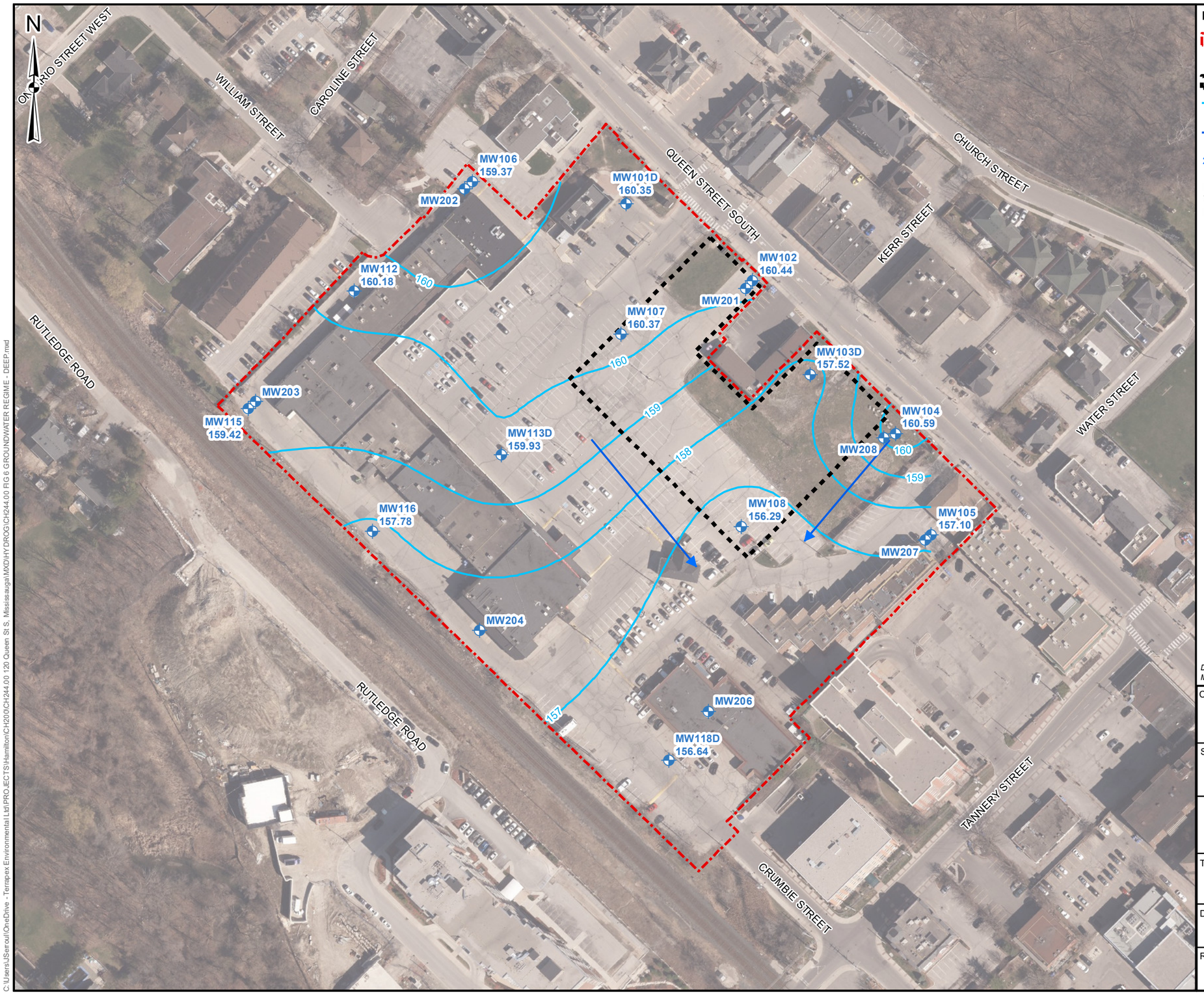
SITE LOCATION:
120, 128, 142, 148, 154, 158 QUEEN STREET SOUTH AND 169 CRUMBIE STREET, MISSISSAUGA, ONTARIO

TERRAPEX

TITLE:
SHALLOW GROUNDWATER REGIME

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

C:\Users\JSerrou\OneDrive - Terrapex Environmental Ltd\PROJECTS\Hamilton\CH200\CH244.00 120 Queen St S, Mississauga\MXD\HYDROG\CH244.00 FIG 5 GROUNDWATER REGIME - SHALLOW.mxd



LEGEND

- SITE BOUNDARY
- MONITORING WELL
- PROPOSED PARKING GARAGE FOOTPRINT
- 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 20 40 60
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:
DEEP GROUNDWATER REGIME

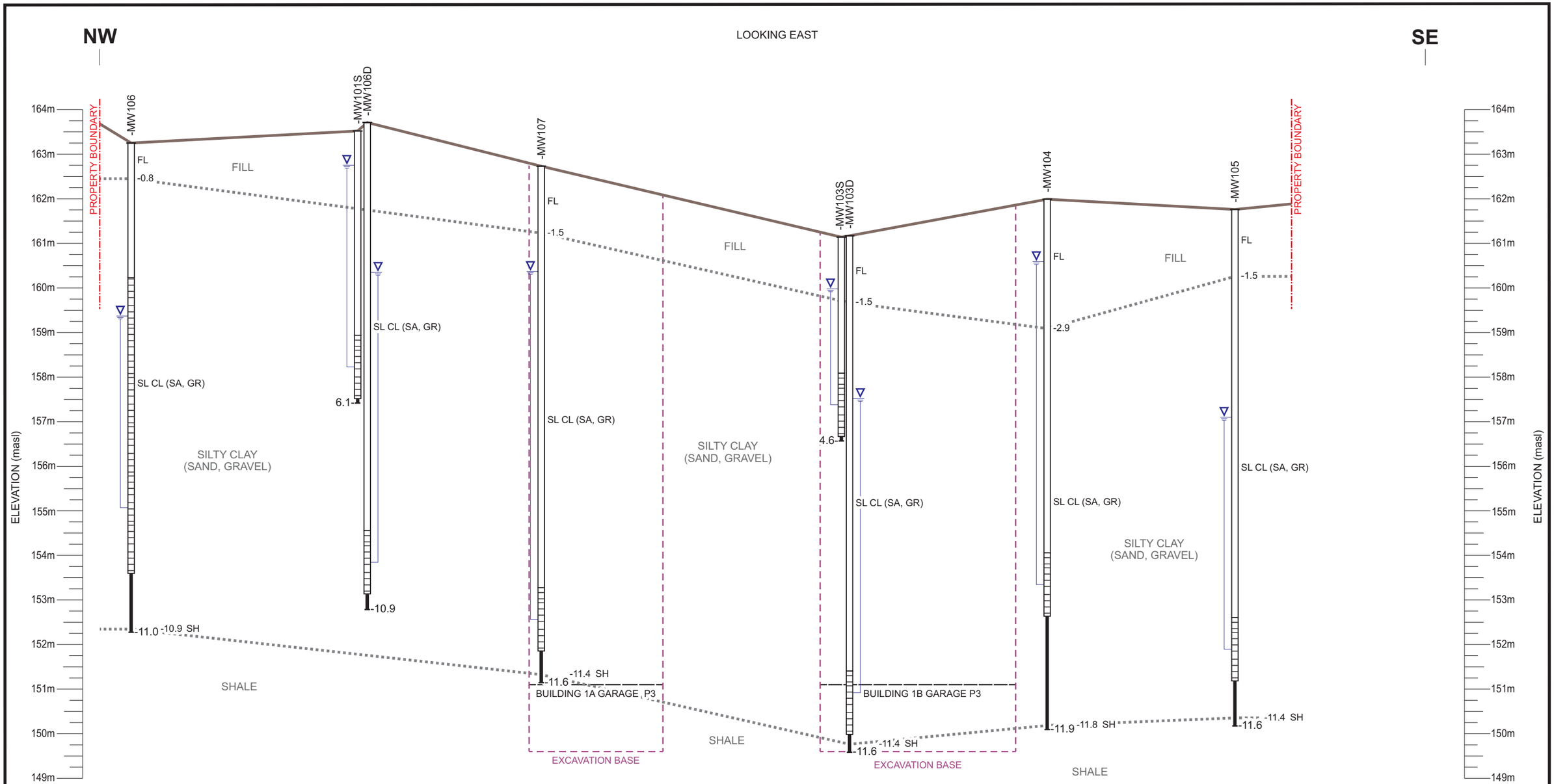
DRAWN BY:	PROJECT NO.:	CHECKED BY:
JS/SW	CH244.00	BDT
REVISION: 00	DATE: FEBRUARY 2024	FIGURE: 6

C:\Users\JSerrouri\OneDrive - Terrapex Environmental Ltd\PROJECTS\Hamilton\CH200\CH244.00 120 Queen St S, Mississauga\MXD\HYDRO\CH244.00 FIG 6 GROUNDWATER REGIME - DEEP.mxd

NW

LOOKING EAST

SE



LEGEND

GR	GRAVEL
SA	SAND
SL	SILT
CL	CLAY
FL	FILL
SH	SHALE BEDROCK
X(Y)	X IS A MAIN TEXTURE Y IS A SIGNIFICANT MINOR TEXTURE

-MW104 - MONITORING WELL DESIGNATION

STATIC WATER LEVEL- (April 18, 2023)

DEPTH OF SOIL INTERFACE(m bg)- 3.7-

- SCREENED ZONE

- BOREHOLE

HORIZONTAL SCALE:

0 10 20

Metres

NOTES:
1. SOIL AND GROUNDWATER KNOWN ONLY AT BOREHOLE LOCATIONS.
2. BOREHOLES ARE PROJECTED ONTO PROFILE.

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: **HYDROSTRATIGRAPHIC PROFILE: NW-SE**

DRAWN BY:	PROJECT NO.:	CHECKED BY:
SW/ AB	CH244.00	BDT
REVISION: 00	DATE: FEBRUARY 2024	FIGURE: 7

SW

LOOKING WEST

NE

RAILWAY

PROPERTY BOUNDARY

-MW118S
-MW118D

GROUND SURFACE

FILL

FL

-1.8

SL CL (SA, GR)

6.1

SILTY CLAY
(SAND, GRAVEL)

-10.5 SH

SHALE

-MW108

FL

-1.5

SL CL (SA, GR)

-11.6 SH

-MW103S
-MW103D

FL

-0.7

4.6

SL CL (SA, GR)

-11.6

-11.4 SH

PROPERTY BOUNDARY

QUEEN STREET SOUTH

BUILDING 1B GARAGE P3

EXCAVATION BASE

ELEVATION (masl)

164m
163m
162m
161m
160m
159m
158m
157m
156m
155m
154m
153m
152m
151m
150m
149m
148m

LEGEND

GR	GRAVEL
SA	SAND
SL	SILT
CL	CLAY
FL	FILL
SH	SHALE BEDROCK
X(Y)	X IS A MAIN TEXTURE Y IS A SIGNIFICANT MINOR TEXTURE

-MW104 - MONITORING WELL DESIGNATION

STATIC WATER LEVEL- (April 18, 2023)

DEPTH OF SOIL INTERFACE(m bg)- 3.7

- SCREENED ZONE

- BOREHOLE

HORIZONTAL SCALE:

0 10 20
Metres

NOTES:
1. SOIL AND GROUNDWATER KNOWN ONLY AT BOREHOLE LOCATIONS.
2. BOREHOLES ARE PROJECTED ONTO PROFILE.

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: **HYDROSTRATIGRAPHIC PROFILE: SW-NE**

DRAWN BY:	PROJECT NO.:	CHECKED BY:
SW/ AB	CH244.00	BDT
REVISION: 00	DATE: FEBRUARY 2024	FIGURE: 8

APPENDIX II
TABLES

TABLE 1
Monitoring Well Construction Details
120, 128, 142, 148, 154, 158 Queen Street South and 169 Crumbie Street, Mississauga

Position and Depth

Well Desig.	UTM Northing	UTM Easting	Date of Construct	Stick Down	Depth of Borehole	Depth to Well Bottom	Screen Length	Depth to Screen Bottom	Depth to Screen Top	Depth to Top Sand
(m)	(m)	(m)	dd-mmm-yy	(m)	(m bg)	(m bg)	(m)	(m bg)	(m bg)	(m bg)
MW101	4826412	603610	18/19-Jan-23	-0.59	10.90	10.67	1.52	10.57	9.15	8.85
MW101S	4826413	603610	19-Jan-23	-0.16	6.10	6.10	1.52	6.00	4.58	4.28
MW102	4826382	603659	08/09-Feb-23	-0.16	12.10	10.36	1.52	10.26	8.84	8.54
MW103	4826346	603681	07/08-Feb-23	0.99	11.58	11.28	1.52	11.18	9.76	9.46
MW103S	4826346	603681	08-Feb-23	0.82	4.57	4.57	1.52	4.47	3.05	2.75
MW104	4826323	603715	06/07-Feb-23	0.93	11.89	9.45	1.52	9.35	7.93	7.63
MW105	4826284	603728	31-Jan-23	-0.08	11.58	10.67	1.52	10.57	9.15	8.85
MW106	4826420	603551	19/20-Jan-23	-0.09	10.97	9.75	3.05	9.65	6.70	6.40
MW107	4826361	603608	18-Jan-23	-0.09	11.58	10.97	1.52	10.87	9.45	9.15
MW108	4826287	603655	02-Feb-23	-0.10	11.60	11.28	3.05	11.18	8.23	7.93
MW112	4826378	603505	24/25-Jan-23	-0.07	12.30	10.36	1.52	10.26	8.84	8.54
MW113	4826315	603562	16-Jan-23	-0.10	10.10	9.91	1.52	9.81	8.39	8.09
MW113S	4826316	603561	16-Jan-23	-0.08	6.10	6.10	1.52	6.00	4.58	4.28
MW115	4826332	603464	20/24-Jan-23	-0.08	12.04	8.84	1.22	8.74	7.62	7.32
MW116	4826285	603512	25/26-Jan-23	-0.08	11.65	10.06	1.52	9.96	8.54	8.24
MW118	4826197	603627	27-Jan-23	-0.08	10.45	10.06	1.52	9.96	8.54	8.24
MW118S	4826197	603626	27-Jan-23	-0.10	6.10	6.10	1.52	6.00	4.58	4.28

TABLE 1
Monitoring Well Construction Details
120, 128, 142, 148, 154, 158 Queen Street South and 169 Crumbie Street, Mississauga

Key Elevations

Well Desig.	Ground Elev. (m asl)	End of Borehole Elev. (m asl)	Top of Pipe Elev. (m asl)	Screen Bottom Elev. (m asl)	Screen Top Elev. (m asl)
MW101	163.71	152.81	163.12	153.14	154.56
MW101S	163.52	157.43	163.36	157.53	158.95
MW102	162.79	150.69	162.63	152.52	153.94
MW103	161.17	149.58	162.15	149.99	151.41
MW103S	161.14	156.57	161.96	156.67	158.09
MW104	161.99	150.10	162.92	152.64	154.06
MW105	161.76	150.18	161.67	151.19	152.61
MW106	163.25	152.28	163.16	153.59	156.54
MW107	162.73	151.15	162.64	151.86	153.28
MW108	161.40	149.80	161.30	150.22	153.17
MW112	162.93	150.63	162.86	152.67	154.09
MW113	162.74	152.64	162.65	152.94	154.36
MW113S	162.70	156.60	162.62	156.70	158.12
MW115	162.72	150.68	162.64	153.98	155.10
MW116	162.07	150.42	161.99	152.11	153.53
MW118	159.99	149.54	159.91	150.03	151.45
MW118S	160.00	153.90	159.90	154.00	155.42

Notes:

m asl = metres above sea level

m bg = metres below ground (or grade)

UTM locations and elevations obtained from TOPCON GNSS

Elevations interpolated from survey points

TABLE 2
Observed Groundwater Levels
120, 128, 142, 148, 154, 158 Queen Street South and 169 Crumbie Stree

Well Desig.	Date	Ground Elev. (m asl)	Top Pipe Elev. (m asl)	Groundwater Depth (m bmp)	Groundwater Depth (m bg)	Gr'water Elev. (m asl)
MW101	28-Feb-23	163.71	163.12	3.89	4.47	159.23
	08-Mar-23			9.57	*10.16*	153.55
	15-Mar-23			8.36	*8.94*	154.76
	18-Apr-23			2.77	3.36	160.35
	18-May-23			0.48	1.07	162.64
	30-May-23			2.35	2.94	160.77
MW101S	28-Feb-23	163.52	163.36	0.76	0.91	162.61
	08-Mar-23			1.48	1.63	161.89
	15-Mar-23			0.84	0.99	162.53
	18-Apr-23			0.61	0.77	162.75
Developed	04-May-23			0.71	0.87	162.65
	18-May-23			0.73	0.88	162.64
	30-May-23			0.79	0.94	162.58
MW102	28-Feb-23	162.79	162.63	0.10	0.26	162.53
	08-Mar-23			0.26	0.41	162.37
	15-Mar-23			0.19	0.35	162.44
	18-Apr-23			Blocked		
	18-May-23			2.19	2.35	160.44
	30-May-23			2.20	2.36	160.43
MW103	28-Feb-23	161.17	162.15	4.72	3.73	157.43
	08-Mar-23			4.88	3.90	157.27
	15-Mar-23			4.78	3.79	157.38
	18-Apr-23			4.64	3.65	157.52
	04-May-23			4.66	3.67	157.50
	18-May-23			4.74	3.75	157.41
	30-May-23			4.79	3.81	157.36
MW103S	28-Feb-23	161.14	161.96	4.57	3.74	157.40
	08-Mar-23			4.70	3.88	157.26
	15-Mar-23			4.46	3.64	157.50
	18-Apr-23			1.98	1.16	159.98
	18-May-23			1.46	0.64	160.50
	30-May-23			1.67	0.85	160.29
MW104	28-Feb-23	161.99	162.92	2.50	1.57	160.42
	08-Mar-23			2.31	1.38	160.61
	15-Mar-23			2.31	1.38	160.61
	18-Apr-23			2.33	1.40	160.59
	18-May-23			2.43	1.50	160.49
	30-May-23			3.54	2.60	159.38

TABLE 2
Observed Groundwater Levels
120, 128, 142, 148, 154, 158 Queen Street South and 169 Crumbie Stree

Well Desig.	Date	Ground Elev. (m asl)	Top Pipe Elev. (m asl)	Groundwater Depth (m bmp)	Groundwater Depth (m bg)	Gr'water Elev. (m asl)
MW105	28-Feb-23	161.76	161.67	6.21	6.29	155.47
	08-Mar-23			5.69	5.77	155.98
	15-Mar-23			5.25	5.34	156.42
	18-Apr-23			4.57	4.65	157.10
	18-May-23			3.65	3.73	158.02
	30-May-23			3.38	3.47	158.29
MW106	28-Feb-23	163.25	163.16	2.52	2.60	160.64
	08-Mar-23			2.39	2.48	160.77
	15-Mar-23			1.62	1.70	161.54
	18-Apr-23			3.79	3.88	159.37
	18-May-23			3.73	3.81	159.43
MW107	28-Feb-23	162.73	162.64	2.15	2.24	160.50
	08-Mar-23			2.09	2.18	160.55
	15-Mar-23			2.19	2.29	160.45
	18-Apr-23			2.27	2.36	160.37
	18-May-23			2.33	2.42	160.31
	30-May-23			2.38	2.47	160.27
MW108	28-Feb-23	161.40	161.30	5.00	5.10	156.30
	08-Mar-23			5.15	5.26	156.14
	15-Mar-23			5.26	5.36	156.04
	18-Apr-23			5.01	5.11	156.29
	18-May-23			5.00	5.10	156.30
	30-May-23			5.06	5.16	156.24
MW112	28-Feb-23	162.93	162.86	2.76	2.83	160.11
	08-Mar-23			2.67	2.74	160.19
	15-Mar-23			2.63	2.70	160.24
	18-Apr-23			2.68	2.75	160.18
	18-May-23			3.50	3.57	159.36
	30-May-23			2.56	2.63	160.30
MW113	28-Feb-23	162.74	162.65	3.63	3.72	159.02
	08-Mar-23			7.17	7.26	155.48
	15-Mar-23			4.46	4.56	158.19
	18-Apr-23			2.72	2.81	159.93
	18-May-23			2.69	2.78	159.96
	30-May-23			2.67	2.76	159.98

TABLE 2
Observed Groundwater Levels
120, 128, 142, 148, 154, 158 Queen Street South and 169 Crumbie Stree

