• Lakeview Community Partners Limited

Due Diligence Phase II Environmental Site Assessment

Type of Document
Final Report

Project Name
800 Hydro Road, Mississauga, Ontario

Project Number
MRK-00243747-A0

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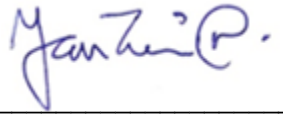

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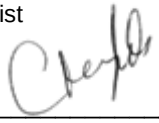

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SUMMARY SHEET

800 Hydro Road, Mississauga, Ontario

1. Site and Adjacent Land Conditions

Land Use	Industrial
Date of Soil Sampling	November 6 to 10, 13 and 14, 2017
Date of Ground Water Sampling	November 7, 8, 10, and 13 to 15, 2017
Number of Test Holes Drilled	12
Number of Monitoring Wells Installed	9
Type of OVM Meter	RKI Eagle 2
Adjacent Land Use (current)	North - Commercial/Industrial South - Lake Ontario East - Commercial/Industrial West - Commercial/Industrial/Parkland
Aquifer Usage in 100 metre Radius	No

2. Site Soil Conditions

Stratigraphy	**Maximum Depths (m)**	**Comments**
Sand and gravel fill	2.57	10 to 30 cm of topsoil underlain by brown sand and gravel fill, trace brick, moist, no odour, no staining.
Clayey silt fill	3.95	Brown clayey silt fill, trace brick, moist, no odour, no staining.
Silt to clayey silt till	15.2	Brown to grey silt to clayey silt till, moist, no odour, no staining.
Shale bedrock	>15.2	Grey shale bedrock, no odour, no staining.

3. Ground Water

Depth (mbgs)	1.25 to 7.77
Screened Interval of Monitoring Well(s) (mbgs)	6.09 to 7.62 at TH101, 14.33 to 15.24 at TH102, 5.48 to 8.53 at TH104 and TH105, 1.52 to 4.57 at TH108, 0.91 to 3.96 at TH109 and TH111, 1.52 to 4.72 at TH110 and 1.21 to 4.27 at TH112
Ground Water Flow Direction	Inferred to be southerly to southeasterly
Liquid Petroleum Detected	No

4. Selected Soil and Ground Water Standards

The Ministry of Environment and Climate Change (MOECC) Table 3 Standards for a residential/parkland/institutional property use with medium to fine textured soils, referenced by Ontario Regulation (O. Reg.) 153/04, are appropriate for this site, except for 1) the portion of the site where the depth to bedrock is less than 2 metres (former Powerhouse area), the MOECC Table 7 Standards for a residential/parkland/institutional property use with medium to fine textured soils applies; and 2) the portion of the site within 30 metres of surface water body, where the MOECC Table 9 Standards for a residential/parkland/ institutional property use applies.

5. Analytical Results (Samples exceeding MOECC Table 3, 7 or Table 9 Standards)

Location	Medium	Depth (mbgs)	Parameters
TH108-SS1	Soil	0.0 to 0.60	Lead
TH110-SS1	Soil	0.0 to 0.60	Selenium
TH111-SS2	Soil	0.76 to 1.37	PHC fraction F2
TP12-2m	Soil	1.0 to 2.0	PHC fractions F2 and F3 (Table 9 only)
TP13-2.5m	Soil	2.5 to 3.0	PHC fractions F1, F2 and F3 (Table 9 only)
TP14-2m	Soil	2.0 to 3.0	PHC fraction F2
MW1-16	Ground water	1.06 to 4.11	PHC fraction F2
TH110	Ground water	1.06 to 4.11	PHC fractions F2 and F3
TMW301	Ground water	1.06 to 4.11	PHC fraction F2
MW5-05	Ground water	2.29 to 5.33	PHC fraction F2

Executive Summary

The executive summary is a brief synopsis of the report and should not be read in lieu of reading the report in its entirety. EXP was retained by Lakeview Community Partners Limited to conduct a Due Diligence Phase II Environmental Site Assessment for the property municipally addressed as 800 Hydro Road, Mississauga, Ontario (the "site").

The approximately 71.6 hectares (177 acres) site was developed as the former Ontario Power Generation (OPG) Lakeview Coal Generating Plant in the late 1950s; the coal-fired power plant ceased operations in 2005, and was decommissioned and demolished between 2006 and 2008.

The objective of the environmental assessment was to evaluate the potential environmental risks associated with the soil and ground water conditions at the site. The work was done in support of a potential real estate transaction. The soil and ground water investigation included the advancement of 12 test holes (TH101 to TH112), of which nine were completed as ground water monitors (TH101, TH102, TH104, TH105, TH108 to TH112) on November 6 to 10 and November 13, 2017. Eighteen test pits were also advanced to evaluate the subsurface conditions on November 14, 2017. Ground water sampling at the nine newly installed wells and twenty-six existing wells installed previously by various consultants were completed on November 7 to 10 and November 13 to 15, 2017. In addition, three surface water samples were obtained from the former intake channel to assess the quality of surface water within the southern portion of the site.

Soil samples were collected from the 12 test holes and 4 of the 18 test pits (TP11 to TP14) and submitted to the laboratory for analysis of benzene, toluene, ethylbenzene and xylenes (BTEX), petroleum hydrocarbon (PHC) fractions F1 to F4, polychlorinated biphenyls (PCBs), polycyclic aromatic hydrocarbons (PAHs) and/or metals and inorganics. Thirty-five ground water samples were collected for the analysis of PAHs, PHC fractions F1 to F4, volatile organic compounds (VOCs) including BTEX and/or metals and inorganics.

The Ministry of Environmental and Climate Change (MOECC) Table 3 Standards for a residential/parkland/institutional property use with medium to fine textured soils were deemed appropriate for evaluating soil and ground water conditions across most of the site. In areas where the depth to the bedrock is less than 2 metres (former Powerhouse area), the MOECC Table 7 Standards for shallow soils in a non-potable ground water condition were deemed appropriate. In areas within 30 metres of Lake Ontario, the MOECC Table 9 Standards for use within 30 metres of a water body in a non-potable ground water condition were deemed appropriate.

1. **Soil and ground water results outside 30 metres of Lake Ontario**

The soil samples collected from test holes TH101 to TH112 and TP11 and TP13 were within the MOECC Table 3 Standards for all parameters analyzed with the following exceptions:

- One soil sample (TH108-SS1), collected from the sand and gravel fill at 0 to 0.60 mbgs, exhibited a concentration of lead that exceeded the Table 3 Standards;
- One soil sample (TH110-SS1), collected from the sand and gravel fill at 0 to 0.60 mbgs, exhibited a concentration of selenium that exceeded the Table 3 Standards;
- One soil sample (TH111-SS2), collected from the sand and gravel fill at 0.76 to 1.37 mbgs, exhibited a concentration of PHC fraction F2 that exceeded the Table 3 Standards;
- One soil sample (TP14-2m), collected from the sand and gravel fill at 2.0 to 3.0 mbgs, exhibited a concentration of PHC fraction F2 that exceeded the Table 3 Standards.

The ground water samples were within the MOECC Table 3 Standards for all property uses with medium to fine textured soil for all parameters analyzed, with the following exceptions:

- One ground water sample (MW1-16, screened from 1.06 to 4.11 mbgs), exhibited a concentration of PHC fraction F2 that exceeded the Table 3 Standards; and
- One ground water sample (TH110, screened from 1.06 to 4.11 mbgs), exhibited concentrations of PHC fractions F2 and F3 that exceeded the Table 3 Standards.

Exceedances of the MOECC generic Standards do not necessarily mean there is an unacceptable risk to human health or the environment. There are no concerns associated with the current site status.

2. Soil and ground water results in areas of shallow bedrock

Soil samples were obtained from one location (TH112) at depths ranging from 1.52 to 2.13 mbgs, in the area where the former transformers were located, and petroleum impacted soil was identified. Soil samples were analyzed for PHC fraction F1 to F4, BTEX and PCBs. The soil samples were within the MOECC Table 7 Standards for all parameters analyzed.

Ground water samples were obtained from five locations (MW219, MW215, MW232, MW233 and TH112) located within and immediately surrounding the footprint of the Powerhouse. Ground water samples were analyzed for PHC fractions F1 to F4 and VOCs. The ground water samples were within the MOECC Table 7 Standards for all property uses with medium to fine textured soil for all parameters analyzed.

3. Soil and ground water results within 30 metres of Lake Ontario

The soil samples collected from test pits TP10 and TP12 were within the MOECC Table 9 Standards for all parameters analyzed with the following exceptions:

- One soil sample (TP12-2m), collected from the sand and gravel fill at 1.0 to 2.0 mbgs, exhibited concentrations of PHC fractions F2 and F3 that exceeded the Table 9 Standards; and
- One soil sample (TP13-2.5m), collected from the sand and gravel fill at 2.5 to 3.0 mbgs, exhibited concentrations of PHC fractions F1, F2 and F3 that exceeded the Table 9 Standards.

The ground water samples were within the MOECC Table 9 Standards for all property uses with medium to fine textured soil for all parameters analyzed with the following exception:

- One ground water sample (TMW301, screened from 1.06 to 4.11 mbgs), exhibited concentrations of PHC fraction F2 that exceeded the Table 9 Standards; and
- One ground water sample (MW5-05, screened from 2.29 to 5.33 mbgs), exhibited concentrations of PHC fraction F2 that exceeded the Table 9 Standards.

Exceedances of the MOECC generic Standards do not necessarily mean there is an unacceptable risk to human health or the environment. There are no concerns associated with the current site status, however additional environmental assessment work will be required to support a change to a more sensitive land use in accordance with O. Reg. 153/04.

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1. Introduction

EXP Services Inc. (EXP) was retained by Lakeview Community Partners Limited to conduct a Due Diligence Phase II Environmental Site Assessment for the property located at 800 Hydro Road, Mississauga, Ontario (herein referred to as "site" or "subject property").

The objective of the investigation was to evaluate the potential environmental risks associated with soil and ground water quality at the site. The work was done in support of a potential real estate transaction. At the time of the investigation, the site was owned by Ontario Power Generation Inc. (OPG).

EXP was retained to conduct the environmental assessment by Mr. John Dill of Lakeview Community Partners Limited.

The environmental assessment Standards for the subject property were determined using Ontario Regulation (O. Reg.) 153/04 under Part XV.1 of the *Environmental Protection Act*. Soil and ground water samples were submitted to AGAT Laboratories Inc., an accredited laboratory.

The environmental assessment for the subject property was conducted in accordance with Canadian Standards Association (CSA) "*CSA Z769-00 (R2013), Phase II Environmental Site Assessment*" Standards, and generally accepted professional practices. In addition, it is understood that a transition to a more sensitive land use is intended, and that a Record of Site Condition (RSC) filing is required in the future. Therefore, the sampling work for the assessment was done per O. Reg. 153/04. The data collected may be used to supplement any future work in support of the RSC filings.

Subject to this standard of care, EXP makes no express or implied warranties regarding its services and no third party beneficiaries are intended. Figures and tables referenced throughout the report are provided at the beginning of the Appendices. EXP's limitations are outlined in Appendix A.

EXP personnel who conducted assessment work for this project included Ms. Carla Reynolds (QP_{ESA}), Mr. Travis Tan (QP_{ESA}) and Mr. Ajay Jayalath. An outline of their qualifications is provided in Appendix B.

1.1 Property Information

The site is situated south of Lakeshore Road East, adjacent to the Lakefront Promenade Park and Lakeview Water Treatment Plant in Mississauga. The site was first developed as the former OPG Lakeview Coal Generating Plant in the late 1950s; the coal-fired power plant ceased operations in 2005, and was decommissioned and demolished between 2006 and 2008. The site is comprised of approximately 71.6 hectares (177 acres), intended to be redeveloped as follows:

- 27.1 hectares (67 acres), including the adjacent water lots, along the north shore of Lake Ontario, will be developed as "Municipal Lands"; and,

- 44.5 hectares (110 acres) north of the Municipal Lands to be developed for mixed use purposes, the "Development Lands".

The approximate Universal Transverse Mercator (UTM) coordinates for the site centroid are NAD83 17-4825552N 616987E. The UTM coordinates were based on Global Positioning System (GPS) measurements obtained from Google Earth (2017).

A Locality Plan is attached as Figure 1.

2. Background Information

2.1 Physical Setting

The site is located in the physiographic region identified as the Iroquois Plain. The native surficial soils in this region are predominantly composed of older glacial ice deposits, typically silty clay to silt till (*Physiography of Southern Ontario*, Chapman and Putnam, 1984). According to the Geological Survey of Canada map of the area (*Southern Ontario, 1:1,000,000 Scale, Sheet 30S, Map 1355A*), the underlying bedrock geology comprises shale, limestone, dolomite, and siltstone of the Queenston Formation of the Upper Ordovician period.

According to the Geological Survey of Canada map of Southern Ontario (Bedrock Topography of the Greater Toronto and Oak Ridges Moraine Areas, Southern Ontario, Brennand et al., 1998), the bedrock elevation of the subject property is approximately 75 metres above sea level (masl), and is approximately even with the surface water level of Lake Ontario, located directly south of the site.

The topography in the vicinity of the subject property is relatively flat. Topographic maps of Mississauga (*Ontario Ministry of Natural Resources, Sheet 10 17 6150 48200, Ontario Base Map Series 1:10,000:1984*; *CanVec Series, Map 30 M/12, Edition 1.1, 1:25,000 Scale, Government of Canada, Natural Resources Canada, Earth Sciences Sector, Centre for Topographic Information, 2009*) were reviewed. The topographic contours indicate ground water is expected to flow southeast towards Lake Ontario.

Lake Ontario is located directly south of the site; the site includes an approximately 14.4 hectare (35.6 acre) water lot. Local and regional ground water flow is anticipated to be in the southerly to southeasterly direction towards Lake Ontario.

Based on the Ministry of Natural Resources and Forestry's "Make a Map: Natural Heritage Areas" the site is not located within 30 metres of any of the following:

- An area reserved or set apart as a provincial park or conservation reserve under the Provincial Parks and Conservation Reserves Act, 2006;
- An area of natural and scientific interest (life science or earth science) identified by the Ministry of Natural Resources as having provincial significance;
- A wetland identified by the Ministry of Natural Resources as having provincial significance;

- An area designated as an escarpment natural area or an escarpment protection area by the Niagara Escarpment Plan under the Niagara Escarpment Planning and Development Act;
- An area identified by the Ministry of Natural Resources as significant habitat of a threatened or endangered species;
- An area which is habitat of a species that is classified under section 7 of the Endangered Species Act, 2007 as a threatened or endangered species;
- Property within an area designated as a natural core area or natural linkage area within the area to which the Oak Ridges Moraine Conservation Plan under the Oak Ridges Moraine Conservation Act, 2001 applies; and,
- An area set apart as a wilderness area under the Wilderness Areas Act.

Information available on the Ministry of Natural Resources (MNR) website indicated that the site is not located on or within 30 metres of any ANSIs including provincial parks, conservation reserves, wilderness areas, or wetlands.

The subject property is not located in the Niagara Escarpment Planning Area as designated under the Niagara Escarpment Planning and Development Act (2009) nor in the Oak Ridges Moraine Area as designated under the Oak Ridges Moraine Conservation Act (2001).

Table 1 summarizes the environmental setting and site characteristics. Well response tests (rising head) were completed by Golder at two locations (BH3 and BH7) in 1998 and at three locations (MW13-02, MW13-14 and MW13-19) in 2013. A review of the single well response tests indicates a horizontal hydraulic conductivity range of 1.0×10^{-4} cm/s to 2.0×10^{-3} cm/s within the overburden fill. An average of the hydraulic conductivities, a value of 1.05×10^{-3} cm/s, was used to calculate ground water flow velocity. Based on a hydraulic gradient of 0.001 m/m and an effective porosity of 15% (McWhorter and Sunada, 1977), Darcy's Law was used to calculate the ground water flow velocity through the overburden fill. The ground water flow velocity was calculated to be approximately 2.21 metres per year. The Darcy's Law calculation is provided in Table 2.

2.2 Past Investigations

Extensive environmental assessments were carried out in the past to characterize both soil and ground water in areas where potentially contaminating activities (PCAs) may have taken place. The laboratory analytical results indicate that concentrations of polycyclic aromatic hydrocarbons (PAHs), and metal and inorganic parameters exceed the applicable MOECC Standards in soil at sporadic locations across the site. The impacts are likely sourced from poor quality industrial fill material that may have been imported onto the site, and the extensive use of coal for power generation. Petroleum-related contaminants were encountered in soil and ground water; the most extensive impacts were found in the southern portion of the site, between the former Powerhouse building to the north and the Lake Ontario intake channel to the south. These impacts resulted from historical site activities, such as the operation of the combustion turbine units (CTUs), and leakage from underground tanks used for storing ignition oil. Liquid petroleum was encountered in the ground in this area. Other contaminants of concern (COCs) include polychlorinated biphenyls (PCBs) from transformer oil.

A number of remediation programs were carried out on the site. In 2007, O' Connor Associates completed a remedial excavation of the former Switchyard (north of the former Powerhouse). The soil in this area was remediated to the 2004 Table 3 Standards for an industrial land use. The same year, Conestoga Rover Associates (CRA), also completed a remediation of the former Coal Yard (eastern half of the site) to the 2004 Table 3 Standards for an industrial land use, and an RSC was filed and acknowledged by the MOECC. A vacuum extraction system operated between 2011 and 2014 to remove the liquid petroleum encountered in the subsurface in the area of the former pumphouses #1 and #2 (south of the Powerhouse). Reportedly, liquid petroleum has not been encountered since 2012.

Site Plans showing the former site configuration are attached as Figures 2A and 2B.

3. Soil and Ground Water Investigation

3.1 Site Condition Standards

This site is not considered to be potentially sensitive. There are no areas of natural or scientific interest on or immediately adjacent to the site. Based on previous environmental assessment work by GHD (GHD, 2015), pH levels measured in soil were within the range of 5 to 9, the acceptable range for non-sensitive site under O. Reg. 153/04, with the exception of 3 samples that had pH ranging from 10.3 to 11.5. The 3 samples were taken from the former Powerhouse area, where there was widespread concrete material, which could have caused the increase in pH. Therefore, it is assumed for the purpose of this due diligence assessment, that soil pH across the site is within 5 to 9. For the future RSC filing, re-sampling of soil pH, or spot remediation, at the locations where the elevated pH levels were measured, will be required.

Bedrock across much of the site is present at a depth greater than 2.0 metres below ground surface (mbgs). Around the Powerhouse, bedrock was encountered at shallower, at depths of about 0.6 to 2 mbgs. South of the Powerhouse, the depth to bedrock increases as a result of the historical infilling of the lake; the depth to bedrock ranges from about 4 to 5 mbgs.

Given the above information, and considering the proposed residential/commercial land use, it is determined that the applicable Site Condition Standards (SCS) for the site are as follows:

- Table 3 Standards for residential/commercial property use with medium to fine textured soils for the portion of the site greater than 30 metres from a water body;
- Table 7 Standards for residential/commercial property use with medium to fine textured soils for the portion of the site with shallow bedrock (Powerhouse area); and
- Table 9 Standards for residential/commercial property use for properties within 30 metres of a water body with medium to fine textured soils.

The Powerhouse area, where the Table 7 Standards apply, and the area within 30 metres of a water body (Lake Ontario), where the Table 9 Standards apply, is shown on Figures 2A and 2B.

3.2 Subsurface Investigation Methodology

EXP performed the environmental assessment following the requirements of CSA Z769-00 Standards and in accordance with generally accepted professional practices. In addition, it is understood that a transition to a more sensitive land use is intended, and that RSC filings will be required in the near future. Therefore, the sampling work for the Subsurface Assessment was done per O. Reg. 153/04. The data collected may be used to supplement any future work in support of the RSC filings.

The drilling investigation was conducted on November 6 to 10 and 13, 2017. Pontil Drilling Ltd. was contracted by EXP to advance twelve test holes (TH101 to TH112) in the areas of potential environmental concern to characterize the quality of soil and ground water. Additional test holes were advanced as part of a separate geotechnical investigation on the site, also performed by EXP and summarized in a separate report. The geotechnical test holes were advanced to a maximum depth of 15.25 mbgs using a track-mounted CME-75 conventional drill rig, equipped with a split spoon sampling system.

The test pitting investigation was conducted on November 14, 2017. Clarkway Construction was contracted by EXP to advance 18 test pits (TP1 to TP18) at the subject property. The test pits were advanced to a maximum depth of 3.5 mbgs using a track-mounted excavator. A minimum of one representative soil sample was collected from each soil strata observed in each test pit for field screening purposes. Test pits, which were advanced below the ground water table, were left open for a few hours to allow ground water to accumulate in the test pits; no free floating petroleum was observed on the ground water in the test pits.

Test holes and test pit logs are provided in Appendix C.

Worst-case soil samples were selected from each of the test holes and 4 test pits advanced in the CTU area (TP11 to TP14) for laboratory analysis. A deeper delineation soil sample was also retained for potential analysis, if required. The soil samples selected for laboratory analysis were immediately placed into laboratory prepared glass jars, labelled, and stored in a cooler with ice at less than 10˚C. Soil samples were analysed for potential COCs: PHC fractions F1 to F4, volatile organic compounds (VOCs) including benzene, toluene ethylbenzene and xylenes (BTEX), PCBs, PAHs and metals and inorganic parameters.

Nine of the newly advanced test holes were completed as ground water monitors (TH101, TH102, TH104, TH105, TH108, TH109, TH110, TH111 and TH112). Screen intervals were selected to straddle the ground water table to intercept floating liquid petroleum, if any. TH101 and TH102 were advanced to a greater depth to evaluate any potential dense non-aqueous phase liquid migrating from upgradient properties located north of the site. Monitor construction details are included in the test hole logs (Appendix C).

Prior to collecting the ground water samples, the monitors were developed by removing a minimum of three well volume equivalents of ground water or purging to dryness using a dedicated bailer.

Ground water sampling was conducted on November 7, 8,10, and 13 to 15, 2017 at twenty-five existing monitors MW1-06, MW23-07, MW5-05, MW5-06, MW250, MW215, MW219, MW232, MW233, MW240, MW3-16, MW225, TMW301, MW255, MW13-13, MW13-15, MW1-16, MW211, TRW-12, TMW303, TRW-4, TMW306, MW2-14, MW3-14 and MW5-14; and the nine newly installed monitors (TH101, TH102, TH104, TH105, TH108, TH109, TH110, TH111 and TH112). The ground water samples selected for laboratory analysis were immediately placed into laboratory prepared glass bottles and vials, labelled, and transported to the laboratory stored in a cooler with ice at less than 10˚C. Samples were analyzed for PHC fractions F1 to F4, PAHs, VOCs including BTEX and metals.

All laboratory analyses were completed by AGAT Laboratories, an accredited laboratory located in Mississauga, Ontario.

3.3 Field Screening Measurements

Readings of the petroleum vapour concentrations in the soil samples collected during the drilling and test pitting investigation were measured using a RKI Instruments Eagle 2, where there was sufficient recovery. This instrument is designed to detect and measure concentrations of combustible gas in the atmosphere. It is equipped with two ranges of measurement, reading concentrations in parts per million by volume (ppmv) or in percentage lower explosive limit (LEL). The RKI Eagle 2 instrument can determine combustible vapour concentrations in the range equivalent to 0 to 11,000 ppmv of hexane. The instrument was configured to eliminate any response from methane for all sampling conducted at the site. Instrument calibration is checked on a daily basis in the LEL range using standard gases comprised of a known concentration of hexane in air. If the instrument readings are within ±10% of the standard gas value, then the instrument is deemed to be calibrated, however if the readings are greater than ±10% of the standard gas value then the instrument is re-calibrated prior to use. The vapour concentrations are accurate to within ±5% of reading or ±2% LEL (whichever is greater) in the 0-100% LEL range and to within ±50 ppm or ±10% of reading (whichever is greater) in the 0-50,000 ppm range.

Measured petroleum vapours ranged from non-detectable (<25 ppm) to 325 ppm in samples taken from TH101 to TH112 and TP1 to TP18 where there was sufficient recovery to perform vapour measurements. Sample selection for laboratory analysis was determined based on visual observation, odour, and petroleum vapour readings from the RKI Eagle 2.

All measurements of ground water and liquid petroleum (if any) depth were made with a Solinst Model 122 oil/water interface probe. Both the probe and the measuring tape that came into contact with liquids within the monitor are cleaned with Alconox detergent, and then rinsed with distilled water and methanol and allowed to air dry after each measurement. A bailer is also used to check the monitor for the presence of phase-separated liquid petroleum.

No liquid petroleum was observed or measured in any of the monitors.

3.4 Soil and Ground Water Chemical Analysis

During the drilling and test pitting, conducted on November 6 to 10 and 13 to 14, 2017, worst-case soil samples were selected from each of the test holes and 4 test pits advanced in the CTU area (TP11 to TP14) for laboratory analysis of potential COCs, including PHC fractions F1 to F4, PCBs, VOCs (including BTEX), PAHs and metals and inorganics.

Ground water sampling was conducted on November 7, November 8, November 10, November 13 to 15, 2017 at the twenty-five existing monitors and nine newly installed monitors. The ground water samples selected for laboratory analysis were immediately placed into laboratory prepared glass bottles and vials, labelled, and transported to the laboratory stored in a cooler with ice at less than 10˚C. Samples were analyzed for PHC fractions F1 to F4, PAHs, VOCs (including BTEX) and metals.

The results of the chemical analyses are discussed below, by area. The approximate boundaries of the areas are shown on Figure 2B. The Laboratory Certificates of Analysis are attached as Appendix D.

Recreational and Transmission Line Area

Soil samples were obtained from one location (TH102) at depths ranging from 0.0 to 4.20 mbgs. A field duplicate (TH102-SS101) was obtained for one of the samples (TH102-SS1) and analyzed for the same parameters. Samples were analyzed for PAHs and metals to evaluate the potential impact related to fill of unknown quality in the ball diamond area, at the northwest portion of the recreational area.

The soil samples collected from TH102 were within the MOECC Table 3 Standards for all parameters analyzed. The results of the soil chemical analyses and the MOECC Table 3 Standards are provided in Table 3a.

Ground water samples were obtained from six monitors (TH101, TH102, MW2-14, MW3-14, MW5-14 and MW250) screened at depths ranging from 2.13 to 15.24 mbgs. Ground water samples were analyzed for PHC fractions F1 to F4 and VOCs to evaluate the potential of on-coming ground water impacts upgradient off-site properties. TH101 and TH102 were screened at a greater depth to evaluate any potential liquid phase solvent migrating from upgradient properties located north of the site. TH101 was screened from 6.1 to 7.6 mbgs in the bedrock and TH102 was screened from 14.3 to 15.2 mbgs.

The ground water samples were within the MOECC Table 3 Standards for all property uses with medium to fine textured soil for all parameters analyzed. The results of the ground water chemical analyses and the MOECC Table 3 Standards are provided in Table 3b.

Switchyard Area

Soil samples were obtained from three locations (TH103, TH104 and TH105) at depths ranging from 0.0 to 6.71 mbgs, in the areas where soil impacts related to transformer fluid were historically found and remediated. Soil samples were analyzed for PHC fractions F1-F4, BTEX and PCBs to evaluate the potential impacts related to transformer fluids.

The soil samples were within the MOECC Table 3 Standards for all parameters analyzed. The results of the soil chemical analyses and the MOECC Table 3 Standards are provided in Table 4a.

Ground water samples were obtained from two monitors (TH104 and TH105) screened at depths ranging from 5.49 to 8.53 mbgs. Ground water samples were analyzed for PHC fractions F1 to F4 and BTEX. Due to their limited solubility in water, and absence in the soil, ground water is not likely to be impacted by PCBs, and PCBs were therefore not analysed.

The ground water samples were within the MOECC Table 3 Standards for all property uses with medium to fine textured soil for all parameters analyzed. The results of the ground water chemical analyses and the MOECC Table 3 Standards are provided in Table 4b.

Powerhouse Area

Soil samples were obtained from one location (TH112) at depths ranging from 1.52 to 2.13 mbgs, in the area where the former transformers were located, and petroleum impacted soil was identified. Soil samples were analyzed for PHC fraction F1 to F4, BTEX and PCBs.

The soil samples were within the MOECC Table 7 Standards for all parameters analyzed. The results of the soil chemical analyses and the MOECC Table 7 Standards are provided in Table 5a. Copies of the Laboratory Certificates of Analysis are provided in Appendix D.