Well Desig.	Date	Ground Elev. (m asl)	Top Pipe Elev. (m asl)	Groundwater Depth (m bmp)	Groundwater Depth (m bg)	Gr'water Elev. (m asl)
MW113S	28-Feb-23	162.70	162.62	1.29	1.37	161.33
	08-Mar-23			*4.88*	*4.97*	*157.73*
	15-Mar-23			2.13	2.21	160.49
	18-Apr-23			1.77	1.85	160.85
Developed	04-May-23			1.96	2.04	160.66
	18-May-23			2.13	2.21	160.49
	30-May-23			1.91	1.99	160.71
MW115	28-Feb-23	162.72	162.64	3.24	3.32	159.40
	08-Mar-23			3.22	3.30	159.42
	15-Mar-23			3.21	3.30	159.43
	18-Apr-23			3.22	3.30	159.42
Developed	04-May-23			3.29	3.37	159.35
	18-May-23			4.37	4.45	158.27
	30-May-23			3.56	3.64	159.08
MW116	28-Feb-23	162.07	161.99	4.15	4.23	157.84
	08-Mar-23			-	-	-
	15-Mar-23			4.16	4.24	157.83
	18-Apr-23			4.22	4.30	157.78
	18-May-23			5.65	5.73	156.34
	30-May-23			4.54	4.62	157.45
MW118	28-Feb-23	159.99	159.91	3.28	3.36	156.63
	08-Mar-23			3.38	3.46	156.53
	15-Mar-23			3.42	3.50	156.50
	18-Apr-23			3.27	3.35	156.64
	18-May-23			3.35	3.43	156.56
	30-May-23			3.36	3.43	156.56
MW118S	28-Feb-23	160.00	159.90	4.73	4.82	155.17
	08-Mar-23			5.05	5.15	154.84
	15-Mar-23			4.87	4.97	155.03
	18-Apr-23			2.00	2.10	157.90
Developed	04-May-23			1.24	1.33	158.66
	18-May-23			*4.55*	*4.64*	*155.35*
	30-May-23			2.68	2.78	157.22

Notes

1. *italics* - wells recovering from previous sampling/development - value is suspect
2. m asl = metres above sea level
3. m bmp = metres below measurement point
4. m bg = metres below ground

TABLE 3
Summary of Groundwater Quality
120, 128, 142, 148, 154, 158 Queen Street South and 169 Crumbie Street, Mississauga

	Units	Sewers Bylaw			MW103	MW103	MW101S	MW113S	MW115	MW118S
		Peel Sanitary	Peel Storm	Mis'ga Storm	08-Mar-23	30-May-23	30-May-23	30-May-23	30-May-23	30-May-23
MISCELLANEOUS INORGANIC PARAMETERS										
Fluoride	mg/L	10	-		0.37					
pH	pH units	5.5-10	6.0-9.0	6.0-9.0	7.92					
Total Suspended Solids	mg/L	350	15	15	<10					
Cyanide - Total (CN)	mg/L	2	0.02	0.02	<0.002					
Total Residual Chlorine	mg/L	-	-	1	<0.01					
METALS (Total)										
Aluminium (Al)	mg/L	50	-	1	0.485					
Antimony (Sb)	mg/L	5	-	-	<0.020					
Arsenic (As)	mg/L	1	0.02	0.02	<0.015					
Cadmium (Cd)	mg/L	0.7	0.008	0.008	<0.010					
Hexavalent Chromium (Cr VI)	mg/L	-	-	0.04	<0.002					
Chromium (Cr)	mg/L	5	0.08	0.08	<0.015					
Cobalt (Co)	mg/L	5	-	-	<0.020					
Copper (Cu)	mg/L	3	0.05	0.04	<0.010					
Lead (Pb)	mg/L	3	0.120	0.120	<0.020					
Manganese (Mn)	mg/L	5	***0.05***	***0.05***	***0.094***	***0.056***	***0.096***	***0.497***	***0.216***	***0.719***
Manganese (Mn) (Dissolved)	mg/L	5	***0.05***	***0.05***	n/a	0.013	***0.088***	***0.482***	***0.167***	***0.702***
Mercury (Hg)	mg/L	0.01	0.0004	0.0004	<0.0002					
Molybdenum (Mo)	mg/L	5	-	-	<0.020					
Nickel (N)	mg/L	3	0.08	0.08	<0.015					
Selenium (Se)	mg/L	1	0.02	0.02	<0.002					
Silver (Ag)	mg/L	5	0.12	0.12	<0.010					
Tin (Sn)	mg/L	5	-	-	<0.025					
Titanium (Ti)	mg/L	5	-	-	0.013					
Zinc (Zn)	mg/L	3	0.04	0.04	<0.020					
MICROBIOLOGICAL AND NUTRIENTS										
Escherichia coli	CFU/100 mL	-	200	200	61					
Oil & Grease: Animal+Veg.	mg/L	150	-	-	<0.5					
Oil & Grease: Mineral+Synth	mg/L	15	-	-	<0.5					
Biological Oxygen Demand (BOD)	mg/L	300	15	15	<2					
Phenolics (4AAP)	mg/L	1.0	***0.008***	***0.008***	***0.061***	***0.009***	***0.010***	***0.013***	0.006	***0.011***
Phosphorus (P)	mg/L	10	0.4	0.4	0.02					
Sulfate (SO4)	mg/L	1500	-	-	104					
Total Kjeldahl Nitrogen (TKN)	mg/L	100	1	1	0.24					
VOLATILE ORGANIC COMPOUNDS										
Benzene	mg/L	0.01	0.002	0.002	<0.0002					
Chloroform	mg/L	0.04	0.002	-	<0.0002					
Methylene Chloride (Dichloromethane)	mg/L	2	0.0052	-	<0.0001					
Dichlorobenzene, 1,2-	mg/L	0.05	0.0056	-	<0.0001					
Dichlorobenzene,1,4-	mg/L	0.08	0.0068	-	<0.0001					
Dichloroethylene, cis-1,2-	mg/L	4	0.0056	-	<0.0002					
Dichloropropene, trans-1,3-	mg/L	0.14	0.0056	-	<0.0003					
Ethylbenzene	mg/L	0.16	0.002	0.002	<0.0001					
Methyl Ethyl Ketone	mg/L	8.0	-	-	<0.0009					
Styrene	mg/L	0.2	-	-	<0.0001					
Tetrachloroethane, 1,1,2,2-	mg/L	1.4	0.017	-	<0.0001					
Tetrachloroethylene	mg/L	1	0.0044	-	<0.0001					
Toluene	mg/L	0.27	0.002	0.002	<0.0002					
Trichloroethylene	mg/L	0.4	0.008	-	<0.0002					
o-Xylenes	mg/L	-	-	-	<0.0002					
m+p-Xylenes	mg/L	-	-	-	<0.0001					
Xylenes (Total)	mg/L	1.4	0.0044	0.0044	<0.0001					
Polycyclic Aromatic Hydrocarbons	mg/L	-	-	0.002	<0.0003					
SEMIVOLATILE ORGANIC COMPOUNDS										
Bis (2-ethylhexyl) phthalate	mg/L	0.012	0.0088	-	<0.0005					
Di-N-Butyl phthalate	mg/L	0.08	0.015	-	<0.0005					
MISCELLANEOUS ORGANIC PARAMETERS										
Nonylphenols (Total)	mg/L	0.02	-	-	<0.001					
Nonylphenol Ethoxylate (Total)	mg/L	0.2	-	-	<0.01					
PCBs	mg/L	0.001	0.004	-	<0.0002					

Notes
1. Sewer use criteria values based on Peel Region sewer bylaw (53-2010) and City of Mississauga storm sewer bylaw (0046-2022)
2. Bold and italic values at least exceed either Table 1 or Table 2, as highlighted
3. mg/L = milligrams per litre
4. CFU/100mL = colony forming units per 100 millilitres
5. "-" indicates no established criteria for the parameter
6. Mis'ga is City of Mississauga

TABLE 4
Forecasted Construction Dewatering Rate for Buildings 1A and 1B Garage
120, 128, 142, 148, 154, 158 Queen Street South and 169 Crumbie Street, Mississauga

Parameter	Value	Units	Symbol	Origin of Value
Aquifer Hydraulic Conditions				
Hydraulic conductivity	1.8E-07	m/s	K	Highest observed in field tests
Hydraulic connection to water table	Unconfined			Interpreted
Analogous Dewatering Array Dimensions				
Analogous shape	Circle			
Length of excavation	97.2	m	X	Estimated from design plans
Width of excavation	66.1	m	J	Average width, =A / X
Excavation footprint area to be dewatered	6,429	m^2	A	Design plans
Equivalent radius	45.2	m	R_W	= sqrt (A / π)
Subsurface Vertical Dimensions				
Surface grade	162.5	masl	E_G	Representative in Buildings 1A and 1B area
Number of basement levels	3		N	Design plans
P3 slab (upper surface), depth	11.4	mbg	D_F	= E_G - E_F
P3 slab (upper surface), elevation	151.1	masl	E_F	Design plans
Elevation difference between P3 slab and excavation base	1.5	m	W	Typical design
Excavation base, elevation	149.6	masl	E_{EX}	= E_F - W
Excavation base, depth	12.9	mbg	D_{EX}	Assumed 1.5 m deeper than foundation slab surface
Elevation difference between excavation base and reference datum	5.0	m		Assumed
Reference datum (for calculation)	144.6	masl	E_{RD}	Set at 5 m below base of excavation
Dewatering Levels and Dimensions				
Water table, elevation	162.2	masl	EW_{HIGH}	= E_G - DW_{SHALL}
Water table, depth	0.3	m	DW_{SHALL}	Shallowest observed on site
Buffer for seasonal fluctuation	0.3	m	B	Based on observations including spring, limited by grade
Water table elevation (pre-pumping level)	162.5	masl	$EW_{HIGHEST}$	= EW_{HIGH} + B. Allows for extreme year
Height of water table above reference datum	17.9	m	H	= $EW_{HIGHEST}$ - E_{RD}
Target dewatering level, elevation	148.6	m asl	EW_{TARG}	Target is 1 m lower than excavation base = E_{EX} - 1.0
Target dewatering level, depth	13.9	mbg	DW_{TARG}	Target is 1 m deeper than excavation base = D_{EX} + 1.0
Height of target water level above datum	4.0	m	h_T	= EW_{TARG} - E_{RD}
Radius of Influence				
Applied equation	$R_O = 3000 * (H - h_T) * (K)^{0.5}$			Sichart and Kryieleis (1930)
Radius of Influence	17.7	m	R_O	As measured from excavation edge
Incident Stormwater				
Excavation open area	6,429	m^2	A	Excavation design
Typical large storm	25	mm/day	P_T	Assumed. Typically 4-5 events/year. Larger is possible.
Stormwater (i.e. from precipitation)	161	m^3/day	Q_{STORM}	= A * P_T
Change of units (rounded)	160,725	litres/day	Q_{STORM}	
Estimated Flows to be Managed				
Applied equation	$Q_{GW} = K^* (H^2 - h_T^2) / (5.31 \times 10^{-6} * \ln((Ro+Rw)/Rw))$			Powers et. al, 2007
Groundwater seepage	31.3	litres/min	Q_{GW}	Calculated from values in this sheet
Change of units	45,118	litres/day	Q_{GW}	
Safety factor	2.0			Allows for unknown conditions between boreholes or beyond the excavation walls
Groundwater seepage	90,300	litres/day		= Safety Factor x Q_{GW}, rounded
Groundwater seepage plus storm water	251,025	litres/day		= Safety Factor x Q_{GW} + Q_{STORM}
Applicable Regulatory Instrument	**EASR**			MECP, O.Reg 245/11, O.Reg 387/04; OWRA S.41
Value to specify in regulatory instrument	***251,000***	litres/day		If EASR, then value includes stormwater. Otherwise stormwater is not included in this value. Value is rounded.

Notes.

1. Patrick Powers, Arthur Corwin, Paul Schmall, Walter Kaeck. 2007. Construction Dewatering and Groundwater Control. Third Edition.
2. mbg = metres below ground level
3. masl = metres above sea level

TABLE 5
Forecasted Foundation Drainage Rate for Buildings 1A and 1B Garage
120, 128, 142, 148, 154, 158 Queen Street South and 169 Crumbie Street, Mississauga

Parameter	Value	Units	Symbol	Origin of Value
Aquifer Hydraulic Conditions				
Hydraulic conductivity	1.8E-07	m/s	K	Highest observed in field tests
Hydraulic connection to water table				Unconfined
Analogous Dewatering Array Dimensions				
Analogous shape	Circle			
Length of excavation	97.2	m	X	Estimated from design plans
Width of excavation	66.1	m	J	Average width, =A / X
Internal area to be dewatered	6,429	m^2	A	Design plans
Radius of an equivalent well	45.2	m	R_W	= sqrt (A / π)
Subsurface Vertical Dimensions				
Surface grade (approximate average)	162.5	masl	E_G	Representative in Buildings 1A and 1B area
Number of basement levels	3		N	Design plans
P3 slab (upper surface), depth	11.4	mbg	D_F	= E_G - E_F
P3 slab (upper surface), elevation	151.1	masl	E_F	Design plans
Elevation difference between P3 slab and foundation drain	0.3	m		Typical design
Foundation drains, elevation	150.8	masl	E_{EX}	Assumed 0.3 m lower than foundation slab surface
Foundation drains, depth	11.7	mbg	D_{EX}	Assumed 0.3 m deeper than foundation slab surface
Elevation difference between excavation base and reference datum	5.0	m		Assumed
Reference datum (for calculation)	145.8	masl	E_{RD}	Set at 5 m below foundation drains
Dewatering Levels and Dimensions				
Water table, elevation	162.2	masl	EW_{HIGH}	= E_G - DW_{SHALL}
Water table, depth	0.3	m	DW_{SHALL}	Shallowest observed on site
Buffer for seasonal fluctuation	0.3	m	B	Based on observations including spring, limited by grade
Water table elevation (pre-pumping level)	162.5	masl	$EW_{HIGHEST}$	= EW_{HIGH} + B. Allows for seasonal fluctuation
Height of water table above reference datum	16.7	m	H	= $EW_{HIGHEST}$ - E_{RD}
Target dewatering level, elevation	150.5	m asl	EW_{TARG}	Target is foundation drains
Target dewatering level, depth	11.7	mbg	DW_{TARG}	Target is foundation drains
Height of target water level above datum	4.7	m	h_T	= EW_{TARG} - E_{RD}
Radius of Influence				
Applied equation	$R_O = 3000 * (H - h_T) * (K)^{0.5}$			Sichart and Kryieleis (1930)
Radius of Influence	15	m	R_O	As measured from excavation edge
Estimated Flows to be Managed				
Applied equation	$Q_{GW} = K^* (H^2 - h_T^2) / (5.31 \times 10^{-6} * \ln((Ro+Rw)/Rw))$			Powers et. al, 2007
Groundwater seepage	30.0	litres/min	Q_{GW}	Calculated from values in this sheet
Change of units	43,191	litres/day	Q_{GW}	
Safety factor	2.0			Allow for unknown conditions between boreholes or beyond the excavation walls
Groundwater seepage to foundations, with safety factor	86,400	litres/day		= Safety Factor x Q_{GW}, rounded

Notes.

1 Patrick Powers, Arthur Corwin, Paul Schmall, Walter Kaeck. 2007. Construction Dewatering and Groundwater Control. Third Edition.

2. mbg = metres below ground level

3. masl = metres above sea level

APPENDIX III
BOREHOLE REPORT RECORDS

CLIENT: De Zen Realty Company Ltd.	PROJECT NO.: CH244.00	**RECORD OF: MW101**
ADDRESS: 120, 128, 142, 154, 158 Queen Street South, and 169 Crumbie Street		
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 (%)	CV/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 72/225		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			Bentonite 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)										Sand Screen + Sand	

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, and 169 Crumbie Street

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 (%)	CV/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 ▲ 50/50		11		70				
							12		0				
		END OF BOREHOLE											

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INPUT BY: EMZ | MONITORING DATE: 15-Mar-23

REVIEWED BY: KC |

CLIENT: De Zen Realty Company Ltd.	PROJECT NO.: CH244.00	**RECORD OF: MW101S**
ADDRESS: 120, 128, 142, 154, 158 Queen Street South, and 169 Crumbie Street		
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 (%)	CV/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

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INPUT BY: EMZ	MONITORING DATE: 15-Mar-23
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CLIENT: De Zen Realty Company Ltd.	PROJECT NO.: CH244.00	**RECORD OF: MW102**
ADDRESS: 120, 128, 142, 154, 158 Queen Street South, and 169 Crumbie Street		
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 (%)	CV/TOV (ppm or %LEL)	LABORATORY TESTING	WELL INSTALLATION	REMARKS
		asphaltic concrete (100 mm)	0	162.5	4		1		21	<5		Bentonite	
		granular base (135 mm)											50 mm monitoring well was installed. Water level measured on March 15, 2023: 0.35 mbg
		FILL firm, very moist, dark brown clayey silt some gravel, some sand	0.5										
		stiff to very stiff CLAYEY SILT trace gravel, trace to some sand (TILL)	1	162	14		2		88	<5			
			1.5	161.5									
			2	161	19		3		88	<5			
			2.5	160.5									
		moist brown			19		4		79	<5			
			3	160									
			3.5	159.5	21		5		83	<5			
			4	159									
					12		6		88	<5			
			4.5	158.5									

			5	158	8		7		70				
			5.5	157.5		129							
			6	157									
		moist to very moist grey	6.5	156.5	11		8		92	<5			
			7	156									
			7.5	155.5									
				155	16		9		88	<5			
			8										
			8.5	154.5									
		hard, wet, grey CLAYEY SILT some gravel to gravelly some sand to sandy (TILL)		154								Sand	
			9									Screen + Sand	
				153.5	88/225		10		44	<5			

TERRAPEX

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INPUT BY: EMZ	MONITORING DATE: 15-Mar-23
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CLIENT: De Zen Realty Company Ltd.	PROJECT NO.: CH244.00	**RECORD OF: MW102**
ADDRESS: 120, 128, 142, 154, 158 Queen Street South, and 169 Crumbie Street		
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 (%)	CV/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: MW103**
ADDRESS: 120, 128, 142, 154, 158 Queen Street South, and 169 Crumbie Street		
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 (%)	CV/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
			0.5	160.5									
		very stiff, moist, brown CLAYEY SILT trace gravel, some sand (TILL)	1	160	21		2		92	<5			
			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			
			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			
		----------	8.5	152.5									
		reddish grey	9	152	50/75		10		100	<5			

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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, and 169 Crumbie Street		
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

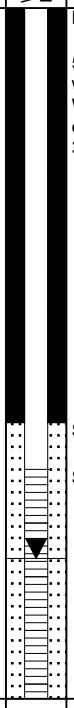
GWL (m)	SOIL SYMBOL	SOIL DESCRIPTION	DEPTH (m)	ELEVATION (m)	SHEAR STRENGTH (kPa) 40 80 120 160 / N-VALUE (Blows/300mm) 20 40 60 80	WATER CONTENT (%) ▲ PL W.C. LL 20 40 60 80	SAMPLE NO.	SAMPLE TYPE	RECOVERY (%)	CV/TOV (ppm or %LEL)	LABORATORY TESTING	WELL INSTALLATION	REMARKS
		hard, moist, reddish grey 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: MW103S**
ADDRESS: 120, 128, 142, 154, 158 Queen Street South, and 169 Crumbie Street		
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 (%)	CV/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: MW104**

ADDRESS: 120, 128, 142, 154, 158 Queen Street South, and 169 Crumbie Street

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 (%)	CV/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 1 1.5 2	161.5 161 160.5 160	11 13 10		1 2 3A 3B		58 58 0	<5 <5 <5		Bentonite	50 mm monitoring well was installed. Water level measured on March 15, 2023: 1.38 mbg
		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 3.5	159 158.5	21		5		88	<5			
		brown	4 4.5	158 157.5	25		6		50	<5			
		grey	5 5.5 6	157 156.5 156	12		7		75	<5			
		hard, moist to very moist, grey CLAYEY SILT some gravel to gravelly some sand to sandy (TILL)	6.5 7 7.5 8 8.5 9	155.5 155 154.5 154 153.5 153	15 56 50/50		8 9 10		67 67 75	<5		Sand Screen + Sand	

TERRAPEX

LOGGED BY: JD | DRILLING DATE: 06 & 07-Feb-23

INPUT BY: EMZ | MONITORING DATE: 15-Mar-23

REVIEWED BY: KC

CLIENT: De Zen Realty Company Ltd.		PROJECT NO.: CH244.00	**RECORD OF: MW104**
ADDRESS: 120, 128, 142, 154, 158 Queen Street South, and 169 Crumbie Street			
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 (%)	CV/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, and 169 Crumbie Street		
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 (%)	CV/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		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	160.5 160 159.5	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			
		----------	4.5 5 5.5	157.5 157 156.5	25	14	7		67	<5			
		grey	6	156									
		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	154	35	9	9		83	<5			
			8.5 9	153.5 153								Sand Screen + Sand	
				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, and 169 Crumbie Street		
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 (%)	CV/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, and 169 Crumbie Street		
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 (%)	CV/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		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			Sand Screen + Sand
			6.5	156.5									
			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, and 169 Crumbie Street		
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 (%)	CV/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									
		weathered SHALE	10.5	152.5	50/125	7	11		72				
		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, and 169 Crumbie Street		
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 (%)	CV/TOV (ppm or %LEL)	LABORATORY TESTING	WELL INSTALLATION	REMARKS
		asphaltic concrete (125 mm)	0	162.5	10	11	1		63	<5		Bentonite	
		granular base (160 mm)											
		FILL compact,moist, brown sand and gravel	0.5	162	9	5	2A		67	<5			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	161.5		21	2B						
		very stiff, moist, brown CLAYEY SILT trace gravel, trace to some sand (TILL)	1.5	161	22	15	3		83	<5			
			2	160.5									
			2.5	160	21		4		83	<5			
			3	159.5	21	17	5		83	<5			
			3.5	159	18	14	6A		75	<5			
			4	158.5		17	6B						
			4.5	158	17								
			5			19	7		83	<5			
			5.5	157.5									
		stiff to hard, moist, grey CLAYEY SILT some gravel to gravelly some sand to sandy (TILL)	6	157									
			6.5	156.5	10	11	8		83	<5			
			7	156									
			7.5	155.5									
			8	155	51	2	9A		58	<5			
						7	9B						
			8.5	154.5									
		hard, moist, reddish brown GRAVELLY SANDY CLAYEY SILT (TILL)	9	154								Sand	
				153.5									

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, and 169 Crumbie Street		
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 (%)	CV/TOV (ppm or %LEL)	LABORATORY TESTING	WELL INSTALLATION	REMARKS
		hard, moist, reddish brown GRAVELLY SANDY CLAYEY SILT (TILL)	9.5	153		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, and 169 Crumbie Street		
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) / N-VALUE (Blows/300mm)	WATER CONTENT (%) PL W.C. LL	SAMPLE NO.	SAMPLE TYPE	RECOVERY (%)	CV/TOV (ppm or %LEL)	LABORATORY TESTING	WELL INSTALLATION	REMARKS
		asphaltic concrete (100 mm)	0	161	9		1		50	<5		Bentonite	
		granular base (150 mm)	0.5										50 mm monitoring well was installed. Water level measured on March 15, 2023: 5.36 mbg
		FILL loose, moist, brown sand and gravel, mixed with clayey silt	1	160.5	10		2		58	<5			
		FILL stiff, moist, dark brown clayey silt trace gravel, trace sand	1.5	160									
		very stiff to hard, moist, brown CLAYEY SILT trace gravel, trace to some sand (TILL)	2	159.5	24		3		83	<5			
			2.5	159	48		4		38	<5			
			3	158.5									
			3.5	158	24		5		79	<5			
			4	157.5									
			4.5	157	22		6		75	<5			
			5	156.5	24		7		79	<5			
			5.5	156									
		hard, moist, grey CLAYEY SILT some gravel to gravelly some sand to sandy (TILL)	6	155.5									
			6.5	155	58		8		79	<5			
			7	154.5									
			7.5	154									
			8	153.5	58		9		83	<5			Sand
			8.5	153									Screen + Sand
			9	152.5	60		10A		79	<5			

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, and 169 Crumbie Street		
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 (%)	CV/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									
			11.5	150	50/25 ▲		12		0				
		weathered SHALE 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, and 169 Crumbie Street		
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 (%)	CV/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 0.5 1	162.5 162	10 17		1 2A 2B		50 88	<5 <5			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)	1.5 2 2.5 3 3.5 4	161.5 161 160.5 160 159.5 159	21 25 17 12		3 4 5 6		92 63 75 79	<5 <5 <5 <5			
		firm, moist, brown CLAYEY SILT	4.5 5	158.5 158	7		7		75	<5			
		very stiff to hard, moist, grey CLAYEY SILT some gravel to gravelly some sand to sandy (TILL)	5.5 6 6.5 7 7.5 8 8.5 9	157.5 157 156.5 156 155.5 155 154.5 154 153.5	21 28		8 9A 9B		100 67	<5 <5			

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, and 169 Crumbie Street		
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 (%)	CV/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										
			10.5	152.5									
			11	152	52		11		78	<5			
			11.5	151.5	50/75		12		67	<5			
		weathered SHALE			50/75		13		100	<5			
		END OF BOREHOLE											

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, and 169 Crumbie Street		
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 (%)	CV/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	162.5 162 161.5 161	10 10 13	10 16 12	1 2 3		50 25 79	<5 <5 <5			
		stiff to very stiff, moist, brown CLAYEY SILT trace gravel, trace to some sand (TILL)	2 2.5 3 3.5 4 4.5	160.5 160 159.5 159 158.5 158	27 21 17 12	16 17 17 18	4 5 6 7		83 88 92 83	<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	157.5 157 156.5 156 155.5 155 154.5 154 153.5	32 50/75	11 8	8 9		83 100	<5 <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, and 169 Crumbie Street

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 (%)	CV/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 |

CLIENT: De Zen Realty Company Ltd.	PROJECT NO.: CH244.00	**RECORD OF: BH111**
ADDRESS: 120, 128, 142, 154, 158 Queen Street South, and 169 Crumbie Street		
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 (%)	CV/TOV (ppm or %LEL)	LABORATORY TESTING	WELL INSTALLATION	REMARKS
		asphaltic concrete (100 mm)	0	161	8		1		33	<5			
		granular base (150 mm)											
		FILL stiff to very stiff, moist, brown clayey silt	0.5	160.5									
		very stiff to stiff, moist CLAYEY SILT trace gravel, trace to some sand (TILL)	1	160	20		2		75	<5			
			1.5	159.5									
			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	154									
			7.5	153.5									
			8	153	55		9		75	<5			
			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, and 169 Crumbie Street

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 (%)	CV/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 |

CLIENT: De Zen Realty Company Ltd.	PROJECT NO.: CH244.00	**RECORD OF: MW112**
ADDRESS: 120, 128, 142, 154, 158 Queen Street South, and 169 Crumbie Street		
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

SOIL DESCRIPTION

- asphaltic concrete (100 mm)
- granular base (150 mm)
- FILL
  compact, moist, brown
  sandy silt
- very stiff to stiff, moist
  CLAYEY SILT
  trace gravel, trace to some sand
  (TILL)
  brown
  grey
- very stiff to hard, moist, grey
  CLAYEY SILT
  some gravel to gravelly
  some sand to sandy
  (TILL)
- hard, moist, grey

SHEAR STRENGTH (kPa) 40 80 120 160
N-VALUE (Blows/300mm) 20 40 60 80
WATER CONTENT (%) PL W.C. LL 20 40 60 80

SAMPLE NO.	SAMPLE TYPE	RECOVERY (%)	CV/TOV (ppm or %LEL)	N-VALUE	ELEVATION (m)	DEPTH (m)
1		63	<5	10	162.5	0.5
2		63	<5	26	162	1
3		75	<5	23	161	2
4		83	<5	24	160.5	2.5
5		83	<5	29	159.5	3.5
6		88	<5	14	159	4
7		88	<5	14	158	5
8		83	<5	28	156.5	6.5
9		100	<5	60	155	8

LABORATORY TESTING

WELL INSTALLATION: Bentonite; Sand; Screen + Sand

REMARKS: 50 mm monitoring well was installed. Water level measured on March 15, 2023: 2.70 mbg

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, and 169 Crumbie Street		
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 (%)	CV/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: MW113**
ADDRESS: 120, 128, 142, 154, 158 Queen Street South, and 169 Crumbie Street		
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 (%)	CV/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	162.5	12		1		75	<5		Bentonite	50 mm monitoring well was installed. Water level measured on March 15, 2023: 4.56 mbg
			0.5	162									
			1	161.5	10		2		50	<5			
		very stiff, moist, brown CLAYEY SILT trace gravel, trace to some sand (TILL)	1.5	161	20		3		92	<5			
			2	160.5									
			2.5	160	19		4		79	<5			
			3	159.5	19		5		83	<5			
			3.5	159									
			4	158.5	22		6		75	<5			
			4.5	158	17		7		75	<5			
			5	157.5									
		very stiff to hard, moist, grey CLAYEY SILT some gravel to gravelly some sand to sandy (TILL)	5.5	157									
			6	156.5	18		8		83	<5			
			6.5	156									
			7	155.5									
			7.5	155	50/125		9		27	<5		Sand	
			8	154.5								Screen + Sand	
			8.5	154									
			9	153.5									

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, and 169 Crumbie Street		
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 (%)	CV/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			
			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: MW113S
ADDRESS: 120, 128, 142, 154, 158 Queen Street South, and 169 Crumbie Street		
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 (%)	CV/TOV (ppm or %LEL)	LABORATORY TESTING	WELL INSTALLATION	REMARKS
		Straight drilled to 6.1 mbg to install monitoring well	0 – 6	162.5 – 157								Bentonite (0–4 m); Sand (4 m); Screen + Sand (4.5–6 m); water level at 2.21 mbg	Bentonite 50 mm monitoring well was installed. Water level measured on March 15, 2023: 2.21 mbg Sand Screen + Sand
		END OF BOREHOLE											

Depth scale (m): 0, 0.5, 1, 1.5, 2, 2.5, 3, 3.5, 4, 4.5, 5, 5.5, 6

Elevation scale (m): 162.5, 162, 161.5, 161, 160.5, 160, 159.5, 159, 158.5, 158, 157.5, 157

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: BH114**
ADDRESS: 120, 128, 142, 154, 158 Queen Street South, and 169 Crumbie Street		
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 (%)	CV/TOV (ppm or %LEL)	LABORATORY TESTING	WELL INSTALLATION	REMARKS
		asphaltic concrete (100 mm)	0	161	6		1		42	<5			
		granular base (170 mm)											
		FILL firm, moist, dark brown clayey silt trace gravel, some sand, some organics	0.5	160.5									
			1	160	8		2		46	<5			
		stiff to very stiff, moist CLAYEY SILT trace gravel, trace to some sand (TILL)	1.5	159.5	23		3		67	<5			
			2	159									
			2.5	158.5	18		4		71	<5			
		brown	3	158									
			3.5	157.5	18		5		67	<5			
			4	157	12		6		63	<5			
			4.5	156.5									
			5	156	12		7		67	<5			
		----------	5.5	155.5									
			6	155									
		grey	6.5	154.5	16		8		67	<5			
			7	154									
		hard, moist, grey CLAYEY SILT some gravel to gravelly some sand to sandy (TILL)	7.5	153.5									
			8	153	53		9		75	<5			
			8.5	152.5									
			9	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, and 169 Crumbie Street

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 (%)	CV/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 |

CLIENT: De Zen Realty Company Ltd.	PROJECT NO.: CH244.00	**RECORD OF: MW115**
ADDRESS: 120, 128, 142, 154, 158 Queen Street South, and 169 Crumbie Street		
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 (%)	CV/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 – 1.5	162.5 – 161	7, 6, 4	5, 14, 18, 18, 22	1A, 1B, 1C, 2, 3		33, 67, 63	<5		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 – 5.5	160.5 – 157.5	8, 20, 30, 40	20, 16, 15, 15	4, 5, 6, 7		67, 63, 58, 50	<5			
		hard, grey CLAYEY SILT some gravel to gravelly some sand to sandy (TILL) moist ---------- wet	5.5 – 9	157 – 153.5	33, 30, 50/25	10, 14, 5	8, 9, 10		63, 77, 100	<5		Sand Screen + Sand	

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, and 169 Crumbie Street		
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 (%)	CV/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, and 169 Crumbie Street		
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 (%)	CV/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		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	159.5 159 158.5 158 157.5	17 20 22		4 5 6		75 75 88	<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	35 26 55 50/125		7 8 9 10		83 75 75 45	<5 <5 <5		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, and 169 Crumbie Street		
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 (%)	CV/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, and 169 Crumbie Street		
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 (%)	CV/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			
		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 40		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	22 50 50/125		7 8 9 10		75 83 75 100	<5 <5 <5 <5			

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, and 169 Crumbie Street

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 (%)	CV/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 |

CLIENT: De Zen Realty Company Ltd.	PROJECT NO.: CH244.00	**RECORD OF: MW118**
ADDRESS: 120, 128, 142, 154, 158 Queen Street South, and 169 Crumbie Street		
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

SOIL DESCRIPTION

- asphaltic concrete (100 mm)
- granular base (150 mm)
- FILL
  firm, moist, grey/black
  clayey silt
  trace gravel, trace sand
  some organics
- stiff to very stiff, moist, brown
  CLAYEY SILT
  trace gravel, trace to some sand
  (TILL)
- very stiff to hard, moist, grey
  CLAYEY SILT
  some gravel to gravelly
  some sand to sandy
  (TILL)
- ----------
- rock fragments

DEPTH (m)	ELEVATION (m)	SHEAR STRENGTH (kPa) ● / N-VALUE (Blows/300mm) ▲	WATER CONTENT (%) PL W.C. LL	SAMPLE NO.	SAMPLE TYPE	RECOVERY (%)	CV/TOV (ppm or %LEL)	LABORATORY TESTING
0	159.5	▲6	■5	1A		42	<5	
0.5			■13	1B				
1	159	▲6	■11	2		63	<5	
1.5	158.5							
2	158	▲13	■22	3		83	<5	
2.5	157.5	▲25	■15	4		88	<5	
3	157							
3.5	156.5	▲22	■16	5		83	<5	
4	156	▲22	■14	6		88	<5	
4.5	155.5							
5	155	▲17	■14	7		88	<5	
5.5	154.5							
6	154							
6.5	153.5	▲23	■11	8		92	<5	
7	153							
7.5	152.5							
8	152	▲43	■12	9		75	<5	
8.5	151.5							
9	151							

WELL INSTALLATION: Bentonite; Sand; Screen + Sand

REMARKS: 50 mm monitoring well was installed. Water level measured on March 15, 2023: 3.50 mbg

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, and 169 Crumbie Street		
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

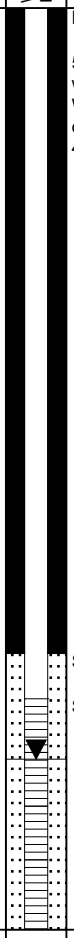
GWL (m)	SOIL SYMBOL	SOIL DESCRIPTION	DEPTH (m)	ELEVATION (m)	SHEAR STRENGTH (kPa) 40 80 120 160 / N-VALUE (Blows/300mm) 20 40 60 80	WATER CONTENT (%) PL W.C. LL 20 40 60 80	SAMPLE NO.	SAMPLE TYPE	RECOVERY (%)	CV/TOV (ppm or %LEL)	LABORATORY TESTING	WELL INSTALLATION	REMARKS
		hard, moist, grey CLAYEY 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: MW118S**
ADDRESS: 120, 128, 142, 154, 158 Queen Street South, and 169 Crumbie Street			
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

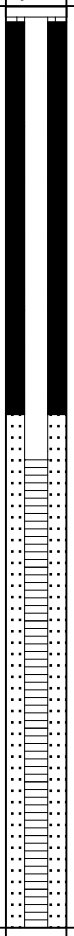
GWL (m)	SOIL SYMBOL	SOIL DESCRIPTION	DEPTH (m)	ELEVATION (m)	SHEAR STRENGTH (kPa) ● 40 80 120 160 / N-VALUE (Blows/300mm) ▲ 20 40 60 80	WATER CONTENT (%) PL W.C. LL 20 40 60 80	SAMPLE NO.	SAMPLE TYPE	RECOVERY (%)	CV/TOV (ppm or %LEL)	LABORATORY TESTING	WELL INSTALLATION	REMARKS
		Straight drilled to 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	159.5 159 158.5 158 157.5 157 156.5 156 155.5 155 154.5 154									Bentonite 50 mm monitoring well was installed. Water level measured on March 15, 2023: 4.97 mbg Sand Screen + Sand
		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: MW201**
ADDRESS: 120, 128, 142, 154, 158 Queen Street South, and 169 Crumbie Street		
CITY/PROVINCE: Mississauga, ON	NORTHING (m):	EASTING (m): ELEV. (m)
CONTRACTOR: 3D	METHOD: 8" HOLLOWSTEM	
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 (%)	CV/TOV (ppm or %LEL)	LABORATORY TESTING	WELL INSTALLATION	REMARKS
		brown CLAYEY SILTY SAND gravels	0 – 0.5 – 1 – 1.5 – 2 – 2.5 – 3 – 3.5 – 4 – 4.5 – 5 – 5.5 – 6										
		moist, dark brown											
		END OF BOREHOLE											

TERRAPEX

LOGGED BY: KP	DRILLING DATE: 5-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: MW202**
ADDRESS: 120, 128, 142, 154, 158 Queen Street South, and 169 Crumbie Street		
CITY/PROVINCE: Mississauga, ON	NORTHING (m):	EASTING (m): ELEV. (m)
CONTRACTOR: 3D	METHOD: 8" HOLLOWSTEM	
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 (%)	CV/TOV (ppm or %LEL)	LABORATORY TESTING	WELL INSTALLATION	REMARKS
		loose, brown CLAYEY SILTY SAND gravels	0										
			0.5										
			1										
			1.5										
			2										
			2.5										
			3										
			3.5										
			4										
		moist, greyish brown	4.5										
			5										
			5.5										
			6										
		END OF BOREHOLE											

TERRAPEX

LOGGED BY: KP	DRILLING DATE: 5-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: MW203**
ADDRESS: 120, 128, 142, 154, 158 Queen Street South, and 169 Crumbie Street		
CITY/PROVINCE: Mississauga, ON	NORTHING (m):	EASTING (m): ELEV. (m)
CONTRACTOR: 3D	METHOD: 8" HOLLOWSTEM	
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

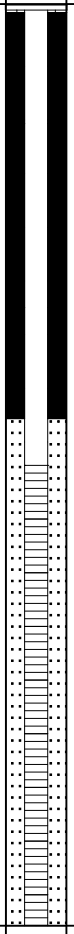
GWL (m)	SOIL SYMBOL	SOIL DESCRIPTION	DEPTH (m)	ELEVATION (m)	SHEAR STRENGTH (kPa) ● 40 80 120 160 / N-VALUE (Blows/300mm) ▲ 20 40 60 80	WATER CONTENT (%) PL W.C. LL 20 40 60 80	SAMPLE NO.	SAMPLE TYPE	RECOVERY (%)	CV/TOV (ppm or %LEL)	LABORATORY TESTING	WELL INSTALLATION	REMARKS
		brown CLAYEY SILTY silty sand, gravels	0										
			0.5										
			1										
			1.5										
			2										
		greyish brown	2.5										
		brown	3										
			3.5										
			4										
		sand greyish	4.5										
			5										
			5.5										
			6										
		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: MW204**
ADDRESS: 120, 128, 142, 154, 158 Queen Street South, and 169 Crumbie Street		
CITY/PROVINCE: Mississauga, ON	NORTHING (m):	EASTING (m): ELEV. (m)
CONTRACTOR: 3D	METHOD: 8" HOLLOWSTEM	
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 (%)	CV/TOV (ppm or %LEL)	LABORATORY TESTING	WELL INSTALLATION	REMARKS
		STRAIGHT DRILL TO 6.10m	0 – 0.5 – 1 – 1.5 – 2 – 2.5 – 3 – 3.5 – 4 – 4.5 – 5 – 5.5 – 6										
		END OF BOREHOLE											

TERRAPEX	LOGGED BY: KP	DRILLING DATE: 12-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: BH205**
ADDRESS: 120, 128, 142, 154, 158 Queen Street South, and 169 Crumbie Street		
CITY/PROVINCE: Mississauga, ON	NORTHING (m):	EASTING (m): ELEV. (m)
CONTRACTOR: 3D	METHOD: 8" HOLLOWSTEM	
BOREHOLE DIAMETER (cm):	WELL DIAMETER (cm):	SCREEN SLOT #: SAND TYPE: SEALANT TYPE:

SAMPLE TYPE: AUGER | DRIVEN | CORING | DYNAMIC CONE | SHELBY | SPLIT SPOON

GWL (m)	SOIL SYMBOL	SOIL DESCRIPTION	DEPTH (m)	ELEVATION (m)	SHEAR STRENGTH (kPa) 40 80 120 160 / N-VALUE (Blows/300mm) 20 40 60 80	WATER CONTENT (%) PL W.C. LL 20 40 60 80	SAMPLE NO.	SAMPLE TYPE	RECOVERY (%)	CV/TOV (ppm or %LEL)	LABORATORY TESTING	WELL INSTALLATION	REMARKS
		FILL loose, brown sand, gravels	0				1		30	<5ppm			
		dense, greyish brown CLAYEY SILT trace sand, gravels	0.5 1		9		2		40	<5ppm	SVOC PAH M&I		
		brown	1.5 2		16		3		50	<5ppm	SVOC PAH M&I		
			2.5		27		4		60	<5ppm			
		moist	3		32		5		60	<5ppm	BTEX F1-F4 VOC		
			3.5 4		>50		6		5	<5ppm			
			4.5		22		7		60	<5ppm	BTEX F1-F4 VOC		
			5 5.5		>50		8		5	<5ppm			
			6										
		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, and 169 Crumbie Street		
CITY/PROVINCE: Mississauga, ON	NORTHING (m):	EASTING (m): ELEV. (m)
CONTRACTOR: 3D	METHOD: 8" HOLLOWSTEM	
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

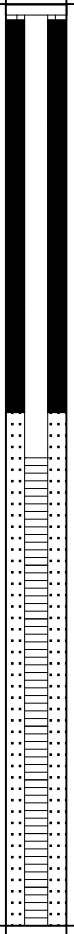
GWL (m)	SOIL SYMBOL	SOIL DESCRIPTION	DEPTH (m)	ELEVATION (m)	SHEAR STRENGTH (kPa) 40 80 120 160 / N-VALUE (Blows/300mm) 20 40 60 80	WATER CONTENT (%) PL W.C. LL 20 40 60 80	SAMPLE NO.	SAMPLE TYPE	RECOVERY (%)	CV/TOV (ppm or %LEL)	LABORATORY TESTING	WELL INSTALLATION	REMARKS
		loose, brown SAND trace gravel	0		1		1		30	10ppm	M&I PAH		DUP MW906
		compact, brown CLAYEY SAND trace gravel	0.5										
			1		3		2		60	<5ppm	M&I PAH		
			1.5										
		wet, brown	2		10		3		60	<5ppm	BTEX F1-F4 VOC		
		watery	2.5		7		4		70	<5ppm			
		dense	3										
			3.5		35		5		90	<5ppm			
			4		27		6		90	<5ppm			
		greyish	4.5										
			5		20		7		40	<5ppm			
		END OF BOREHOLE											