Ground water samples were obtained from five locations (MW219, MW215, MW232, MW233 and TH112) located within and immediately surrounding the footprint of the powerhouse. The monitors were screened from depths ranging from 0.91 to 4.27 mbgs. Ground water samples were analyzed for PHC fractions F1 to F4 and VOCs.

The ground water samples were within the MOECC Table 7 Standards for all property uses with medium to fine textured soil for all parameters analyzed. The results of the ground water chemical analyses and the MOECC Table 3 Standards are provided in Table 5b.

South of Powerhouse Area

Soil samples were obtained from 8 locations (TH106, TH108, TH109, TH110, TH111, TH112, TP11 and TP14), where the former induction fans, ignition oil USTs and CTU were located. The samples were collected at depths ranging from 0.0 to 3.66 mbgs. Soil samples were analyzed for PHC fractions F1 to F4 including BTEX, PAHs and metals and inorganics.

The soil samples collected were within the MOECC Table 3 Standards for all parameters analyzed with the following exceptions:

- One soil sample (TH108-SS1), collected from the sand and gravel fill at 0 to 0.60 mbgs, exhibited a concentration of lead that exceeded the Table 3 Standards;
- One soil sample (TH110-SS1), collected from the sand and gravel fill at 0 to 0.60 mbgs, exhibited a concentration of selenium that exceeded the Table 3 Standards;
- One soil sample (TH111-SS2), collected from the sand and gravel fill at 0.76 to 1.37 mbgs, exhibited a concentration of PHC fraction F2 that exceeded the Table 3 Standards; and
- One soil sample (TP14-2m), collected from the sand and gravel fill at 2.0 to 3.0 mbgs, exhibited a concentration of PHC fraction F2 that exceeded the Table 3 Standards.

The results of the soil chemical analyses and the MOECC Table 3 Standards are provided in Table 6a.

Ground water samples were obtained from eleven locations (MW3-16, MW13-15, TH108, MW255, MW225, MW240, MW211, MW1-16, TH109, TH110 and TH111) screened at depths ranging from 1.07 to 4.57 mbgs. Two field duplicates (TH1000, MW2559) were obtained and analyzed for the same parameters as the original samples (TH109 and MW255). Ground water samples were analyzed for PHC fractions F1 to F4, VOCs and metals and inorganic parameters.

The ground water samples were within the MOECC Table 3 Standards for all property uses with medium to fine textured soil for all parameters analyzed with the following exceptions:

- One ground water sample (MW1-16, screened from 1.06 to 4.11 mbgs), exhibited a concentration of PHC fraction F2 that exceeded the Table 3 Standards; and
- One ground water sample (TH110, screened from 1.06 to 4.11 mbgs), exhibited concentrations of PHC fractions F2 and F3 that exceeded the Table 3 Standards.

The results of the ground water chemical analyses and the MOECC Table 3 Standards are provided in Table 6b.

Area Within 30 metres of a Water Body

Two test pits were advanced south of the powerhouse, in close proximity to the Intake Channel, to evaluate the soil conditions in the area of the former oil pumphouse. The soil samples were collected at depths ranging from 1.0 to 3.0 mbgs, and were analyzed for PHC fractions F1 to F4 including BTEX. Both test pit samples had concentrations of petroleum-related parameters exceeding the Table 9 Standards:

- One soil sample (TP12-2m), collected from the sand and gravel fill at 1.0 to 2.0 mbgs, exhibited concentrations of PHC fractions F2 and F3 that exceeded the Table 9 Standards; and
- One soil sample (TP13-2.5m), collected from the sand and gravel fill at 2.5 to 3.0 mbgs, exhibited concentrations of PHC fraction F1, F2 and F3 that exceeded the Table 9 Standards.

The results of the soil chemical analyses and the MOECC Table 9 Standards are provided in Table 7a.

Ground water samples were obtained from six monitors (TRW4, TRW12, TMW301, TMW303, TMW306, and MW13-13) located south of the powerhouse along the intake channel, and one monitor (MW05-05) located south of the former coal pile effluent pond. The monitors were screened at depths ranging from 1.07 to 4.11 mbgs. Two field duplicates (TR43 and TRW129) were obtained and analyzed for the same parameters as the original samples (TR4 and TRW12, respectively). Ground water samples were analyzed for PHC fractions F1 to F4, VOCs, PAHs and/or metals and inorganic parameters.

The ground water samples were within the MOECC Table 9 Standards for all property uses with medium to fine textured soil for all parameters analyzed with the following exceptions:

- One ground water sample (TMW301, screened from 1.06 to 4.11 mbgs), exhibited a concentration of PHC fraction F2 that exceeded the Table 9 Standards; and
- One ground water sample (MW5-05 screened from 2.29 to 5.33 mbgs), exhibited a concentration of PHC fraction F2 that exceeded the Table 9 Standards.

The results of the ground water chemical analyses and the MOECC Table 9 Standards are provided in Table 7b.

Former Coal Yard Area

There were no data gaps for soil in the former Coal Yard area, thus, soil samples were not collected.

Ground water samples were obtained from three monitors (MW1-06, MW5-06 and MW23-07) from depths ranging from 0.76 to 4.42 mbgs. MW5-06 is located in the former maintenance garage area, where petroleum-related impacts were remediated. Ground water samples were analyzed for PAHs, PHC fractions F1 to F4, VOCs and metals and inorganics.

The ground water samples were within the MOECC Table 3 Standards for all property uses with medium to fine textured soil for all parameters analyzed. The results of the ground water chemical analyses and the MOECC Table 3 Standards are provided in Table 8.

Intake Channel

Surface water samples were obtained from three locations (GR1, GR2 and GR3) from the surface of the intake channel.

The results were compared to the Aquatic Protection Values (APVs) published in the *Rationale For The Development Of Soil And Ground Water Standard For Use At Contaminated Sites in Ontario* Document by the MOECC in 2011. All parameters analysed were below the laboratory detection limits, however, the following parameters had detection limits that exceeded the APV:

acenaphthylene, benzo(a)anthracene, benzo(g,h,i)perylene, chrysene, dibenz(a,h)anthracene, indeno(1,2,3-cd)pyrene and silver. The concentrations of all PAHs and metals are below the laboratory detection limits. Furthermore, PAHs and metals are within the Table 9 Standards in all the ground water samples collected in monitors located in close proximity of the intake channel. Therefore, it is unlikely that the exceedances (of the detection limits) are indicative of actual presence of COCs in the surface water.

The results of the surface water chemical analyses and the corresponding APVs are provided in Table 9.

The above noted soil and ground water exceedances of the generic Standards do not necessarily mean that there is unacceptable risk to human health or the environment, however additional environmental assessment work will be required to support an RSC.

Copies of the Laboratory Certificates of Analysis are provided in Appendix D.

4. Review and Evaluation

4.1 Geology

Site stratigraphy was generally observed to consist of sand and gravel fill to a maximum depth of about 2.57 mbgs, underlain by a clayey silt fill to a maximum depth of about 4 mbgs, underlain by silt to clayey silt till, which extends to the shale bedrock. The bedrock is found at varying depths across the site. The depth to bedrock in the northern portion of the site ranges from about 3.5 mbgs to beyond 15.3 mbgs, with the greatest depths found at the northwest portions (at TH102). Around the powerhouse, bedrock is shallower, at depths of about 0.6 to 2 mbgs. South of the powerhouse, the depth to bedrock increases as a result of the historical infilling of the lake. The depth to bedrock ranges from about 4 to 5 mbgs south of the powerhouse.

It is to be noted that EXP did not advance any test holes in the Coal Yard area. Based on a historical drilling investigation by CRA in 2008, the site stratigraphy was generally observed to consist of fill consisting of topsoil, gravel, and trace coal to a maximum depth of about 0.6 mbgs, underlain by sandy silt with cobbles to a maximum depth of about 3.7 mbgs, underlain by clayey silt till to a maximum depth of about 3.81 mbgs, which extends to the shale bedrock. Bedrock is found at various depths across the site, ranging from 3.81 mbgs to 5.33 mbgs.

It is also to be noted that concrete slabs were encountered at surficial depths in several test hole/test pit locations (TH107, TP3, TP15, TP16 and TP17) advanced in areas immediately around the Powerhouse and to the south of the powerhouse. Crushed concrete, brick and gravel fill were encountered at TP8 and TP18 up to the maximum depth investigated of 3 mbgs.

4.2 Ground Water: Depths and Flow Direction

The screened intervals of the monitoring wells were: 6.09 to 7.62 mbgs at TH101, 14.33 to 15.24 mbgs at TH102, 5.48 to 8.53 mbgs at TH104 and TH105, 1.52 to 4.57 mbgs at TH108, 0.91 to 3.96 mbgs at TH109 and TH111, 1.52 to 4.72 mbgs at TH110 and 1.21 to 4.27 mbgs at TH112. The intervals were chosen based on field observations during drilling in order to straddle the ground water table to intercept floating liquid petroleum, if any, with the exception of TH101 and TH102. TH101 and TH102 were screened deeper to evaluate the potential presence of liquid phase solvents and deep ground water impact migrating from the upgradient industrial/commercial properties onto the site.

The ground water depth was calculated based on the static water level measurement documented during the subsurface investigation using a Solinst Model 122 oil/water interface probe. The depth to ground water was measured to be between 1.25 mbgs (TH109) and 7.77 mbgs (TH105). No liquid petroleum was observed or detected in any of the monitors.

Taking into consideration the local topography and surface water features in the surrounding area, the regional ground water flow direction is inferred to be southerly to southeasterly towards Lake Ontario.

Table 1 summarizes the environmental setting and site characteristics. Well response tests (rising head) were completed by Golder at two locations (BH3 and BH7) in 1998 and at three locations (MW13-02, MW13-14 and MW13-19) in 2013. A review of the single well response tests indicates a horizontal hydraulic conductivity range of 1.0×10^{-4} cm/s to 2.0×10^{-3} cm/s within the overburden fill. An average of the hydraulic conductivities, a value of 1.05×10^{-3} cm/s, was used to calculate ground water flow velocity. Based on a hydraulic gradient of 0.001 m/m and an effective porosity of 15% (McWhorter and Sunada, 1977), Darcy's Law was used to calculate the ground water flow velocity through the overburden fill. The ground water flow velocity was calculated to be approximately 2.21 metres per year. The Darcy's Law calculation is provided in Table 2.

5. Conclusions

Based on the results of the soil analyses, the following conclusions are made:

- The soil sample taken from the ball diamond area, where imported fill material of unknown quality was suspected, exhibited no evidence of fill-related impacts. No putrescible materials or debris was encountered. Concentrations of metals and PAHs, the potential contaminants of concern typically associated with impacted fill, were within the MOECC Table 3 Standards for residential/parkland/institutional land uses, indicating the absence of fill-related impact.
- Soil samples taken from the former Switchyard area, where PCB contamination was historically identified and remediated, exhibited no evidence of PCB-related impacts; concentrations of PCBs, as well as PHC fractions F1 to F4, were within the Table 3 Standards.

- Two soil samples taken from the area south of the former Powerhouse had concentrations of metal parameters (lead and selenium) in exceedance of the Table 3 Standards. Lead and selenium were also identified as fill-related contaminants in previous environmental assessments and can be expected in fill across the site.
- Three soil samples taken from the area of the former CTUs (also south of the former powerhouse) had concentrations of PHC fractions F2 and F3 in exceedance of the Table 3 or 9 Standards. However, the concentrations were several times lower than the highest concentrations historically found in this area, indicating natural attenuation is ongoing. All other soil samples collected across the site had concentrations of PHCs within the Table 3, 7 or 9 Standards.

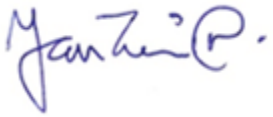
Based on the results of the ground water analyses, the following conclusions are made:

- The ground water samples taken along the northern property boundary exhibited no evidence of impact coming from upgradient industrial properties. Concentrations of all parameters analysed, including VOCs, were within the Table 3 Standards. This indicates it is unlikely that there are any on-coming ground water impacts.
- In the area south of the former powerhouse, where PHC impacts were historically widespread, 4 of the 17 sampling locations had exceedances of petroleum-related parameters (PHC fractions F2 and/or F3). Further, concentrations of PHCs were generally lower than historical maximums, indicating natural attenuation is ongoing.
- Ground water samples taken from the other 17 monitors across the site had concentrations of all parameters analysed within the Table 3, 7 or 9 Standards.
- Ground water samples taken from 7 monitors located close to Lake Ontario had concentrations of all parameters analysed within the Table 3, or 9 Standards.
- All of the parameters analysed in the 3 surface water samples taken from the intake channel were non-detectable for all parameters indicating that surface water in the intake channel is not impacted by on-site contaminations.

Exceedances of the MOECC generic Standards do not necessarily mean there is an unacceptable risk to human health or the environment. There are no concerns associated with the current site status, however additional environmental assessment work will be required to support a change to a more sensitive land use in accordance with O. Reg. 153/04. Remediation and/or risk assessment may be required to support the filing of any RSCs.

Signatures

Respectfully submitted,
EXP Services Inc.



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6. References

1. Canadian Standards Association, *Z769-00 (R2013) Phase II Environmental Site Assessment*, 2000.

2. Chapman, L.J. and D.F. Putnam, *The Physiography of Southern Ontario*, Third Edition, Ontario Ministry of Natural Resources, 1984.

3. Conestoga- Rovers & Associates, *Phase Two Environmental Site Assessment, Former Powerhouse Area, Former Lakeview Generating Station, 800 Hydro Road, Mississauga, Ontario,* dated, June 2015.

4. GHD Limited., *Summary of Environmental Conditions- Future Municipal Park Lands*, *Former Lakeview Generating Station,* 800 Hydro Road, Mississauga, Ontario, dated, June 2016.

5. Golder Associates Ltd., Site Characterization Report Task 1 of the Phase ll Environmental Site Assessment Lakeview Generating Station, 800 Hydro Road, Mississauga, Ontario, dated, December 1998.

6. Golder Associates Ltd., *Phase ll Environmental Site Assessment – Pier Access,* 800 Hydro Road, Mississauga, Ontario, dated, February 2014.

7. Freeze, R.A. and J.A. Cherry, Groundwater, Prentice-Hall of Canada Ltd., 1979.

8. McWhorter and Sunada, Groundwater Hydrology and Hydraulics, 1977.

9. Ontario Geological Survey*, Bedrock Geology of Ontario*, Southern Sheet, Ontario Geological Survey Map 2544, Scale 1:1,000,000, 1991.

10. Ontario Regulation 153/04, Record of Site Condition, Part XV.1 of the *Environmental Protection Act*, July 1, 2011.

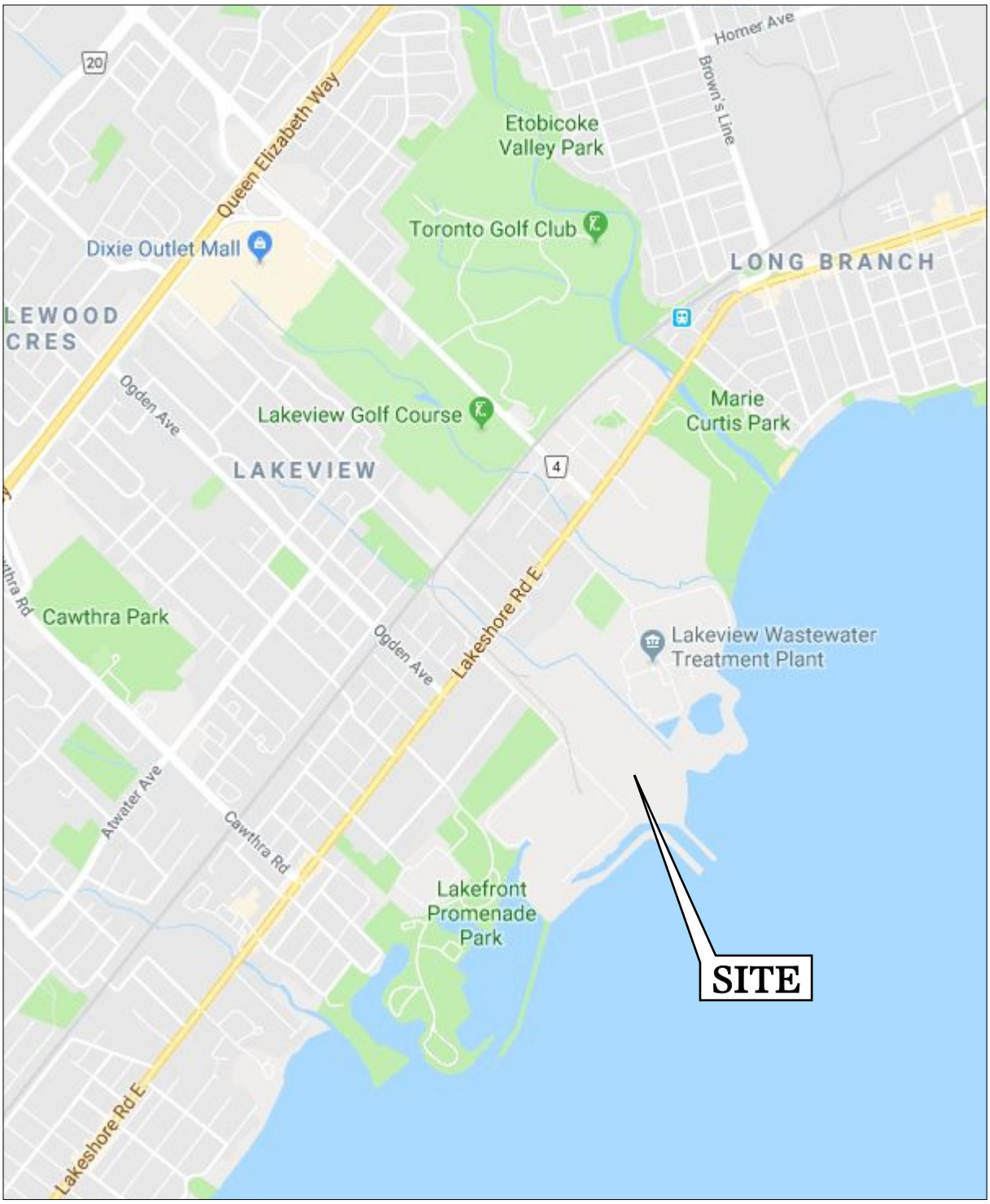
11. Ontario Ministry of the Environment, *Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act*, April 15, 2011.

12. Ontario Ministry of the Environment, *Guidance on Sampling and Analytical Methods for Use at Contaminated Sites in Ontario*, December 1996.

13. Sharpe, D.R., *Quaternary Geology of Toronto and Surrounding Area, Ontario Geological Survey Preliminary Map P. 2204, Geological Series*, scale 1:100,000, 1980.

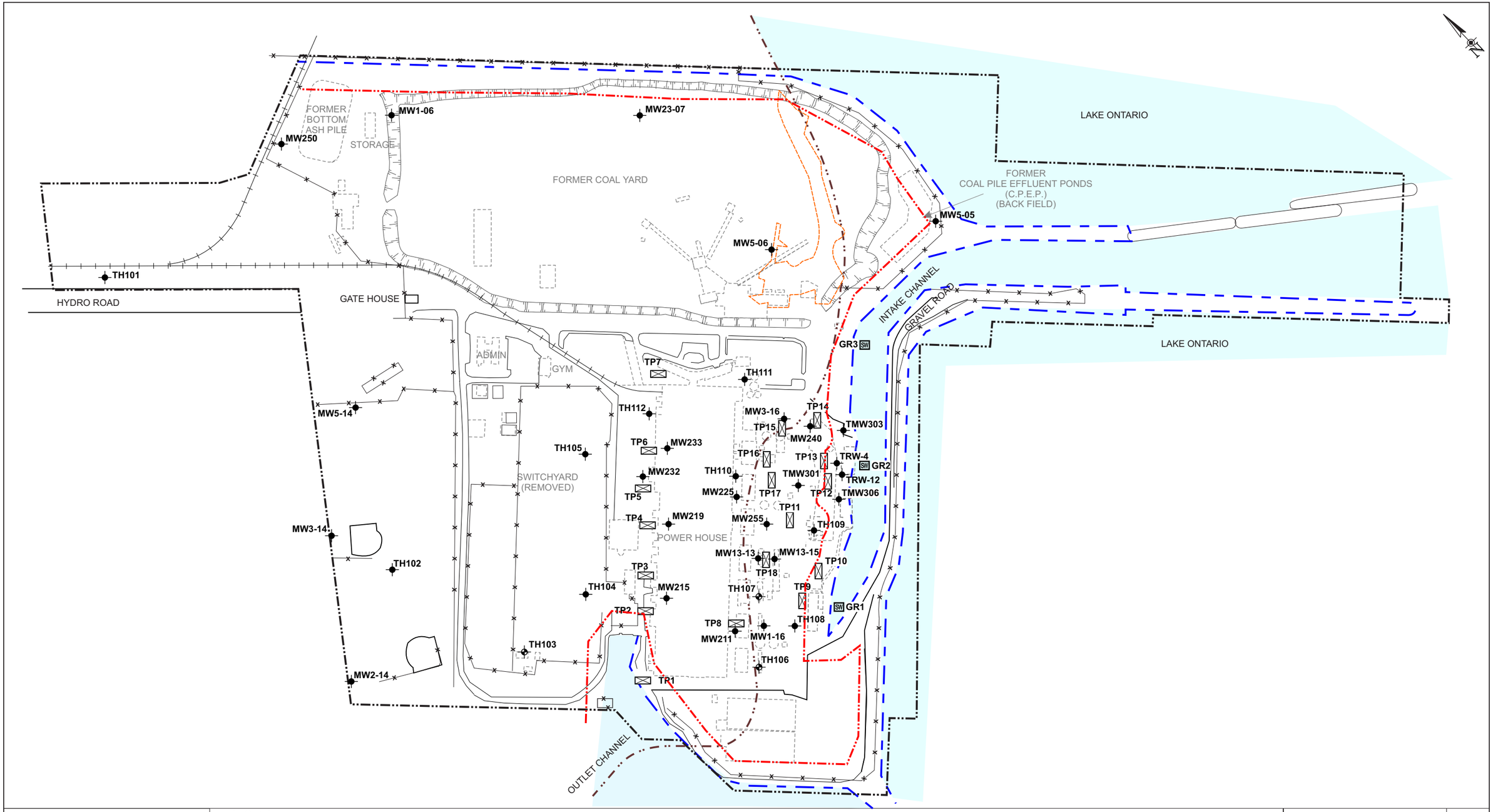
Appendices

Figures



SCALE: 0 400 800m	**SOURCE:** GOOGLE MAPS		LOCALITY PLAN	FIGURE 1
exp.	DRAWN BY	CHECKED BY	800 HYDRO ROAD MISSISSAUGA, ONTARIO	
	K.G.	T.T.	PROJECT NUMBER: 243747	DATE: DECEMBER 2017

243747-LOCALITY



SCALE:

0 100 200m

(APPROXIMATE)

SOURCE:

BASED ON PHASE TWO ENVIRONMENTAL ASSESSMENT (CRA, 2015), AND FIELD OBSERVATIONS BY EXP STAFF

DRAWN BY	CHECKED BY
K.G.	T.T.

LEGEND:

- PROPERTY BOUNDARY
- FENCE LINE
- RAIL LINE
- CURRENT SHORE LINE
- SHORE LINE (PRIOR TO 1958)
- 30m DISTANCE FROM WATER BODIES
- APPROXIMATE LIMIT OF REMEDIAL EXCAVATION (2007)
- FORMER FEATURES
- WATER BODY
- TEST HOLE WITH MONITOR
  MW*-06 SERIES (CRA, 2006)
  MW*-07 SERIES (CRA, 2007)
  MW200 AND TMW SERIES (CRA, 2008)
  MW13 SERIES (GOLDER, 2013)
  TH SERIES (EXP, 2017)
- TEST PIT (EXP, 2017)
- SW SURFACE WATER SAMPLE LOCATION (EXP, 2017)

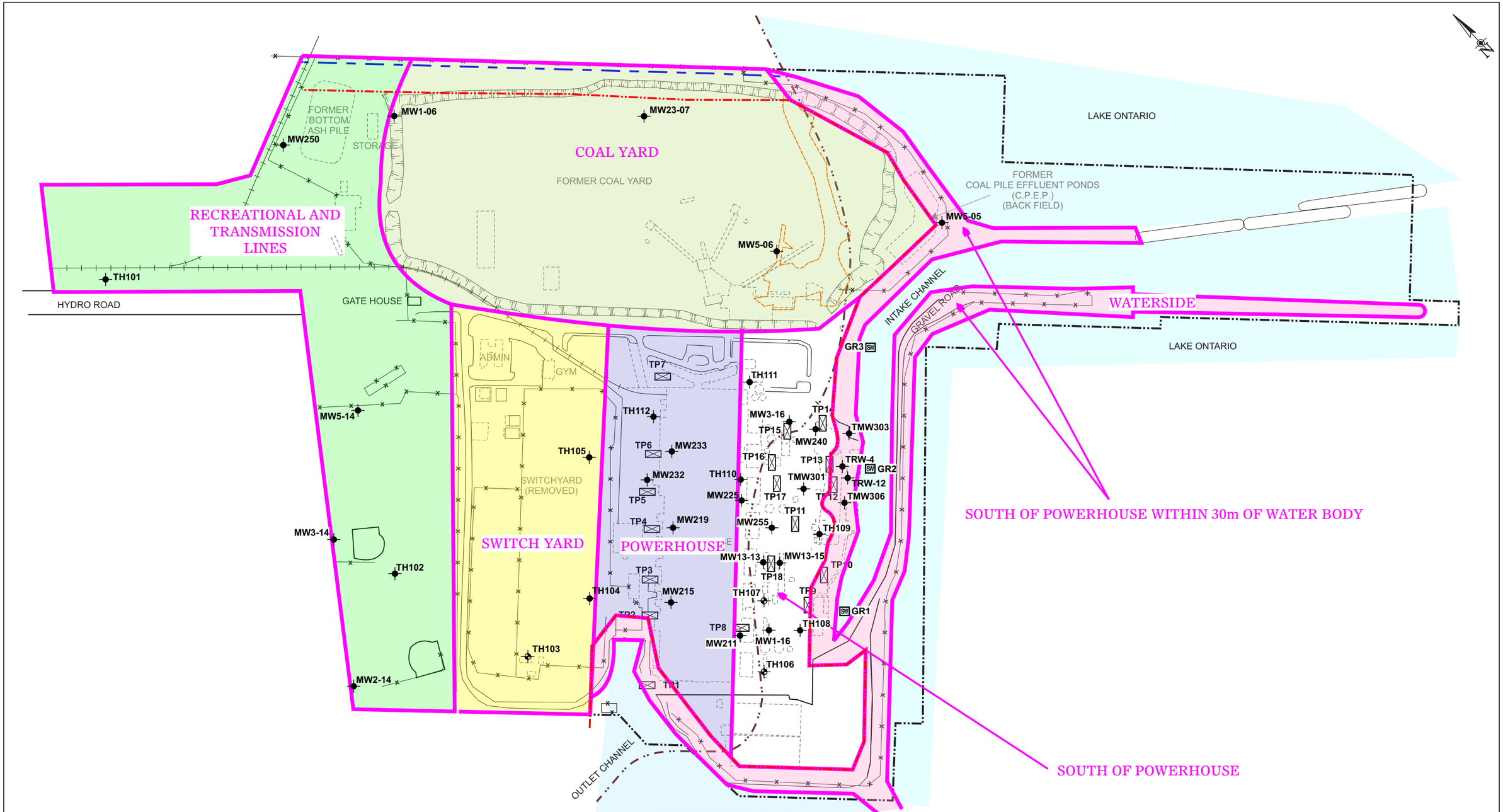
SITE PLAN

FIGURE 2A

800 HYDRO ROAD
MISSISSAUGA, ONTARIO

PROJECT NUMBER: 243747 | DATE: DECEMBER 2017

243747-LAKEVIEW-DEC17: SITE PLAN



SCALE:

0 100 200m

(APPROXIMATE)

SOURCE:

BASED ON PHASE TWO ENVIRONMENTAL ASSESSMENT (CRA, 2015), AND FIELD OBSERVATIONS BY EXP STAFF

DRAWN BY	CHECKED BY
K.G.	T.T.