TERRAPEX

LOGGED BY: KP	DRILLING DATE: 9-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: MW207**
ADDRESS: 120, 128, 142, 154, 158 Queen Street South, and 169 Crumbie Street		
CITY/PROVINCE: Mississauga, ON	NORTHING (m):	EASTING (m): ELEV. (m)
CONTRACTOR: 3D	METHOD: 8" HOLLOWSTEM	
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

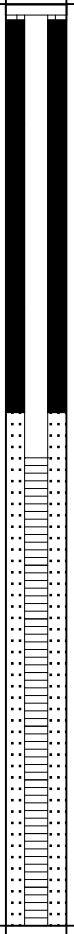
GWL (m)	SOIL SYMBOL	SOIL DESCRIPTION	DEPTH (m)	ELEVATION (m)	SHEAR STRENGTH (kPa) ● 40 80 120 160 / N-VALUE (Blows/300mm) ▲ 20 40 60 80	WATER CONTENT (%) PL W.C. LL 20 40 60 80	SAMPLE NO.	SAMPLE TYPE	RECOVERY (%)	CV/TOV (ppm or %LEL)	LABORATORY TESTING	WELL INSTALLATION	REMARKS
		brown CLAYEY SILTY SAND trace gravel	0 – 0.5 – 1 – 1.5 – 2 – 2.5 – 3 – 3.5 – 4 – 4.5 – 5 – 5.5 – 6										
		END OF BOREHOLE											

TERRAPEX

LOGGED BY: KP	DRILLING DATE: 6-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: MW208**
ADDRESS: 120, 128, 142, 154, 158 Queen Street South, and 169 Crumbie Street		
CITY/PROVINCE: Mississauga, ON	NORTHING (m):	EASTING (m): ELEV. (m)
CONTRACTOR: 3D	METHOD: 8" HOLLOWSTEM	
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 (%)	CV/TOV (ppm or %LEL)	LABORATORY TESTING	WELL INSTALLATION	REMARKS
		loose, moist, brown CLAYEY SILTY SAND trace gravel	0 – 0.5 – 1 – 1.5 – 2 – 2.5 – 3 – 3.5 – 4 – 4.5 – 5 – 5.5 – 6										
		END OF BOREHOLE											

TERRAPEX

LOGGED BY: KP	DRILLING DATE: 6-Jun-23
INPUT BY: SW	MONITORING DATE: -
REVIEWED BY:	PAGE 1 OF 1

APPENDIX IV
LABORATORY RECORD OF GROUNDWATER QUALITY

AGAT Laboratories

5835 COOPERS AVENUE
MISSISSAUGA, ONTARIO
CANADA L4Z 1Y2
TEL (905)712-5100
FAX (905)712-5122
http://www.agatlabs.com

CLIENT NAME: TERRAPEX ENVIRONMENTAL LIMITED
90 SCARSDALE RD
TORONTO, ON M3B2R7
(905) 474-5265
ATTENTION TO: Andrew Durbano
PROJECT: CH244.00
AGAT WORK ORDER: 23T003974
MICROBIOLOGY ANALYSIS REVIEWED BY: Nivine Basily, Inorganics Report Writer
TRACE ORGANICS REVIEWED BY: Pinkal Patel, Report Reviewer
WATER ANALYSIS REVIEWED BY: Nivine Basily, Inorganics Report Writer
DATE REPORTED: Mar 15, 2023
PAGES (INCLUDING COVER): 24
VERSION*: 1

Should you require any information regarding this analysis please contact your client services representative at (905) 712-5100

*Notes

Disclaimer:

- *All work conducted herein has been done using accepted standard protocols, and generally accepted practices and methods. AGAT test methods may incorporate modifications from the specified reference methods to improve performance.*
- *All samples will be disposed of within 30 days after receipt unless a Long Term Storage Agreement is signed and returned. Some specialty analysis may be exempt, please contact your Client Project Manager for details.*
- *AGAT's liability in connection with any delay, performance or non-performance of these services is only to the Client and does not extend to any other third party. Unless expressly agreed otherwise in writing, AGAT's liability is limited to the actual cost of the specific analysis or analyses included in the services.*
- *This Certificate shall not be reproduced except in full, without the written approval of the laboratory.*
- *The test results reported herewith relate only to the samples as received by the laboratory.*
- *Application of guidelines is provided "as is" without warranty of any kind, either expressed or implied, including, but not limited to, warranties of merchantability, fitness for a particular purpose, or non-infringement. AGAT assumes no responsibility for any errors or omissions in the guidelines contained in this document.*
- *All reportable information as specified by ISO/IEC 17025:2017 is available from AGAT Laboratories upon request.*
- *For environmental samples in the Province of Quebec: The analysis is performed on and results apply to samples as received. A temperature above 6°C upon receipt, as indicated in the Sample Reception Notification (SRN), could indicate the integrity of the samples has been compromised if the delay between sampling and submission to the laboratory could not be minimized.*

AGAT Laboratories

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Certificate of Analysis

AGAT WORK ORDER: 23T003974

PROJECT: CH244.00

CLIENT NAME: TERRAPEX ENVIRONMENTAL LIMITED

ATTENTION TO: Andrew Durbano

SAMPLING SITE:120-158 Queen St.S, Mississauga

SAMPLED BY:KP, AP

E. Coli

DATE RECEIVED: 2023-03-08

DATE REPORTED: 2023-03-15

				SAMPLE DESCRIPTION:	MW103-D
				SAMPLE TYPE:	Water
				DATE SAMPLED:	2023-03-08 10:30
Parameter	Unit	G / S	RDL	4836772	
Escherichia coli - DC Agar	CFU/100mL			0	

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard

4836772 Escherichia coli RDL = 1 CFU/100mL.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By:

AGAT Laboratories

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Certificate of Analysis

AGAT WORK ORDER: 23T003974

PROJECT: CH244.00

CLIENT NAME: TERRAPEX ENVIRONMENTAL LIMITED

ATTENTION TO: Andrew Durbano

SAMPLING SITE:120-158 Queen St.S, Mississauga

SAMPLED BY:KP, AP

Fecal Coliforms in Water

DATE RECEIVED: 2023-03-08

DATE REPORTED: 2023-03-15

				SAMPLE DESCRIPTION:	MW103-D
				SAMPLE TYPE:	Water
				DATE SAMPLED:	2023-03-08 10:30
Parameter	Unit	G / S	RDL	4836772	
Fecal Coliform	CFU/100mL	0		61	

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Peel Storm By-Law 53-2010
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

4836772 Fecal Coliforms RDL = 1 CFU/100mL

Analysis performed at AGAT Toronto (unless marked by *)

Certified By:

AGAT Laboratories

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Certificate of Analysis

AGAT WORK ORDER: 23T003974
PROJECT: CH244.00

CLIENT NAME: TERRAPEX ENVIRONMENTAL LIMITED
SAMPLING SITE:120-158 Queen St.S, Mississauga

ATTENTION TO: Andrew Durbano
SAMPLED BY:KP, AP

Mississauga Storm - Organics

DATE RECEIVED: 2023-03-08

DATE REPORTED: 2023-03-15

				SAMPLE DESCRIPTION:	MW103-D
				SAMPLE TYPE:	Water
				DATE SAMPLED:	2023-03-08 10:30
Parameter	Unit	G / S	RDL		4836772
Benzene	mg/L	0.002	0.0002		<0.0002
Toluene	mg/L	0.002	0.0002		<0.0002
Ethylbenzene	mg/L	0.002	0.0001		<0.0001
m & p-Xylene	mg/L		0.0002		<0.0002
o-Xylene	mg/L		0.0001		<0.0001
Xylenes (Total)	mg/L	0.0044	0.0001		<0.0001
Acenaphthene	mg/L		0.00010		<0.00010
Acenaphthylene	mg/L		0.00011		<0.00011
Anthracene	mg/L		0.00007		<0.00007
Benzo(a)anthracene	mg/L		0.00008		<0.00008
Benzo(a)pyrene	mg/L		0.001		<0.001
Benzo(b)fluoranthene	mg/L		0.00003		<0.00003
Benzo(ghi)perylene	mg/L		0.00006		<0.00006
Benzo(k)fluoranthene	mg/L		0.00006		<0.00006
Chrysene	mg/L		0.00005		<0.00005
Dibenzo(a,h)anthracene	mg/L		0.00009		<0.00009
Fluoranthene	mg/L		0.00012		<0.00012
Fluorene	mg/L		0.0002		<0.0002
Indeno(1,2,3-cd)pyrene	mg/L		0.00003		<0.00003
Naphthalene	mg/L		0.0003		<0.0003
Phenanthrene	mg/L		0.00011		<0.00011
Pyrene	mg/L		0.00012		<0.00012
Total PAHs	mg/L	0.002	0.0003		<0.0003
1,2-Dichlorobenzene	mg/L	0.0056	0.0001		<0.0001
1,4-Dichlorobenzene	mg/L	0.0068	0.0001		<0.0001
Dichloromethane	mg/L	0.0052	0.0001		<0.0001
Tetrachloroethylene	mg/L	0.0044	0.0001		<0.0001
Trichloroethylene	mg/L	0.0076	0.0002		<0.0002
Tetrachloroethene	mg/L	0.017	0.0002		<0.0002

Certified By: Jinkal Patel

AGAT Laboratories

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CANADA L4Z 1Y2
TEL (905)712-5100
FAX (905)712-5122
http://www.agatlabs.com

Certificate of Analysis

AGAT WORK ORDER: 23T003974

PROJECT: CH244.00

CLIENT NAME: TERRAPEX ENVIRONMENTAL LIMITED

ATTENTION TO: Andrew Durbano

SAMPLING SITE:120-158 Queen St.S, Mississauga

SAMPLED BY:KP, AP

Mississauga Storm - Organics

DATE RECEIVED: 2023-03-08

DATE REPORTED: 2023-03-15

				SAMPLE DESCRIPTION:	MW103-D
				SAMPLE TYPE:	Water
				DATE SAMPLED:	2023-03-08 10:30
Parameter	Unit	G / S	RDL		4836772
PCBs	mg/L	0.0004	0.0002		<0.0002
Surrogate	Unit	Acceptable Limits			
Toluene-d8	% Recovery	50-140			113
4-Bromofluorobenzene	% Recovery	50-140			74
Acridine-d9	%	50-140			85
Naphthalene-d8	%	50-140			97
Terphenyl-d14	%	50-140			70
Decachlorobiphenyl	%	50-140			102

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to City of Mississauga - Storm Sewer Discharge
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

4836772 Xylenes total is a calculated parameter. The calculated value is the sum of m&p-Xylene and o-Xylene.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By: Pinkal Patel

AGAT Laboratories

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CANADA L4Z 1Y2
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FAX (905)712-5122
http://www.agatlabs.com

Certificate of Analysis

AGAT WORK ORDER: 23T003974
PROJECT: CH244.00

CLIENT NAME: TERRAPEX ENVIRONMENTAL LIMITED
SAMPLING SITE:120-158 Queen St.S, Mississauga

ATTENTION TO: Andrew Durbano
SAMPLED BY:KP, AP

Peel Region Sanitary - Organics

DATE RECEIVED: 2023-03-08

DATE REPORTED: 2023-03-15

					SAMPLE DESCRIPTION:	MW103-D
					SAMPLE TYPE:	Water
					DATE SAMPLED:	2023-03-08 10:30
Parameter	Unit	G / S: A	G / S: B	RDL		4836772
Oil and Grease (animal/vegetable) in water	mg/L	150		0.5		<0.5
Oil and Grease (mineral) in water	mg/L	15		0.5		<0.5
Methylene Chloride	mg/L	2	0.0052	0.0003		<0.0003
Methyl Ethyl Ketone	mg/L	8.0		0.0009		<0.0009
cis-1,2-Dichloroethylene	mg/L	4	0.0056	0.0002		<0.0002
Chloroform	mg/L	0.04	0.002	0.0002		<0.0002
Benzene	mg/L	0.01	0.002	0.0002		<0.0002
Trichloroethylene	mg/L	0.4	0.008	0.0002		<0.0002
Toluene	mg/L	0.27	0.002	0.0002		<0.0002
Tetrachloroethene	mg/L	1	0.0044	0.0002		<0.0002
trans-1,3-Dichloropropene	mg/L	0.14	0.0056	0.0003		<0.0003
Ethylbenzene	mg/L	0.16	0.002	0.0001		<0.0001
1,1,2,2-Tetrachloroethane	mg/L	1.4	0.017	0.0001		<0.0001
Styrene	mg/L	0.2		0.0001		<0.0001
1,2-Dichlorobenzene	mg/L	0.05	0.0056	0.0001		<0.0001
1,4-Dichlorobenzene	mg/L	0.08	0.0068	0.0001		<0.0001
m & p-Xylene	mg/L			0.0002		<0.0002
o-Xylene	mg/L			0.0001		<0.0001
Xylenes (Total)	mg/L	1.4	0.0044	0.0001		<0.0001
PCBs	mg/L	0.001	0.0004	0.0002		<0.0002
Di-n-butyl phthalate	mg/L	0.08	0.015	0.0005		<0.0005
Bis(2-Ethylhexyl)phthalate	mg/L	0.012	0.0088	0.0005		<0.0005
NP2EO	mg/L			0.01		<0.01
NP1EO	mg/L			0.01		<0.01
4n-NP	mg/L			0.001		<0.001
NP	mg/L			0.001		<0.001
Nonylphenols	mg/L	0.02		0.001		<0.001
Nonylphenol Ethoxylates	mg/L	0.2		0.01		<0.01

Certified By: Pinkal Patel

AGAT Laboratories

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Certificate of Analysis

AGAT WORK ORDER: 23T003974

PROJECT: CH244.00

CLIENT NAME: TERRAPEX ENVIRONMENTAL LIMITED

ATTENTION TO: Andrew Durbano

SAMPLING SITE:120-158 Queen St.S, Mississauga

SAMPLED BY:KP, AP

Peel Region Sanitary - Organics

DATE RECEIVED: 2023-03-08

DATE REPORTED: 2023-03-15

		SAMPLE DESCRIPTION:	MW103-D
		SAMPLE TYPE:	Water
		DATE SAMPLED:	2023-03-08 10:30
Surrogate	Unit	Acceptable Limits	4836772
Toluene-d8	% Recovery	50-140	113
4-Bromofluorobenzene	% Recovery	50-140	74
Decachlorobiphenyl	%	50-140	102
2,4,6-Tribromophenol	%	50-140	88
2-Fluorophenol	%	50-140	97
Chrysene-d12	%	50-140	70
phenol-d6 surrogate	%	50-140	68

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: A Refers to Peel Sanitary By-Law 53-2010, B Refers to Peel Storm By-Law 53-2010
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

4836772 Oil and Grease animal/vegetable is a calculated parameter. The calculated value is the difference between Total O&G and Mineral O&G.
Xylenes total is a calculated parameter. The calculated value is the sum of m&p-Xylene and o-Xylene.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By: Pinkal Patel

AGAT Laboratories

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MISSISSAUGA, ONTARIO
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Certificate of Analysis

AGAT WORK ORDER: 23T003974
PROJECT: CH244.00

CLIENT NAME: TERRAPEX ENVIRONMENTAL LIMITED
ATTENTION TO: Andrew Durbano

SAMPLING SITE:120-158 Queen St.S, Mississauga
SAMPLED BY:KP, AP

Mississauga Storm Sewer Use Bylaw- Inorganics

DATE RECEIVED: 2023-03-08
DATE REPORTED: 2023-03-15

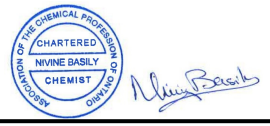
				SAMPLE DESCRIPTION:	MW103-D
				SAMPLE TYPE:	Water
				DATE SAMPLED:	2023-03-08 10:30
Parameter	Unit	G / S	RDL		4836772
pH	pH Units	6.0-9.0	NA		7.92
BOD (5)	mg/L	15	2		<2
Total Suspended Solids	mg/L	15	10		<10
Total Residual Chlorine	mg/L	1.0	0.01		0.01
Cyanide, SAD	mg/L	0.02	0.002		<0.002
Phenols	mg/L	0.008	0.001		0.061
Total Phosphorus	mg/L	0.4	0.02		0.02
Chromium VI	mg/L	0.04	0.002		<0.002
Total Aluminum	mg/L	1.0	0.010		0.485
Total Arsenic	mg/L	0.02	0.015		<0.015
Total Cadmium	mg/L	0.008	0.005		<0.005
Total Chromium	mg/L	0.08	0.015		<0.015
Total Copper	mg/L	0.04	0.010		<0.010
Total Lead	mg/L	0.12	0.020		<0.020
Total Manganese	mg/L	2.0	0.020		0.094
Total Mercury	mg/L	0.0004	0.0002		<0.0002
Total Nickel	mg/L	0.08	0.015		<0.015
Total Selenium	mg/L	0.02	0.002		<0.002
Total Silver	mg/L	0.12	0.010		<0.010
Total Zinc	mg/L	0.2	0.020		<0.020

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to City of Mississauga - Storm Sewer Discharge
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

4836772 Residual Chlorine: Due to the instability of chlorine in aqueous solutions, the results reported may be biased low and should be reviewed with discretion.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By:



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Certificate of Analysis

AGAT WORK ORDER: 23T003974
PROJECT: CH244.00

CLIENT NAME: TERRAPEX ENVIRONMENTAL LIMITED
SAMPLING SITE:120-158 Queen St.S, Mississauga

ATTENTION TO: Andrew Durbano
SAMPLED BY:KP, AP

Peel Sanitary Sewer Use By-Law - Inorganics

DATE RECEIVED: 2023-03-08

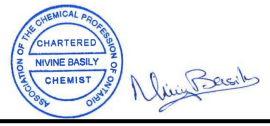
DATE REPORTED: 2023-03-15

				SAMPLE DESCRIPTION:	MW103-D
				SAMPLE TYPE:	Water
				DATE SAMPLED:	2023-03-08 10:30
Parameter	Unit	G / S	RDL		4836772
pH	pH Units	5.5-10	NA		7.92
CBOD (5)	mg/L	300	2		<2
Total Suspended Solids	mg/L	350	10		<10
Fluoride	mg/L	10	0.05		0.37
Sulphate	mg/L	1500	0.10		104
Cyanide, SAD	mg/L	2	0.002		<0.002
Phenols	mg/L	1.0	0.002		0.061
Total Phosphorus	mg/L	10	0.02		0.02
Total Kjeldahl Nitrogen	mg/L	100	0.10		0.24
Total Aluminum	mg/L	50	0.010		0.485
Total Antimony	mg/L	5	0.020		<0.020
Total Arsenic	mg/L	1	0.015		<0.015
Total Cadmium	mg/L	0.7	0.010		<0.010
Total Chromium	mg/L	5	0.015		<0.015
Total Cobalt	mg/L	5	0.020		<0.020
Total Copper	mg/L	3	0.010		<0.010
Total Lead	mg/L	3	0.020		<0.020
Total Manganese	mg/L	5	0.020		0.094
Total Mercury	mg/L	0.01	0.0002		<0.0002
Total Molybdenum	mg/L	5	0.020		<0.020
Total Nickel	mg/L	3	0.015		<0.015
Total Selenium	mg/L	1	0.002		<0.002
Total Silver	mg/L	5	0.010		<0.010
Total Tin	mg/L	5	0.025		<0.025
Total Titanium	mg/L	5	0.010		0.013
Total Zinc	mg/L	3	0.020		<0.020

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Peel Sanitary By-Law 53-2010
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By:



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http://www.agatlabs.com

Exceedance Summary

AGAT WORK ORDER: 23T003974

PROJECT: CH244.00

CLIENT NAME: TERRAPEX ENVIRONMENTAL LIMITED

ATTENTION TO: Andrew Durbano

SAMPLEID	SAMPLE TITLE	GUIDELINE	ANALYSIS PACKAGE	PARAMETER	UNIT	GUIDEVALUE	RESULT
4836772	MW103-D	ON Mississauga SM	Mississauga Storm Sewer Use Bylaw- Inorganics	Phenols	mg/L	0.008	0.061
4836772	MW103-D	ON Peel SM	Fecal Coliforms in Water	Fecal Coliform	CFU/100mL	0	61

AGAT Laboratories

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Quality Assurance

CLIENT NAME: TERRAPEX ENVIRONMENTAL LIMITED

AGAT WORK ORDER: 23T003974

PROJECT: CH244.00

ATTENTION TO: Andrew Durbano

SAMPLING SITE:120-158 Queen St.S, Mississauga

SAMPLED BY:KP, AP

Microbiology Analysis

RPT Date: Mar 15, 2023			DUPLICATE			Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD		Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
E. Coli															
Escherichia coli - DC Agar	4837055		0	0	NA										
Comments: NA - % RPD Not Applicable.															
Fecal Coliforms in Water															
Fecal Coliform	4836772	4836772	61	59	3.3%										

Certified By:

AGAT Laboratories

5835 COOPERS AVENUE
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Quality Assurance

CLIENT NAME: TERRAPEX ENVIRONMENTAL LIMITED

AGAT WORK ORDER: 23T003974

PROJECT: CH244.00

ATTENTION TO: Andrew Durbano

SAMPLING SITE:120-158 Queen St.S, Mississauga

SAMPLED BY:KP, AP

Trace Organics Analysis

RPT Date: Mar 15, 2023			DUPLICATE				REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Method Blank	Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
Peel Region Sanitary - Organics															
Oil and Grease (animal/vegetable) in water	4833404		< 0.5	< 0.5	NA	< 0.5	99%	70%	130%	111%	70%	130%	109%	70%	130%
Oil and Grease (mineral) in water	4833404		< 0.5	< 0.5	NA	< 0.5	93%	70%	130%	84%	70%	130%	81%	70%	130%
Methylene Chloride	4836772		< 0.0003	< 0.0003	NA	< 0.0003	102%	50%	140%	92%	60%	130%	86%	50%	140%
Methyl Ethyl Ketone	4836772		< 0.0009	< 0.0009	NA	< 0.0009	80%	50%	140%	109%	50%	140%	104%	50%	140%
cis-1,2-Dichloroethylene	4836772		< 0.0002	< 0.0002	NA	< 0.0002	86%	50%	140%	94%	60%	130%	90%	50%	140%
Chloroform	4836772		< 0.0002	< 0.0002	NA	< 0.0002	104%	50%	140%	95%	60%	130%	114%	50%	140%
Benzene	4836772		< 0.0002	< 0.0002	NA	< 0.0002	89%	50%	140%	103%	60%	130%	77%	50%	140%
Trichloroethylene	4836772		< 0.0002	< 0.0002	NA	< 0.0002	80%	50%	140%	92%	60%	130%	84%	50%	140%
Toluene	4836772		< 0.0002	< 0.0002	NA	< 0.0002	102%	50%	140%	118%	60%	130%	97%	50%	140%
Tetrachloroethene	4836772		< 0.0002	< 0.0002	NA	< 0.0002	84%	50%	140%	96%	60%	130%	80%	50%	140%
trans-1,3-Dichloropropene	4836772		< 0.0003	< 0.0003	NA	< 0.0003	79%	50%	140%	75%	60%	130%	115%	50%	140%
Ethylbenzene	4836772		< 0.0001	< 0.0001	NA	< 0.0001	95%	50%	140%	112%	60%	130%	90%	50%	140%
1,1,2,2-Tetrachloroethane	4836772		< 0.0001	< 0.0001	NA	< 0.0001	112%	50%	140%	107%	60%	130%	111%	50%	140%
Styrene	4836772		< 0.0001	< 0.0001	NA	< 0.0001	105%	50%	140%	118%	60%	130%	99%	50%	140%
1,2-Dichlorobenzene	4836772		< 0.0001	< 0.0001	NA	< 0.0001	97%	50%	140%	98%	60%	130%	82%	50%	140%
1,4-Dichlorobenzene	4836772		< 0.0001	< 0.0001	NA	< 0.0001	112%	50%	140%	119%	60%	130%	97%	50%	140%
m & p-Xylene	4836772		< 0.0002	< 0.0002	NA	< 0.0002	98%	50%	140%	114%	60%	130%	95%	50%	140%
o-Xylene	4836772		< 0.0001	< 0.0001	NA	< 0.0001	111%	50%	140%	111%	60%	130%	106%	50%	140%
PCBs	4840241		< 0.0002	< 0.0002	NA	< 0.0002	92%	50%	140%	73%	50%	140%	86%	50%	140%
Di-n-butyl phthalate	4792695		< 0.0005	< 0.0005	NA	< 0.0005	68%	50%	140%	74%	50%	140%	77%	50%	140%
Bis(2-Ethylhexyl)phthalate	4792695		< 0.0005	< 0.0005	NA	< 0.0005	70%	50%	140%	73%	50%	140%	86%	50%	140%
NP2EO	4822675		< 0.01	< 0.01	NA	< 0.01	92%	50%	130%	104%	50%	130%	100%	50%	130%
NP1EO	4822675		< 0.01	< 0.01	NA	< 0.01	106%	50%	130%	99%	50%	130%	98%	50%	130%
4n-NP	4822675		< 0.001	< 0.001	NA	< 0.001	79%	50%	130%	97%	50%	130%	90%	50%	130%
NP	4822675		< 0.001	< 0.001	NA	< 0.001	94%	50%	130%	116%	50%	130%	110%	50%	130%
Mississauga Storm - Organics															
Benzene	4836772		< 0.0002	< 0.0002	0.0%	< 0.0002	89%	50%	140%	103%	60%	130%	77%	50%	140%
Toluene	4836772		< 0.0002	< 0.0002	0.0%	< 0.0002	102%	50%	140%	118%	60%	130%	97%	50%	140%
Ethylbenzene	4836772		< 0.0001	< 0.0001	0.0%	< 0.0001	95%	50%	140%	112%	60%	130%	90%	50%	140%
m & p-Xylene	4836772		< 0.0002	< 0.0002	0.0%	< 0.0002	98%	50%	140%	114%	60%	130%	95%	50%	140%
o-Xylene	4836772		< 0.0001	< 0.0001	0.0%	< 0.0001	111%	50%	140%	111%	60%	130%	106%	50%	140%
Acenaphthene	4840741		< 0.00010	< 0.00010	NA	< 0.00010	85%	50%	140%	77%	50%	140%	90%	50%	140%
Acenaphthylene	4840741		< 0.00011	< 0.00011	NA	< 0.00011	91%	50%	140%	74%	50%	140%	93%	50%	140%
Anthracene	4840741		< 0.00007	< 0.00007	NA	< 0.00007	102%	50%	140%	101%	50%	140%	109%	50%	140%
Benzo(a)anthracene	4840741		< 0.00008	< 0.00008	NA	< 0.00008	101%	50%	140%	73%	50%	140%	100%	50%	140%
Benzo(a)pyrene	4840741		< 0.001	< 0.001	NA	< 0.001	65%	50%	140%	77%	50%	140%	68%	50%	140%
Benzo(b)fluoranthene	4840741		< 0.00003	< 0.00003	NA	< 0.00003	76%	50%	140%	110%	50%	140%	75%	50%	140%
Benzo(ghi)perylene	4840741		< 0.00006	< 0.00006	NA	< 0.00006	87%	50%	140%	74%	50%	140%	87%	50%	140%

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Quality Assurance

CLIENT NAME: TERRAPEX ENVIRONMENTAL LIMITED

AGAT WORK ORDER: 23T003974

PROJECT: CH244.00

ATTENTION TO: Andrew Durbano

SAMPLING SITE:120-158 Queen St.S, Mississauga

SAMPLED BY:KP, AP

Trace Organics Analysis (Continued)

RPT Date: Mar 15, 2023			DUPLICATE				REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Method Blank	Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
Benzo(k)fluoranthene	4840741		< 0.00006	< 0.00006	NA	< 0.00006	71%	50%	140%	82%	50%	140%	78%	50%	140%
Chrysene	4840741		< 0.00005	< 0.00005	NA	< 0.00005	88%	50%	140%	78%	50%	140%	75%	50%	140%
Dibenzo(a,h)anthracene	4840741		< 0.00009	< 0.00009	NA	< 0.00009	105%	50%	140%	83%	50%	140%	89%	50%	140%
Fluoranthene	4840741		< 0.00012	< 0.00012	NA	< 0.00012	105%	50%	140%	99%	50%	140%	99%	50%	140%
Fluorene	4840741		< 0.0002	< 0.0002	NA	< 0.0002	71%	50%	140%	79%	50%	140%	108%	50%	140%
Indeno(1,2,3-cd)pyrene	4840741		< 0.00003	< 0.00003	NA	< 0.00003	108%	50%	140%	74%	50%	140%	103%	50%	140%
Naphthalene	4840741		< 0.0003	< 0.0003	NA	< 0.0003	103%	50%	140%	78%	50%	140%	84%	50%	140%
Phenanthrene	4840741		< 0.00011	< 0.00011	NA	< 0.00011	64%	50%	140%	77%	50%	140%	98%	50%	140%
Pyrene	4840741		< 0.00012	< 0.00012	NA	< 0.00012	94%	50%	140%	90%	50%	140%	73%	50%	140%
1,2-Dichlorobenzene	4836772		< 0.0001	< 0.0001	0.0%	< 0.0001	97%	50%	140%	98%	60%	130%	82%	50%	140%
1,4-Dichlorobenzene	4836772		< 0.0001	< 0.0001	0.0%	< 0.0001	112%	50%	140%	119%	60%	130%	97%	50%	140%
Dichloromethane	4836772		< 0.0001	< 0.0001	0.0%	< 0.0001	97%	50%	140%	80%	60%	130%	77%	50%	140%
Tetrachloroethylene	4836772		< 0.0001	< 0.0001	0.0%	< 0.0001	82%	50%	140%	96%	60%	130%	94%	50%	140%
Trichloroethylene	4836772		< 0.0002	< 0.0002	0.0%	< 0.0002	72%	50%	140%	100%	60%	130%	80%	50%	140%
Tetrachloroethene	4836772		< 0.0002	< 0.0002	0.0%	< 0.0002	84%	50%	140%	96%	60%	130%	80%	50%	140%

Comments: When the average of the sample and duplicate results is less than 5x the RDL, the Relative Percent Difference (RPD) will be indicated as Not Applicable (NA).

Certified By: Jinkal Patel

AGAT Laboratories

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Quality Assurance

CLIENT NAME: TERRAPEX ENVIRONMENTAL LIMITED
AGAT WORK ORDER: 23T003974
PROJECT: CH244.00
ATTENTION TO: Andrew Durbano
SAMPLING SITE:120-158 Queen St.S, Mississauga
SAMPLED BY:KP, AP

Water Analysis

RPT Date: Mar 15, 2023

PARAMETER	Batch	Sample Id	DUPLICATE			Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
			Dup #1	Dup #2	RPD		Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
Peel Sanitary Sewer Use By-Law - Inorganics															
pH	4840758		8.00	8.00	0.0%	NA	100%	90%	110%						
CBOD (5)	4836772	4836772	<2	<2	NA	< 2	100%	75%	125%						
Total Suspended Solids	4837634		<10	<10	NA	< 10	102%	80%	120%						
Fluoride	4836013		<0.05	<0.05	NA	< 0.05	101%	70%	130%	99%	80%	120%	104%	70%	130%
Sulphate	4836013		26.8	26.6	0.7%	< 0.10	99%	70%	130%	100%	80%	120%	99%	70%	130%
Cyanide, SAD	4814314		<0.002	<0.002	NA	< 0.002	105%	70%	130%	91%	80%	120%	107%	70%	130%
Phenols	4837507		0.004	0.003	NA	< 0.002	99%	90%	110%	102%	90%	110%	99%	80%	120%
Total Phosphorus	4838836		0.04	0.03	NA	< 0.02	101%	70%	130%	91%	80%	120%	96%	70%	130%
Total Kjeldahl Nitrogen	4832290		0.74	0.82	10.3%	< 0.10	106%	70%	130%	101%	80%	120%	95%	70%	130%
Total Aluminum	4836772	4836772	0.485	0.488	0.6%	< 0.010	96%	70%	130%	112%	80%	120%	126%	70%	130%
Total Antimony	4836772	4836772	<0.020	<0.020	NA	< 0.020	109%	70%	130%	106%	80%	120%	109%	70%	130%
Total Arsenic	4836772	4836772	<0.015	<0.015	NA	< 0.015	100%	70%	130%	99%	80%	120%	105%	70%	130%
Total Cadmium	4836772	4836772	<0.010	<0.010	NA	< 0.010	102%	70%	130%	103%	80%	120%	106%	70%	130%
Total Chromium	4836772	4836772	<0.015	<0.015	NA	< 0.015	100%	70%	130%	106%	80%	120%	112%	70%	130%
Total Cobalt	4836772	4836772	<0.020	<0.020	NA	< 0.020	104%	70%	130%	107%	80%	120%	112%	70%	130%
Total Copper	4836772	4836772	<0.010	<0.010	NA	< 0.010	101%	70%	130%	103%	80%	120%	107%	70%	130%
Total Lead	4836772	4836772	<0.020	<0.020	NA	< 0.020	100%	70%	130%	97%	80%	120%	97%	70%	130%
Total Manganese	4836772	4836772	0.094	0.101	NA	< 0.020	102%	70%	130%	109%	80%	120%	118%	70%	130%
Total Mercury	4836346		<0.0002	<0.0002	NA	< 0.0002	101%	70%	130%	98%	80%	120%	98%	70%	130%
Total Molybdenum	4836772	4836772	<0.020	<0.020	NA	< 0.020	104%	70%	130%	113%	80%	120%	118%	70%	130%
Total Nickel	4836772	4836772	<0.015	<0.015	NA	< 0.015	101%	70%	130%	99%	80%	120%	105%	70%	130%
Total Selenium	4836772	4836772	<0.002	0.003	NA	< 0.002	100%	70%	130%	103%	80%	120%	108%	70%	130%
Total Silver	4836772	4836772	<0.010	<0.010	NA	< 0.010	100%	70%	130%	104%	80%	120%	107%	70%	130%
Total Tin	4836772	4836772	<0.025	<0.025	NA	< 0.025	103%	70%	130%	102%	80%	120%	103%	70%	130%
Total Titanium	4836772	4836772	0.013	0.010	NA	< 0.010	96%	70%	130%	115%	80%	120%	118%	70%	130%
Total Zinc	4836772	4836772	<0.020	<0.020	NA	< 0.020	103%	70%	130%	107%	80%	120%	113%	70%	130%

Comments: NA signifies Not Applicable.
Duplicate NA: results are under 5X the RDL and will not be calculated.

Mississauga Storm Sewer Use Bylaw- Inorganics															
BOD (5)	4838836		5	6	NA	< 2	101%	75%	125%						
Chromium VI	4833414		<0.002	<0.002	NA	< 0.002	102%	70%	130%	106%	80%	120%	107%	70%	130%

Comments: NA signifies Not Applicable.
Duplicate NA: results are under 5X the RDL and will not be calculated.

Certified By:

AGAT Laboratories

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Quality Assurance

CLIENT NAME: TERRAPEX ENVIRONMENTAL LIMITED

AGAT WORK ORDER: 23T003974

PROJECT: CH244.00

ATTENTION TO: Andrew Durbano

SAMPLING SITE:120-158 Queen St.S, Mississauga

SAMPLED BY:KP, AP

Water Analysis (Continued)

RPT Date: Mar 15, 2023			DUPLICATE				REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Method Blank	Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper

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CLIENT NAME: TERRAPEX ENVIRONMENTAL LIMITED

ATTENTION TO: Andrew Durbano

Sample ID	Sample Description	Sample Type	Date Sampled	Date Received
4836772	MW103-D	Water	08-MAR-2023	08-MAR-2023

E. Coli

Parameter	Date Prepared	Date Analyzed	Initials
Escherichia coli - DC Agar	09-MAR-2023	10-MAR-2023	PK

Fecal Coliforms in Water

Parameter	Date Prepared	Date Analyzed	Initials
Fecal Coliform	09-MAR-2023	10-MAR-2023	PK

Mississauga Storm - Organics

Parameter	Date Prepared	Date Analyzed	Initials
Benzene	10-MAR-2023	10-MAR-2023	AG
Toluene	10-MAR-2023	10-MAR-2023	AG
Ethylbenzene	10-MAR-2023	10-MAR-2023	AG
m & p-Xylene	10-MAR-2023	10-MAR-2023	AG
o-Xylene	10-MAR-2023	10-MAR-2023	AG
Xylenes (Total)	10-MAR-2023	10-MAR-2023	SYS
Toluene-d8	10-MAR-2023	10-MAR-2023	AG
4-Bromofluorobenzene	10-MAR-2023	10-MAR-2023	AG
Acenaphthene	15-MAR-2023	15-MAR-2023	SB
Acenaphthylene	15-MAR-2023	15-MAR-2023	SB
Anthracene	15-MAR-2023	15-MAR-2023	SB
Benzo(a)anthracene	15-MAR-2023	15-MAR-2023	SB
Benzo(a)pyrene	15-MAR-2023	15-MAR-2023	SB
Benzo(b)fluoranthene	15-MAR-2023	15-MAR-2023	SB
Benzo(ghi)perylene	15-MAR-2023	15-MAR-2023	SB
Benzo(k)fluoranthene	15-MAR-2023	15-MAR-2023	SB
Chrysene	15-MAR-2023	15-MAR-2023	SB
Dibenzo(a,h)anthracene	15-MAR-2023	15-MAR-2023	SB
Fluoranthene	15-MAR-2023	15-MAR-2023	SB
Fluorene	15-MAR-2023	15-MAR-2023	SB
Indeno(1,2,3-cd)pyrene	15-MAR-2023	15-MAR-2023	SB
Naphthalene	15-MAR-2023	15-MAR-2023	SB
Phenanthrene	15-MAR-2023	15-MAR-2023	SB
Pyrene	15-MAR-2023	15-MAR-2023	SB
Total PAHs	15-MAR-2023	15-MAR-2023	SB
Acridine-d9	15-MAR-2023	15-MAR-2023	SB
Naphthalene-d8	15-MAR-2023	15-MAR-2023	SB
Terphenyl-d14	15-MAR-2023	15-MAR-2023	SB
1,2-Dichlorobenzene	10-MAR-2023	10-MAR-2023	AG
1,4-Dichlorobenzene	10-MAR-2023	10-MAR-2023	AG
Dichloromethane	10-MAR-2023	10-MAR-2023	AG

AGAT Laboratories

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Time Markers

AGAT WORK ORDER: 23T003974
PROJECT: CH244.00

CLIENT NAME: TERRAPEX ENVIRONMENTAL LIMITED

ATTENTION TO: Andrew Durbano

Sample ID	Sample Description	Sample Type	Date Sampled	Date Received
4836772	MW103-D	Water	08-MAR-2023	08-MAR-2023

Mississauga Storm - Organics

Parameter	Date Prepared	Date Analyzed	Initials
Tetrachloroethylene	10-MAR-2023	10-MAR-2023	AG
Trichloroethylene	10-MAR-2023	10-MAR-2023	AG
Tetrachloroethene	10-MAR-2023	10-MAR-2023	AG
PCBs	14-MAR-2023	15-MAR-2023	LSP
Decachlorobiphenyl	14-MAR-2023	15-MAR-2023	LSP

Mississauga Storm Sewer Use Bylaw- Inorganics

Parameter	Date Prepared	Date Analyzed	Initials
pH	10-MAR-2023	10-MAR-2023	ND
BOD (5)	10-MAR-2023	15-MAR-2023	PK
Total Suspended Solids	10-MAR-2023	10-MAR-2023	VD
Total Residual Chlorine	10-MAR-2023	10-MAR-2023	NP
Cyanide, SAD	10-MAR-2023	10-MAR-2023	BG
Phenols	09-MAR-2023	09-MAR-2023	WZ
Total Phosphorus	10-MAR-2023	10-MAR-2023	XL
Chromium VI	09-MAR-2023	09-MAR-2023	WZ
Total Aluminum	09-MAR-2023	09-MAR-2023	DW
Total Arsenic	09-MAR-2023	09-MAR-2023	DW
Total Cadmium	09-MAR-2023	09-MAR-2023	DW
Total Chromium	09-MAR-2023	09-MAR-2023	DW
Total Copper	09-MAR-2023	09-MAR-2023	DW
Total Lead	09-MAR-2023	09-MAR-2023	DW
Total Manganese	09-MAR-2023	09-MAR-2023	DW
Total Mercury	09-MAR-2023	09-MAR-2023	DL
Total Nickel	09-MAR-2023	09-MAR-2023	DW
Total Selenium	09-MAR-2023	09-MAR-2023	DW
Total Silver	09-MAR-2023	09-MAR-2023	DW
Total Zinc	09-MAR-2023	09-MAR-2023	DW

Peel Region Sanitary - Organics

Parameter	Date Prepared	Date Analyzed	Initials
Oil and Grease (animal/vegetable) in water	15-MAR-2023	15-MAR-2023	RMK
Oil and Grease (mineral) in water	15-MAR-2023	15-MAR-2023	RMK
Methylene Chloride	10-MAR-2023	10-MAR-2023	AG
Methyl Ethyl Ketone	10-MAR-2023	10-MAR-2023	AG
cis-1,2-Dichloroethylene	10-MAR-2023	10-MAR-2023	AG
Chloroform	10-MAR-2023	10-MAR-2023	AG
Benzene	10-MAR-2023	10-MAR-2023	AG
Trichloroethylene	10-MAR-2023	10-MAR-2023	AG

AGAT Laboratories

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Time Markers

AGAT WORK ORDER: 23T003974
PROJECT: CH244.00

CLIENT NAME: TERRAPEX ENVIRONMENTAL LIMITED

ATTENTION TO: Andrew Durbano

Sample ID	Sample Description	Sample Type	Date Sampled	Date Received
4836772	MW103-D	Water	08-MAR-2023	08-MAR-2023

Peel Region Sanitary - Organics

Parameter	Date Prepared	Date Analyzed	Initials
Toluene	10-MAR-2023	10-MAR-2023	AG
Tetrachloroethene	10-MAR-2023	10-MAR-2023	AG
trans-1,3-Dichloropropene	10-MAR-2023	10-MAR-2023	AG
Ethylbenzene	10-MAR-2023	10-MAR-2023	AG
1,1,2,2-Tetrachloroethane	10-MAR-2023	10-MAR-2023	AG
Styrene	10-MAR-2023	10-MAR-2023	AG
1,2-Dichlorobenzene	10-MAR-2023	10-MAR-2023	AG
1,4-Dichlorobenzene	10-MAR-2023	10-MAR-2023	AG
m & p-Xylene	10-MAR-2023	10-MAR-2023	AG
o-Xylene	10-MAR-2023	10-MAR-2023	AG
Xylenes (Total)	10-MAR-2023	10-MAR-2023	SYS
Toluene-d8	10-MAR-2023	10-MAR-2023	AG
4-Bromofluorobenzene	10-MAR-2023	10-MAR-2023	AG
PCBs	14-MAR-2023	15-MAR-2023	LSP
Decachlorobiphenyl	14-MAR-2023	15-MAR-2023	LSP
Di-n-butyl phthalate	15-MAR-2023	15-MAR-2023	SB
Bis(2-Ethylhexyl)phthalate	15-MAR-2023	15-MAR-2023	SB
2,4,6-Tribromophenol	15-MAR-2023	15-MAR-2023	SB
2-Fluorophenol	15-MAR-2023	15-MAR-2023	SB
Chrysene-d12	15-MAR-2023	15-MAR-2023	SB
phenol-d6 surrogate	15-MAR-2023	15-MAR-2023	SB
NP2EO	10-MAR-2023	10-MAR-2023	CA
NP1EO	10-MAR-2023	10-MAR-2023	CA
4n-NP	10-MAR-2023	10-MAR-2023	CA
NP	10-MAR-2023	10-MAR-2023	CA
Nonylphenols	10-MAR-2023	10-MAR-2023	CA
Nonylphenol Ethoxylates	10-MAR-2023	10-MAR-2023	CA