LEGEND:

- PROPERTY BOUNDARY
- FENCE LINE
- RAIL LINE
- CURRENT SHORE LINE
- SHORE LINE (PRIOR TO 1958)
- 30m DISTANCE FROM WATER BODIES
- APPROXIMATE LIMIT OF REMEDIAL EXCAVATION (2007)
- FORMER FEATURES
- WATER BODY
- OPG BORDER
- TEST HOLE WITH MONITOR
  - MW*-06 SERIES (CRA, 2006)
  - MW*-07 SERIES (CRA, 2007)
  - MW200 AND TMW SERIES (CRA, 2008)
  - MW13 SERIES (GOLDER, 2013)
  - TH SERIES (EXP, 2017)
- TEST PIT (EXP, 2017)
- SURFACE WATER SAMPLE LOCATION (EXP, 2017)

SITE PLAN WITH AREAS

FIGURE 2B

800 HYDRO ROAD
MISSISSAUGA, ONTARIO

PROJECT NUMBER: 243747 | DATE: DECEMBER 2017

243747-LAKEVIEW-DEC17: SITE PLAN WITH AREAS

Tables

Table 1: SITE ENVIRONMENTAL SETTING DATA

800 Hydro Road, Mississauga, Ontario
December 2017

NATIVE SOIL

Type:	Overburden Fill
Hydraulic Conductivity	(select range)
> 10^{-3} cm/s:	
<10^{-3} to >10^{-6} cm/s:	1.05 x10-3
< 10^{-6} cm/s:	
Soil Texture:	Medium to fine
Estimated or Measured:	Measured (Golder, 2008 and 2014)

GROUND WATER

Depth to Water Table:	1.25 to 7.77
Estimated or Measured:	Measured (EXP, 2017)
Direction of Flow:	Southerly to southeasterly
Estimated or Measured:	Measured (GHD, 2017)

MUNICIPAL SERVICES

Piped Water:	N/A
Ground Water Source:	No
Distance to Well:	N/A
Surface Water Source:	Yes - Lake Ontario
Sanitary Sewer:	Yes
Storm Sewer:	Yes

PRIVATE SERVICES

Distance to Nearest Well:	N/A
Approximate Depth of Well:	N/A
Private Sanitary Sewage:	No

SURFACE WATER

Name of water body:	Lake Ontario
Distance from site:	Immediately south of the site
Elevation drop from site:	N/A
Direct Drainage from site:	Yes

Table 2: DARCY'S LAW CALCULATIONS

800 Hydro Road, Mississauga, Ontario
December 2017

Q=kia v=ki/n t=T/v

Permeability k (m/sec) =	1.05E-05
(cm/sec) =	1.05E-03
Gradient i (m/m) =	0.001
Effective Porosity n =	0.15
Thickness T (m) =	NA

Velocity v (m/sec) =	7.00E-08
(feet/sec) =	2.30E-07
(feet/day) =	1.98E-02
(feet/year) =	7.24E+00
(metres/year) =	2.21E+00

- Hydraulic conductivity is an average of hydraulic conductivities measured by in 2008 and 2014.
- Permeability for silty sand based on published values (Freeze and Cherry, 1979).
- Effective porosity based on published values (McWhorter and Sunada, 1977).
- Gradient estimated based on slope of land.

243747

Table 3a: SOIL CHEMICAL ANALYSIS - Polycyclic Aromatic Hydrocarbons - Recreational and Transmission Line Area

800 Hydro Road, Mississauga, Ontario
December 2017

Sample I.D.	Units	RDL*	Test Hole TH102-SS2	Test Hole TH102-SS6	Ontario Regulation 153/04 Table 3 Soil Standards**
Depth (m)			0.76 to 1.37	3.81 to 4.42	
Soil Type			Clayey Silt Fill	Clayey Silt Till	
Date of Sample Collection			8-Nov-17	8-Nov-17	
Date of Sample Analysis			20-Nov-17	20-Nov-17	
Certificate of Analysis Number			17T283430	17T283430	
Laboratory I.D.			8903255	8903257	
2-and 1-methyl Naphthalene	µg/g	0.05	<0.05	<0.05	3.4
Acenaphthene	µg/g	0.05	<0.05	<0.05	58
Acenaphthylene	µg/g	0.05	<0.05	<0.05	0.17
Anthracene	µg/g	0.05	<0.05	<0.05	0.74
Benzo(a)anthracene	µg/g	0.05	<0.05	<0.05	0.63
Benzo(a)pyrene	µg/g	0.05	<0.05	<0.05	0.3
Benzo(b)fluoranthene	µg/g	0.05	<0.05	<0.05	0.78
Benzo(g,h,i)perylene	µg/g	0.05	<0.05	<0.05	7.8
Benzo(k)fluoranthene	µg/g	0.05	<0.05	<0.05	0.78
Chrysene	µg/g	0.05	<0.05	<0.05	7.8
Dibenzo(a,h)anthracene	µg/g	0.05	<0.05	<0.05	0.1
Fluoranthene	µg/g	0.05	<0.05	<0.05	0.69
Fluorene	µg/g	0.05	<0.05	<0.05	69
Indeno(1,2,3-cd)pyrene	µg/g	0.05	<0.05	<0.05	0.48
Naphthalene	µg/g	0.05	<0.05	<0.05	0.75
Phenanthrene	µg/g	0.05	<0.05	<0.05	7.8
Pyrene	µg/g	0.05	<0.05	<0.05	78

NOTES:

Analysis by AGAT Laboratories.

All results in ppm (µg/g) and based on dry weight basis.

* Reporting Detection Limit (RDL) value is listed.

** Standards shown are for a residential/parkland/institutional property use with medium to fine textured soil.

*** The sum of 1- and 2-Methylnaphthalene concentrations must not exceed the soil Standard if both are detected.

Exceedances of Table 3 Standards are shown in **bold**.

Table 3a: SOIL CHEMICAL ANALYSIS - Metals and Inorganic Parameters - Recreational and Transmission Line Area

800 Hydro Road, Mississauga, Ontario

December 2017

Sample I.D.	Units	RDL*	Test Hole TH102-SS1	Duplicate of TH102-SS1 TH102-SS101	Ontario Regulation 153/04 Table 3 Soil Standards**
Depth (m)			0.0 to 0.61	0.0 to 0.61	
Soil Type			Clayey Silt Fill	Clayey Silt Fill	
Date of Sample Collection			8-Nov-17	8-Nov-17	
Date of Sample Analysis			20-Nov-17	20-Nov-17	
Certificate of Analysis Number			17T283430	17T283430	
Laboratory I.D.			8903249	8903254	
Antimony	µg/g	0.8	<0.8	<0.8	7.5
Arsenic	µg/g	1	6	5.0	18
Barium	µg/g	2	80	85.0	390
Beryllium	µg/g	0.5	0.8	0.8	4
Boron	µg/g	5	11	12.0	120
Cadmium	µg/g	0.5	<0.5	<0.5	1.2
Chromium	µg/g	2	27	29.0	160
Cobalt	µg/g	0.5	15.0	15.5	22
Copper	µg/g	1	35	31.0	140
Lead	µg/g	1	17	23.0	120
Molybdenum	µg/g	0.5	<0.5	<0.5	6.9
Nickel	µg/g	1	32	32.0	100
Selenium	µg/g	0.4	0.4	<0.4	2.4
Silver	µg/g	0.2	<0.2	<0.2	20
Thallium	µg/g	0.4	<0.4	<0.4	1
Uranium	µg/g	0.5	0.6	0.6	23
Vanadium	µg/g	1	30	31.0	86
Zinc	µg/g	5	72	71.0	340

NOTES:

Analysis by AGAT Laboratories.

NV mean "no value". N/A means "not applicable". NA means "not analyzed".

All results in ppm (µg/g) and based on dry weight basis.

* Reporting Detection Limit (RDL) value is listed.

** Standards shown are for a residential/parkland/institutional property use with medium to fine textured soil.

Exceedances of Table 3 Standards are shown in **bold**.

Table 3b: GROUND WATER CHEMICAL ANALYSIS - Petroleum Hydrocarbon Parameters- Recreational and Transmission Line Area

800 Hydro Road, Mississauga, Ontario

December 2017

Sample I.D.	Units	RDL*	Monitor MW5-14	Monitor MW3-14	Monitor MW2-14	Monitor TH101	Monitor TH102	Ontario Regulation 153/04 Table 3 Ground Water Standards**
Screen Interval (m)			2.13 to 5.18	3.35 to 4.88	2.44 to 3.96	6.10 to 7.62	14.33 to 15.24	
Date of Sample Collection			8-Nov-17	8-Nov-17	8-Nov-17	15-Nov-17	15-Nov-17	
Date of Sample Analysis			20-Nov-17	20-Nov-17	20-Nov-17	23-Nov-17	23-Nov-17	
Certificate of Analysis Number			17T282567	17T282567	17T282567	17T285277	17T285277	
Laboratory I.D.			8899319	8899322	8899323	8913972	8913976	
Benzene	µg/L	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	430
Toluene	µg/L	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	18,000
Ethylbenzene	µg/L	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	2,300
Xylene Mixture (Total)	µg/L	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	4,200
PHC F1 (C6 to C10) - BTEX	µg/L	25	<25	<25	<25	<25	<25	750
PHC F2 (C10 to C16)	µg/L	100	<100	<100	<100	<100	<100	150
PHC F3 (C16 to C34)	µg/L	100	<100	<100	<100	<100	<100	500
PHC F4 (C34 to C50)	µg/L	100	<100	<100	<100	<100	<100	500

NOTES:

Analysis by AGAT Laboratories.

All results in ppb (µg/L).

* Reporting Detection Limit (RDL) value is listed.

** Standards shown are for all types of property use with medium to fine textured soil.

Exceedances of Table 3 Standards are shown in **bold**.

Table 3b: GROUND WATER CHEMICAL ANALYSIS - Volatile Organic Compounds- Recreational and Transmission Line Area

800 Hydro Road, Mississauga, Ontario
December 2017

Sample I.D.	Units	RDL*	Monitor MW5-14	Monitor MW3-14	Monitor MW2-14	Monitor TH101	Monitor TH102	Monitor MW250	Ontario Regulation 153/04 Table 3 Ground Water Standards**
Screen Interval (m)			2.13 to 5.18	3.35 to 4.88	2.44 to 3.96	6.10 to 7.62	14.33 to 15.24	4.27 to 4.72	
Date of Sample Collection			8-Nov-17	8-Nov-17	8-Nov-17	15-Nov-17	15-Nov-17	15-Nov-17	
Date of Sample Analysis			20-Nov-17	20-Nov-17	20-Nov-17	23-Nov-17	23-Nov-17	23-Nov-17	
Certificate of Analysis Number			17T282567	17T282567	17T282567	17T285277	17T285277	17T285277	
Laboratory I.D.			8899319	8899322	8899323	8913972	8913976	8914367	
1,1,1,2-Tetrachloroethane	µg/L	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	28
1,1,1-Trichloroethane	µg/L	0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	6,700
1,1,2,2-Tetrachloroethane	µg/L	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	15
1,1,2-Trichloroethane	µg/L	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	30
1,1-Dichloroethane	µg/L	0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	3,100
1,1-Dichloroethylene	µg/L	0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	17
1,2-Dichlorobenzene	µg/L	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	9,600
1,2-Dichloroethane	µg/L	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	12
1,2-Dichloropropane	µg/L	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	140
1,3-Dichlorobenzene	µg/L	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	9,600
1,3-Dichloropropene	µg/L	0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	45
1,4-Dichlorobenzene	µg/L	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	67
Acetone	µg/L	1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	130,000
Benzene	µg/L	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	430
Bromodichloromethane	µg/L	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	85,000
Bromoform	µg/L	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	770
Bromomethane	µg/L	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	56
Carbon Tetrachloride	µg/L	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	8.4
Chlorobenzene	µg/L	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	630
Chloroform	µg/L	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	22
cis- 1,2-Dichloroethylene	µg/L	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	17
Dibromochloromethane	µg/L	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	82,000
Dichlorodifluoromethane	µg/L	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	4,400
Ethylbenzene	µg/L	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	2,300
Ethylene Dibromide	µg/L	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	0.83
Methyl Ethyl Ketone	µg/L	1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	1,500,000
Methyl Isobutyl Ketone	µg/L	1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	580,000
Methyl tert-butyl ether	µg/L	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	1,400
Methylene Chloride	µg/L	0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	5,500
n-Hexane	µg/L	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	520
Styrene	µg/L	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	9,100
Tetrachloroethylene	µg/L	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	17
Toluene	µg/L	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	18,000
trans- 1,2-Dichloroethylene	µg/L	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	17
Trichloroethylene	µg/L	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	17
Trichlorofluoromethane	µg/L	0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	2,500
Vinyl Chloride	µg/L	0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	1.7
Xylene Mixture	µg/L	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	4,200

NOTES:

Analysis by AGAT Laboratories.

All results in ppb (µg/L).

* Reporting Detection Limit (RDL) value is listed.

** Standards shown are for all types of property use with medium to fine textured soil.

Exceedances of Table 3 Standards are shown in **bold**.

Table 4a: SOIL CHEMICAL ANALYSIS - Petroleum Hydrocarbon Parameters - Switchyard Area

800 Hydro Road, Mississauga, Ontario
December 2017

Sample I.D.	Units	RDL*	Test Hole TH103-SS9	Test Hole TH104-SS6	Test Hole TH105-SS5	Ontario Regulation 153/04 Table 3 Soil Standards**
Depth (m)			6.10 to 6.71	3.81 to 3.97	3.05 to 3.31	
Soil Type			Clayey Silt Till	Silt	Silt	
Date of Sample Collection			6-Nov-17	6-Nov-17	6-Nov-17	
Date of Sample Analysis			20-Nov-17	20-Nov-17	20-Nov-17	
Certificate of Analysis Number			17T283430	17T283430	17T283430	
Laboratory I.D.			8903278	8903297	8903312	
Field Vapour Reading			ND	ND	ND	
Benzene	µg/g	0.02	<0.02	<0.02	<0.02	0.17
Toluene	µg/g	0.08	<0.08	<0.08	<0.08	6
Ethylbenzene	µg/g	0.05	<0.05	<0.05	<0.05	15
Xylene Mixture (Total)	µg/g	0.05	<0.05	<0.05	<0.05	25
PHC F1 (C6 to C10) - BTEX	µg/g	5	<5	<5	<5	65
PHC F2 (C10 to C16)	µg/g	10	<10	<10	<10	150
PHC F3 (C16 to C34)	µg/g	50	57	<50	<50	1,300
PHC F4 (C34 to C50)	µg/g	50	<50	<50	<50	5,600

NOTES:

Analysis by AGAT Laboratories.

All results in ppm (µg/g) and based on dry weight basis. NA means "not analysed". NM means "not measured". ND means "not detected".

* Reporting Detection Limit (RDL) value is listed.

** Standards shown are for a residential/parkland/institutional property use with medium to fine textured soil.

Exceedances of Table 3 Standards are shown in **bold**.

Table 4a: SOIL CHEMICAL ANALYSIS - Polychlorinated Biphenyls - Switchyard Area

800 Hydro Road, Mississauga, Ontario
December 2017

Sample I.D.	Units	RDL*	Test Hole TH104-SS1	Duplicate of TH104-SS1 TH104-SS101	Test Hole TH105-SS1	Ontario Regulation 153/04 Table 3 Soil Standards**
Depth (m)			0.0 to 0.61	0.0 to 0.61	0.0 to 0.61	
Soil Type			Sand and Gravel Fill	Sand and Gravel Fill	Sand and Gravel Fill	
Date of Sample Collection			9-Nov-17	9-Nov-17	9-Nov-17	
Date of Sample Analysis			20-Nov-17	20-Nov-17	20-Nov-17	
Certificate of Analysis Number			17T283430	17T283430	17T283430	
Laboratory I.D.			8903293	8903296	8903308	
Aroclor 1242	µg/g	0.1	<0.1	<0.1	<0.1	NV
Aroclor 1248	µg/g	0.1	<0.1	<0.1	<0.1	NV
Aroclor 1254	µg/g	0.1	<0.1	<0.1	<0.1	NV
Aroclor 1260	µg/g	0.1	<0.1	<0.1	<0.1	NV
Polychlorinated Biphenyls	µg/g	0.1	<0.1	<0.1	<0.1	0.35

NOTES:

Analysis by AGAT Laboratories.

All results in ppm (µg/g) and based on dry weight basis. NV means "no value".

* Reporting Detection Limit (RDL) value is listed.

** Standards shown are for a residential/parkland/institutional property use with medium to fine textured soil.

Exceedances of Table 3 Standards are shown in **bold**.

Table 4b: GROUND WATER CHEMICAL ANALYSIS - Petroleum Hydrocarbon Parameters- Switchyard Area

800 Hydro Road, Mississauga, Ontario
December 2017

Sample I.D.	Units	MDL*	Monitor TH104	Monitor TH105	Ontario Regulation 153/04 Table 3 Ground Water Standards**
Screen Interval (m)			5.49 to 8.53	5.49 to 8.53	
Date of Sample Collection			15-Nov-17	15-Nov-17	
Date of Sample Analysis			23-Nov-17	23-Nov-17	
Certificate of Analysis Number			17T285277	17T285277	
Laboratory I.D.			8913977	8913978	
Benzene	µg/L	<0.20	<0.20	<0.20	430
Toluene	µg/L	<0.20	<0.20	<0.20	18,000
Ethylbenzene	µg/L	<0.10	<0.10	<0.10	2,300
Xylene Mixture (Total)	µg/L	<0.20	<0.20	<0.20	4,200
PHC F1 (C6 to C10) - BTEX	µg/L	25	<25	<25	750
PHC F2 (C10 to C16)	µg/L	100	<100	<100	150
PHC F3 (C16 to C34)	µg/L	100	<100	<100	500
PHC F4 (C34 to C50)	µg/L	100	<100	<100	500

NOTES:

Analysis by AGAT Laboratories.

All results in ppb (µg/L).

* Reporting Detection Limit (RDL) value is listed.

** Standards shown are for all types of property use with medium to fine textured soil.

Exceedances of Table 3 Standards are shown in **bold**.

Table 5a: SOIL CHEMICAL ANALYSIS - Petroleum Hydrocarbon Parameters - Powerhouse Area

800 Hydro Road, Mississauga, Ontario
December 2017

Sample I.D.	Units	RDL*	Test Hole TH112-SS3	Ontario Regulation 153/04 Table 7 Soil Standards**
Depth (m)			1.52 to 1.68	
Soil Type			Silt Fill	
Date of Sample Collection			13-Nov-17	
Date of Sample Analysis			27-Nov-17	
Certificate of Analysis Number			17T286217	
Laboratory I.D.			8921995	
Field Vapour Reading			ND	
Benzene	µg/g	0.02	<0.02	0.17
Toluene	µg/g	0.08	<0.08	6
Ethylbenzene	µg/g	0.05	<0.05	15
Xylene Mixture (Total)	µg/g	0.05	<0.05	25
PHC F1 (C6 to C10) - BTEX	µg/g	5	<5	65
PHC F2 (C10 to C16)	µg/g	10	<10	150
PHC F3 (C16 to C34)	µg/g	50	<50	1,300
PHC F4 (C34 to C50)	µg/g	50	<50	5,600

NOTES:

Analysis by AGAT Laboratories.

All results in ppm (µg/g) and based on dry weight basis. NA means "not analysed". NM means "not measured". ND means "not detected".

* Reporting Detection Limit (RDL) value is listed.

** Standards shown are for a residential/parkland/institutional property use with medium to fine textured soil.

Exceedances of Table 7 Standards are shown in **bold**.

Table 5a: SOIL CHEMICAL ANALYSIS - Polychlorinated Biphenyls - Powerhouse Area

800 Hydro Road, Mississauga, Ontario
December 2017

Sample I.D.	Units	RDL*	Test Hole TH112-SS1	Ontario Regulation 153/04 Table 7 Soil Standards**
Depth (m)			0.0 to 0.61	
Soil Type			Silt Fill	
Date of Sample Collection			13-Nov-17	
Date of Sample Analysis			27-Nov-17	
Certificate of Analysis Number			17T286217	
Laboratory I.D.			8921991	
Aroclor 1242	µg/g	0.1	<0.1	NV
Aroclor 1248	µg/g	0.1	<0.1	NV
Aroclor 1254	µg/g	0.1	<0.1	NV
Aroclor 1260	µg/g	0.1	<0.1	NV
Polychlorinated Biphenyls	µg/g	0.1	<0.1	0.35

NOTES:

Analysis by AGAT Laboratories.

All results in ppm (µg/g) and based on dry weight basis. NV means "no value".

* Reporting Detection Limit (RDL) value is listed.

** Standards shown are for a residential/parkland/institutional property use with medium to fine textured soil.

Exceedances of Table 7 Standards are shown in **bold**.

Table 5b: GROUND WATER CHEMICAL ANALYSIS - Petroleum Hydrocarbon Parameters- Powerhouse Area

800 Hydro Road, Mississauga, Ontario

December 2017

Sample I.D.	Units	RDL*	Monitor MW 219	Monitor MW 215	Monitor MW 232	Monitor MW 233	Monitor TH112	Ontario Regulation 153/04 Table 7 Ground Water Standards**
Screen Interval (m)			0.91 to 3.05	0.91 to 2.74	1.22 to 2.74	0.91 to 3.05	1.22 to 4.27	
Date of Sample Collection			13-Nov-17	10-Nov-17	13-Nov-17	13-Nov-17	14-Nov-17	
Date of Sample Analysis			21-Nov-17	21-Nov-17	21-Nov-17	21-Nov-17	23-Nov-17	
Certificate of Analysis Number			17T283734	17T283734	17T283734	17T283734	17T285277	
Laboratory I.D.			8904869	8904876	8904885	8904891	8915524	
Benzene	µg/L	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	0.5
Toluene	µg/L	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	320
Ethylbenzene	µg/L	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	54
Xylene Mixture (Total)	µg/L	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	72
PHC F1 (C6 to C10) - BTEX	µg/L	25	<25	<25	<25	<25	<25	420
PHC F2 (C10 to C16)	µg/L	100	<100	<100	<100	<100	<100	150
PHC F3 (C16 to C34)	µg/L	100	<100	<100	<100	<100	<100	500
PHC F4 (C34 to C50)	µg/L	100	<100	<100	<100	<100	<100	500

NOTES:

Analysis by AGAT Laboratories.

All results in ppb (µg/L).

* Reporting Detection Limit (RDL) value is listed.

** Standards shown are for all types of property use with medium to fine textured soil.

Exceedances of Table 7 Standards are shown in **bold**.

Table 5b: GROUND WATER CHEMICAL ANALYSIS - Volatile Organic Compounds- Powerhouse Area

800 Hydro Road, Mississauga, Ontario
December 2017

Sample I.D.	Units	RDL*	Monitor MW 219	Monitor MW 215	Monitor MW 232	Monitor MW 233	Monitor TH112	Ontario Regulation 153/04 Table 7 Ground Water Standards**
Screen Interval (m)			0.91 to 3.05	0.91 to 2.74	1.22 to 2.74	0.91 to 3.05	1.22 to 4.27	
Date of Sample Collection			13-Nov-17	10-Nov-17	13-Nov-17	13-Nov-17	14-Nov-17	
Date of Sample Analysis			21-Nov-17	21-Nov-17	21-Nov-17	21-Nov-17	23-Nov-17	
Certificate of Analysis Number			17T283734	17T283734	17T283734	17T283734	17T285277	
Laboratory I.D.			8904869	8904876	8904885	8904891	8915524	
1,1,1,2-Tetrachloroethane	µg/L	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	1.1
1,1,1-Trichloroethane	µg/L	0.30	<0.30	<0.30	<0.30	<0.30	<0.30	23
1,1,2,2-Tetrachloroethane	µg/L	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	0.5
1,1,2-Trichloroethane	µg/L	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	0.5
1,1-Dichloroethane	µg/L	0.30	<0.30	<0.30	<0.30	<0.30	<0.30	11
1,1-Dichloroethylene	µg/L	0.30	<0.30	<0.30	<0.30	<0.30	<0.30	0.5
1,2-Dichlorobenzene	µg/L	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	150
1,2-Dichloroethane	µg/L	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	0.5
1,2-Dichloropropane	µg/L	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	0.58
1,3-Dichlorobenzene	µg/L	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	7,600
1,3-Dichloropropene	µg/L	0.30	<0.30	<0.30	<0.30	<0.30	<0.30	0.5
1,4-Dichlorobenzene	µg/L	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	0.5
Acetone	µg/L	1.0	<1.0	<1.0	<1.0	<1.0	<1.0	100,000
Benzene	µg/L	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	0.5
Bromodichloromethane	µg/L	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	67,000
Bromoform	µg/L	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	5
Bromomethane	µg/L	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	0.89
Carbon Tetrachloride	µg/L	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	0.2
Chlorobenzene	µg/L	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	140
Chloroform	µg/L	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	2
cis- 1,2-Dichloroethylene	µg/L	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	1.6
Dibromochloromethane	µg/L	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	65,000
Dichlorodifluoromethane	µg/L	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	3,500
Ethylbenzene	µg/L	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	54
Ethylene Dibromide	µg/L	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	0.2
Methyl Ethyl Ketone	µg/L	1.0	<1.0	<1.0	<1.0	<1.0	<1.0	21,000
Methyl Isobutyl Ketone	µg/L	1.0	<1.0	<1.0	<1.0	<1.0	<1.0	5,200
Methyl tert-butyl ether	µg/L	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	15
Methylene Chloride	µg/L	0.30	<0.30	<0.30	<0.30	<0.30	<0.30	26
n-Hexane	µg/L	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	5
Styrene	µg/L	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	43
Tetrachloroethylene	µg/L	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	0.5
Toluene	µg/L	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	320
trans- 1,2-Dichloroethylene	µg/L	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	1.6
Trichloroethylene	µg/L	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	0.5
Trichlorofluoromethane	µg/L	0.40	<0.40	<0.40	<0.40	<0.40	<0.40	2,000
Vinyl Chloride	µg/L	0.17	<0.17	<0.17	<0.17	<0.17	<0.17	0.5
Xylene Mixture	µg/L	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	72

NOTES:

Analysis by AGAT Laboratories.

All results in ppb (µg/L).

* Reporting Detection Limit (RDL) value is listed.

** Standards shown are for all types of property use with medium to fine textured soil.

Exceedances of Table 7 Standards are shown in **bold**.

Table 6a: SOIL CHEMICAL ANALYSIS - Petroleum Hydrocarbon Parameters- South of Powerhouse

800 Hydro Road, Mississauga, Ontario
December 2017

Sample I.D.	Units	RDL*	Test Hole TH106-SS5	Test Hole TH108-SS2	Test Hole TH109-SS2	Test Hole TH110- SS3	Test Hole TH111-SS2	Test Pit TP11-GR3	Test Pit TP14-2m	Ontario Regulation 153/04 Table 3 Soil Standards**
Depth (m)			3.05 to 3.66	0.76 to 1.37	0.76 to 1.37	1.52 to 2.13	0.76 to 1.37	1.22 to 1.83	2.0 to 3.0	
Soil Type			Silt Fill	Silt Fill	Sandy Silt Fill	Sand Fill	Sand and Gravel Fill	Clayey Silt Fill	Clayey Silt	
Date of Sample Collection			6-Nov-17	6-Nov-17	13-Nov-17	13-Nov-17	6-Nov-17	14-Nov-17	14-Nov-17	
Date of Sample Analysis			20-Nov-17	20-Nov-17	27-Nov-17	27-Nov-17	20-Nov-17	27-Nov-17	27-Nov-17	
Certificate of Analysis Number			17T283430	17T283430	17T286217	17T286217	17T283430	17T286217	17T286217	
Laboratory I.D.			8903313	8903375	8921971	8921988	8903380	8921998	8922006	
Field Vapour Reading			ND	ND	10 ppm	60 ppm	ND	250 ppm	260 ppm	
Benzene	µg/g	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	0.17
Toluene	µg/g	0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	6
Ethylbenzene	µg/g	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	15
Xylene Mixture (Total)	µg/g	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	25
PHC F1 (C6 to C10) - BTEX	µg/g	5	<5	<5	<5	<5	7	<5	26	65
PHC F2 (C10 to C16)	µg/g	10	<10	<10	<10	16	**350**	110	**910**	150
PHC F3 (C16 to C34)	µg/g	50	<50	<50	<50	<50	330	110	280	1,300
PHC F4 (C34 to C50)	µg/g	50	<50	<50	<50	<50	<50	<50	<50	5,600

NOTES:

Analysis by AGAT Laboratories.