Peel Sanitary Sewer Use By-Law - Inorganics

Parameter	Date Prepared	Date Analyzed	Initials
pH	10-MAR-2023	10-MAR-2023	ND
CBOD (5)	10-MAR-2023	15-MAR-2023	PK
Total Suspended Solids	10-MAR-2023	10-MAR-2023	VD
Fluoride	09-MAR-2023	09-MAR-2023	LC
Sulphate	09-MAR-2023	09-MAR-2023	LC
Cyanide, SAD	10-MAR-2023	10-MAR-2023	BG
Phenols	09-MAR-2023	09-MAR-2023	WZ
Total Phosphorus	10-MAR-2023	10-MAR-2023	XL
Total Kjeldahl Nitrogen	10-MAR-2023	10-MAR-2023	SK

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Time Markers

AGAT WORK ORDER: 23T003974
PROJECT: CH244.00

CLIENT NAME: TERRAPEX ENVIRONMENTAL LIMITED

ATTENTION TO: Andrew Durbano

Sample ID	Sample Description	Sample Type	Date Sampled	Date Received
4836772	MW103-D	Water	08-MAR-2023	08-MAR-2023

Peel Sanitary Sewer Use By-Law - Inorganics

Parameter	Date Prepared	Date Analyzed	Initials
Total Aluminum	09-MAR-2023	09-MAR-2023	DW
Total Antimony	09-MAR-2023	09-MAR-2023	DW
Total Arsenic	09-MAR-2023	09-MAR-2023	DW
Total Cadmium	09-MAR-2023	09-MAR-2023	DW
Total Chromium	09-MAR-2023	09-MAR-2023	DW
Total Cobalt	09-MAR-2023	09-MAR-2023	DW
Total Copper	09-MAR-2023	09-MAR-2023	DW
Total Lead	09-MAR-2023	09-MAR-2023	DW
Total Manganese	09-MAR-2023	09-MAR-2023	DW
Total Mercury	09-MAR-2023	09-MAR-2023	DL
Total Molybdenum	09-MAR-2023	09-MAR-2023	DW
Total Nickel	09-MAR-2023	09-MAR-2023	DW
Total Selenium	09-MAR-2023	09-MAR-2023	DW
Total Silver	09-MAR-2023	09-MAR-2023	DW
Total Tin	09-MAR-2023	09-MAR-2023	DW
Total Titanium	09-MAR-2023	09-MAR-2023	DW
Total Zinc	09-MAR-2023	09-MAR-2023	DW

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Method Summary

CLIENT NAME: TERRAPEX ENVIRONMENTAL LIMITED

AGAT WORK ORDER: 23T003974

PROJECT: CH244.00

ATTENTION TO: Andrew Durbano

SAMPLING SITE:120-158 Queen St.S, Mississauga

SAMPLED BY:KP, AP

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Microbiology Analysis			
Escherichia coli - DC Agar	MIC-93-7010	MOE Method E3407	MF/INCUBATOR
Fecal Coliform	MIC-93-7000	SM 9222 D	MF/INCUBATOR

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Method Summary

CLIENT NAME: TERRAPEX ENVIRONMENTAL LIMITED
AGAT WORK ORDER: 23T003974
PROJECT: CH244.00
ATTENTION TO: Andrew Durbano
SAMPLING SITE:120-158 Queen St.S, Mississauga
SAMPLED BY:KP, AP

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Trace Organics Analysis			
Benzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Toluene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	P & T GC/MS
Ethylbenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	P & T GC/MS
m & p-Xylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
o-Xylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Xylenes (Total)	VOL-91-5001	modified from EPA 5030B & EPA 8260D	CALCULATION
Toluene-d8	VOL-91- 5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
4-Bromofluorobenzene	VOL-91- 5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Acenaphthene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Acenaphthylene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Anthracene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Benzo(a)anthracene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Benzo(a)pyrene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Benzo(b)fluoranthene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Benzo(ghi)perylene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Benzo(k)fluoranthene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Chrysene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Dibenzo(a,h)anthracene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Fluoranthene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Fluorene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Indeno(1,2,3-cd)pyrene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Naphthalene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Phenanthrene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Pyrene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Total PAHs	ORG-91-5105	modified from EPA 3510C and EPA 8270E	CALCULATION
Acridine-d9	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Naphthalene-d8	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS

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Method Summary

CLIENT NAME: TERRAPEX ENVIRONMENTAL LIMITED

AGAT WORK ORDER: 23T003974

PROJECT: CH244.00

ATTENTION TO: Andrew Durbano

SAMPLING SITE:120-158 Queen St.S, Mississauga

SAMPLED BY:KP, AP

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Terphenyl-d14	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
1,2-Dichlorobenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,4-Dichlorobenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Dichloromethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Tetrachloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Trichloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Tetrachloroethene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
PCBs	ORG-91-5112	EPA SW-846 3510 & 8082	GC/ECD
Decachlorobiphenyl	ORG-91-5112	modified from EPA SW846 3510C & 8082A	GC/ECD
Oil and Grease (animal/vegetable) in water	VOL-91-5011	EPA SW-846 3510C & SM5520	BALANCE
Oil and Grease (mineral) in water	VOL-91-5011	EPA SW-846 3510C & SM 5520	BALANCE
Methylene Chloride	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Methyl Ethyl Ketone	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
cis-1,2-Dichloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Chloroform	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Toluene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
trans-1,3-Dichloropropene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Ethylbenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1,2,2-Tetrachloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Styrene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
PCBs	ORG-91-5112	modified from EPA SW-846 3510C & 8082A	GC/ECD
Di-n-butyl phthalate	ORG-91-5114	modified from EPA SW-846 3510C & 8270E	GC/MS
Bis(2-Ethylhexyl)phthalate	ORG-91-5114	modified from EPA SW-846 3510C & 8270E	GC/MS
2,4,6-Tribromophenol	ORG-91-5114	modified from EPA 3510C and EPA 8270E	GC/MS
2-Fluorophenol	ORG-91-5114	modified from EPA 3510C and EPA 8270E	GC/MS
Chrysene-d12	ORG-91-5114	modified from EPA 3510C and EPA 8270E	GC/MS
phenol-d6 surrogate	ORG-91-5114	modified from EPA 3510C and EPA 8270E	GC/MS
NP2EO	ORG-91-5122	modified ASTM D7485-16	HPLC
NP1EO	ORG-91-5122	modified ASTM D7485-16	HPLC
4n-NP	ORG-91-5122	modified ASTM D7485-16	HPLC
NP	ORG-91-5122	modified ASTM D7485-16	HPLC

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Method Summary

CLIENT NAME: TERRAPEX ENVIRONMENTAL LIMITED

AGAT WORK ORDER: 23T003974

PROJECT: CH244.00

ATTENTION TO: Andrew Durbano

SAMPLING SITE:120-158 Queen St.S, Mississauga

SAMPLED BY:KP, AP

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Nonylphenols	ORG-91-5122	modified ASTM D7485-16	CALCULATION
Nonylphenol Ethoxylates	ORG-91-5122	modified ASTM D7485-16	CALCULATION
Water Analysis			
pH	INOR-93-6000	modified from SM 4500-H+ B	PC TITRATE
BOD (5)	INOR-93-6006	Modified from SM 5210 B	DO METER
Total Suspended Solids	INOR-93-6028	modified from EPA 1684,ON MOECC E3139,SM 2540C,D	BALANCE
Total Residual Chlorine	INOR-93-6060	modified from SM 4500-CL- G	SPECTROPHOTOMETER
Cyanide, SAD	INOR-93-6051	modified from MOECC E3015; SM 4500-CN- A, B, & C	TECHNICON AUTO ANALYZER
Phenols	INOR-93-6072	modified from SM 5530 D	LACHAT FIA
Total Phosphorus	INOR-93-6022	modified from SM 4500-P B and SM 4500-P E	SPECTROPHOTOMETER
Chromium VI	INOR-93-6073	modified from SM 3500-CR B	LACHAT FIA
Total Aluminum	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS
Total Arsenic	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS
Total Cadmium	MET -93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS
Total Chromium	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS
Total Copper	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS
Total Lead	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS
Total Manganese	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS
Total Mercury	MET-93-6100	modified from EPA 245.2 and SM 3112 B	CVAAS
Total Nickel	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS
Total Selenium	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS
Total Silver	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS
Total Zinc	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS
CBOD (5)	INOR-93-6006	Modified from SM 5210 B	DO METER
Fluoride	INOR-93-6004	modified from SM 4110 B	ION CHROMATOGRAPH
Sulphate	INOR-93-6004	modified from SM 4110 B	ION CHROMATOGRAPH
Total Kjeldahl Nitrogen	INOR-93-6048	modified from EPA 351.2 and SM 4500-NORG D	LACHAT FIA
Total Antimony	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS
Total Cobalt	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS
Total Molybdenum	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS
Total Tin	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS
Total Titanium	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS

AGAT Laboratories
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Mississauga, Ontario L4Z 1Y2
Ph: 905.712.5100 Fax: 905.712.5122
webearth.agatlabs.com

Chain of Custody Record

If this is a Drinking Water sample, please use Drinking Water Chain of Custody Form (potable water consumed by humans)

Laboratory Use Only

Work Order #: 23T003974

Cooler Quantity: 1 Lg

Arrival Temperatures: 1.7 | 1.9 | 2.1

Custody Seal Intact: ☐ Yes ☐ No ☐ N/A

Notes: Loose snow

Report Information:

Company: Terrapex Env. Ltd.
Contact: Andrew Durbano
Address: ~~65 Nelson Rd~~ 90 Scarsdale Rd Toronto M3B 2R7
Phone: 647-460-9529 Fax:
Reports to be sent to:
1. Email: a.durbano@terrapex.com
2. Email: b.theimer@terrapex.com

Regulatory Requirements:

(Please check all applicable boxes)

☐ Regulation 153/04
Table ___ (Indicate One)
☐ Ind/Com ☐ Res/Park ☐ Agriculture
Soil Texture (Check One) ☐ Coarse ☐ Fine

☐ Excess Soils R406
Table ___ (Indicate One)
☐ Regulation 558
☐ CCME

☑ Sewer Use ☑ Sanitary ☑ Storm
Peel Sanitary/Storm, Mississauga Storm
(Regional)
☐ Prov. Water Quality Objectives (PWQO)
☐ Other
(Indicate One)

Turnaround Time (TAT) Required:

Regular TAT ☑ 5 to 7 Business Days

Rush TAT (Rush Surcharges Apply)

☐ 3 Business Days ☐ 2 Business Days ☐ Next Business Day

OR Date Required (Rush Surcharges May Apply):

Please provide prior notification for rush TAT
*TAT is exclusive of weekends and statutory holidays

For 'Same Day' analysis, please contact your AGAT CPM

Project Information:

Project: CH244-00
Site Location: 120-158 Queen St. S, Mississauga.
Sampled By: KP/AP
AGAT Quote #: PO:
Please note: If quotation number is not provided, client will be billed full price for analysis.

Is this submission for a **Record of Site Condition?** ☐ Yes ☑ No

Report Guideline on *Certificate of Analysis* ☑ Yes ☐ No

Invoice Information:

Bill To Same: Yes ☑ No ☐

Company: Terrapex Environmental Ltd.
Contact: Andrew Durbano / Brian Theimer
Address/Email: ~~accounts@terrapex.com~~ accounts.payable@terrapex.com
90 Scarsdale ~~Rd~~ Rd, Toronto ON, M3B 2R7

Sample Matrix Legend

B	Biota
GW	Ground Water
O	Oil
P	Paint
S	Soil
SD	Sediment
SW	Surface Water

Sample Identification	Date Sampled	Time Sampled	# of Containers	Sample Matrix	Comments/ Special Instructions	Field Filtered - Metals, Hg, CrVI, DOC (Y/N)	O. Reg 153: Metals & Inorganics	O. Reg 153: Metals - ☐ CrVI, ☐ Hg, ☐ HWSB	O. Reg 153: BTEX, F1-F4 PHCs	O. Reg 153: PAHs	O. Reg 153: PCBs	O. Reg 153: VOC	O. Reg 153: Aroclors	O. Reg 558: Landfill Disposal Characterization TCLP: ☐ M&I ☐ VOCs ☐ ABNs ☐ B(a)P ☐ PCBs	O. Reg 406: Excess Soils SPLP Rainwater Leach SPLP: ☐ Metals ☐ VOCs ☐ SVOCs	O. Reg 406: Excess Soils Characterization Package pH, ICPMS Metals, BTEX, F1-F4	Corrosivity: Include Moisture ☐ Sulphide ☐	Peel Sanitary & Storm	Mississauga Storm					Potentially Hazardous or High Concentration (Y/N)
MW103-D	8/3/23	10:30 AM PM	24	GW	lab preserve ~~bottle~~ 1x1L ABN amber bottle for Oil and Grease - Instructed by Linda Berthelet	N												X	X					
		AM PM																						
		AM PM																						
		AM PM																						
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		AM PM																						
		AM PM																						

Samples Relinquished By (Print Name and Sign):	Date	Time	Samples Received By (Print Name and Sign):	Date	Time
Khushbu Patel, [signature]	8/3/23	4:40	[signature]		
Samples Relinquished By (Print Name and Sign):	Date	Time	Samples Received By (Print Name and Sign):	Date	Time
Samples Relinquished By (Print Name and Sign):	Date	Time	Samples Received By (Print Name and Sign):	Date	Time

'23MAR 8 4:41 PM

Page 1 of 1

N°: T - 139596

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CLIENT NAME: TERRAPEX ENVIRONMENTAL LIMITED
90 SCARSDALE RD
TORONTO, ON M3B2R7
(905) 474-5265
ATTENTION TO: Brian Theimer
PROJECT: CH244.00
AGAT WORK ORDER: 23T030554
WATER ANALYSIS REVIEWED BY: Nivine Basily, Inorganics Report Writer
DATE REPORTED: Jun 07, 2023
PAGES (INCLUDING COVER): 7
VERSION*: 1

Should you require any information regarding this analysis please contact your client services representative at (905) 712-5100

*Notes

AGAT Laboratories

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Certificate of Analysis

AGAT WORK ORDER: 23T030554

PROJECT: CH244.00

CLIENT NAME: TERRAPEX ENVIRONMENTAL LIMITED

ATTENTION TO: Brian Theimer

SAMPLING SITE:120 Queen St. South, Mississauga

SAMPLED BY:BV/VS

Inorganic Chemistry (Water)

DATE RECEIVED: 2023-05-31

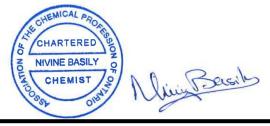
DATE REPORTED: 2023-06-07

					SAMPLE DESCRIPTION:	MW101S	MW113S	MW118S	MW115	MW103
					SAMPLE TYPE:	Water	Water	Water	Water	Water
					DATE SAMPLED:	2023-05-30 14:30	2023-05-30 14:45	2023-05-30 15:00	2023-05-30 15:15	2023-05-30 15:30
Parameter	Unit	G / S: A	G / S: B	G / S: C	RDL	5030543	5030547	5030548	5030549	5030550
Dissolved Manganese	mg/L				0.002	0.088	0.482	0.702	0.167	0.013
Total Manganese	mg/L	5	0.05	2.0	0.020	0.096[B-C]	0.497[B-C]	0.719[B-C]	0.216[B-C]	0.056[B-C]
Phenols	mg/L	1.0	0.008	0.008	0.002	0.010[C-A]	0.013[C-A]	0.011[C-A]	0.006[<B]	0.009[C-A]

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: A Refers to Peel Sanitary By-Law 53-2010, B Refers to Peel Storm By-Law 53-2010, C Refers to City of Mississauga - Storm Sewer Discharge
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By:



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Exceedance Summary

AGAT WORK ORDER: 23T030554

PROJECT: CH244.00

CLIENT NAME: TERRAPEX ENVIRONMENTAL LIMITED

ATTENTION TO: Brian Theimer

SAMPLEID	SAMPLE TITLE	GUIDELINE	ANALYSIS PACKAGE	PARAMETER	UNIT	GUIDEVALUE	RESULT
5030543	MW101S	ON Mississauga SM	Inorganic Chemistry (Water)	Phenols	mg/L	0.008	0.010
5030543	MW101S	ON Peel SM	Inorganic Chemistry (Water)	Phenols	mg/L	0.008	0.010
5030543	MW101S	ON Peel SM	Inorganic Chemistry (Water)	Total Manganese	mg/L	0.05	0.096
5030547	MW113S	ON Mississauga SM	Inorganic Chemistry (Water)	Phenols	mg/L	0.008	0.013
5030547	MW113S	ON Peel SM	Inorganic Chemistry (Water)	Phenols	mg/L	0.008	0.013
5030547	MW113S	ON Peel SM	Inorganic Chemistry (Water)	Total Manganese	mg/L	0.05	0.497
5030548	MW118S	ON Mississauga SM	Inorganic Chemistry (Water)	Phenols	mg/L	0.008	0.011
5030548	MW118S	ON Peel SM	Inorganic Chemistry (Water)	Phenols	mg/L	0.008	0.011
5030548	MW118S	ON Peel SM	Inorganic Chemistry (Water)	Total Manganese	mg/L	0.05	0.719
5030549	MW115	ON Peel SM	Inorganic Chemistry (Water)	Total Manganese	mg/L	0.05	0.216
5030550	MW103	ON Mississauga SM	Inorganic Chemistry (Water)	Phenols	mg/L	0.008	0.009
5030550	MW103	ON Peel SM	Inorganic Chemistry (Water)	Phenols	mg/L	0.008	0.009
5030550	MW103	ON Peel SM	Inorganic Chemistry (Water)	Total Manganese	mg/L	0.05	0.056

AGAT Laboratories
5835 COOPERS AVENUE
MISSISSAUGA, ONTARIO
CANADA L4Z 1Y2
TEL (905)712-5100
FAX (905)712-5122
http://www.agatlabs.com

Quality Assurance

CLIENT NAME: TERRAPEX ENVIRONMENTAL LIMITED
AGAT WORK ORDER: 23T030554
PROJECT: CH244.00
ATTENTION TO: Brian Theimer
SAMPLING SITE:120 Queen St. South, Mississauga
SAMPLED BY:BV/VS

Water Analysis

RPT Date: Jun 07, 2023			DUPLICATE				REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Method Blank	Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
Inorganic Chemistry (Water)															
Dissolved Manganese	5030057		0.009	0.010	NA	< 0.002	95%	70%	130%	107%	80%	120%	101%	70%	130%
Total Manganese	5027962		<0.020	<0.020	NA	< 0.020	95%	70%	130%	92%	80%	120%	95%	70%	130%
Phenols	5031924		0.003	0.003	NA	< 0.002	94%	90%	110%	96%	90%	110%	98%	80%	120%

Comments: NA signifies Not Applicable.
Duplicate NA: results are under 5X the RDL and will not be calculated.