All results in ppm (µg/g) and based on dry weight basis. NA means "not analysed". NM means "not measured". ND means "not detected".

* Reporting Detection Limit (RDL) value is listed.

** Standards shown are for a residential/parkland/institutional property use with medium to fine textured soil.

Exceedances of Table 3 Standards are shown in **bold**.

Table 6a: SOIL CHEMICAL ANALYSIS - Metals and Inorganic Parameters- South of Powerhouse

800 Hydro Road, Mississauga, Ontario
December 2017

Sample I.D.	Units	RDL*	Test Hole TH108-SS1	Test Hole TH109-SS2	Test Hole TH110-SS1	Ontario Regulation 153/04 Table 3 Soil Standards**
Depth (m)			0.0 to 0.61	0.76 to 1.37	0.0 to 0.61	
Soil Type			Sand and Gravel Fill	Sandy Silt Fill	Sand and Gravel Fill	
Date of Sample Collection			9-Nov-17	13-Nov-17	13-Nov-17	
Date of Sample Analysis			20-Nov-17	17-Nov-17	17-Nov-17	
Certificate of Analysis Number			17T283430	17T286217	17T286217	
Laboratory I.D.			8903316	8921971	8921985	
Antimony	µg/g	0.8	<0.8	<0.8	<0.8	7.5
Arsenic	µg/g	1	12	3.0	4	18
Barium	µg/g	2	80	6.0	6	390
Beryllium	µg/g	0.5	0.8	25.0	52	5
Boron	µg/g	5	18	<0.5	<0.5	120
Cadmium	µg/g	0.5	<0.5	<0.5	<0.5	1.2
Chromium	µg/g	2	44	9.0	12	160
Cobalt	µg/g	0.5	9.3	4.7	5.6	22
Copper	µg/g	1	36	11.0	37	180
Lead	µg/g	1	**1,020**	5.0	36	120
Molybdenum	µg/g	0.5	2.2	<0.5	1.2	6.9
Nickel	µg/g	1	22	8.0	10	130
Selenium	µg/g	0.4	2.0	<0.4	**4.9**	2.4
Silver	µg/g	0.2	<0.2	<0.2	<0.2	25
Thallium	µg/g	0.4	<0.4	<0.4	<0.4	1
Uranium	µg/g	0.5	0.6	<0.5	<0.5	23
Vanadium	µg/g	1	27	12.0	13	86
Zinc	µg/g	5	215	24.0	48	340

NOTES:

Analysis by AGAT Laboratories.

NV mean "no value". N/A means "not applicable". NA means "not analyzed".

All results in ppm (µg/g) and based on dry weight basis.

* Reporting Detection Limit (RDL) value is listed.

** Standards shown are for a residential/parkland/institutional property use with medium to fine textured soil.

Exceedances of Table 3 Standards are shown in **bold**.

Table 6a: SOIL CHEMICAL ANALYSIS - Polycyclic Aromatic Hydrocarbons- South of Powerhouse

800 Hydro Road, Mississauga, Ontario
December 2017

Sample I.D.	Units	RDL*	Test Hole TH108-SS1	Test Hole TH109-SS1	Test Hole TH110-SS1	Ontario Regulation 153/04 Table 3 Soil Standards**
Depth (m)			0.0 to 0.61	0.0 to 0.61	0.0 to 0.61	
Soil Type			Sand and Gravel Fill	Sand and Gravel Fill	Sand and Gravel Fill	
Date of Sample Collection			9-Nov-17	13-Nov-17	13-Nov-17	
Date of Sample Analysis			20-Nov-17	27-Nov-17	27-Nov-17	
Certificate of Analysis Number			17T283430	17T286217	17T286217	
Laboratory I.D.			8903316	8921957	8921985	
2-and 1-methyl Naphthalene	µg/g	0.05	0.08	<0.05	<0.05	3.4
Acenaphthene	µg/g	0.05	<0.05	<0.05	<0.05	58
Acenaphthylene	µg/g	0.05	<0.05	<0.05	<0.05	0.17
Anthracene	µg/g	0.05	<0.05	<0.05	<0.05	0.74
Benzo(a)anthracene	µg/g	0.05	<0.05	<0.05	<0.05	0.63
Benzo(a)pyrene	µg/g	0.05	<0.05	<0.05	<0.05	0.3
Benzo(b)fluoranthene	µg/g	0.05	<0.05	<0.05	<0.05	0.78
Benzo(g,h,i)perylene	µg/g	0.05	<0.05	<0.05	<0.05	7.8
Benzo(k)fluoranthene	µg/g	0.05	<0.05	<0.05	<0.05	0.78
Chrysene	µg/g	0.05	<0.05	<0.05	<0.05	7.8
Dibenzo(a,h)anthracene	µg/g	0.05	<0.05	<0.05	<0.05	0.1
Fluoranthene	µg/g	0.05	<0.05	<0.05	<0.05	0.69
Fluorene	µg/g	0.05	<0.05	<0.05	<0.05	69
Indeno(1,2,3-cd)pyrene	µg/g	0.05	<0.05	<0.05	<0.05	0.48
Naphthalene	µg/g	0.05	<0.05	<0.05	<0.05	0.75
Phenanthrene	µg/g	0.05	<0.05	<0.05	<0.05	7.8
Pyrene	µg/g	0.05	<0.05	<0.05	<0.05	78

NOTES:

Analysis by AGAT Laboratories.

All results in ppm (µg/g) and based on dry weight basis.

* Reporting Detection Limit (RDL) value is listed.

** Standards shown are for a residential/parkland/institutional property use with medium to fine textured soil.

*** The sum of 1- and 2-Methylnaphthalene concentrations must not exceed the soil Standard if both are detected.

Exceedances of Table 3 Standards are shown in **bold**.

Table 6b: GROUND WATER CHEMICAL ANALYSIS - Polycyclic Aromatic Hydrocarbons- South of Powerhouse Area

800 Hydro Road, Mississauga, Ontario
December 2017

Sample I.D.	Units	RDL*	Monitor MW3-16	Monitor MW13-15	Monitor TH108	Ontario Regulation 153/04 Table 3 Ground Water Standards**
Screen Interval (m)			1.53 to 3.66	1.07 to 4.11	1.52 to 4.57	
Date of Sample Collection			7-Nov-17	7-Nov-17	15-Nov-17	
Date of Sample Analysis			20-Nov-17	20-Nov-17	23-Nov-17	
Certificate of Analysis Number			17T282567	17T282567	17T285277	
Laboratory I.D.			8899317	8899325	8913980	
2-and 1-methyl Naphthalene	µg/L	0.20	<0.20	<0.20	<0.20	1,800
Acenaphthene	µg/L	0.20	<0.20	<0.20	<0.20	1,700
Acenaphthylene	µg/L	0.20	<0.20	<0.20	<0.20	1.8
Anthracene	µg/L	0.10	<0.10	<0.10	<0.10	2.4
Benz(a)anthracene	µg/L	0.20	<0.20	<0.20	<0.20	4.7
Benzo(a)pyrene	µg/L	0.01	<0.01	<0.01	<0.01	0.81
Benzo(b)fluoranthene	µg/L	0.10	<0.10	<0.10	<0.10	0.75
Benzo(g,h,i)perylene	µg/L	0.20	<0.20	<0.20	<0.20	0.2
Benzo(k)fluoranthene	µg/L	0.10	<0.10	<0.10	<0.10	0.4
Chrysene	µg/L	0.10	<0.10	<0.10	<0.10	1
Dibenz(a,h)anthracene	µg/L	0.20	<0.20	<0.20	<0.20	0.52
Fluoranthene	µg/L	0.20	<0.20	<0.20	<0.20	130
Fluorene	µg/L	0.20	<0.20	<0.20	<0.20	400
Indeno(1,2,3-cd)pyrene	µg/L	0.20	<0.20	<0.20	<0.20	0.2
Naphthalene	µg/L	0.20	<0.20	<0.20	<0.20	6,400
Phenanthrene	µg/L	0.10	<0.10	<0.10	<0.10	580
Pyrene	µg/L	0.20	<0.20	<0.20	<0.20	68

NOTES:

Analysis by AGAT Laboratories.

All results in ppb (µg/L).

* Reporting Detection Limit (RDL) value is listed.

** Standards shown are for all types of property use with medium to fine textured soil.

*** The sum of 1- and 2-Methylnaphthalene concentrations must not exceed the soil Standard if both are detected.

Exceedances of Table 3 Standards are shown in **bold**.

Table 6b: GROUND WATER CHEMICAL ANALYSIS - Petroleum Hydrocarbon Parameters- South of Powerhouse Area

800 Hydro Road, Mississauga, Ontario
December 2017

Sample I.D.	Units	RDL*	Monitor MW255	Duplicate of MW255 MW2559	Monitor MW225	Monitor MW240	Duplicate of MW240 MW249	Monitor MW3-16	Monitor MW 211	Monitor MW13-15	Ontario Regulation 153/04 Table 3 Ground Water Standards**
Screen Interval (m)			1.22 to 4.11	1.22 to 4.11	1.22 to 4.11	1.07 to 4.11	0.91 to 3.96	1.53 to 3.66	1.22 to 2.74	1.07 to 4.11	
Date of Sample Collection			8-Nov-17	8-Nov-17	8-Nov-17	7-Nov-17	7-Nov-17	7-Nov-17	10-Nov-17	8-Nov-17	
Date of Sample Analysis			20-Nov-17	20-Nov-17	20-Nov-17	20-Nov-17	20-Nov-17	20-Nov-17	21-Nov-17	20-Nov-17	
Certificate of Analysis Number			17T282567	17T282567	17T282567	17T282567	17T282567	17T282567	17T283734	17T282567	
Laboratory I.D.			8899331	8899332	8899333	8899271	8899286	8899317	8904880	8899325	
Benzene	µg/L	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	430
Toluene	µg/L	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	18,000
Ethylbenzene	µg/L	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	2,300
Xylene Mixture (Total)	µg/L	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	4,200
PHC F1 (C6 to C10) - BTEX	µg/L	25	<25	<25	<25	<25	<25	<25	<25	<25	750
PHC F2 (C10 to C16)	µg/L	100	<100	<100	<100	140	130	<100	<100	<100	150
PHC F3 (C16 to C34)	µg/L	100	**3900**	**2,500**	<100	<100	<100	<100	<100	<100	500
PHC F4 (C34 to C50)	µg/L	100	510	330	<100	<100	<100	<100	<100	<100	500

NOTES:
Analysis by AGAT Laboratories.
All results in ppb (µg/L).
* Reporting Detection Limit (RDL) value is listed.
** Standards shown are for all types of property use with medium to fine textured soil.
Exceedances of Table 3 Standards are shown in **bold**.

Table 6b: GROUND WATER CHEMICAL ANALYSIS - Petroleum Hydrocarbon Parameters- South of Powerhouse Area

800 Hydro Road, Mississauga, Ontario
December 2017

Sample I.D.	Units	RDL*	Monitor MW 1-16	Monitor TH108	Monitor TH109	Duplicate of TH109 TH1000	Monitor TH110	Monitor TH111	Monitor TMW301	Monitor MW13-13	Ontario Regulation 153/04 Table 3 Ground Water Standards**
Screen Interval (m)			1.06 to 4.11	1.52 to 4.57	0.91 to 3.96	0.91 to 3.96	1.52 to 4.73	0.91 to 3.96	Unknown to 3.20***	1.07 to 4.11	
Date of Sample Collection			10-Nov-17	15-Nov-17	14-Nov-17	14-Nov-17	15-Nov-17	15-Nov-17	7-Nov-17	8-Nov-17	
Date of Sample Analysis			21-Nov-17	23-Nov-17	23-Nov-17	22-Nov-17	23-Nov-17	23-Nov-17	15-Nov-17	15-Nov-17	
Certificate of Analysis Number			17T283734	17T285277	17T285277	17T285277	17T285277	17T285277	17T282567	17T282567	
Laboratory I.D.			8904895	8913980	8914342	8914368	8914347	8914348	8899313	8899328	
Benzene	µg/L	0.20	<0.20	<0.20	<0.20	<0.20	4.9	<0.20	<0.20	<0.20	430
Toluene	µg/L	0.20	<0.20	<0.20	<0.20	0.33	<0.20	0.38	<0.20	<0.20	18,000
Ethylbenzene	µg/L	0.10	<0.10	<0.10	<0.10	<0.10	0.89	0.16	<0.10	<0.10	2,300
Xylene Mixture (Total)	µg/L	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	0.74	<0.20	<0.20	4,200
PHC F1 (C6 to C10) - BTEX	µg/L	25	34	<25	<25	<25	390	<25	51	<25	750
PHC F2 (C10 to C16)	µg/L	100	**370**	<100	<100	<100	**2,000**	<100	**360**	<100	150
PHC F3 (C16 to C34)	µg/L	100	180	<100	<100	<100	**830**	<100	160	<100	500
PHC F4 (C34 to C50)	µg/L	100	<100	<100	<100	<100	<100	<100	<100	<100	500

NOTES:

Analysis by AGAT Laboratories.

All results in ppb (µg/L).

* Reporting Detection Limit (RDL) value is listed.

** Standards shown are for all types of property use with medium to fine textured soil.

*** Depth of screen interval unknown. Depth to bottom of monitor shown.

Exceedances of Table 3 Standards are shown in **bold**.

Table 6b: GROUND WATER CHEMICAL ANALYSIS - Volatile Organic Compounds- South of Powerhouse Area

800 Hydro Road, Mississauga, Ontario
December 2017

Sample I.D.	Units	RDL*	Monitor MW255	Duplicate of MW255 MW2559	Monitor MW225	Monitor MW 211	Monitor TH108	Monitor TH110	Ontario Regulation 153/04 Table 3 Ground Water Standards**
Screen Interval (m)			1.22 to 4.11	1.22 to 4.11	1.52 to 4.57	1.22 to 2.74	1.52 to 4.57	1.52 to 4.73	
Date of Sample Collection			8-Nov-17	8-Nov-17	8-Nov-17	10-Nov-17	15-Nov-17	15-Nov-17	
Date of Sample Analysis			20-Nov-17	20-Nov-17	20-Nov-17	21-Nov-17	23-Nov-17	23-Nov-17	
Certificate of Analysis Number			17T282567	17T282567	17T282567	17T283734	17T285277	17T285277	
Laboratory I.D.			8899331	8899332	8899333	8904880	8913980	8914347	
1,1,1,2-Tetrachloroethane	µg/L	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	28
1,1,1-Trichloroethane	µg/L	0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	6,700
1,1,2,2-Tetrachloroethane	µg/L	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	15
1,1,2-Trichloroethane	µg/L	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	30
1,1-Dichloroethane	µg/L	0.30	1.8	1.4	<0.30	<0.30	<0.30	<0.30	3,100
1,1-Dichloroethylene	µg/L	0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	17
1,2-Dichlorobenzene	µg/L	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	9,600
1,2-Dichloroethane	µg/L	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	12
1,2-Dichloropropane	µg/L	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	140
1,3-Dichlorobenzene	µg/L	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	9,600
1,3-Dichloropropene	µg/L	0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	45
1,4-Dichlorobenzene	µg/L	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	67
Acetone	µg/L	1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	130,000
Benzene	µg/L	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	4.9	430
Bromodichloromethane	µg/L	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	85,000
Bromoform	µg/L	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	770
Bromomethane	µg/L	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	56
Carbon Tetrachloride	µg/L	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	8.4
Chlorobenzene	µg/L	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	630
Chloroform	µg/L	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	22
cis- 1,2-Dichloroethylene	µg/L	0.20	3.4	2.5	<0.20	<0.20	<0.20	<0.20	17
Dibromochloromethane	µg/L	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	82,000
Dichlorodifluoromethane	µg/L	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	4,400
Ethylbenzene	µg/L	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	0.89	2,300
Ethylene Dibromide	µg/L	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	0.83
Methyl Ethyl Ketone	µg/L	1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	1,500,000
Methyl Isobutyl Ketone	µg/L	1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	580,000
Methyl tert-butyl ether	µg/L	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	1,400
Methylene Chloride	µg/L	0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	5,500
n-Hexane	µg/L	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	520
Styrene	µg/L	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	9,100
Tetrachloroethylene	µg/L	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	17
Toluene	µg/L	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	18,000
trans- 1,2-Dichloroethylene	µg/L	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	17
Trichloroethylene	µg/L	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	17
Trichlorofluoromethane	µg/L	0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	2,500
Vinyl Chloride	µg/L	0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	1.7
Xylene Mixture	µg/L	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	4,200

NOTES:

Analysis by AGAT Laboratories.

All results in ppb (µg/L).

* Reporting Detection Limit (RDL) value is listed.

** Standards shown are for all types of property use with medium to fine textured soil.

Exceedances of Table 3 Standards are shown in **bold**.

Table 6b: GROUND WATER CHEMICAL ANALYSIS - Metals and Inorganic Parameters-- South of Powerhouse Area

800 Hydro Road, Mississauga, Ontario
December 2017

Sample I.D.	Units	RDL*	Monitor MW3-16	Monitor MW13-15	Monitor TH108	Ontario Regulation 153/04 Table 3 Ground Water Standards**
Screen Interval (m)			1.53 to 3.66	1.07 to 4.11	1.52 to 4.57	
Date of Sample Collection			7-Nov-17	8-Nov-17	15-Nov-17	
Date of Sample Analysis			20-Nov-17	20-Nov-17	21-Nov-17	
Certificate of Analysis Number			17T282567	17T282567	17T285277	
Laboratory I.D.			8899317	8899325	8913980	
Antimony	µg/L	1.0	<1.0	<1.0	<1.0	20,000
Arsenic	µg/L	1.0	<1.0	<1.0	2.7	1,900
Barium	µg/L	2.0	38	38	51.7	29,000
Beryllium	µg/L	0.5	<0.5	<0.5	<0.5	67
Boron	µg/L	10.0	882	466	908	45,000
Cadmium	µg/L	0.2	<0.2	<0.2	<0.2	2.7
Chromium	µg/L	2.0	<2.0	<2.0	<2.0	810
Cobalt	µg/L	0.5	<0.5	<0.5	0.8	66
Copper	µg/L	1.0	<1.0	<1.0	<1.0	87
Lead	µg/L	0.5	<0.5	<0.5	<0.5	25
Molybdenum	µg/L	0.5	10.1	12.9	6.8	9,200
Nickel	µg/L	1.0	<1.0	<1.0	<1.0	490
Selenium	µg/L	1.0	<1.0	<1.0	1.5	63
Silver	µg/L	0.2	<0.2	<0.2	<0.2	1.5
Thallium	µg/L	0.3	<0.3	<0.3	<0.3	510
Uranium	µg/L	0.5	1	1.3	1.8	420
Vanadium	µg/L	0.4	<0.4	1.2	0.8	250
Zinc	µg/L	5.0	<5.0	39.9	<5.0	1,100

NOTES:

Analysis by AGAT Laboratories.

NV mean "no value". N/A means "not applicable".

All results in ppb (µg/L).

* Reporting Detection Limit (RDL) value is listed.

** Standards shown are for all types of property use with medium to fine textured soil.

Exceedances of Table 3 Standards are shown in **bold**.

Table 7a: SOIL CHEMICAL ANALYSIS - Petroleum Hydrocarbon Parameters - Area Within 30m of a Waterbody

800 Hydro Road, Mississauga, Ontario
December 2017

Sample I.D.	Units	RDL*	Test Pit TP12-2m	Test Pit TP13-2.5m	Ontario Regulation 153/04 Table 9 Soil Standards**
Depth (m)			1.0 to 2.0	2.5 to 3.0	
Soil Type			Sand and Gravel Fill	Clayey Silt Fill	
Date of Sample Collection			14-Nov-17	14-Nov-17	
Date of Sample Analysis			27-Nov-17	27-Nov-17	
Certificate of Analysis Number			17T286217	17T286217	
Laboratory I.D.			8921999	8922001	
Field Vapour Reading			325 ppm	175 ppm	
Benzene	µg/g	0.02	<0.02	<0.02	0.02
Toluene	µg/g	0.08	<0.08	<0.08	0.2
Ethylbenzene	µg/g	0.05	<0.05	<0.05	0.05
Xylene Mixture (Total)	µg/g	0.05	<0.05	<0.05	0.05
PHC F1 (C6 to C10) - BTEX	µg/g	5	<5	**48**	25
PHC F2 (C10 to C16)	µg/g	10	**660**	**3,900**	10
PHC F3 (C16 to C34)	µg/g	50	**640**	**2,400**	240
PHC F4 (C34 to C50)	µg/g	50	<50	<50	120

NOTES:

Analysis by AGAT Laboratories.

All results in ppm (µg/g) and based on dry weight basis. NA means "not analysed". NM means "not measured".

* Reporting Detection Limit (RDL) value is listed.

** Standards shown are for a residential/parkland/institutional property use with medium to fine textured soil.

Exceedances of Table 9 Standards are shown in **bold**.

Table 7b: GROUND WATER CHEMICAL ANALYSIS - Polycyclic Aromatic Hydrocarbons - Area Within 30m of a Waterbody

800 Hydro Road, Mississauga, Ontario
December 2017

Sample I.D.	Units	RDL*	Monitor TRW12	Duplicate of TRW12 TRW129	Monitor MW5-05	Ontario Regulation 153/04 Table 9 Ground Water Standards**
Screen Interval (m)			Unknown to 3.98****	Unknown to 3.98****	2.29 to 5.33	
Date of Sample Collection			7-Nov-17	7-Nov-17	13-Nov-17	
Date of Sample Analysis			20-Nov-17	20-Nov-17	21-Nov-17	
Certificate of Analysis Number			17T282567	17T282567	17T283734	
Laboratory I.D.			8899299	8899309	8904972	
2-and 1-methyl Naphthalene	µg/L	0.20	<0.20	<0.20	<0.20	1,500
Acenaphthene	µg/L	0.20	0.55	0.58	<0.20	600
Acenaphthylene	µg/L	0.20	<0.20	<0.20	<0.20	1.4
Anthracene	µg/L	0.10	<0.10	<0.10	<0.10	1
Benz(a)anthracene	µg/L	0.20	<0.20	<0.20	<0.20	1.8
Benzo(a)pyrene	µg/L	0.01	<0.01	<0.01	<0.01	0.81
Benzo(b)fluoranthene	µg/L	0.10	<0.10	<0.10	<0.10	0.75
Benzo(g,h,i)perylene	µg/L	0.20	<0.20	<0.20	<0.20	0.2
Benzo(k)fluoranthene	µg/L	0.10	<0.10	<0.10	<0.10	0.4
Chrysene	µg/L	0.10	<0.10	<0.10	<0.10	0.7
Dibenz(a,h)anthracene	µg/L	0.20	<0.20	<0.20	<0.20	0.4
Fluoranthene	µg/L	0.20	<0.20	<0.20	<0.20	73
Fluorene	µg/L	0.20	<0.20	<0.20	<0.20	290
Indeno(1,2,3-cd)pyrene	µg/L	0.20	<0.20	<0.20	<0.20	0.2
Naphthalene	µg/L	0.20	<0.20	<0.20	<0.20	1,400
Phenanthrene	µg/L	0.10	<0.10	<0.10	<0.10	380
Pyrene	µg/L	0.20	<0.20	<0.20	<0.20	5.7

NOTES:

Analysis by AGAT Laboratories.

All results in ppb (µg/L).

* Reporting Detection Limit (RDL) value is listed.

** Standards shown are for all types of property use with medium to fine textured soil.

*** The sum of 1- and 2-Methylnaphthalene concentrations must not exceed the soil Standard if both are detected.

**** Depth of screen interval unknown. Depth to bottom of monitor shown.

Exceedances of Table 9 Standards are shown in **bold**.

Table 7b: GROUND WATER CHEMICAL ANALYSIS - South of Powerhouse -Area Within 30m of a Waterbody

800 Hydro Road, Mississauga, Ontario
December 2017

Sample I.D.	Units	MDL*	Monitor TRW-4	Monitor TRW12	Monitor TMW301	Monitor TMW303	Monitor TMW306	Monitor MW5-05	Monitor MW13-13	Ontario Regulation 153/04 Table 9 Ground Water Standards**
Screen Interval (m)			Unknown to 4.40***	Unknown to 3.98***	Unknown to 3.20***	Unknown to 3.77***	Unknown to 3.741***	2.29 to 5.33	1.07 to 4.11	
Date of Sample Collection			7-Nov-17	7-Nov-17	7-Nov-17	7-Nov-17	7-Nov-17	13-Nov-17	8-Nov-17	
Date of Sample Analysis			20-Nov-17	20-Nov-17	20-Nov-17	20-Nov-17	20-Nov-17	21-Nov-17	20-Nov-17	
Certificate of Analysis Number			17T282567	17T282567	17T282567	17T282567	17T282567	17T283734	17T282567	
Laboratory I.D.			8899289	8899299	8899313	8899287	8899312	8904972	8899328	
Benzene	µg/L	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	44
Toluene	µg/L	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	14,000
Ethylbenzene	µg/L	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	1,800
Xylene Mixture (Total)	µg/L	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	3,300
PHC F1 (C6 to C10) - BTEX	µg/L	25	<25	<25	51	<25	<25	<25	<25	420
PHC F2 (C10 to C16)	µg/L	100	<100	<100	**360**	<100	110	<100	<100	150
PHC F3 (C16 to C34)	µg/L	100	<100	150	160	<100	<100	<100	<100	500
PHC F4 (C34 to C50)	µg/L	100	<100	<100	<100	<100	<100	<100	<100	500

NOTES:

Analysis by AGAT Laboratories.

All results in ppb (µg/L).

* Reporting Detection Limit (RDL) value is listed.

** Standards shown are for all types of property use with medium to fine textured soil.

*** Depth of screen interval unknown. Depth to bottom of monitor shown.

Exceedances of Table 9 Standards are shown in **bold**.

Table 7b: GROUND WATER CHEMICAL ANALYSIS - Volatile Organic Compounds - Area Within 30m of a Waterbody

800 Hydro Road, Mississauga, Ontario
December 2017

Sample I.D.	Units	MDL*	Monitor TRW4	Duplicate of TRW4 TRW43	Ontario Regulation 153/04 Table 9 Ground Water Standards**
Screen Interval (m)			Unknown to 4.40***	Unknown to 4.40***	
Date of Sample Collection			7-Nov-17	7-Nov-17	
Date of Sample Analysis			20-Nov-17	20-Nov-17	
Certificate of Analysis Number			17T282567	17T282567	
Laboratory I.D.			8899289	8899294	
1,1,1,2-Tetrachloroethane	µg/L	0.10	<0.10	<0.10	3.3
1,1,1-Trichloroethane	µg/L	0.30	<0.30	<0.30	640
1,1,2,2-Tetrachloroethane	µg/L	0.10	<0.10	<0.10	3.2
1,1,2-Trichloroethane	µg/L	0.20	<0.20	<0.20	4.7
1,1-Dichloroethane	µg/L	0.30	<0.30	<0.30	320
1,1-Dichloroethylene	µg/L	0.30	<0.30	<0.30	1.6
1,2-Dichlorobenzene	µg/L	0.10	<0.10	<0.10	4,600
1,2-Dichloroethane	µg/L	0.20	<0.20	<0.20	1.6
1,2-Dichloropropane	µg/L	0.20	<0.20	<0.20	16
1,3-Dichlorobenzene	µg/L	0.10	<0.10	<0.10	7,600
1,3-Dichloropropene	µg/L	0.30	<0.30	<0.30	5.2
1,4-Dichlorobenzene	µg/L	0.10	<0.10	<0.10	8
Acetone	µg/L	1.0	<1.0	<1.0	100,000
Benzene	µg/L	0.20	<0.20	<0.20	44
Bromodichloromethane	µg/L	0.20	<0.20	<0.20	67,000
Bromoform	µg/L	0.10	<0.10	<0.10	380
Bromomethane	µg/L	0.20	<0.20	<0.20	5.6
Carbon Tetrachloride	µg/L	0.20	<0.20	<0.20	0.79
Chlorobenzene	µg/L	0.10	<0.10	<0.10	500
Chloroform	µg/L	0.20	<0.20	<0.20	2.4
cis- 1,2-Dichloroethylene	µg/L	0.20	<0.20	<0.20	1.6
Dibromochloromethane	µg/L	0.10	<0.10	<0.10	65,000
Dichlorodifluoromethane	µg/L	0.20	<0.20	<0.20	3,500
Ethylbenzene	µg/L	0.10	<0.10	<0.10	1,800
Ethylene Dibromide	µg/L	0.10	<0.10	<0.10	0.25
Methyl Ethyl Ketone	µg/L	1.0	<1.0	<1.0	470,000
Methyl Isobutyl Ketone	µg/L	1.0	<1.0	<1.0	140,000
Methyl tert-butyl ether	µg/L	0.20	<0.20	<0.20	190
Methylene Chloride	µg/L	0.30	<0.30	<0.30	610
n-Hexane	µg/L	0.20	<0.20	<0.20	51
Styrene	µg/L	0.10	<0.10	<0.10	1,300
Tetrachloroethylene	µg/L	0.20	<0.20	<0.20	1.6
Toluene	µg/L	0.20	<0.20	<0.20	14,000
trans- 1,2-Dichloroethylene	µg/L	0.20	<0.20	<0.20	1.6
Trichloroethylene	µg/L	0.20	<0.20	<0.20	1.6
Trichlorofluoromethane	µg/L	0.40	<0.40	<0.40	2,000
Vinyl Chloride	µg/L	0.17	<0.17	<0.17	0.5
Xylene Mixture	µg/L	0.20	<0.20	<0.20	3,300

NOTES:

Analysis by AGAT Laboratories.

All results in ppb (µg/L).

* Reporting Detection Limit (RDL) value is listed.

** Standards shown are for all types of property use with medium to fine textured soil.

*** Depth of screen interval unknown. Depth to bottom of monitor shown.

Exceedances of Table 9 Standards are shown in **bold**.

Table 7b: GROUND WATER CHEMICAL ANALYSIS - Metals and Inorganic Parameters - Area Within 30m of a Waterbody

800 Hydro Road, Mississauga, Ontario
December 2017

Sample I.D.	Units	MDL*	Monitor TRW12	Duplicate of TRW12 TRW129	Monitor MW 5-05	Ontario Regulation 153/04 Table 9 Ground Water Standards**
Screen Interval (m)			Unknown to 3.98****	Unknown to 3.98****	2.29 to 5.33	
Date of Sample Collection			7-Nov-17	7-Nov-17	13-Nov-17	
Date of Sample Analysis			20-Nov-17	20-Nov-17	21-Nov-17	
Certificate of Analysis Number			17T282567	17T282567	17T283734	
Laboratory I.D.			8899299	8899309	8904972	
Antimony	µg/L	1.0	<1.0	<1.0	<1.0	16,000
Arsenic	µg/L	1.0	1.5	1.4	2	1,500
Barium	µg/L	2.0	409	382	36.7	23,000
Beryllium	µg/L	0.5	<0.5	<0.5	<0.5	53
Boron	µg/L	10.0	537	497	441	36,000
Cadmium	µg/L	0.2	<0.2	<0.2	<0.2	2.1
Chromium	µg/L	2.0	5.1	2.9	<2.0	640
Cobalt	µg/L	1.0	1	0.7	1.4	52
Copper	µg/L	1.0	<1.0	<1.0	<1.0	69
Lead	µg/L	0.5	<0.5	<0.5	<0.5	20
Molybdenum	µg/L	0.5	1.1	0.8	<0.5	7,300
Nickel	µg/L	1.0	<1.0	<1.0	3	390
Selenium	µg/L	1.0	<1.0	1.5	2	50
Silver	µg/L	0.2	<0.2	<0.2	<0.2	1.2
Thallium	µg/L	0.3	<0.3	<0.3	<0.3	400
Uranium	µg/L	0.5	0.6	0.6	1.3	330
Vanadium	µg/L	0.4	<0.4	<0.4	<0.4	200
Zinc	µg/L	5.0	<5.0	<5.0	6.4	890

NOTES:

Analysis by AGAT Laboratories.

NV mean "no value". N/A means "not applicable".

All results in ppb (µg/L).

* Reporting Detection Limit (RDL) value is listed.

** Standards shown are for all types of property use with medium to fine textured soil.

*** Depth of screen interval unknown. Depth to bottom of monitor shown.

Exceedances of Table 9 Standards are shown in **bold**.

Table 8: GROUND WATER CHEMICAL ANALYSIS - Polycyclic Aromatic Hydrocarbons - Coal Yard Area

800 Hydro Road, Mississauga, Ontario
December 2017

Sample I.D.	Units	RDL*	Monitor MW5-06	Monitor MW23-07	Monitor MW1-06	Ontario Regulation 153/04 Table 3 Ground Water Standards**
Screen Interval (m)			1.37 to 4.42	0.76 to 2.90	2.29 to 5.33	
Date of Sample Collection			13-Nov-17	13-Nov-17	15-Nov-17	
Date of Sample Analysis			21-Nov-17	21-Nov-17	23-Nov-17	
Certificate of Analysis Number			17T283734	17T283734	17T285277	
Laboratory I.D.			8904899	8904938	8914354	
2-and 1-methyl Naphthalene	µg/L	0.20	<0.20	<0.20	<0.20	1,800
Acenaphthene	µg/L	0.20	<0.20	<0.20	<0.20	1,700
Acenaphthylene	µg/L	0.20	<0.20	<0.20	<0.20	1.8
Anthracene	µg/L	0.10	<0.10	<0.10	<0.20	2.4
Benz(a)anthracene	µg/L	0.20	<0.20	<0.20	<0.10	4.7
Benzo(a)pyrene	µg/L	0.01	<0.01	<0.01	<0.10	0.81
Benzo(b)fluoranthene	µg/L	0.10	<0.10	<0.10	<0.20	0.75
Benzo(g,h,i)perylene	µg/L	0.20	<0.20	<0.20	<0.20	0.2
Benzo(k)fluoranthene	µg/L	0.10	<0.10	<0.10	<0.20	0.4
Chrysene	µg/L	0.10	<0.10	<0.10	<0.10	1
Dibenz(a,h)anthracene	µg/L	0.20	<0.20	<0.20	<0.10	0.52
Fluoranthene	µg/L	0.20	<0.20	<0.20	<0.10	130
Fluorene	µg/L	0.20	<0.20	<0.20	<0.01	400
Indeno(1,2,3-cd)pyrene	µg/L	0.20	<0.20	<0.20	<0.20	0.2
Naphthalene	µg/L	0.20	<0.20	<0.20	<0.20	6,400
Phenanthrene	µg/L	0.10	<0.10	<0.10	<0.20	580
Pyrene	µg/L	0.20	<0.20	<0.20	<0.20	68

NOTES:

Analysis by AGAT Laboratories.

All results in ppb (µg/L).

* Reporting Detection Limit (RDL) value is listed.

** Standards shown are for all types of property use with medium to fine textured soil.

*** The sum of 1- and 2-Methylnaphthalene concentrations must not exceed the soil Standard if both are detected.

Exceedances of Table 3 Standards are shown in **bold**.

Table 8: GROUND WATER CHEMICAL ANALYSIS - Petroleum Hydrocarbon Parameters - Coal Yard Area

800 Hydro Road, Mississauga, Ontario

December 2017

Sample I.D.	Units	RDL*	Monitor MW 23-07	Monitor MW 5-06	Monitor MW1-06	Ontario Regulation 153/04 Table 3 Ground Water Standards**
Screen Interval (m)			0.76 to 2.90	1.37 to 4.42	2.29 to 5.33	
Date of Sample Collection			13-Nov-17	13-Nov-17	15-Nov-17	
Date of Sample Analysis			21-Nov-17	21-Nov-17	23-Nov-17	
Certificate of Analysis Number			17T283734	17T283734	17T285277	
Laboratory I.D.			8904938	8904899	8914354	
Benzene	µg/L	0.20	<0.20	<0.20	<0.20	430
Toluene	µg/L	0.20	<0.20	<0.20	<0.20	18,000
Ethylbenzene	µg/L	0.10	<0.10	<0.10	<0.10	2,300
Xylene Mixture (Total)	µg/L	0.20	<0.20	<0.20	<0.20	4,200
PHC F1 (C6 to C10) - BTEX	µg/L	25	<25	<25	<25	750
PHC F2 (C10 to C16)	µg/L	100	<100	<100	<150	150
PHC F3 (C16 to C34)	µg/L	100	<100	<100	<200	500
PHC F4 (C34 to C50)	µg/L	100	<100	<100	<200	500

NOTES:

Analysis by AGAT Laboratories.

All results in ppb (µg/L).

* Reporting Detection Limit (RDL) value is listed.

** Standards shown are for all types of property use with medium to fine textured soil.

Exceedances of Table 3 Standards are shown in **bold**.

Table 8: GROUND WATER CHEMICAL ANALYSIS - Volatile Organic Compounds - Coal Yard Area

800 Hydro Road, Mississauga, Ontario
December 2017

Sample I.D.	Units	RDL*	Monitor MW5-06	Monitor MW1-06	Ontario Regulation 153/04 Table 3 Ground Water Standards**
Screen Interval (m)			1.37 to 4.42	2.29 to 5.33	
Date of Sample Collection			13-Nov-17	15-Nov-17	
Date of Sample Analysis			21-Nov-17	23-Nov-17	
Certificate of Analysis Number			17T283734	17T285277	
Laboratory I.D.			8904899	8914354	
1,1,1,2-Tetrachloroethane	µg/L	0.10	<0.10	<0.10	28
1,1,1-Trichloroethane	µg/L	0.30	<0.30	<0.30	6,700
1,1,2,2-Tetrachloroethane	µg/L	0.10	<0.10	<0.10	15
1,1,2-Trichloroethane	µg/L	0.20	<0.20	<0.20	30
1,1-Dichloroethane	µg/L	0.30	<0.30	<0.30	3,100
1,1-Dichloroethylene	µg/L	0.30	<0.30	<0.30	17
1,2-Dichlorobenzene	µg/L	0.10	<0.10	<0.10	9,600
1,2-Dichloroethane	µg/L	0.20	<0.20	<0.20	12
1,2-Dichloropropane	µg/L	0.20	<0.20	<0.20	140
1,3-Dichlorobenzene	µg/L	0.10	<0.10	<0.10	9,600
1,3-Dichloropropene	µg/L	0.30	<0.30	<0.30	45
1,4-Dichlorobenzene	µg/L	0.10	<0.10	<0.10	67
Acetone	µg/L	1.0	<1.0	<1.0	130,000
Benzene	µg/L	0.2	<0.20	<0.20	430
Bromodichloromethane	µg/L	0.20	<0.20	<0.20	85,000
Bromoform	µg/L	0.10	<0.10	<0.10	770
Bromomethane	µg/L	0.20	<0.20	<0.20	56
Carbon Tetrachloride	µg/L	0.20	<0.20	<0.20	8.4
Chlorobenzene	µg/L	0.10	<0.10	<0.10	630
Chloroform	µg/L	0.20	<0.20	<0.20	22
cis- 1,2-Dichloroethylene	µg/L	0.20	<0.20	<0.20	17
Dibromochloromethane	µg/L	0.10	<0.10	<0.10	82,000
Dichlorodifluoromethane	µg/L	0.20	<0.20	<0.20	4,400
Ethylbenzene	µg/L	0.10	<0.10	<0.10	2,300
Ethylene Dibromide	µg/L	0.10	<0.10	<0.10	0.83
Methyl Ethyl Ketone	µg/L	1.0	<1.0	<1.0	1,500,000
Methyl Isobutyl Ketone	µg/L	1.0	<1.0	<1.0	580,000
Methyl tert-butyl ether	µg/L	0.20	<0.20	<0.20	1,400
Methylene Chloride	µg/L	0.30	<0.30	<0.30	5,500
n-Hexane	µg/L	0.20	<0.20	<0.20	520
Styrene	µg/L	0.10	<0.10	<0.10	9,100
Tetrachloroethylene	µg/L	0.20	<0.20	<0.20	17
Toluene	µg/L	0.20	<0.20	<0.20	18,000
trans- 1,2-Dichloroethylene	µg/L	0.20	<0.20	<0.20	17
Trichloroethylene	µg/L	0.20	<0.20	<0.20	17
Trichlorofluoromethane	µg/L	0.40	<0.40	<0.40	2,500
Vinyl Chloride	µg/L	0.17	<0.17	<0.17	1.7
Xylene Mixture	µg/L	0.20	<0.20	<0.20	4,200

NOTES:

Analysis by AGAT Laboratories.

All results in ppb (µg/L).

* Reporting Detection Limit (RDL) value is listed.

** Standards shown are for all types of property use with medium to fine textured soil.

Exceedances of Table 3 Standards are shown in **bold**.

Table 8: GROUND WATER CHEMICAL ANALYSIS - Metals and Inorganic Parameters - Coal Yard Area

800 Hydro Road, Mississauga, Ontario
December 2017

Sample I.D.	Units	RDL*	Monitor MW 5-06	Monitor MW 23-07	Ontario Regulation 153/04 Table 3 Ground Water Standards**
Screen Interval (m)			1.37 to 4.42	0.76 to 2.90	
Date of Sample Collection			13-Nov-17	13-Nov-17	
Date of Sample Analysis			21-Nov-17	21-Nov-17	
Certificate of Analysis Number			17T283734	17T283734	
Laboratory I.D.			8904899	8904938	
Antimony	µg/L	1.0	<1.0	<1.0	20,000
Arsenic	µg/L	1.0	1.6	1.2	1,900
Barium	µg/L	2.0	50	27.6	29,000
Beryllium	µg/L	0.5	<0.5	<0.5	67
Boron	µg/L	10.0	186	248	45,000
Cadmium	µg/L	0.2	<0.2	<0.2	2.7
Chromium	µg/L	2.0	2.2	<2.0	810
Cobalt	µg/L	1.0	3	0.7	66
Copper	µg/L	1.0	2.2	1.3	87
Lead	µg/L	0.5	<0.5	<0.5	25
Molybdenum	µg/L	0.5	0.8	1	9,200
Nickel	µg/L	1.0	<1.0	<1.0	490
Selenium	µg/L	1.0	2	<1.0	63
Silver	µg/L	0.2	<0.2	<0.2	1.5
Thallium	µg/L	0.3	<0.3	<0.3	510
Uranium	µg/L	0.5	2.4	2.7	420
Vanadium	µg/L	0.4	<0.4	<0.4	250
Zinc	µg/L	5.0	127	6	1100

NOTES:

Analysis by AGAT Laboratories.

NV mean "no value". N/A means "not applicable".

All results in ppb (µg/L).

* Reporting Detection Limit (RDL) value is listed.

** Standards shown are for all types of property use with medium to fine textured soil.

Exceedances of Table 3 Standards are shown in **bold**.

Table 9: GROUND WATER CHEMICAL ANALYSIS - Petroleum Hydrocarbon Parameters - Intake Channel

800 Hydro Road, Mississauga, Ontario

December 2017

Sample I.D.	Units	RDL*	Monitor GR1	Monitor GR2	Duplicate of GR2 GR23	Monitor GR3	Aquatic Protection Value
Date of Sample Collection			14-Nov-17	14-Nov-17	14-Nov-17	14-Nov-17	
Date of Sample Analysis			22-Nov-17	22-Nov-17	22-Nov-17	22-Nov-17	
Certificate of Analysis Number			17T285277	17T285277	17T285277	17T285277	
Laboratory I.D.			8914373	8914378	8914380	8914379	
Benzene	µg/L	0.20	<0.20	<0.20	<0.20	<0.20	460
Toluene	µg/L	0.20	<0.20	<0.20	<0.20	<0.20	1,400
Ethylbenzene	µg/L	0.10	<0.10	<0.10	<0.10	<0.10	181
Xylene Mixture (Total)	µg/L	0.20	<0.20	<0.20	<0.20	<0.20	330
PHC F1 (C6 to C10) - BTEX	µg/L	25	<25	<25	<25	<25	75.09
PHC F2 (C10 to C16)	µg/L	100	<100	<100	<100	<100	78.47
PHC F3 (C16 to C34)	µg/L	100	<100	<100	<100	<100	NV
PHC F4 (C34 to C50)	µg/L	100	<100	<100	<100	<100	NV

NOTES:

Analysis by AGAT Laboratories.

All results in ppb (µg/L).

NV means 'no value'.

* Reporting Detection Limit (RDL) value is listed.

Exceedances of the Ontario Ministry of the Environment (MOE), 2011C. *Rationale for the Development of Soil and Ground Water Standards for Use at Contaminated Sites in Ontario (April 15, 2011)* are shown in **bold**.

243747

Table 9: GROUND WATER CHEMICAL ANALYSIS - Volatile Organic Compounds - Intake Channel

800 Hydro Road, Mississauga, Ontario

December 2017

Sample I.D.	Units	RDL*	Monitor GR1	Monitor GR2	Duplicate of GR2 GR23	Monitor GR3	Aquatic Protection Value
Date of Sample Collection			14-Nov-17	14-Nov-17	14-Nov-17	14-Nov-17	
Date of Sample Analysis			22-Nov-17	22-Nov-17	22-Nov-17	22-Nov-17	
Certificate of Analysis Number			17T285277	17T285277	17T285277	17T285277	
Laboratory I.D.			8914373	8914378	8914380	8914379	
1,1,1,2-Tetrachloroethane	µg/L	0.10	<0.10	<0.10	<0.10	<0.10	2,000
1,1,1-Trichloroethane	µg/L	0.30	<0.30	<0.30	<0.30	<0.30	900
1,1,2,2-Tetrachloroethane	µg/L	0.10	<0.10	<0.10	<0.10	<0.10	2,400
1,1,2-Trichloroethane	µg/L	0.20	<0.20	<0.20	<0.20	<0.20	9,400
1,1-Dichloroethane	µg/L	0.30	<0.30	<0.30	<0.30	<0.30	202,000
1,1-Dichloroethylene	µg/L	0.30	<0.30	<0.30	<0.30	<0.30	1,200
1,2-Dichlorobenzene	µg/L	0.10	<0.10	<0.10	<0.10	<0.10	763
1,2-Dichloroethane	µg/L	0.20	<0.20	<0.20	<0.20	<0.20	20,000
1,2-Dichloropropane	µg/L	0.20	<0.20	<0.20	<0.20	<0.20	5,700
1,3-Dichlorobenzene	µg/L	0.10	<0.10	<0.10	<0.10	<0.10	763
1,3-Dichloropropene	µg/L	0.30	<0.30	<0.30	<0.30	<0.30	244
1,4-Dichlorobenzene	µg/L	0.10	<0.10	<0.10	<0.10	<0.10	763
Acetone	µg/L	1.0	<1.0	<1.0	<1.0	<1.0	10,000
Benzene	µg/L	0.20	<0.20	<0.20	<0.20	<0.20	460
Bromodichloromethane	µg/L	0.20	<0.20	<0.20	<0.20	<0.20	6,700
Bromoform	µg/L	0.10	<0.10	<0.10	<0.10	<0.10	2,900
Bromomethane	µg/L	0.20	<0.20	<0.20	<0.20	<0.20	320
Carbon Tetrachloride	µg/L	0.20	<0.20	<0.20	<0.20	<0.20	200
Chlorobenzene	µg/L	0.10	<0.10	<0.10	<0.10	<0.10	50
Chloroform	µg/L	0.20	<0.20	<0.20	<0.20	<0.20	1,240
cis- 1,2-Dichloroethylene	µg/L	0.20	<0.20	<0.20	<0.20	<0.20	14,000
Dibromochloromethane	µg/L	0.10	<0.10	<0.10	<0.10	<0.10	6,500
Dichlorodifluoromethane	µg/L	0.20	<0.20	<0.20	<0.20	<0.20	350
Ethylbenzene	µg/L	0.10	<0.10	<0.10	<0.10	<0.10	181
Ethylene Dibromide	µg/L	0.10	<0.10	<0.10	<0.10	<0.10	9,600
Methyl Ethyl Ketone	µg/L	1.0	<1.0	<1.0	<1.0	<1.0	120,000
Methyl Isobutyl Ketone	µg/L	1.0	<1.0	<1.0	<1.0	<1.0	46,000
Methyl tert-butyl ether	µg/L	0.20	<0.20	<0.20	<0.20	<0.20	100,000
Methylene Chloride	µg/L	0.30	<0.30	<0.30	<0.30	<0.30	1,320
n-Hexane	µg/L	0.20	<0.20	<0.20	<0.20	<0.20	250
Styrene	µg/L	0.10	<0.10	<0.10	<0.10	<0.10	720
Tetrachloroethylene	µg/L	0.20	<0.20	<0.20	<0.20	<0.20	840
Toluene	µg/L	0.20	<0.20	<0.20	<0.20	<0.20	1,400
trans- 1,2-Dichloroethylene	µg/L	0.20	<0.20	<0.20	<0.20	<0.20	22,000
Trichloroethylene	µg/L	0.20	<0.20	<0.20	<0.20	<0.20	21,900
Trichlorofluoromethane	µg/L	0.40	<0.40	<0.40	<0.40	<0.40	200
Vinyl Chloride	µg/L	0.17	<0.17	<0.17	<0.17	<0.17	35,600
Xylene Mixture	µg/L	0.20	<0.20	<0.20	<0.20	<0.20	330

NOTES:

Analysis by AGAT Laboratories.

All results in ppb (µg/L).

NV means 'no value'.

* Reporting Detection Limit (RDL) value is listed.

Exceedances of the Ontario Ministry of the Environment (MOE), 2011C. *Rationale for the Development of Soil and Ground Water Standards for Use at Contaminated Sites in Ontario (April 15, 2011)* are shown in **bold**.

Table 9: GROUND WATER CHEMICAL ANALYSIS - Polycyclic Aromatic Hydrocarbons - Intake Channel

800 Hydro Road, Mississauga, Ontario

December 2017

Sample I.D.	Units	RDL*	Monitor GR1	Monitor GR2	Duplicate of (GR2) GR23	Monitor GR3	Aquatic Protection Value
Date of Sample Collection			14-Nov-17	14-Nov-17	14-Nov-17	14-Nov-17	
Date of Sample Analysis			22-Nov-17	22-Nov-17	22-Nov-17	22-Nov-17	
Certificate of Analysis Number			17T285277	17T285277	17T285277	17T285277	
Laboratory I.D.			8914373	8914378	8914379	8914380	
2-and 1-methyl Naphthalene	µg/L	0.20	<0.20	<0.20	<0.20	<0.20	146
Acenaphthene	µg/L	0.20	<0.20	<0.20	<0.20	<0.20	520
Acenaphthylene	µg/L	0.20	**<0.20**	**<0.20**	**<0.20**	**<0.20**	0.14
Anthracene	µg/L	0.10	<0.10	<0.10	<0.10	<0.10	0.1
Benz(a)anthracene	µg/L	0.20	**<0.20**	**<0.20**	**<0.20**	**<0.20**	0.18
Benzo(a)pyrene	µg/L	0.01	<0.01	<0.01	<0.01	<0.01	0.21
Benzo(b)fluoranthene	µg/L	0.10	<0.10	<0.10	<0.10	<0.10	0.42
Benzo(g,h,i)perylene	µg/L	0.20	**<0.20**	**<0.20**	**<0.20**	**<0.20**	0.02
Benzo(k)fluoranthene	µg/L	0.10	<0.10	<0.10	<0.10	<0.10	0.14
Chrysene	µg/L	0.10	**<0.10**	**<0.10**	**<0.10**	**<0.10**	0.07
Dibenz(a,h)anthracene	µg/L	0.20	**<0.20**	**<0.20**	**<0.20**	**<0.20**	0.04
Fluoranthene	µg/L	0.20	<0.20	<0.20	<0.20	<0.20	7.3
Fluorene	µg/L	0.20	<0.20	<0.20	<0.20	<0.20	29
Indeno(1,2,3-cd)pyrene	µg/L	0.20	**<0.20**	**<0.20**	**<0.20**	**<0.20**	0.14
Naphthalene	µg/L	0.20	<0.20	<0.20	<0.20	<0.20	620
Phenanthrene	µg/L	0.10	<0.10	<0.10	<0.10	<0.10	38
Pyrene	µg/L	0.20	<0.20	<0.20	<0.20	<0.20	0.57

NOTES:

Analysis by AGAT Laboratories.

All results in ppb (µg/L).

NV means 'no value'.

* Reporting Detection Limit (RDL) value is listed.

** The sum of 1- and 2-Methylnaphthalene concentrations must not exceed the soil Standard if both are detected.

Exceedances of the Ontario Ministry of the Environment (MOE), 2011C. *Rationale for the Development of Soil and Ground Water Standards for Use at Contaminated Sites in Ontario (April 15, 2011)* are shown in **bold**.

Table 9: GROUND WATER CHEMICAL ANALYSIS - Metals and Inorganic Parameters - Intake Channel

800 Hydro Road, Mississauga, Ontario
December 2017

Sample I.D.	Units	RDL*	Monitor GR1	Monitor GR2	Duplicate of GR2 GR23	Monitor GR3	Aquatic Protection Value
Date of Sample Collection			14-Nov-17	14-Nov-17	14-Nov-17	14-Nov-17	
Date of Sample Analysis			21-Nov-17	21-Nov-17	21-Nov-17	21-Nov-17	
Certificate of Analysis Number			17T285277	17T285277	17T285277	17T285277	
Laboratory I.D.			8914373	8914378	8914380	8914379	
Antimony	µg/L	1.0	<1.0	<1.0	<1.0	<1.0	1,600
Arsenic	µg/L	1.0	1.1	1.1	1.1	<1.0	150
Barium	µg/L	2.0	23.7	23.6	23.7	23.0	2,300
Beryllium	µg/L	0.5	<0.5	<0.5	<0.5	<0.5	5.3
Boron	µg/L	10.0	35.2	32.1	30.9	31.0	3,550
Cadmium	µg/L	0.2	<0.2	<0.2	<0.2	<0.2	0.21
Chromium	µg/L	2.0	<2.0	<2.0	<2.0	<2.0	64
Cobalt	µg/L	0.5	<0.5	<0.5	<0.5	<0.5	5.2
Copper	µg/L	1.0	1.2	<1.0	1.1	1.4	6.9
Lead	µg/L	0.5	<0.5	<0.5	<0.5	<0.5	2.0
Molybdenum	µg/L	0.5	1.4	1.5	1.5	1.4	730
Nickel	µg/L	1.0	<1.0	<1.0	<1.0	<1.0	39
Selenium	µg/L	1.0	1.1	2.1	<1.0	<1.0	5
Silver	µg/L	0.2	**<0.2**	**<0.2**	**<0.2**	**<0.2**	0.12
Thallium	µg/L	0.3	<0.3	<0.3	<0.3	<0.3	40
Uranium	µg/L	0.5	<0.5	<0.5	<0.5	<0.5	33
Vanadium	µg/L	0.4	0.8	0.7	0.6	0.7	20
Zinc	µg/L	5.0	<5.0	<5.0	<5.0	<5.0	89

NOTES:

Analysis by AGAT Laboratories.

All results in ppb (µg/L).

NV means 'no value'.

* Reporting Detection Limit (RDL) value is listed.

Exceedances of the Ontario Ministry of the Environment (MOE), 2011C. *Rationale for the Development of Soil and Ground Water Standards for Use at Contaminated Sites in Ontario (April 15, 2011)* are shown in **bold**.

Appendix A:
Limitations and Use of Report

LIMITATIONS AND USE OF REPORT

BASIS OF REPORT

The Report is based on site conditions known or inferred by the investigation undertaken as of the date of the Report. Should changes occur which potentially impact the condition of the site the recommendations of EXP may require re-evaluation. Where special concerns exist, or the Client has special considerations or requirements, these should be disclosed to EXP to allow for additional or special investigations to be undertaken not otherwise within the scope of investigation conducted for the purpose of the Report.

Where applicable, recommended field services are the minimum necessary to ascertain that construction is being carried out in general conformity with building code guidelines, generally accepted practices and EXP'srecommendations. Any reduction in the level of services recommended will result in EXP providing qualified opinions regarding the adequacy of the work. EXP can assist design professionals or contractors retained by the Client to review applicable plans, drawings, and specifications as they relate to the Report or to conduct field reviews during construction.

RELIANCE ON INFORMATION PROVIDED

The evaluation and conclusions contained in the Report are based on conditions in evidence at the time of site inspections and information provided to EXP by the Client and others. The Report has been prepared for the specific site, development, building, design or building assessment objectives and purpose as communicated by the Client. EXP has relied in good faith upon such representations, information and instructions and accepts no responsibility for any deficiency, misstatement or inaccuracy contained in the Report as a result of any misstatements, omissions, misrepresentation or fraudulent acts of persons providing information. Unless specifically stated otherwise, the applicability and reliability of the findings, recommendations, suggestions or opinions expressed in the Report are only valid to the extent that there has been no material alteration to or variation from any of the information provided to EXP.