Certified By:

AGAT Laboratories

5835 COOPERS AVENUE
MISSISSAUGA, ONTARIO
CANADA L4Z 1Y2
TEL (905)712-5100
FAX (905)712-5122
http://www.agatlabs.com

Time Markers

AGAT WORK ORDER: 23T030554
PROJECT: CH244.00

CLIENT NAME: TERRAPEX ENVIRONMENTAL LIMITED

ATTENTION TO: Brian Theimer

Sample ID	Sample Description	Sample Type	Date Sampled	Date Received
5030543	MW101S	Water	30-MAY-2023	31-MAY-2023

Inorganic Chemistry (Water)

Parameter	Date Prepared	Date Analyzed	Initials
Dissolved Manganese	02-JUN-2023	02-JUN-2023	DW
Total Manganese	01-JUN-2023	01-JUN-2023	DW
Phenols	01-JUN-2023	01-JUN-2023	WZ

5030547	MW113S	Water	30-MAY-2023	31-MAY-2023

Inorganic Chemistry (Water)

Parameter	Date Prepared	Date Analyzed	Initials
Dissolved Manganese	02-JUN-2023	02-JUN-2023	DW
Total Manganese	01-JUN-2023	01-JUN-2023	DW
Phenols	01-JUN-2023	01-JUN-2023	WZ

5030548	MW118S	Water	30-MAY-2023	31-MAY-2023

Inorganic Chemistry (Water)

Parameter	Date Prepared	Date Analyzed	Initials
Dissolved Manganese	02-JUN-2023	02-JUN-2023	DW
Total Manganese	01-JUN-2023	01-JUN-2023	DW
Phenols	01-JUN-2023	01-JUN-2023	WZ

5030549	MW115	Water	30-MAY-2023	31-MAY-2023

Inorganic Chemistry (Water)

Parameter	Date Prepared	Date Analyzed	Initials
Dissolved Manganese	02-JUN-2023	02-JUN-2023	DW
Total Manganese	01-JUN-2023	01-JUN-2023	DW
Phenols	01-JUN-2023	01-JUN-2023	WZ

5030550	MW103	Water	30-MAY-2023	31-MAY-2023

Inorganic Chemistry (Water)

Parameter	Date Prepared	Date Analyzed	Initials
Dissolved Manganese	02-JUN-2023	02-JUN-2023	DW
Total Manganese	01-JUN-2023	01-JUN-2023	DW
Phenols	01-JUN-2023	01-JUN-2023	WZ

AGAT Laboratories

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MISSISSAUGA, ONTARIO
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TEL (905)712-5100
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http://www.agatlabs.com

Method Summary

CLIENT NAME: TERRAPEX ENVIRONMENTAL LIMITED

AGAT WORK ORDER: 23T030554

PROJECT: CH244.00

ATTENTION TO: Brian Theimer

SAMPLING SITE:120 Queen St. South, Mississauga

SAMPLED BY:BV/VS

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Water Analysis			
Dissolved Manganese	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Total Manganese	MET-93-6103	modified from EPA 200.8, 3005A, 3010A & 6020B	ICP-MS
Phenols	INOR-93-6072	modified from SM 5530 D	LACHAT FIA

AGAT Laboratories

5835 Coopers Avenue
Mississauga, Ontario L4Z 1Y2
Ph: 905.712.5100 Fax: 905.712.5122
webearth.agatlabs.com

Laboratory Use Only
Work Order #: 23T030554
Cooler Quantity: [illegible]
Arrival Temperatures: 8.6 | 8.9 | 7.7
Custody Seal Intact: ☒ Yes ☐ No ☐ N/A
Notes: [illegible]

Chain of Custody Record

If this is a Drinking Water sample, please use Drinking Water Chain of Custody Form (potable water intended for human consumption)

Report Information:
Company: Terrapex Environmental Ltd.
Contact: Brian Theimer
Address: 90 Scarsdale Road
Toronto, ON M3B 2R7
Phone: Fax:
Reports to be sent to:
1. Email: b.theimer@terrapex.com; a.durbano@terrapex.com
2. Email: [illegible]

Regulatory Requirements: ☐ No Regulatory Requirement
(Please check all applicable boxes)

☐ Regulation 153/04 — Table (Indicate One): ☐ Ind/Com ☐ Res/Park ☐ Agriculture; Soil Texture (Check One): ☐ Coarse ☐ Fine

☒ Sewer Use — ☒ Sanitary ☒ Storm; Region: Peel Sanitary/Storm (Indicate One) Mississauga Storm

☐ Regulation 558 ☐ CCME ☐ Prov. Water Quality Objectives (PWQO) ☐ Other (Indicate One)

Is this submission for a Record of Site Condition? ☐ Yes ☒ No

Report Guideline on Certificate of Analysis: ☐ Yes ☒ No

Turnaround Time (TAT) Required:
Regular TAT ☒ 5 to 7 Business Days
Rush TAT (Rush Surcharges Apply) ☐ 3 Business Days ☐ 2 Business Days ☐ 1 Business Day
OR Date Required (Rush Surcharges May Apply):
Please provide prior notification for rush TAT
**TAT is exclusive of weekends and statutory holidays*

Project Information:
Project: CH244.00
Site Location: 120 Queen St. South, Mississauga
Outlet #:
Sampled By: BV/VS
AGAT Quote #: 775958 PO:
Please note: If quotation number is not provided, client will be billed full price for analysis.

Invoice Information:
Bill To Same: Yes ☒ No ☐
Company:
Contact:
Address:
Email: accounts.payable@terrapex.com

Activity
Assessment ☐ A1 ☐ A2 ☐ AR ☐ AV
Remediation ☐ RE ☐ RX ☐ RI ☐ RA
Contaminant Management ☐ M ☐ MW ☐ MV

Sample Identification	Date Sampled	Time Sampled	# of Containers	Sample Matrix	Comments/ Special Instructions	Field Filtered - Metals, Hg, CrVI (Y/N)	Dissolved Mn	Total Mn	Total Phenols	Potentially Hazardous or High Concentration (Y/N)
MW101S	30-May-23	2:30pm	3	GW		Y	X	X	X	N
MW113S	↓	2:45pm	3	GW		Y	X	X	X	N
MW118S	↓	3:00pm	3	GW		Y	X	X	X	N
MW115	↓	3:15pm	3	GW		Y	X	X	X	N
MW103	↓	3:30pm	3	GW		Y	X	X	X	N

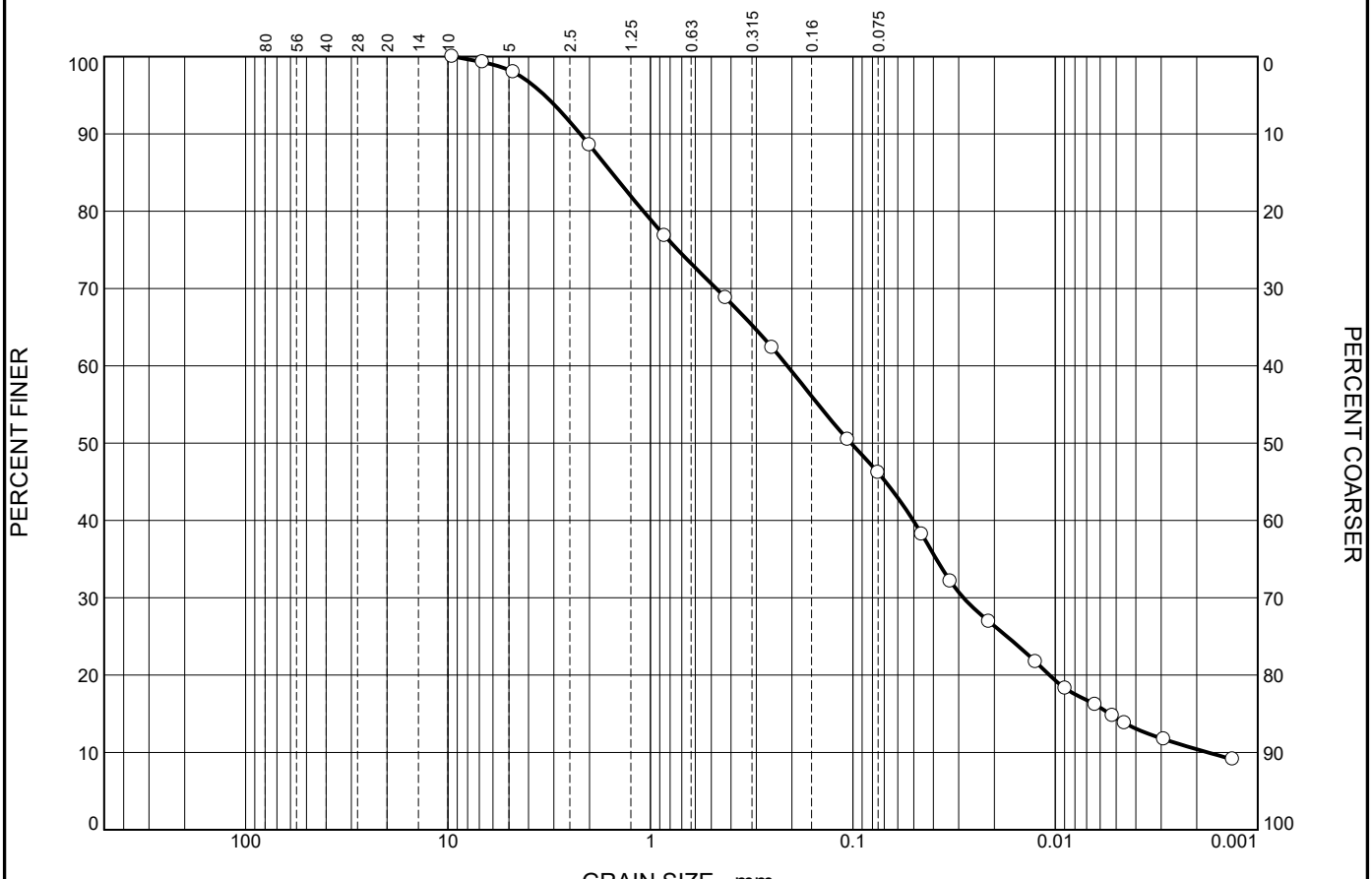
Other analysis columns (not marked): Metals and Inorganics; O. Reg 153: ☐ All Metals ☐ 153 Metals (excl. Hydrides) ☐ Hydride Metals ☐ 153 Metals (incl. Hydrides); ORPs: ☐ B-HWS ☐ Cl ☐ CN ☐ Cr^{6+} ☐ EC ☐ FOC ☐ Hg ☐ pH ☐ SAR; Full Metals Scan; Regulation/Custom Metals; Nutrients: ☐ TP ☐ NH_3 ☐ TKN ☐ NO_3 ☐ NO_2 ☐ NO_3+NO_2; Volatiles: ☐ VOC ☐ BTEX ☐ THM; PHCs F1 - F4; ABNs; PAHs; PCBs: ☐ Total ☐ Aroclors; Organochlorine Pesticides; TCLP: ☐ M&I ☐ VOCs ☐ ABNs ☐ B(a)P ☐ PCBs; Sewer Use

Samples Relinquished By (Print Name and Sign): Andrew Durbano [signature] Date: May31/23 Time: 10:00am
Samples Received By (Print Name and Sign): [signature] Date: 05/31/23 Time: 13:37
Samples Relinquished By (Print Name and Sign): Date Time
Samples Received By (Print Name and Sign): Date Time
Samples Relinquished By (Print Name and Sign): Date Time
Samples Received By (Print Name and Sign): Date Time

\# jars used and not returned: Ø
Page 1 of 1
Nº: SS-T-01865

APPENDIX V
GRAIN SIZE ANALYSES

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

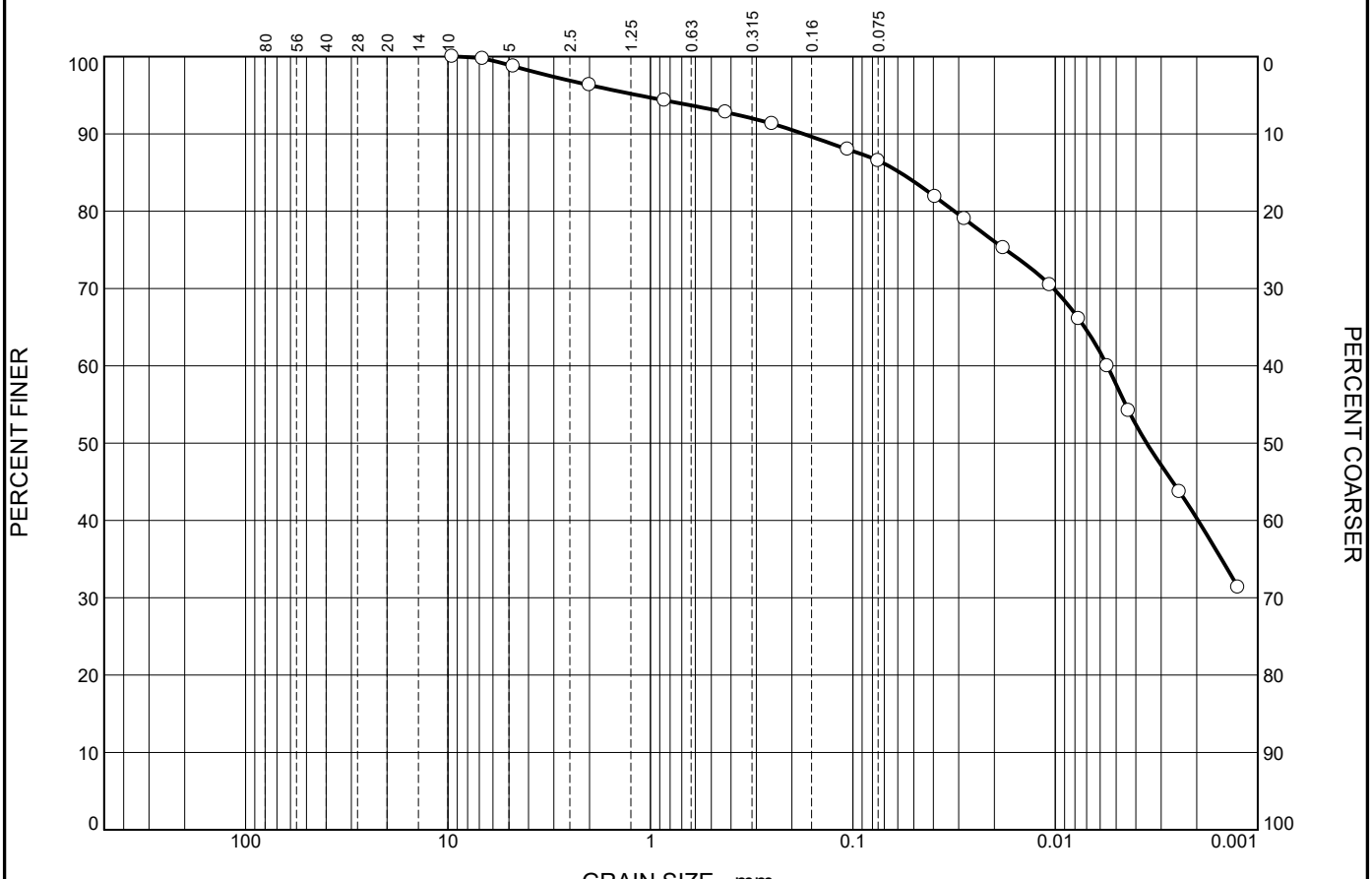
Remarks:

○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

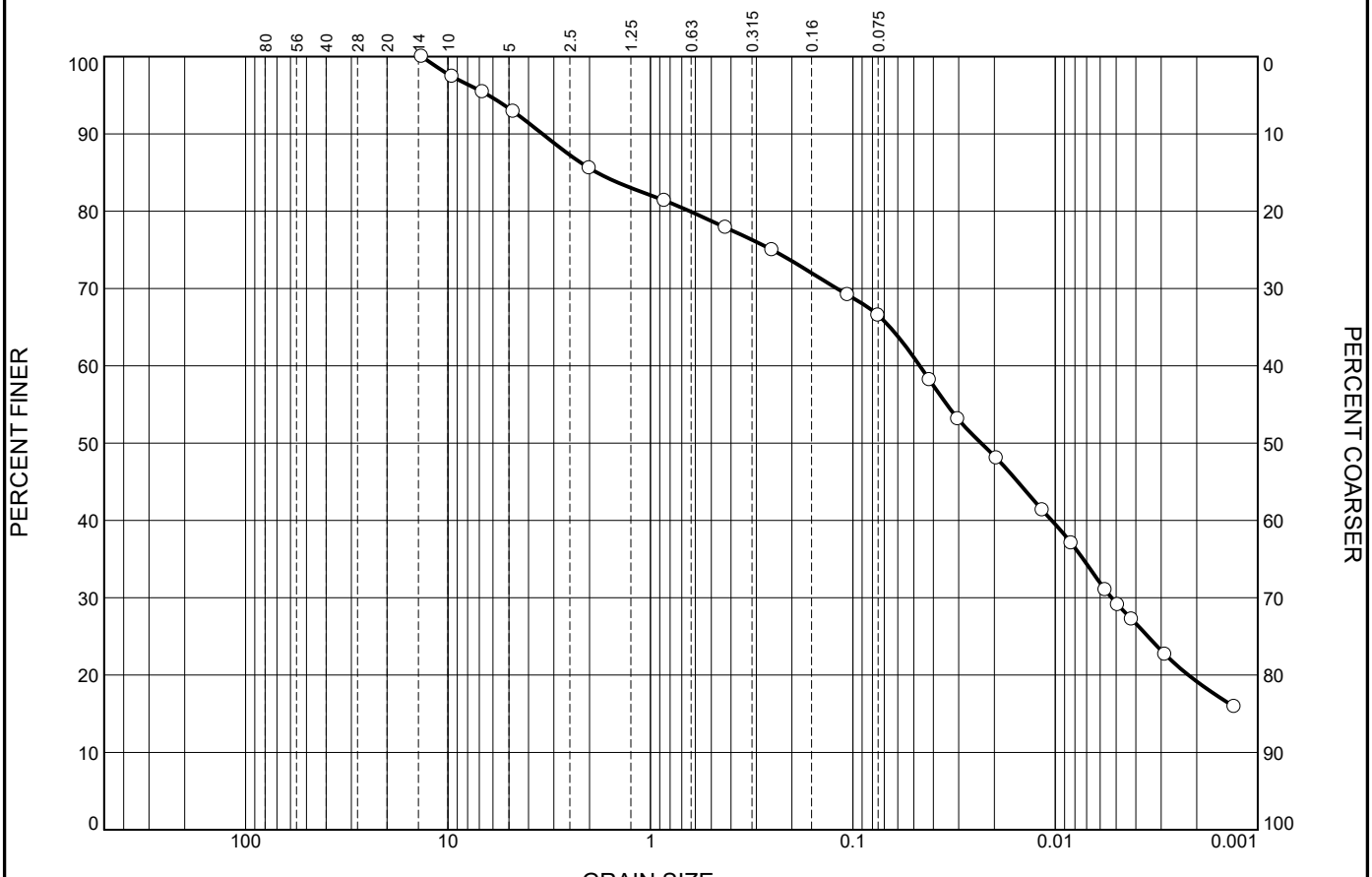
Remarks:

○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

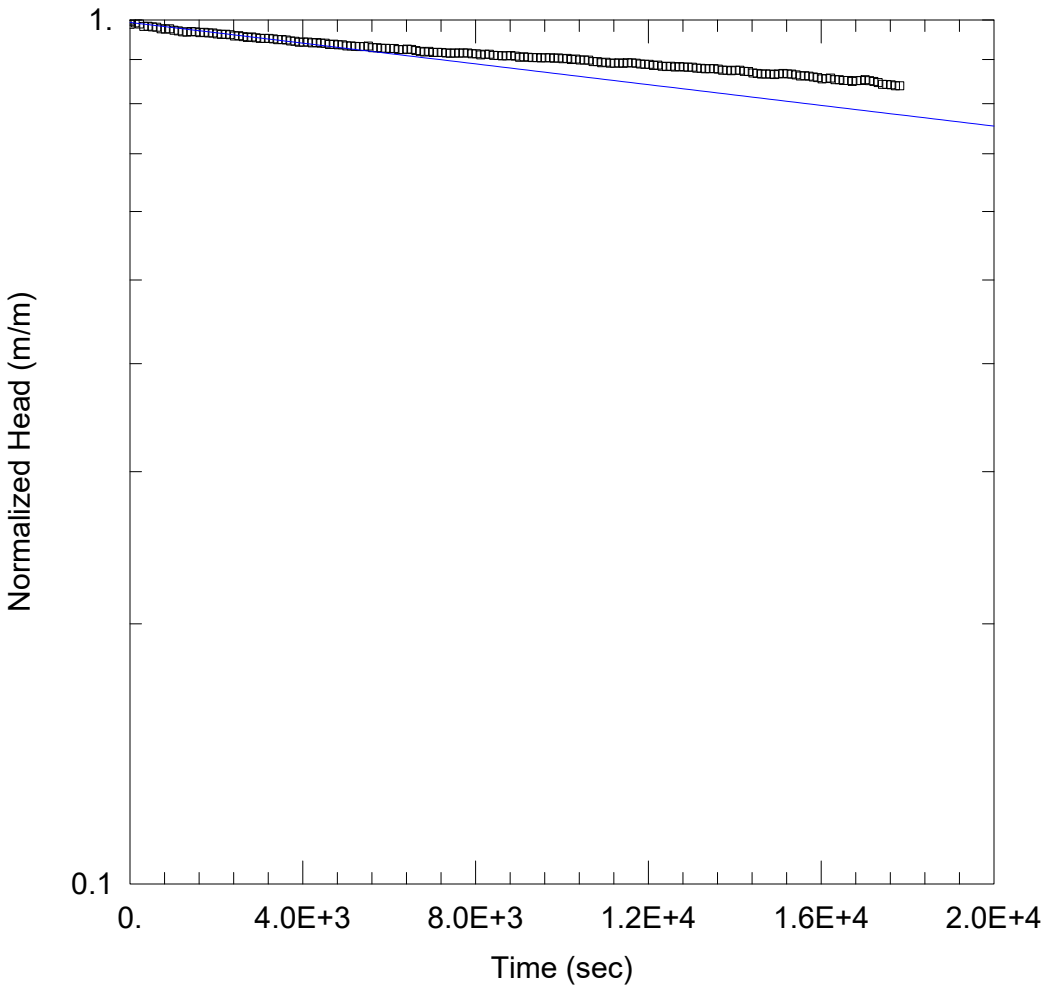
Remarks:

○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

APPENDIX VI
HYDRAULIC CONDUCTIVITY TESTING



HYDROGEOLOGICAL ASSESSMENT

Data Set: C:\...\MW101S.aqt
Date: 03/22/23 Time: 13:53:18

PROJECT INFORMATION

Company: Terrapex Environmental Ltd.
Client: DeZen Realty Company Ltd.
Project: CH244.00
Location: 120-158 Queen St. South
Test Well: MW101S
Test Date: March 15, 2023

AQUIFER DATA

Saturated Thickness: 10.5 m Anisotropy Ratio (Kz/Kr): 1.