STANDARD OF CARE

This report ("Report") has been prepared in a manner consistent with the degree of care and skill exercised by engineering consultants currently practicing under similar circumstances and locale. No other warranty, expressed or implied, is made. Unless specifically stated otherwise, the Report does not contain environmental consulting advice.

COMPLETE REPORT

All documents, records, data and files, whether electronic or otherwise, generated as part of this assignment form part of the Report. This material includes, but is not limited to, the terms of reference given to EXP by the Client, communications between EXP and the Client, other reports, proposals or documents prepared by EXP for the Client in connection with the site described in the Report. In order to properly understand the suggestions, recommendations and opinions expressed in the Report, reference must be made to the Report in its entirety. EXP is not responsible for use by any party of portions of the Report.

USE OF REPORT

The information and opinions expressed in the Report, or any document forming part of the Report, are for the sole benefit of the Client. No other party may use or rely upon the Report in whole or in part without the written consent of EXP. Any use of the Report, or any portion of the Report, by a third party are the sole responsibility of such third party. EXP is not responsible for damages suffered by any third party resulting from unauthorised use of the Report.

REPORT FORMAT

Where EXP has submitted both electronic file and a hard copy of the Report, or any document forming part of the Report, only the signed and sealed hard copy shall be the original documents for record and working purposes. In the event of a dispute or discrepancy, the hard copy shall govern. Electronic files transmitted by EXP utilize specific software and hardware systems. EXP makes no representation about the compatibility of these files with the Client's current or future software and hardware systems. Regardless of format, the documents described herein are EXP's instruments of professional service and shall not be altered without the written consent of EXP.

Appendix B:
Qualifications of Assessors

Carla Reynolds, P.Biol., P.Geo. (Limited), QP_{ESA} (Manager, Environmental Services)

Carla Reynolds obtained an Honours degree in Biology from Queen's University in 1991 and a diploma in Terrain and Water Resources from Fleming College in 1994. Ms. Reynolds became a Professional Biologist with the Alberta Society of Professional Biologists in 2009. She is also registered as a Professional Geoscientist with the Association of Professional Geoscientists of Ontario and is a Qualified Person (QP) for both environmental assessments and risk assessments under Ontario Regulation 153/04.

Ms. Reynolds has over 23 years experience in environmental assessment and remediation. To date, she has completed over 2,000 environmental assessment or remediation projects for various clients across Canada. This work has included consultation during purchase, sale, leasing and development of land, consultation for brownfield site re-development and peer review of remedial design and reports.

T.C. (Travis) Tan, M.A.Sc., P.Eng., QP_{ESA} (Team Lead, Remediation)

Travis Tan graduated from the University of Toronto with a Master of Applied Science degree in Chemical Engineering, having previously completed his Bachelor of Engineering degree in Environmental Engineering at the National University of Singapore.

Mr. Tan has more than 10 years of consulting experience in the environmental field. His areas of expertise include Phase I and II environmental assessments, risk assessments, soil and ground water remediation, modeling and interpretation of contaminant fate and transport and providing technical analysis on environmental legal proceedings.

Mr. Tan manages and directs projects involving Risk Assessment and environmental remediation of complex sites with soil and groundwater contamination, for the purposes of property re-development, mortgage financing, due diligence, legislative compliance and right-of-way conveyance. Projects involve brownfield sites in Ontario, Alberta, Saskatchewan and Texas, including a 90-acre former wood treatment plant in Edmonton; a refrigerator manufacturing facility and a former tannery in the Greater Toronto Area (GTA); and a waterfront property and a former landfill site in the City of Toronto.

Mr. Tan is a Qualified Person for Risk Assessment (QP_{RA}) and Environmental Site Assessment (QP_{ESA}) under Ontario Regulation 153/04. Mr. Tan is a registered Professional Engineer (P. Eng.) in Ontario and Alberta.

Ajay Jayalath, M.Env.Sc. (Hydrogeologist)

Mr. Jayalath graduated from the University of Toronto in 2012 with a Bachelor of Science degree in Environmental Geoscience, specializing in Urban Geoscience and Hydrogeology. He completed his Master of Environmental Science Degree at the University of Toronto in 2014.

Mr. Jayalath has over 5 years' experience in geotechnical and environmental investigations. Since joining EXP in 2013, Mr. Jayalath has worked on numerous Phase One and Two ESAs, from conducting field work to the reporting phases. He has also been involved in the design and application of several remediation projects.

Appendix C:
Test Hole Logs

Log of Borehole TH101

Project No. MRK-00243747-A0 Drawing No. 1

Project: Subsurface Assessment Sheet No. 1 of 1

Location: 800 Hydro Road, Mississauga, Ontario

North Recreational and Transmission Line Area

Date Drilled: November 10, 2017

Drill Type: CME-75 Track

Datum: Trimble TC3 Controller

Chemical Analysis

BTEX	Benzene, Toluene, Ethylbenzene and Xylenes	*	Duplicate Sample
ING	Metals and Inorganics	PCB	Polychlorinated Biphenyls
MET	Metals	PHC	Petroleum Hydrocarbons (F1-F4)
PAH	Polycyclic Aromatic Hydrocarbons	VOC	Volatile Organic Compounds
PEST	Organochlorine Pesticides		

GWL	SYMBOL	Soil Description	ELEV. m	DEPTH	N Value	Combustible Vapour Reading (ppm)	SAMPLES	% RECOV	SAMPLE ID	ANALYSIS
		Brown **TOPSOIL**, moist, no staining, no odour	83.59	0		ND		75	SS1	
		Brown silt **FILL**, some sand, moist, no odour, no staining.	~83.3	1		ND		75	SS2	
		Brown to grey clayey silt till to silt **TILL**, some sand, moist, no odour, no staining.	~82.1 ~81.7	2	50-10"	ND		75	SS3	
						ND		75	SS4	
				3		ND		75	SS5	
		Grey shale **BEDROCK**, weathered, moist, no odour, no staining.	~80.0	4	100-4"	ND		60	SS6	
				5	80-6"	ND		25	SS7	
				6						
				7						
				8						
				9						
				10						
				11						
		Augered in shale bedrock from 3.58 to 7.63 mbgs. **End of Test hole at 7.62 mbgs.**	~76.0	12						

ENVIRONMENTAL-EXP 2017 TH LOGS.GPJ 12/22/17

Time	Water Level (m)	Depth to Cave (m)
November 14, 2017	1.925	

exp Services Inc.
Markham, Ontario
Telephone: 905.695.3217

Log of Borehole TH102

Project No. MRK-00243747-A0 Drawing No. 2

Project: Subsurface Assessment Sheet No. 1 of 2

Location: 800 Hydro Road, Mississauga, Ontario

North Recreational and Transmission Line Area

Date Drilled: November 8, 2017

Drill Type: CME-75 Track

Datum: Trimble TC3 Controller

Chemical Analysis

BTEX	Benzene, Toluene, Ethylbenzene and Xylenes	*	Duplicate Sample
ING	Metals and Inorganics	PCB	Polychlorinated Biphenyls
MET	Metals	PHC	Petroleum Hydrocarbons (F1-F4)
PAH	Polycyclic Aromatic Hydrocarbons	VOC	Volatile Organic Compounds
PEST	Organochlorine Pesticides		

GWL	SYMBOL	Soil Description	ELEV. m	DEPTH	N Value	Combustible Vapour Reading (ppm)	SAMPLES	% RECOV	SAMPLE ID	ANALYSIS
			82.82	0	20 40 60	25 50 75				
		15cm of **TOPSOIL**, moist, no odour, no staining.	~82.7			ND		75	SS1	MET*
		Brown clayey silt **FILL**, trace sand, some gravel, moist, no odour, no staining.		1		ND		80	SS2	PAH
				2		ND		60	SS3	
		Brown clayey silt **TILL**, turning grey at 4.11 mbgs, moist, no odour, no staining.	~80.5			ND		75	SS4	
				3	50-3"	ND		50	SS5	
				4		ND		60	SS6	
				5		ND		50	SS7	
					50-4"	ND		40	SS8	
				6		ND		100	SS9	
				7	50-6"	ND		40	SS10	
▼			~75.0	8		ND		75	SS11	
				9		ND		60	SS12	
				10		ND		70	SS13	
				11		ND		60	SS14	
				12		ND		70	SS15	
						ND		75	SS16	

ENVIRONMENTAL-EXP 2017 TH LOGS.GPJ 12/22/17

Continued Next Page

Time	Water Level (m)	Depth to Cave (m)
November 14, 2017	7.794	

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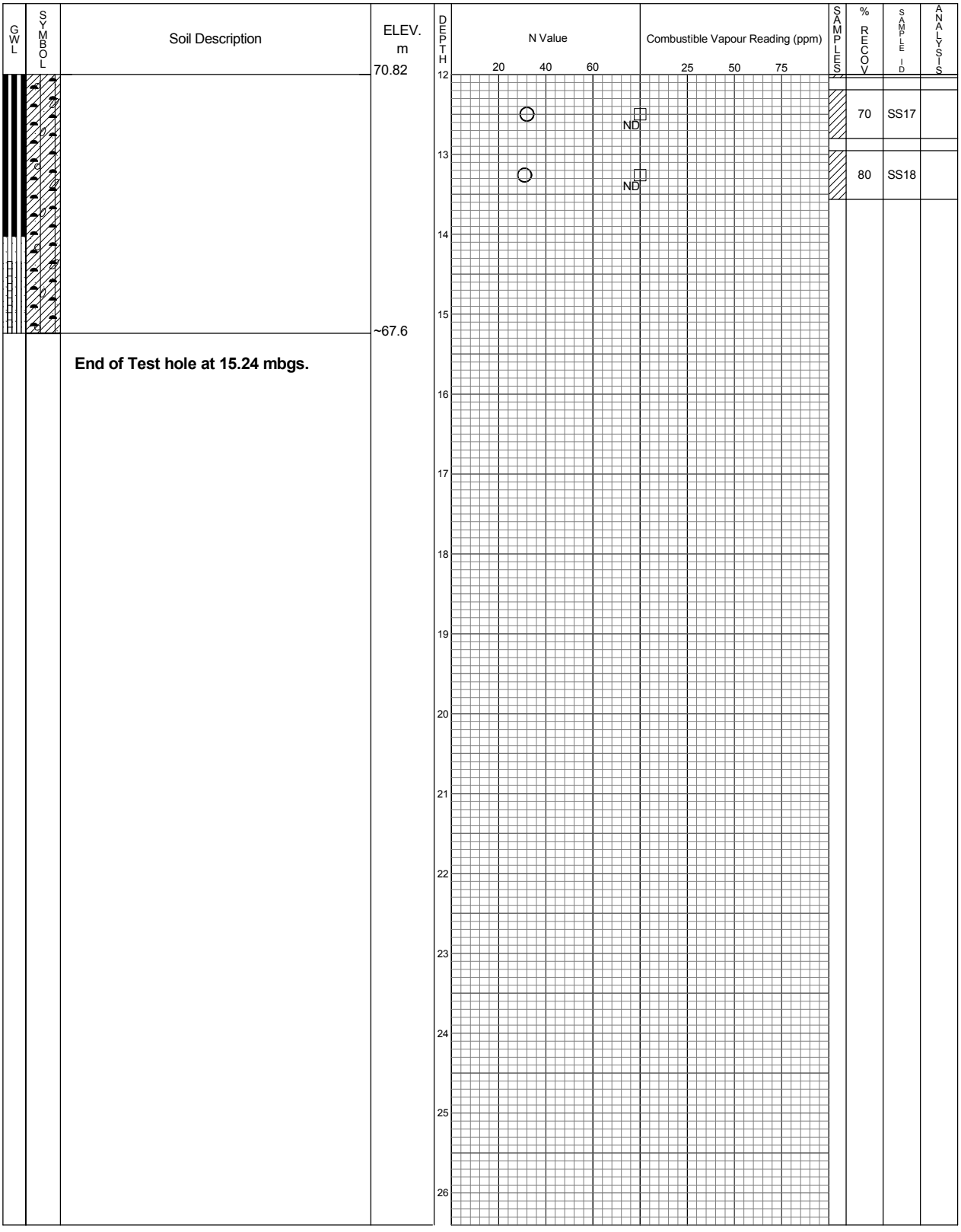
Log of Borehole TH102

Project No. MRK-00243747-A0 Drawing No. 2

Project: Subsurface Assessment Sheet No. 2 of 2



ENVIRONMENTAL-EXP 2017 TH LOGS.GPJ 12/22/17

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Markham, Ontario
Telephone: 905.695.3217

Time	Water Level (m)	Depth to Cave (m)
November 14, 2017	7.794	

Log of Borehole TH103

Project No. MRK-00243747-A0 | Drawing No. 3

Project: Subsurface Assessment | Sheet No. 1 of 2

Location: 800 Hydro Road, Mississauga, Ontario

Switchyard Area

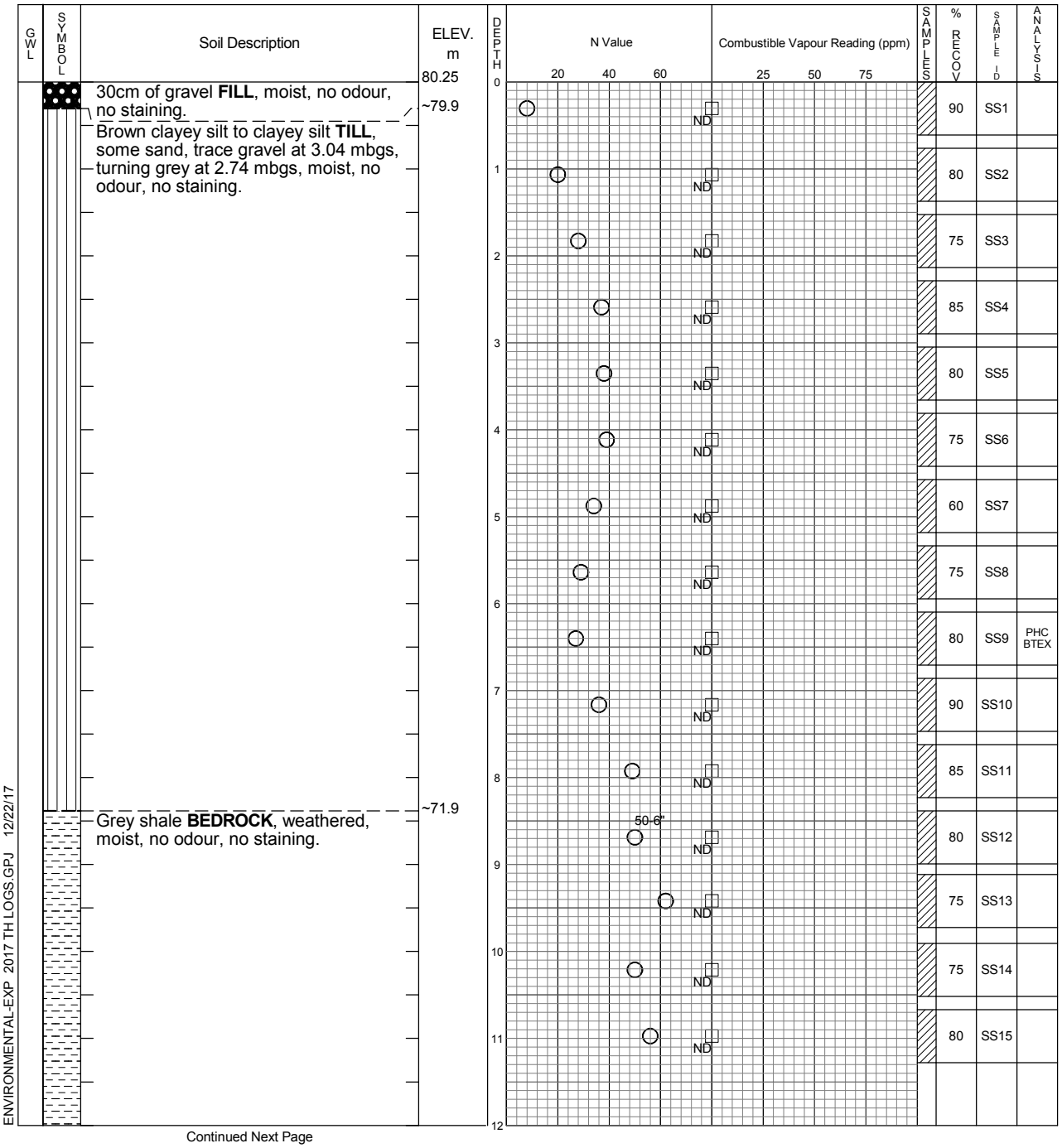
Date Drilled: November 6, 2017

Drill Type: CME-75 Track

Datum: Trimble TC3 Controller

Chemical Analysis

BTEX	Benzene, Toluene, Ethylbenzene and Xylenes	*	Duplicate Sample
ING	Metals and Inorganics	PCB	Polychlorinated Biphenyls
MET	Metals	PHC	Petroleum Hydrocarbons (F1-F4)
PAH	Polycyclic Aromatic Hydrocarbons	VOC	Volatile Organic Compounds
PEST	Organochlorine Pesticides		



Continued Next Page

Time	Water Level (m)	Depth to Cave (m)

exp Services Inc.
Markham, Ontario
Telephone: 905.695.3217

Log of Borehole TH103

Project No. MRK-00243747-A0 Drawing No. 3

Project: Subsurface Assessment Sheet No. 2 of 2

GWL	SYMBOL	Soil Description	ELEV. m	DEPTH	N Value	Combustible Vapour Reading (ppm)	SAMPLES	% RECOV	SAMPLE ID	ANALYSIS
			68.25	12	60-4"	ND		60	SS16	
			~67.4	13						
		Augered in shale bedrock from 8.38 to 12.9 mbgs. **End of Test hole at 12.80 mbgs.**		14						
				15						
				16						
				17						
				18						
				19						
				20						
				21						
				22						
				23						
				24						
				25						
				26						

N Value: 20 40 60

Combustible Vapour Reading (ppm): 25 50 75

ENVIRONMENTAL-EXP 2017 TH LOGS.GPJ 12/22/17

exp Services Inc.
Markham, Ontario
Telephone: 905.695.3217

Time	Water Level (m)	Depth to Cave (m)

Log of Borehole TH104

Project No. MRK-00243747-A0 Drawing No. 4

Project: Subsurface Assessment Sheet No. 1 of 1

Location: 800 Hydro Road, Mississauga, Ontario

Switchyard Area

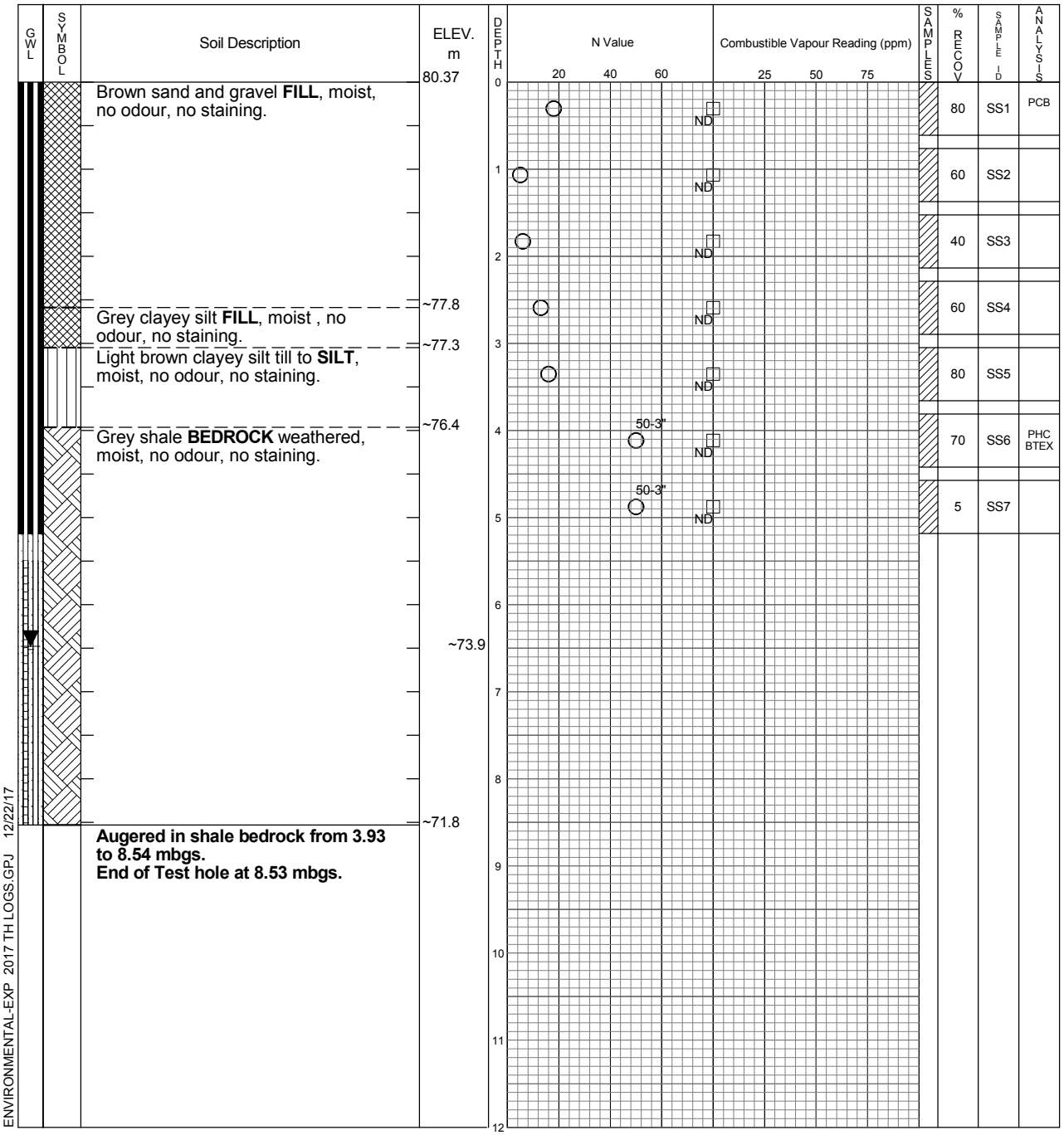
Date Drilled: November 9, 2017

Drill Type: CME-75 Track

Datum: Trimble TC3 Controller

Chemical Analysis

BTEX	Benzene, Toluene, Ethylbenzene and Xylenes	*	Duplicate Sample
ING	Metals and Inorganics	PCB	Polychlorinated Biphenyls
MET	Metals	PHC	Petroleum Hydrocarbons (F1-F4)
PAH	Polycyclic Aromatic Hydrocarbons	VOC	Volatile Organic Compounds
PEST	Organochlorine Pesticides		



Time	Water Level (m)	Depth to Cave (m)
November 14, 2017	6.514	

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Log of Borehole TH105

Project No. MRK-00243747-A0 Drawing No. 5

Project: Subsurface Assessment Sheet No. 1 of 1

Location: 800 Hydro Road, Mississauga, Ontario

Switchyard Area

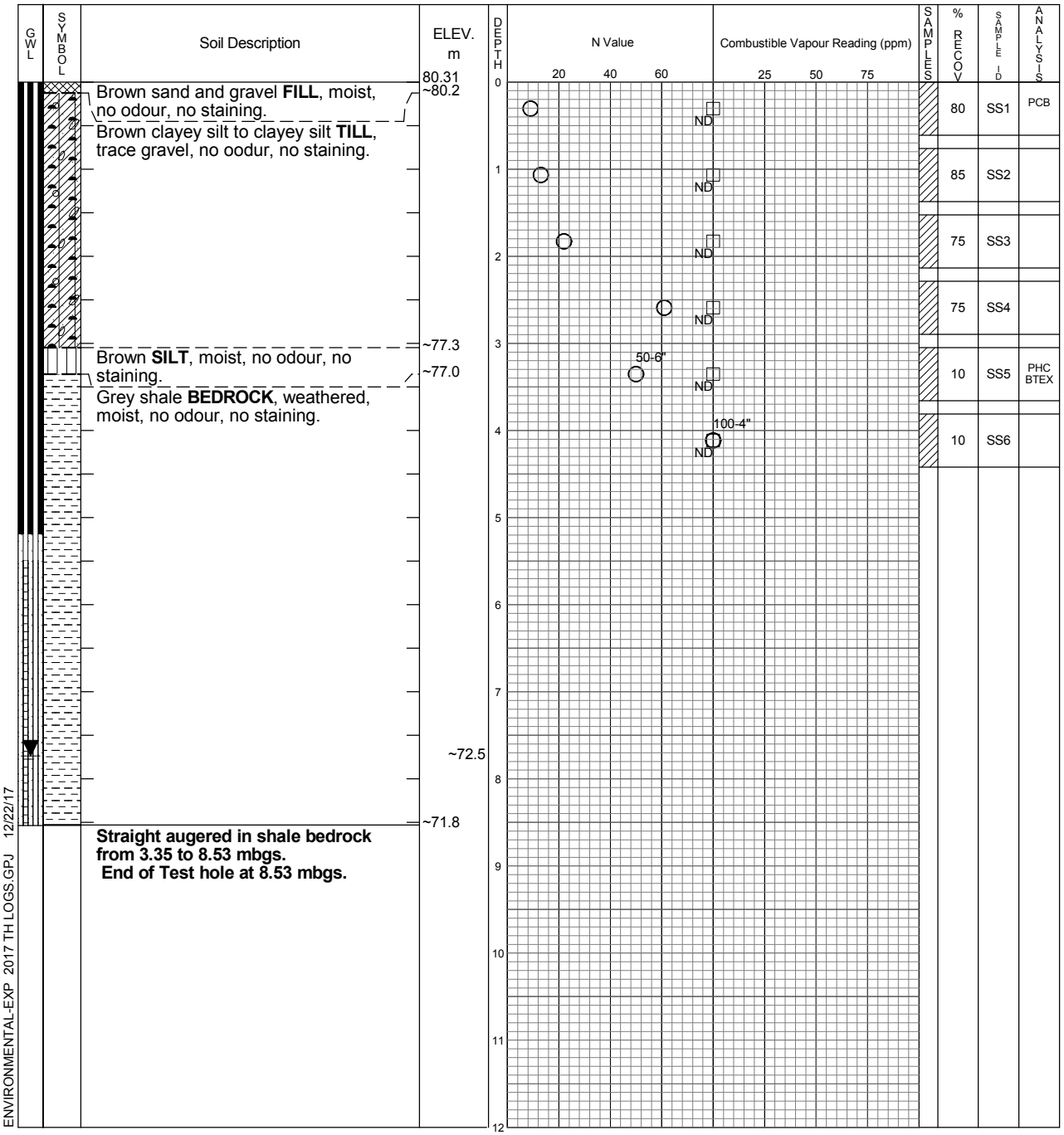
Date Drilled: November 10, 2017

Drill Type: CME-75 Track

Datum: Trimble TC3 Controller

Chemical Analysis

BTEX	Benzene, Toluene, Ethylbenzene and Xylenes	*	Duplicate Sample
ING	Metals and Inorganics	PCB	Polychlorinated Biphenyls
MET	Metals	PHC	Petroleum Hydrocarbons (F1-F4)
PAH	Polycyclic Aromatic Hydrocarbons	VOC	Volatile Organic Compounds
PEST	Organochlorine Pesticides		



Time	Water Level (m)	Depth to Cave (m)
November 15, 2017	7.773	

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Log of Borehole TH106

Project No. MRK-00243747-A0 Drawing No. 6

Project: Subsurface Assessment Sheet No. 1 of 1

Location: 800 Hydro Road, Mississauga, Ontario

South of Powerhouse

Date Drilled: November 6, 2017

Drill Type: CME-75 Track

Datum: Trimble TC3 Controller

Chemical Analysis

BTEX	Benzene, Toluene, Ethylbenzene and Xylenes	*	Duplicate Sample
ING	Metals and Inorganics	PCB	Polychlorinated Biphenyls
MET	Metals	PHC	Petroleum Hydrocarbons (F1-F4)
PAH	Polycyclic Aromatic Hydrocarbons	VOC	Volatile Organic Compounds
PEST	Organochlorine Pesticides		

GWL	SYMBOL	Soil Description	ELEV. m	DEPTH
			77.18	0
		12cm of brown **TOPSOIL**, moist, no odour, no staining.	~77.1	
		Brown sand and gravel **FILL**, moist, no odour, no staining.	~76.3	1
		Brown silt **FILL**, trace gravel, moist to wet at 2.73 mbgs, no odour, no staining.		2
			~73.5	3
		End of Test hole at 3.65 mbgs.		4
				5
				6
				7
				8
				9
				10
				11
				12

N Value: 20, 40, 60

Combustible Vapour Reading (ppm): 25, 50, 75

SAMPLES	% RECOV	SAMPLE ID	ANALYSIS
	85	SS1	
	60	SS2	
	40	SS3	
	80	SS4	
	10	SS5	PHC BTEX

ND

50-6"

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Time	Water Level (m)	Depth to Cave (m)

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Log of Borehole TH107

Project No. MRK-00243747-A0 Drawing No. 7

Project: Subsurface Assessment Sheet No. 1 of 1

Location: 800 Hydro Road, Mississauga, Ontario

South of Powerhouse

Date Drilled: November 9, 2017

Drill Type: CME-75 Track

Datum: Trimble TC3 Controller

Chemical Analysis

BTEX	Benzene, Toluene, Ethylbenzene and Xylenes	*	Duplicate Sample
ING	Metals and Inorganics	PCB	Polychlorinated Biphenyls
MET	Metals	PHC	Petroleum Hydrocarbons (F1-F4)
PAH	Polycyclic Aromatic Hydrocarbons	VOC	Volatile Organic Compounds
PEST	Organochlorine Pesticides		

GWL	SYMBOL	Soil Description	ELEV. m	DEPTH	N Value (20, 40, 60)	Combustible Vapour Reading (ppm) (25, 50, 75)	SAMPLES	% RECOV	SAMPLE ID	ANALYSIS
		77.18		0						
		5cm of brown **TOPSOIL**, moist, no odour, no staining.	~77.1							
		3.04m of **CONCRETE** slab.		1						
				2						
				3						
			~74.1							
		End of Test hole at 3.04 mbgs.		4						
				5						
				6						
				7						
				8						
				9						
				10						
				11						
				12						

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Time	Water Level (m)	Depth to Cave (m)

Log of Borehole TH108

Project No. MRK-00243747-A0 Drawing No. 8

Project: Subsurface Assessment Sheet No. 1 of 1

Location: 800 Hydro Road, Mississauga, Ontario

South of Powerhouse

Date Drilled: November 9, 2017

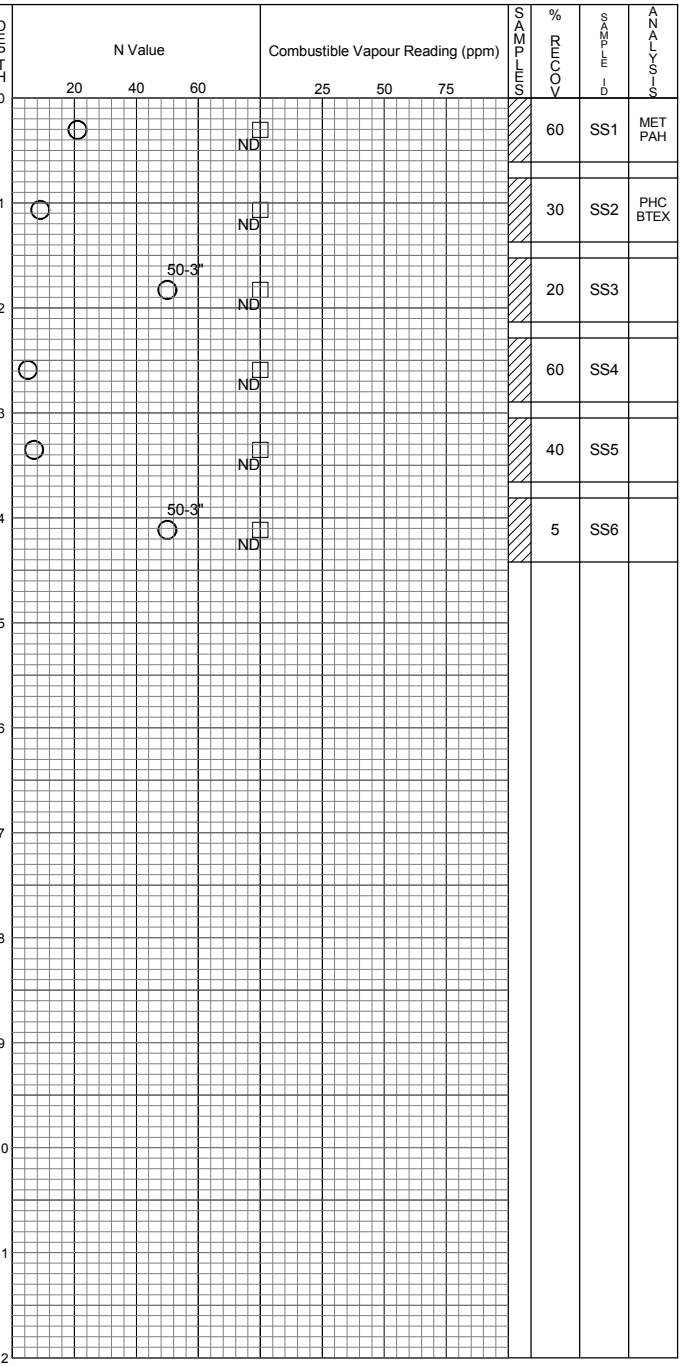
Drill Type: CME-75 Track

Datum: Trimble TC3 Controller

Chemical Analysis

BTEX	Benzene, Toluene, Ethylbenzene and Xylenes	*	Duplicate Sample
ING	Metals and Inorganics	PCB	Polychlorinated Biphenyls
MET	Metals	PHC	Petroleum Hydrocarbons (F1-F4)
PAH	Polycyclic Aromatic Hydrocarbons	VOC	Volatile Organic Compounds
PEST	Organochlorine Pesticides		

GWL	SYMBOL	Soil Description	ELEV. m	DEPTH
			77.31	0
		10cm of brown **TOPSOIL**, moist, no odour, no staining.	~77.2	
		Brown sand and gravel **FILL**, moist, no odour, no staining.	~76.7	
		Grey silt **FILL**, moist to wet at 2.43 mbgs, no odour, no staining.		1
				2
			~74.7	
				3
			~73.5	
		Grey shale **BEDROCK**, weathered, moist, no odour, no staining.	~73.4	4
		Straight augered from 3.91 to 4.57 mbgs.	~72.7	
		End of Test hole at 4.57 mbgs.		5
				6
				7
				8
				9
				10
				11
				12



SAMPLES	% RECOV	SAMPLE ID	ANALYSIS
	60	SS1	MET PAH
	30	SS2	PHC BTEX
	20	SS3	
	60	SS4	
	40	SS5	
	5	SS6	

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Time	Water Level (m)	Depth to Cave (m)
November 14, 2017	2.601	

Log of Borehole TH109

Project No. MRK-00243747-A0 Drawing No. 9

Project: Subsurface Assessment Sheet No. 1 of 1

Location: 800 Hydro Road, Mississauga, Ontario

South of Powerhouse

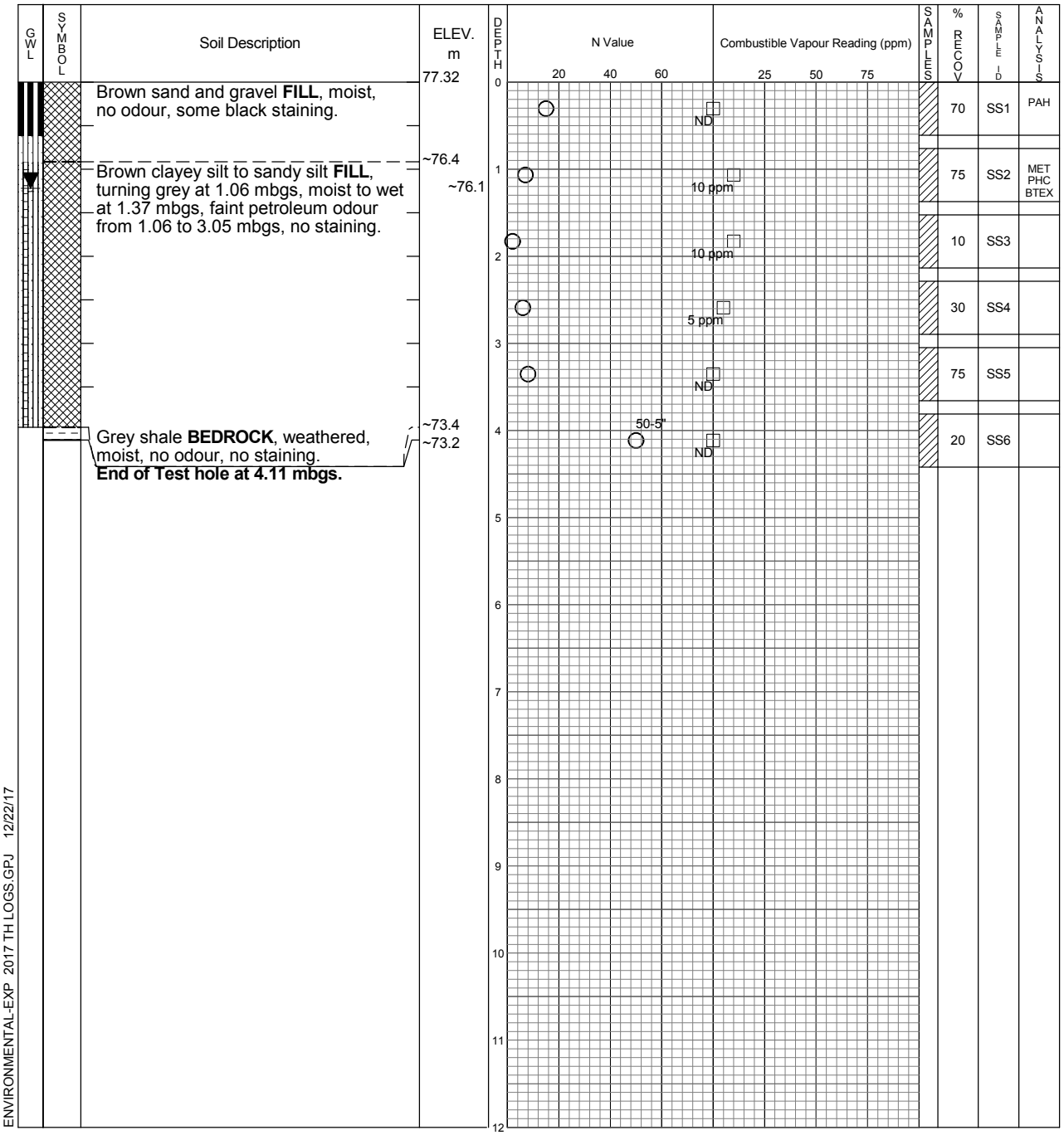
Date Drilled: November 13, 2017

Drill Type: CME-75 Track

Datum: Trimble TC3 Controller

Chemical Analysis

BTEX	Benzene, Toluene, Ethylbenzene and Xylenes	*	Duplicate Sample
ING	Metals and Inorganics	PCB	Polychlorinated Biphenyls
MET	Metals	PHC	Petroleum Hydrocarbons (F1-F4)
PAH	Polycyclic Aromatic Hydrocarbons	VOC	Volatile Organic Compounds
PEST	Organochlorine Pesticides		



ENVIRONMENTAL-EXP 2017 TH LOGS.GPJ 12/22/17

Time	Water Level (m)	Depth to Cave (m)
November 14, 2017	1.257	

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Log of Borehole TH110

Project No. MRK-00243747-A0 Drawing No. 10

Project: Subsurface Assessment Sheet No. 1 of 1

Location: 800 Hydro Road, Mississauga, Ontario

South of Powerhouse

Date Drilled: November 13, 2017

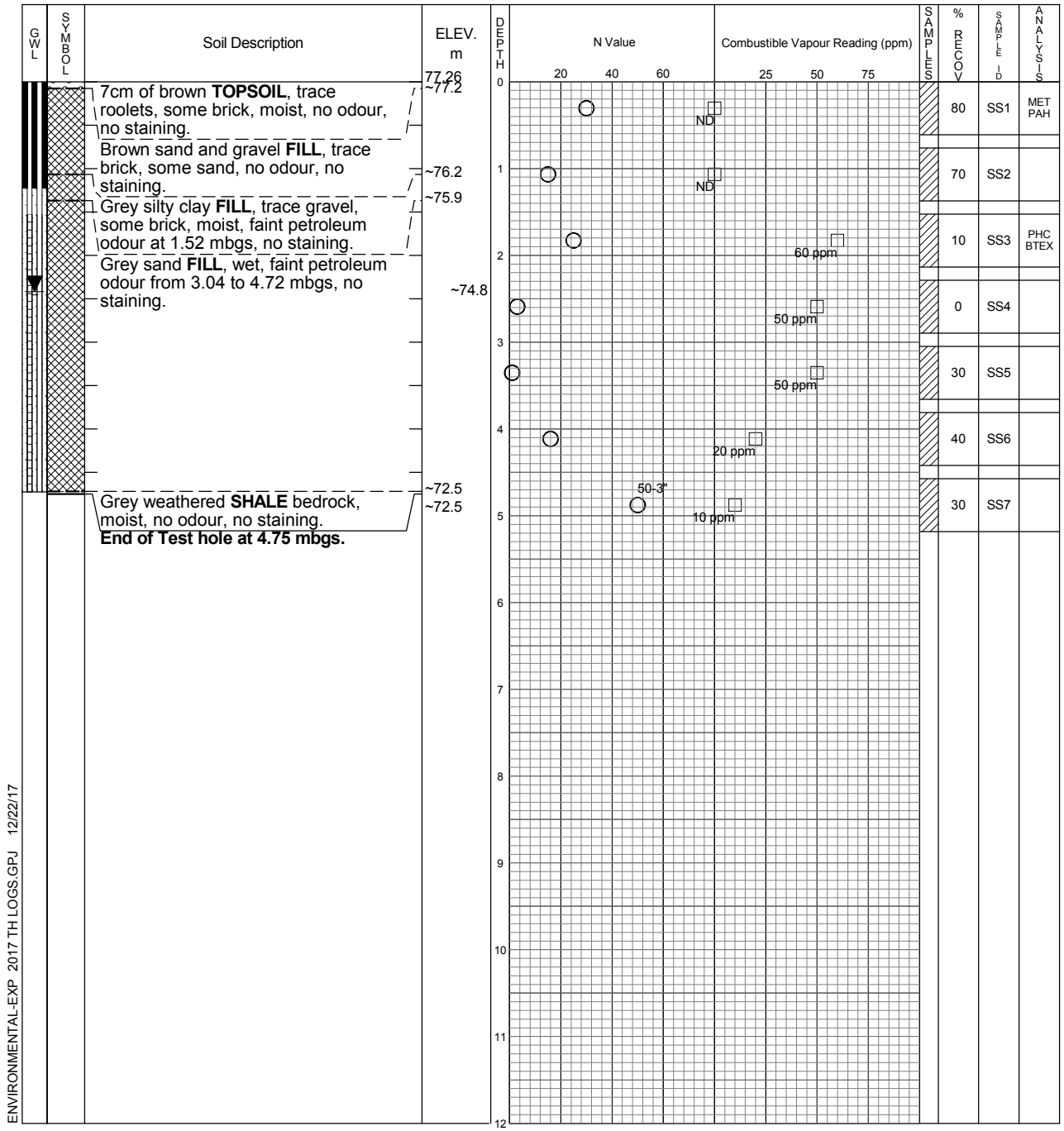
Drill Type: CME-75 Track

Datum: Trimble TC3 Controller

Chemical Analysis

BTEX	Benzene, Toluene, Ethylbenzene and Xylenes	*	Duplicate Sample
ING	Metals and Inorganics	PCB	Polychlorinated Biphenyls
MET	Metals	PHC	Petroleum Hydrocarbons (F1-F4)
PAH	Polycyclic Aromatic Hydrocarbons	VOC	Volatile Organic Compounds
PEST	Organochlorine Pesticides		

GWL	SYMBOL	Soil Description	ELEV. m	DEPTH
			77.26	0
		7cm of brown **TOPSOIL**, trace roolets, some brick, moist, no odour, no staining.	~77.2	
		Brown sand and gravel **FILL**, trace brick, some sand, no odour, no staining.	~76.2	1
		Grey silty clay **FILL**, trace gravel, some brick, moist, faint petroleum odour at 1.52 mbgs, no staining.	~75.9	
		Grey sand **FILL**, wet, faint petroleum odour from 3.04 to 4.72 mbgs, no staining.	~74.8	2
				3
				4
			~72.5	
		Grey weathered **SHALE** bedrock, moist, no odour, no staining.	~72.5	5
		End of Test hole at 4.75 mbgs.		6
				7
				8
				9
				10
				11
				12



SAMPLES	% RECOV	SAMPLE ID	ANALYSIS
	80	SS1	MET PAH
	70	SS2	
	10	SS3	PHC BTEX
	0	SS4	
	30	SS5	
	40	SS6	
	30	SS7	

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Time	Water Level (m)	Depth to Cave (m)
November 14, 2017	2.455	

Log of Borehole TH111

Project No. MRK-00243747-A0 | Drawing No. 11

Project: Subsurface Assessment | Sheet No. 1 of 1

Location: 800 Hydro Road, Mississauga, Ontario

South of Powerhouse

Date Drilled: November 6, 2017

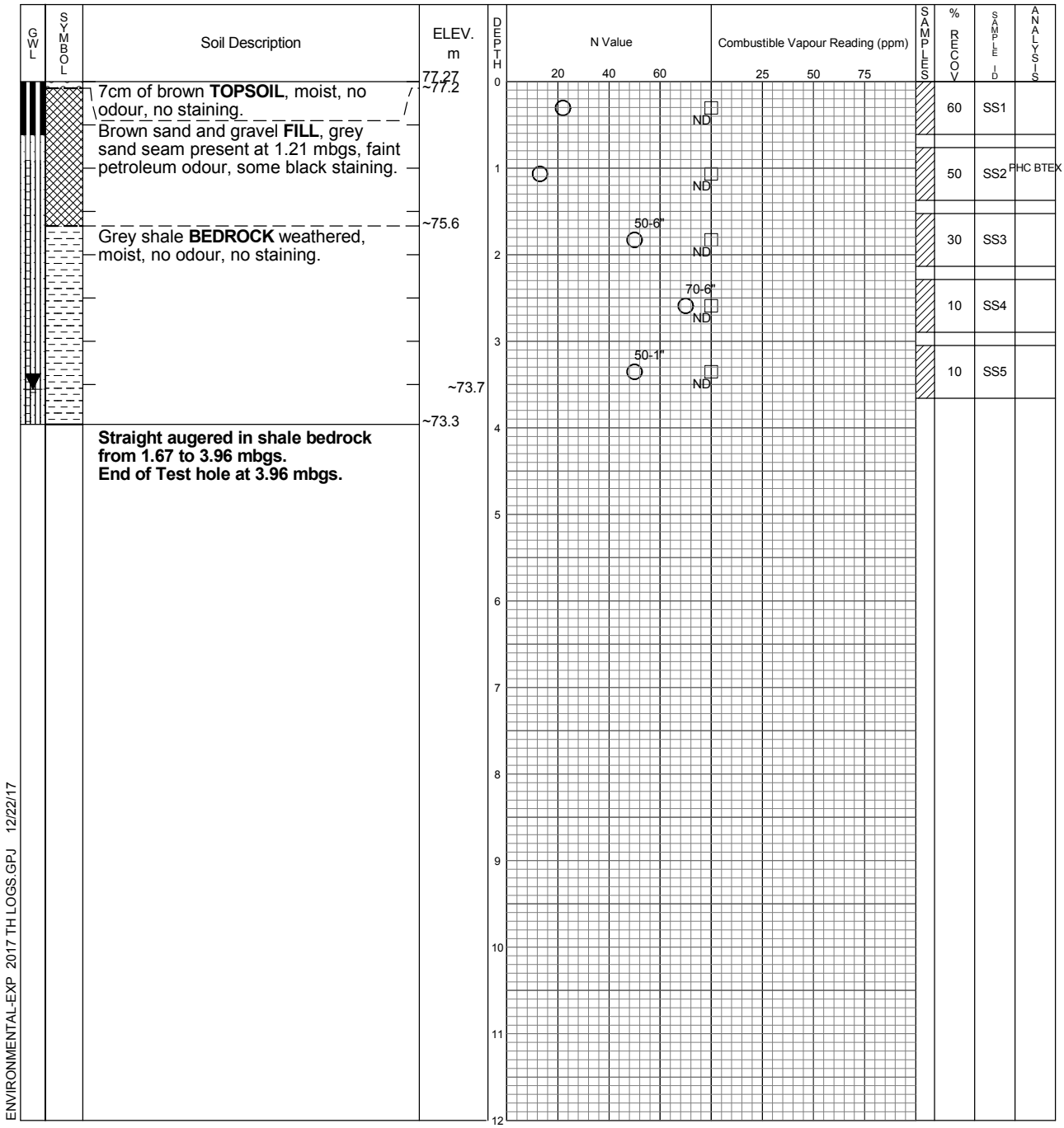
Drill Type: CME-75 Track

Datum: Trimble TC3 Controller

Chemical Analysis

BTEX	Benzene, Toluene, Ethylbenzene and Xylenes	*	Duplicate Sample
ING	Metals and Inorganics	PCB	Polychlorinated Biphenyls
MET	Metals	PHC	Petroleum Hydrocarbons (F1-F4)
PAH	Polycyclic Aromatic Hydrocarbons	VOC	Volatile Organic Compounds
PEST	Organochlorine Pesticides		

GWL	SYMBOL	Soil Description	ELEV. m	DEPTH
			77.27	0
		7cm of brown **TOPSOIL**, moist, no odour, no staining.	~77.2	
		Brown sand and gravel **FILL**, grey sand seam present at 1.21 mbgs, faint petroleum odour, some black staining.		1
			~75.6	
		Grey shale **BEDROCK** weathered, moist, no odour, no staining.		2
				3
			~73.7	
			~73.3	4
		Straight augered in shale bedrock from 1.67 to 3.96 mbgs. End of Test hole at 3.96 mbgs.		5
				6
				7
				8
				9
				10
				11
				12



SAMPLES	% RECOV	SAMPLE ID	ANALYSIS
	60	SS1	
	50	SS2	PHC BTEX
	30	SS3	
	10	SS4	
	10	SS5	

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Time	Water Level (m)	Depth to Cave (m)
November 14, 2017	3.592	

Log of Borehole TH112

Project No. MRK-00243747-A0 Drawing No. 12

Project: Subsurface Assessment Sheet No. 1 of 1

Location: 800 Hydro Road, Mississauga, Ontario

Powerhouse Area

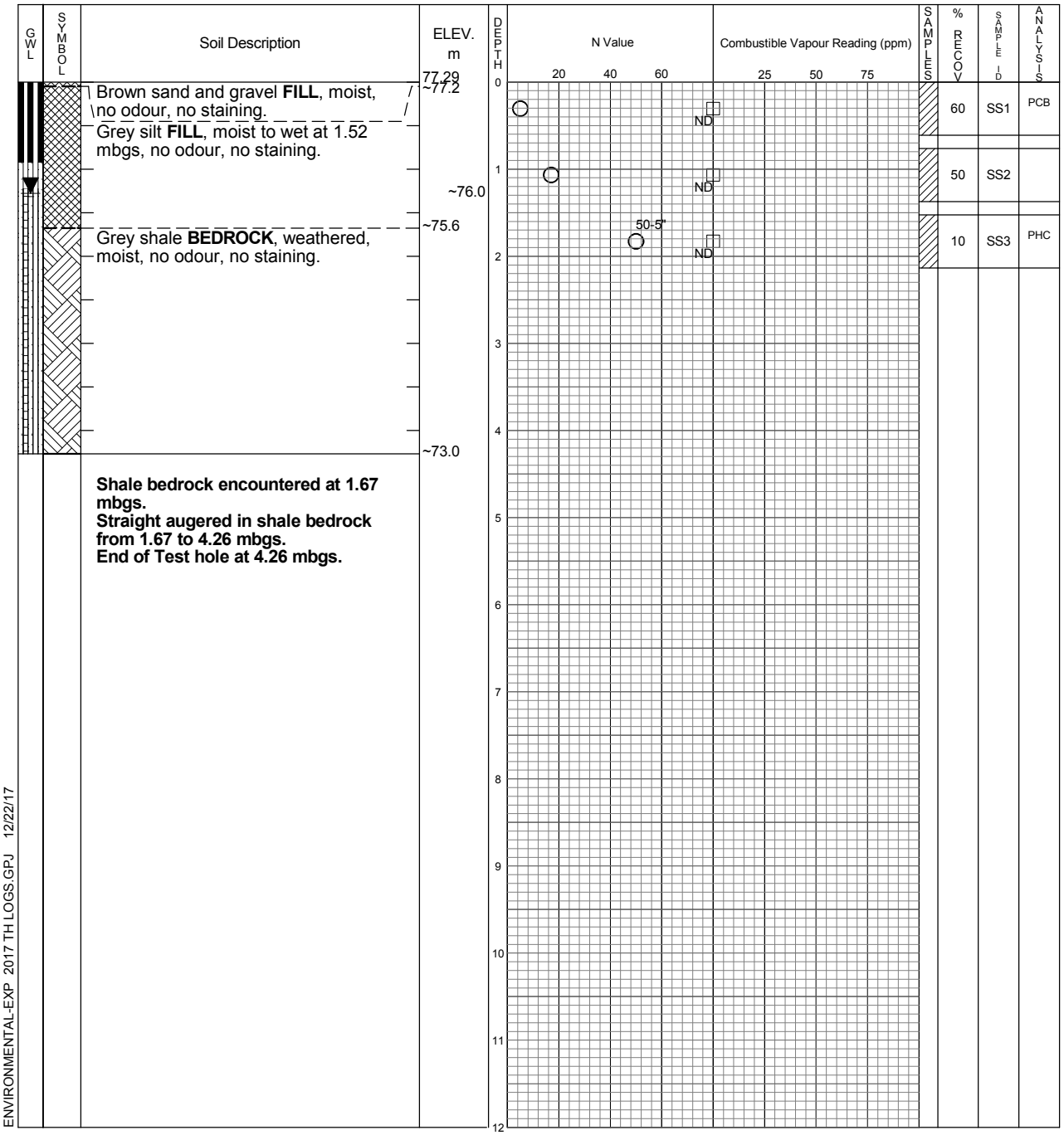
Date Drilled: November 13, 2017

Drill Type: CME-75 Track

Datum: Trimble TC3 Controller

Chemical Analysis

BTEX	Benzene, Toluene, Ethylbenzene and Xylenes	*	Duplicate Sample
ING	Metals and Inorganics	PCB	Polychlorinated Biphenyls
MET	Metals	PHC	Petroleum Hydrocarbons (F1-F4)
PAH	Polycyclic Aromatic Hydrocarbons	VOC	Volatile Organic Compounds
PEST	Organochlorine Pesticides		



ENVIRONMENTAL-EXP 2017 TH LOGS.GPJ 12/22/17

Time	Water Level (m)	Depth to Cave (m)
November 14, 2017	1.315	

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Log of Borehole TP1

Project No. MRK-00243747-A0 Drawing No. 13

Project: Subsurface Assessment Sheet No. 1 of 1

Location: 800 Hydro Road, Mississauga, Ontario

Powerhouse Area

Date Drilled: November 14, 2017

Drill Type: Excavator

Datum: Trimble TC3 Controller

Chemical Analysis

BTEX	Benzene, Toluene, Ethylbenzene and Xylenes	*	Duplicate Sample
ING	Metals and Inorganics	PCB	Polychlorinated Biphenyls
MET	Metals	PHC	Petroleum Hydrocarbons (F1-F4)
PAH	Polycyclic Aromatic Hydrocarbons	VOC	Volatile Organic Compounds
PEST	Organochlorine Pesticides		