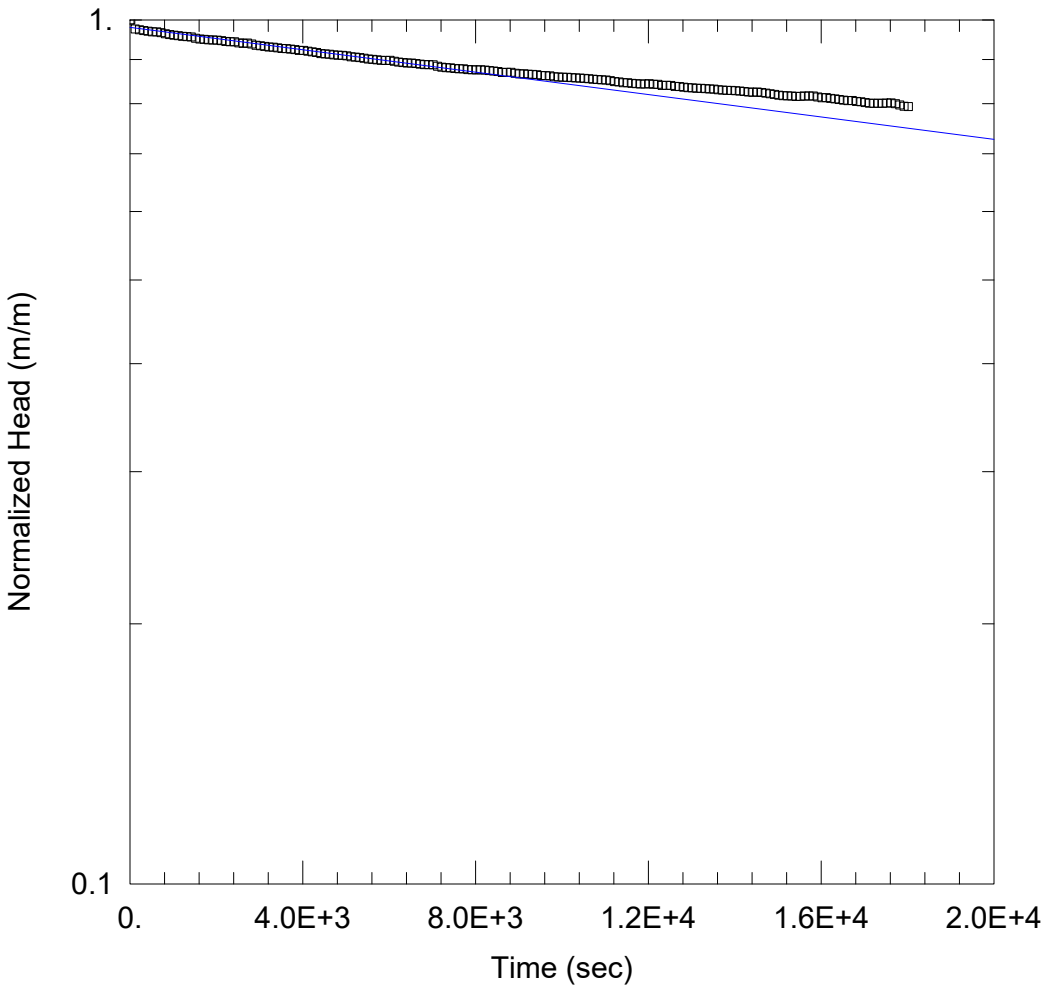
WELL DATA (MW101S)

Initial Displacement: 1.866 m Static Water Column Height: 10.5 m
Total Well Penetration Depth: 5.104 m Screen Length: 1.524 m
Casing Radius: 0.026 m Well Radius: 0.031 m

SOLUTION

Aquifer Model: Unconfined Solution Method: Bouwer-Rice

K = 9.315E-9 m/sec y0 = 1.854 m



HYDROGEOLOGICAL ASSESSMENT

Data Set: C:\...\MW102.aqt
Date: 03/22/23 Time: 13:53:43

PROJECT INFORMATION

Company: Terrapex Environmental Ltd.
Client: DeZen Realty Company Ltd.
Project: CH244.00
Location: 120-158 Queen St. South
Test Well: MW102
Test Date: March 15, 2023

AQUIFER DATA

Saturated Thickness: 11.2 m Anisotropy Ratio (Kz/Kr): 1.

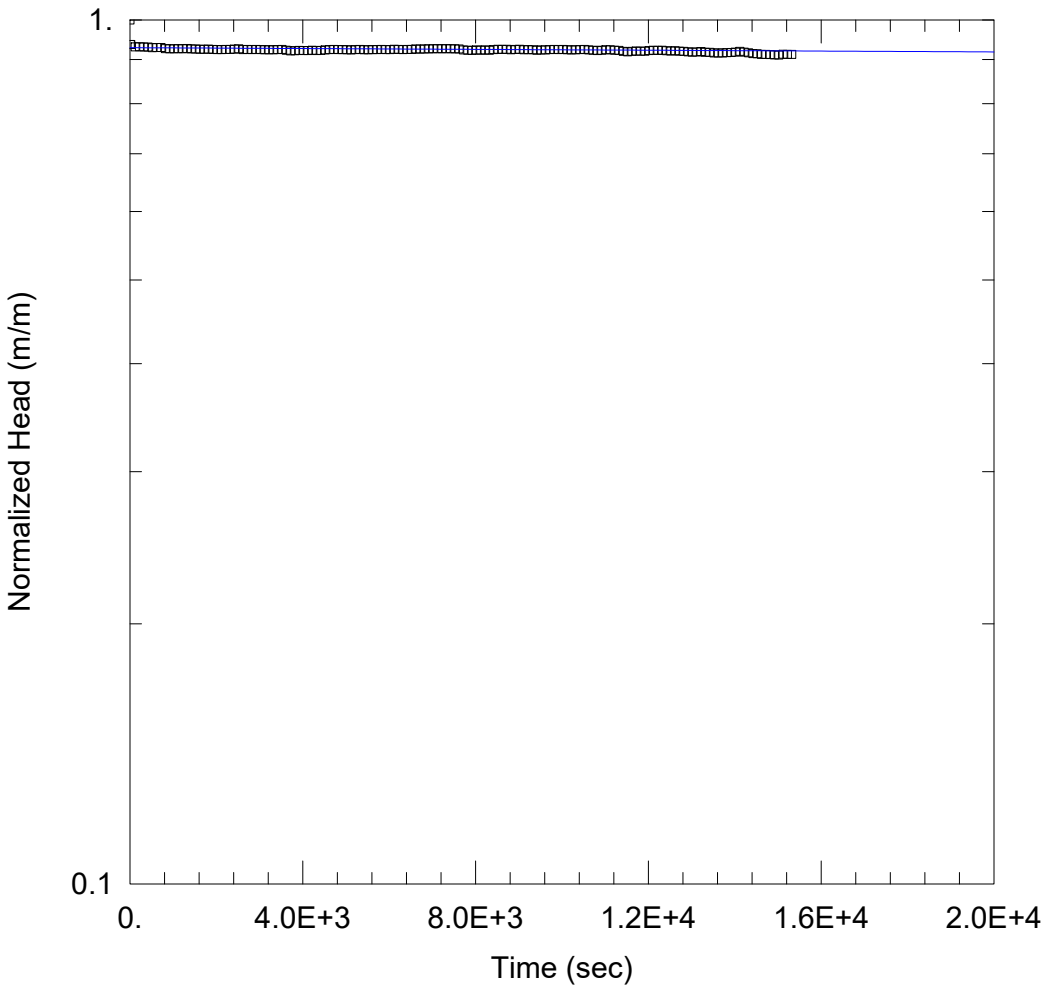
WELL DATA (MW102)

Initial Displacement: 2.251 m
Total Well Penetration Depth: 10.01 m
Casing Radius: 0.026 m
Static Water Column Height: 11.2 m
Screen Length: 1.524 m
Well Radius: 0.031 m

SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice

K = 1.147E-8 m/sec
y0 = 2.207 m



HYDROGEOLOGICAL ASSESSMENT

Data Set: C:\...\MW105.aqt
Date: 03/22/23 Time: 13:54:05

PROJECT INFORMATION

Company: Terrapex Environmental Ltd.
Client: DeZen Realty Company Ltd.
Project: CH244.00
Location: 120-158 Queen St. South
Test Well: MW105
Test Date: March 15, 2023

AQUIFER DATA

Saturated Thickness: 6.2 m Anisotropy Ratio (Kz/Kr): 1.

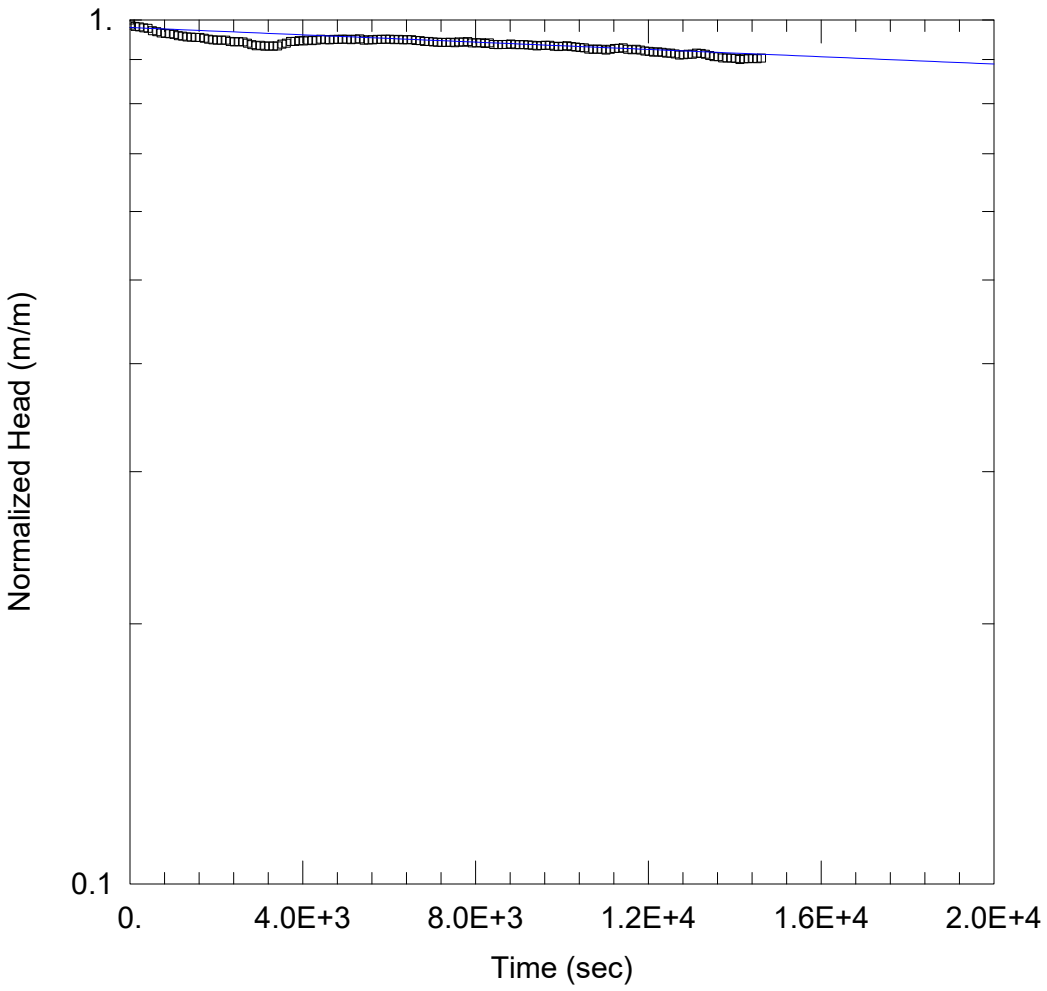
WELL DATA (MW105)

Initial Displacement: 2.298 m Static Water Column Height: 6.2 m
Total Well Penetration Depth: 5.344 m Screen Length: 1.524 m
Casing Radius: 0.026 m Well Radius: 0.031 m

SOLUTION

Aquifer Model: Unconfined Solution Method: Bouwer-Rice

K = 4.055E-10 m/sec y0 = 2.134 m



HYDROGEOLOGICAL ASSESSMENT

Data Set: C:\...\MW113D.aqt
Date: 03/22/23 Time: 16:49:02

PROJECT INFORMATION

Company: Terrapex Environmental Ltd.
Client: DeZen Realty Company Ltd.
Project: CH244.00
Location: 120-158 Queen St. South
Test Well: MW113
Test Date: March 15, 2023

AQUIFER DATA

Saturated Thickness: 6.9 m Anisotropy Ratio (Kz/Kr): 1.

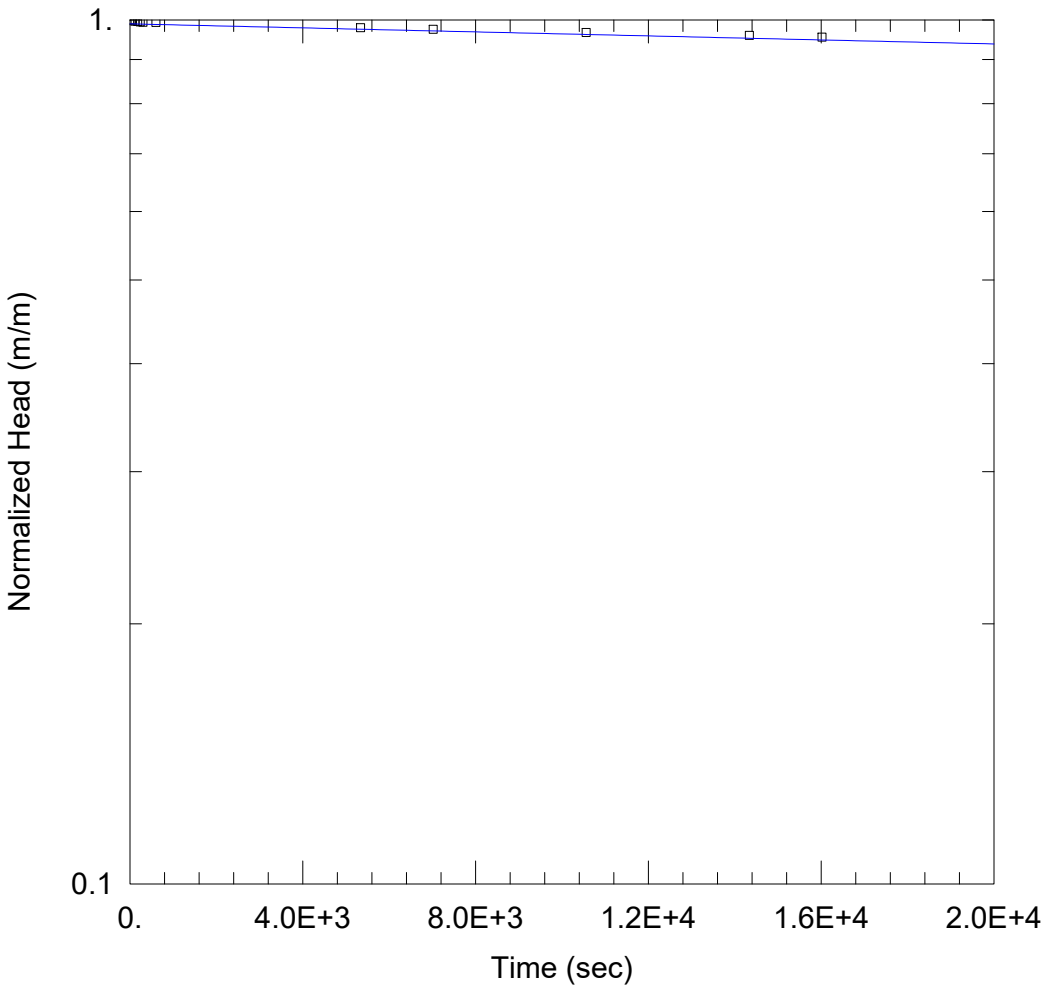
WELL DATA (MW113)

Initial Displacement: 1.58 m
Total Well Penetration Depth: 5.354 m
Casing Radius: 0.026 m
Static Water Column Height: 6.9 m
Screen Length: 1.524 m
Well Radius: 0.031 m

SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice

K = 3.431E-9 m/sec
y0 = 1.548 m



HYDROGEOLOGICAL ASSESSMENT

Data Set: C:\...\MW115.aqt
Date: 03/22/23 Time: 13:54:42

PROJECT INFORMATION

Company: Terrapex Environmental Ltd.
Client: DeZen Realty Company Ltd.
Project: CH244.00
Location: 120-158 Queen St. South
Test Well: MW115
Test Date: March 15, 2023

AQUIFER DATA

Saturated Thickness: 8. m Anisotropy Ratio (Kz/Kr): 1.

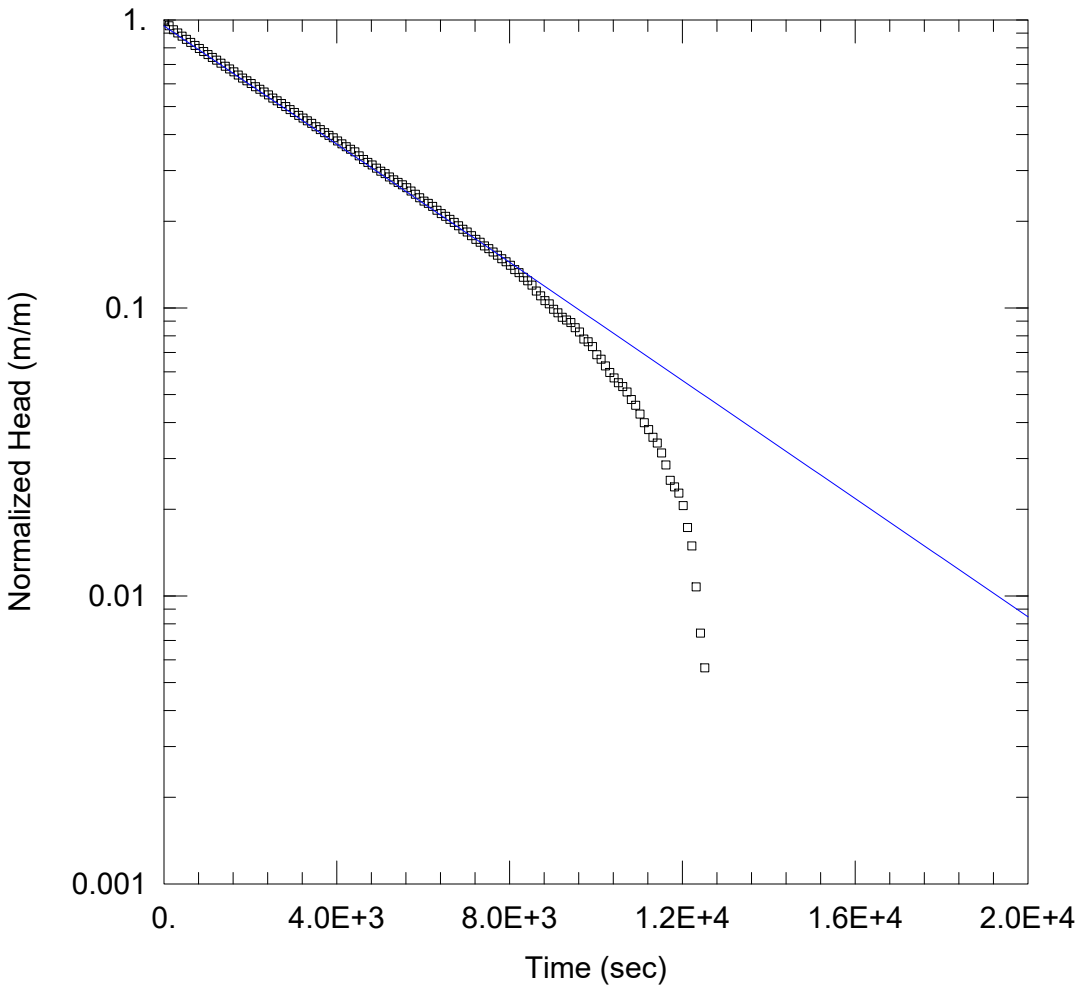
WELL DATA (MW115)

Initial Displacement: 2.347 m
Total Well Penetration Depth: 5.34 m
Casing Radius: 0.026 m
Static Water Column Height: 8. m
Screen Length: 1.22 m
Well Radius: 0.031 m

SOLUTION

Aquifer Model: Unconfined Solution Method: Bouwer-Rice

K = 2.224E-9 m/sec y0 = 2.322 m



HYDROGEOLOGICAL ASSESSMENT

Data Set: C:\...\MW118D.aqt
Date: 03/22/23 Time: 16:49:58

PROJECT INFORMATION

Company: Terrapex Environmental Ltd.
Client: DeZen Realty Company Ltd.
Project: CH244.00
Location: 120-158 Queen St. South
Test Well: MW118
Test Date: March 15, 2023

AQUIFER DATA

Saturated Thickness: 10.7 m Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (MW118)

Initial Displacement: 1.777 m
Total Well Penetration Depth: 9.294 m
Casing Radius: 0.026 m
Static Water Column Height: 10.7 m
Screen Length: 1.524 m
Well Radius: 0.031 m

SOLUTION

Aquifer Model: Unconfined
Solution Method: Bouwer-Rice

K = 1.788E-7 m/sec
y0 = 1.693 m