GWL	SYMBOL	Soil Description	ELEV. m	DEPTH	N Value (20, 40, 60)	Combustible Vapour Reading (ppm) (25, 50, 75)	SAMPLES	% RECOV	SAMPLE ID	ANALYSIS
		20cm of **TOPSOIL**, moist, no odour, no staining.		0		ND	G	75	GR1	
		Brown sand and gravel **FILL**, moist, no odour, no staining.				ND	G	75	GR2	
		15cm of crushed **ASPHALT**.		1		ND	G	75	GR3	
		Grey clayey **SILT**, moist, no odour, no staining.								
		Grey weathered shale bedrock encountered at 1.52 mbgs.		2						
		End of Test pit at 1.52 mbgs.		3						
				4						
				5						
				6						
				7						
				8						
				9						
				10						
				11						
				12						

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Time	Water Level (m)	Depth to Cave (m)

Log of Borehole TP2

Project No. MRK-00243747-A0 Drawing No. 14

Project: Subsurface Assessment Sheet No. 1 of 1

Location: 800 Hydro Road, Mississauga, Ontario

Powerhouse Area

Date Drilled: November 14, 2017

Drill Type: Excavator

Datum: Trimble TC3 Controller

Chemical Analysis

BTEX	Benzene, Toluene, Ethylbenzene and Xylenes	*	Duplicate Sample
ING	Metals and Inorganics	PCB	Polychlorinated Biphenyls
MET	Metals	PHC	Petroleum Hydrocarbons (F1-F4)
PAH	Polycyclic Aromatic Hydrocarbons	VOC	Volatile Organic Compounds
PEST	Organochlorine Pesticides		

GWL	SYMBOL	Soil Description	ELEV. m	DEPTH	N Value (20, 40, 60)	Combustible Vapour Reading (ppm) (25, 50, 75)	SAMPLES	% RECOV	SAMPLE ID	ANALYSIS
		20cm of **TOPSOIL**, moist, no odour, no staining.		0		ND	G	75	GR1	
		Brown sand and gravel **FILL**, cinder blocks present at 1.0 to 1.25mbgs, moist, no odour, no staining.		1		ND	G	75	GR2	
						ND	G	75	GR3	
		Grey weathered shale bedrock encountered at 1.82 mbgs. **End of Test pit at 1.82 mbgs.** **Note: 20cm pipe exposed during the advacement of test pit.**		2						
				3						
				4						
				5						
				6						
				7						
				8						
				9						
				10						
				11						
				12						

ENVIRONMENTAL-EXP 2017 TH LOGS.GPJ 12/22/17

Time	Water Level (m)	Depth to Cave (m)

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Log of Borehole TP3

Project No. MRK-00243747-A0 Drawing No. 15

Project: Subsurface Assessment Sheet No. 1 of 1

Location: 800 Hydro Road, Mississauga, Ontario

Powerhouse Area

Date Drilled: November 14, 2017

Drill Type: Excavator

Datum: Trimble TC3 Controller

Chemical Analysis

BTEX	Benzene, Toluene, Ethylbenzene and Xylenes	*	Duplicate Sample
ING	Metals and Inorganics	PCB	Polychlorinated Biphenyls
MET	Metals	PHC	Petroleum Hydrocarbons (F1-F4)
PAH	Polycyclic Aromatic Hydrocarbons	VOC	Volatile Organic Compounds
PEST	Organochlorine Pesticides		

GWL	SYMBOL	Soil Description	ELEV. m	DEPTH	N Value (20, 40, 60)	Combustible Vapour Reading (ppm) (25, 50, 75)	SAMPLES	% RECOV	SAMPLE ID	ANALYSIS
		Grey gravel **FILL**, moist no odour, no staining.		0		ND	G	75	GR1	
		CONCRETE slab encountered at 0.61 mbgs. **Excavator bucket refusal at 0.61 mbgs.**		1						
				2						
				3						
				4						
				5						
				6						
				7						
				8						
				9						
				10						
				11						
				12						

ENVIRONMENTAL-EXP 2017 TH LOGS.GPJ 12/22/17

Time	Water Level (m)	Depth to Cave (m)

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Log of Borehole TP4

Project No. MRK-00243747-A0 Drawing No. 16

Project: Subsurface Assessment Sheet No. 1 of 1

Location: 800 Hydro Road, Mississauga, Ontario

Powerhouse Area

Date Drilled: November 14, 2017

Drill Type: Excavator

Datum: Trimble TC3 Controller

Chemical Analysis

BTEX	Benzene, Toluene, Ethylbenzene and Xylenes	*	Duplicate Sample
ING	Metals and Inorganics	PCB	Polychlorinated Biphenyls
MET	Metals	PHC	Petroleum Hydrocarbons (F1-F4)
PAH	Polycyclic Aromatic Hydrocarbons	VOC	Volatile Organic Compounds
PEST	Organochlorine Pesticides		

GWL	SYMBOL	Soil Description	ELEV. m	DEPTH	N Value (20, 40, 60)	Combustible Vapour Reading (ppm) (25, 50, 75)	SAMPLES	% RECOV	SAMPLE ID	ANALYSIS
		Gravel **FILL** to 0.15mbgs.		0		75 ppm	G	75	GR1	
		12cm of crushed asphalt **FILL**.								
		Brown sand and gravel **FILL**, moist, no odour, no staining		1		15 ppm	G	75	GR2	
		Grey weathered shale bedrock encountered at 1.52 mbgs. **End of Test pit at 1.52 mbgs.**		2						
				3						
				4						
				5						
				6						
				7						
				8						
				9						
				10						
				11						
				12						

ENVIRONMENTAL-EXP 2017 TH LOGS.GPJ 12/22/17

Time	Water Level (m)	Depth to Cave (m)

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Log of Borehole TP5

Project No. MRK-00243747-A0 Drawing No. 17

Project: Subsurface Assessment Sheet No. 1 of 1

Location: 800 Hydro Road, Mississauga, Ontario

Powerhouse Area

Date Drilled: November 14, 2017

Drill Type: Excavator

Datum: Trimble TC3 Controller

Chemical Analysis

BTEX	Benzene, Toluene, Ethylbenzene and Xylenes	*	Duplicate Sample
ING	Metals and Inorganics	PCB	Polychlorinated Biphenyls
MET	Metals	PHC	Petroleum Hydrocarbons (F1-F4)
PAH	Polycyclic Aromatic Hydrocarbons	VOC	Volatile Organic Compounds
PEST	Organochlorine Pesticides		

GWL	SYMBOL	Soil Description	ELEV. m	DEPTH	N Value (20, 40, 60)	Combustible Vapour Reading (ppm) (25, 50, 75)	SAMPLES	% RECOV	SAMPLE ID	ANALYSIS
		12cm of gravel **FILL**, moist, no odour, no staining.		0		ND	G	75	GR1	
		Brown sand and gravel **FILL**, trace brick, moist, no odour, no staining.		1		ND	G	75	GR2	
						ND	G	75	GR3	
		Grey weathered shale bedrock encountered at 1.82 mbgs. **End of Test pit at 1.82 mbgs.**		2						
				3						
				4						
				5						
				6						
				7						
				8						
				9						
				10						
				11						
				12						

ENVIRONMENTAL-EXP 2017 TH LOGS.GPJ 12/22/17

Time	Water Level (m)	Depth to Cave (m)

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Log of Borehole TP6

Project No. MRK-00243747-A0 Drawing No. 18

Project: Subsurface Assessment Sheet No. 1 of 1

Location: 800 Hydro Road, Mississauga, Ontario

Powerhouse Area

Date Drilled: November 14, 2017

Drill Type: Excavator

Datum: Trimble TC3 Controller

Chemical Analysis

BTEX	Benzene, Toluene, Ethylbenzene and Xylenes	*	Duplicate Sample
ING	Metals and Inorganics	PCB	Polychlorinated Biphenyls
MET	Metals	PHC	Petroleum Hydrocarbons (F1-F4)
PAH	Polycyclic Aromatic Hydrocarbons	VOC	Volatile Organic Compounds
PEST	Organochlorine Pesticides		

GWL	SYMBOL	Soil Description	ELEV. m	DEPTH	N Value (20, 40, 60)	Combustible Vapour Reading (ppm) (25, 50, 75)	SAMPLES	% RECOV	SAMPLE ID	ANALYSIS
		12cm of gravel **FILL**, moist, no odour, no staining.		0		ND	G	75	GR1	
		Brown sand and gravel **FILL**, trace brick, moist, no odour, no staining.		1		ND	G	75	GR2	
		Grey weathered shale bedrock encountered at 1.22 mbgs. **End of Test pit at 1.22 mbgs.**		2						
				3						
				4						
				5						
				6						
				7						
				8						
				9						
				10						
				11						
				12						

ENVIRONMENTAL-EXP 2017 TH LOGS.GPJ 12/22/17

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Time	Water Level (m)	Depth to Cave (m)

Log of Borehole TP7

Project No. MRK-00243747-A0 Drawing No. 19

Project: Subsurface Assessment Sheet No. 1 of 1

Location: 800 Hydro Road, Mississauga, Ontario

Powerhouse Area

Date Drilled: November 14, 2017

Drill Type: Excavator

Datum: Trimble TC3 Controller

Chemical Analysis

BTEX	Benzene, Toluene, Ethylbenzene and Xylenes	*	Duplicate Sample
ING	Metals and Inorganics	PCB	Polychlorinated Biphenyls
MET	Metals	PHC	Petroleum Hydrocarbons (F1-F4)
PAH	Polycyclic Aromatic Hydrocarbons	VOC	Volatile Organic Compounds
PEST	Organochlorine Pesticides		

GWL	SYMBOL	Soil Description	ELEV. m	DEPTH	N Value (20, 40, 60)	Combustible Vapour Reading (ppm) (25, 50, 75)	SAMPLES	% RECOV	SAMPLE ID	ANALYSIS
		Brown sand and gravel **FILL**, moist, no odour, no staining.		0		ND	G	75	GR1	
		Grey weathered shale bedrock encountered at 0.61 mbgs. **End of Test pit at 0.61 mbgs.**		1						
				2						
				3						
				4						
				5						
				6						
				7						
				8						
				9						
				10						
				11						
				12						

ENVIRONMENTAL-EXP 2017 TH LOGS.GPJ 12/22/17

exp Services Inc.
Markham, Ontario
Telephone: 905.695.3217

Time	Water Level (m)	Depth to Cave (m)

Log of Borehole TP8

Project No. MRK-00243747-A0 Drawing No. 20

Project: Subsurface Assessment Sheet No. 1 of 1

Location: 800 Hydro Road, Mississauga, Ontario

South of Powerhouse

Date Drilled: November 14, 2017

Drill Type: Excavator

Datum: Trimble TC3 Controller

Chemical Analysis

BTEX	Benzene, Toluene, Ethylbenzene and Xylenes	*	Duplicate Sample
ING	Metals and Inorganics	PCB	Polychlorinated Biphenyls
MET	Metals	PHC	Petroleum Hydrocarbons (F1-F4)
PAH	Polycyclic Aromatic Hydrocarbons	VOC	Volatile Organic Compounds
PEST	Organochlorine Pesticides		

GWL	SYMBOL	Soil Description	ELEV. m	DEPTH	N Value (20, 40, 60)	Combustible Vapour Reading (ppm) (25, 50, 75)	SAMPLES	% RECOV	SAMPLE ID	ANALYSIS
		Brown sand and gravel **FILL**, trace brick, moist, no odour, no staining.		0		ND	G	75	GR1	
		Brick and concrete **FILL**, moist to wet at 1.21 mbgs, no odour, no staining.		1		ND	G	75	GR2	
		End of Test pit at 1.82 mbgs.		2						
				3						
				4						
				5						
				6						
				7						
				8						
				9						
				10						
				11						
				12						

ENVIRONMENTAL-EXP 2017 TH LOGS.GPJ 12/22/17

Time	Water Level (m)	Depth to Cave (m)

exp Services Inc.
Markham, Ontario
Telephone: 905.695.3217

Log of Borehole TP9

Project No. MRK-00243747-A0 Drawing No. 21

Project: Subsurface Assessment Sheet No. 1 of 1

Location: 800 Hydro Road, Mississauga, Ontario

South of Powerhouse

Date Drilled: November 14, 2017

Drill Type: Excavator

Datum: Trimble TC3 Controller

Chemical Analysis

BTEX	Benzene, Toluene, Ethylbenzene and Xylenes	*	Duplicate Sample
ING	Metals and Inorganics	PCB	Polychlorinated Biphenyls
MET	Metals	PHC	Petroleum Hydrocarbons (F1-F4)
PAH	Polycyclic Aromatic Hydrocarbons	VOC	Volatile Organic Compounds
PEST	Organochlorine Pesticides		

GWL	SYMBOL	Soil Description	ELEV. m	DEPTH	N Value 20 40 60	Combustible Vapour Reading (ppm) 25 50 75	SAMPLES	% RECOV	SAMPLE ID	ANALYSIS
		Brown sand and gravel **FILL**, moist, no odour, black staining present from 0.45 to 0.72 mbgs.		0		ND	G	75	GR1	
		Light brown sand **FILL**, moist, no odour, no staining.		1		ND	G	75	GR2	
		End of Test pit at 1.82 mbgs. **Note: 30cm clay pipe running east to west uncovered during the advancement of test pit at 1.06 mbgs.**		2		ND	G	75	GR3	
				3						
				4						
				5						
				6						
				7						
				8						
				9						
				10						
				11						
				12						

ENVIRONMENTAL-EXP 2017 TH LOGS.GPJ 12/22/17

exp Services Inc.
Markham, Ontario
Telephone: 905.695.3217

Time	Water Level (m)	Depth to Cave (m)

Log of Borehole TP10

Project No. MRK-00243747-A0 Drawing No. 22

Project: Subsurface Assessment Sheet No. 1 of 1

Location: 800 Hydro Road, Mississauga, Ontario

30m within Water Body

Date Drilled: November 14, 2017

Drill Type: Excavator

Datum: Trimble TC3 Controller

Chemical Analysis

BTEX	Benzene, Toluene, Ethylbenzene and Xylenes	*	Duplicate Sample
ING	Metals and Inorganics	PCB	Polychlorinated Biphenyls
MET	Metals	PHC	Petroleum Hydrocarbons (F1-F4)
PAH	Polycyclic Aromatic Hydrocarbons	VOC	Volatile Organic Compounds
PEST	Organochlorine Pesticides		

GWL	SYMBOL	Soil Description	ELEV. m	DEPTH	N Value (20, 40, 60)	Combustible Vapour Reading (ppm) (25, 50, 75)	SAMPLES	% RECOV	SAMPLE ID	ANALYSIS
		30cm of **ASPHALT** pavement.		0		ND	G	75	GR1	
		Brown sand and gravel **FILL**, trace brick, trace concrete fragments, turning grey at 1.21 mbgs, no odour, no staining.		1		ND	G	75	GR2	
						ND	G	75	GR3	
		Grey weathered shale bedrock encountered at 2.0 mbgs. **End of Test pit at 2.0 mbgs.**		2						
				3						
				4						
				5						
				6						
				7						
				8						
				9						
				10						
				11						
				12						

ENVIRONMENTAL-EXP 2017 TH LOGS.GPJ 12/22/17

exp Services Inc.
Markham, Ontario
Telephone: 905.695.3217

Time	Water Level (m)	Depth to Cave (m)

Log of Borehole TP11

Project No. MRK-00243747-A0 Drawing No. 22

Project: Subsurface Assessment Sheet No. 1 of 1

Location: 800 Hydro Road, Mississauga, Ontario

South of Powerhouse

Date Drilled: November 14, 2017

Drill Type: Excavator

Datum: Trimble TC3 Controller

Chemical Analysis

BTEX	Benzene, Toluene, Ethylbenzene and Xylenes	*	Duplicate Sample
ING	Metals and Inorganics	PCB	Polychlorinated Biphenyls
MET	Metals	PHC	Petroleum Hydrocarbons (F1-F4)
PAH	Polycyclic Aromatic Hydrocarbons	VOC	Volatile Organic Compounds
PEST	Organochlorine Pesticides		

GWL	SYMBOL	Soil Description	ELEV. m	DEPTH	N Value	Combustible Vapour Reading (ppm)	SAMPLES	% RECOV	SAMPLE ID	ANALYSIS
		Brown sand and gravel **FILL**, trace brick, 30cm of crushed asphalt present from 0.61 to 0.91 mbgs, moist, no odour, no staining.		0		ND	G	75	GR1	
				1		ND	G	75	GR2	
		Grey clayey silt **FILL**, moist, petroleum odour, black staining.				250 ppm	G	75	GR3	PHC BTEX
		Brown sand **FILL**, moist, faint petroleum odour, no staining.		2		25ppm	G	75	GR4	
		End of Test pit at 2.48 mbgs.		3						
				4						
				5						
				6						
				7						
				8						
				9						
				10						
				11						
				12						

N Value: 20, 40, 60

Combustible Vapour Reading (ppm): 25, 50, 75

ENVIRONMENTAL-EXP 2017 TH LOGS.GPJ 12/22/17

exp Services Inc.
Markham, Ontario
Telephone: 905.695.3217

Time	Water Level (m)	Depth to Cave (m)

Log of Borehole TP12

Project No. MRK-00243747-A0 Drawing No. 24

Project: Subsurface Assessment Sheet No. 1 of 1

Location: 800 Hydro Road, Mississauga, Ontario

South of Powerhouse

Date Drilled: November 14, 2017

Drill Type: Excavator

Datum: Trimble TC3 Controller

Chemical Analysis

BTEX	Benzene, Toluene, Ethylbenzene and Xylenes	*	Duplicate Sample
ING	Metals and Inorganics	PCB	Polychlorinated Biphenyls
MET	Metals	PHC	Petroleum Hydrocarbons (F1-F4)
PAH	Polycyclic Aromatic Hydrocarbons	VOC	Volatile Organic Compounds
PEST	Organochlorine Pesticides		

GWL	SYMBOL	Soil Description	ELEV. m	DEPTH	N Value (20, 40, 60)	Combustible Vapour Reading (ppm) (25, 50, 75)	SAMPLES	% RECOV	SAMPLE ID	ANALYSIS
		Brown sand and gravel **FILL**, moist, no odour, no staining.		0		ND	G	75	GR1	
				1		325 ppm	G	75	GR2	PHC BTEX
		Grey clayey silt **FILL**, moist to wet, faint petroleum odour to 2.50 mbgs, no staining.		2		25 ppm	G	75	GR2	
		End of Test pit at 3.0 mbgs.		3						
				4						
				5						
				6						
				7						
				8						
				9						
				10						
				11						
				12						

ENVIRONMENTAL-EXP 2017 TH LOGS.GPJ 12/22/17

exp Services Inc.
Markham, Ontario
Telephone: 905.695.3217

Time	Water Level (m)	Depth to Cave (m)

Log of Borehole TP13

Project No. MRK-00243747-A0 Drawing No. 25

Project: Subsurface Assessment Sheet No. 1 of 1

Location: 800 Hydro Road, Mississauga, Ontario

South of Powerhouse

Date Drilled: November 14, 2017

Drill Type: Excavator

Datum: Trimble TC3 Controller

Chemical Analysis

BTEX	Benzene, Toluene, Ethylbenzene and Xylenes	*	Duplicate Sample
ING	Metals and Inorganics	PCB	Polychlorinated Biphenyls
MET	Metals	PHC	Petroleum Hydrocarbons (F1-F4)
PAH	Polycyclic Aromatic Hydrocarbons	VOC	Volatile Organic Compounds
PEST	Organochlorine Pesticides		

GWL	SYMBOL	Soil Description	ELEV. m	DEPTH	N Value (20, 40, 60)	Combustible Vapour Reading (ppm) (25, 50, 75)	SAMPLES	% RECOV	SAMPLE ID	ANALYSIS
		Brown sand and gravel **FILL**, moist. no odour, no staining.		0		ND	G	75	GR1	
		Grey clayey silt **FILL**, moist, faint petroleum odour, no staining.		1		175 ppm	G	75	GR2	PHC BTEX
		Grey sand **FILL**, moist, faint petroleum odour, no staining.		2		15 ppm	G	75	GR2	
		End of Test pit at 3.0 mbgs.		3						
				4						
				5						
				6						
				7						
				8						
				9						
				10						
				11						
				12						

ENVIRONMENTAL-EXP 2017 TH LOGS.GPJ 12/22/17

Time	Water Level (m)	Depth to Cave (m)

exp Services Inc.
Markham, Ontario
Telephone: 905.695.3217

Log of Borehole TP14

Project No. MRK-00243747-A0 Drawing No. 26

Project: Subsurface Assessment Sheet No. 1 of 1

Location: 800 Hydro Road, Mississauga, Ontario

South of Powerhouse

Date Drilled: November 14, 2017

Drill Type: Excavator

Datum: Trimble TC3 Controller

Chemical Analysis

BTEX	Benzene, Toluene, Ethylbenzene and Xylenes	*	Duplicate Sample
ING	Metals and Inorganics	PCB	Polychlorinated Biphenyls
MET	Metals	PHC	Petroleum Hydrocarbons (F1-F4)
PAH	Polycyclic Aromatic Hydrocarbons	VOC	Volatile Organic Compounds
PEST	Organochlorine Pesticides		

GWL	SYMBOL	Soil Description	ELEV. m	DEPTH	N Value (20, 40, 60)	Combustible Vapour Reading (ppm) (25, 50, 75)	SAMPLES	% RECOV	SAMPLE ID	ANALYSIS
		Brown sand and gravel **FILL**, trace brick, moist, no odour, no staining.		0		ND		75	GR1	
		Grey clayey **SILT**, moist, faint petroleum odour, no staining.		1		250 ppm		75	GR2	
				2		260 ppm		75	GR3	PHC BTEX
				3		100 ppm		75	GR3	
		End of Test pit at 3.5 mbgs. **Note: a 20cm PVC pipe running east to west was encountered within the test pit.**		4						
				5						
				6						
				7						
				8						
				9						
				10						
				11						
				12						

ENVIRONMENTAL-EXP 2017 TH LOGS.GPJ 12/22/17

Time	Water Level (m)	Depth to Cave (m)

exp Services Inc.
Markham, Ontario
Telephone: 905.695.3217

Log of Borehole TP15

Project No. MRK-00243747-A0 Drawing No. 28

Project: Subsurface Assessment Sheet No. 1 of 1

Location: 800 Hydro Road, Mississauga, Ontario

South of Powerhouse

Date Drilled: November 14, 2017

Drill Type: Excavator

Datum: Trimble TC3 Controller

Chemical Analysis

BTEX	Benzene, Toluene, Ethylbenzene and Xylenes	*	Duplicate Sample
ING	Metals and Inorganics	PCB	Polychlorinated Biphenyls
MET	Metals	PHC	Petroleum Hydrocarbons (F1-F4)
PAH	Polycyclic Aromatic Hydrocarbons	VOC	Volatile Organic Compounds
PEST	Organochlorine Pesticides		

GWL	SYMBOL	Soil Description	ELEV. m	DEPTH	N Value (20, 40, 60)	Combustible Vapour Reading (ppm) (25, 50, 75)	SAMPLES	% RECOV	SAMPLE ID	ANALYSIS
		Brown sand and gravel **FILL**, moist, no odour, no staining. **CONCRETE** slab present at 0.10 mbgs.		0 1 2 3 4 5 6 7 8 9 10 11 12						

ENVIRONMENTAL-EXP 2017 TH LOGS.GPJ 12/22/17

exp Services Inc.
Markham, Ontario
Telephone: 905.695.3217

Time	Water Level (m)	Depth to Cave (m)

Log of Borehole TP16

Project No. MRK-00243747-A0 Drawing No. 27

Project: Subsurface Assessment Sheet No. 1 of 1

Location: 800 Hydro Road, Mississauga, Ontario

South of Powerhouse

Date Drilled: November 14, 2017

Drill Type: Excavator

Datum: Trimble TC3 Controller

Chemical Analysis

BTEX	Benzene, Toluene, Ethylbenzene and Xylenes	*	Duplicate Sample
ING	Metals and Inorganics	PCB	Polychlorinated Biphenyls
MET	Metals	PHC	Petroleum Hydrocarbons (F1-F4)
PAH	Polycyclic Aromatic Hydrocarbons	VOC	Volatile Organic Compounds
PEST	Organochlorine Pesticides		

GWL	SYMBOL	Soil Description	ELEV. m	DEPTH	N Value (20, 40, 60)	Combustible Vapour Reading (ppm) (25, 50, 75)	SAMPLES	% RECOV	SAMPLE ID	ANALYSIS
		Dark to light brown sand and gravel **FILL**, moist, no odour, no staining.		0		ND	G	75	GR1	
				1		ND	G	75	GR2	
		Concrete slab encountered at 1.50 mbgs. **End of Test pit at 1.50 mbgs.**		2						
				3						
				4						
				5						
				6						
				7						
				8						
				9						
				10						
				11						
				12						

ENVIRONMENTAL-EXP 2017 TH LOGS.GPJ 12/22/17

Time	Water Level (m)	Depth to Cave (m)

exp Services Inc.
Markham, Ontario
Telephone: 905.695.3217

Log of Borehole TP17

Project No. MRK-00243747-A0 Drawing No. 29

Project: Subsurface Assessment Sheet No. 1 of 1

Location: 800 Hydro Road, Mississauga, Ontario

South of Powerhouse

Date Drilled: November 14, 2017

Drill Type: Excavator

Datum: Trimble TC3 Controller

Chemical Analysis

BTEX	Benzene, Toluene, Ethylbenzene and Xylenes	*	Duplicate Sample
ING	Metals and Inorganics	PCB	Polychlorinated Biphenyls
MET	Metals	PHC	Petroleum Hydrocarbons (F1-F4)
PAH	Polycyclic Aromatic Hydrocarbons	VOC	Volatile Organic Compounds
PEST	Organochlorine Pesticides		

GWL	SYMBOL	Soil Description	ELEV. m	DEPTH	N Value (20, 40, 60)	Combustible Vapour Reading (ppm) (25, 50, 75)	SAMPLES	% RECOV	SAMPLE ID	ANALYSIS
		Brown sand and gravel **FILL**, moist, no odour, no staining.		0		ND	G	75	GR1	
		CONCRETE slab encountered at 0.61 mbgs. **End of Test pit at 0.61 mbgs.**		1						
				2						
				3						
				4						
				5						
				6						
				7						
				8						
				9						
				10						
				11						
				12						

ENVIRONMENTAL-EXP 2017 TH LOGS.GPJ 12/22/17

Time	Water Level (m)	Depth to Cave (m)

exp Services Inc.
Markham, Ontario
Telephone: 905.695.3217

Log of Borehole TP18

Project No. MRK-00243747-A0 Drawing No. 30

Project: Subsurface Assessment Sheet No. 1 of 1

Location: 800 Hydro Road, Mississauga, Ontario

South of Powerhouse

Date Drilled: November 14, 2017

Drill Type: Excavator

Datum: Trimble TC3 Controller

Chemical Analysis

BTEX	Benzene, Toluene, Ethylbenzene and Xylenes	*	Duplicate Sample
ING	Metals and Inorganics	PCB	Polychlorinated Biphenyls
MET	Metals	PHC	Petroleum Hydrocarbons (F1-F4)
PAH	Polycyclic Aromatic Hydrocarbons	VOC	Volatile Organic Compounds
PEST	Organochlorine Pesticides		

GWL	SYMBOL	Soil Description	ELEV. m	DEPTH	N Value (20, 40, 60)	Combustible Vapour Reading (ppm) (25, 50, 75)	SAMPLES	% RECOV	SAMPLE ID	ANALYSIS
		Brown sand and gravel **FILL**, trace brick, moist, no odour, no staining.		0		ND	G	75	GR1	
		Gravel **FILL**, some concrete and brick pieces, moist, no odour, no staining.		1		ND	G	75	GR2	
		End of Test pit at 3.0 mbgs.		2						
				3						
				4						
				5						
				6						
				7						
				8						
				9						
				10						
				11						
				12						

ENVIRONMENTAL-EXP 2017 TH LOGS.GPJ 12/22/17

Time	Water Level (m)	Depth to Cave (m)

exp Services Inc.
Markham, Ontario
Telephone: 905.695.3217

Client: Lakeview Community Partners Limited
Project Name: Subsurface Environmental Assessment
800 Hydro Road, Mississauga, Ontario
Project Number: MRK-00243747-A0
Date: December 22, 2017, Reissued March 2, 2018

Appendix D:
Laboratory Certificates of Analysis

AGAT Laboratories

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

CLIENT NAME: **EXP Services Inc**
220 Commerce Valley Drive West,Suite 500
Markham, ON, ON L3T0A8
(905) 695-3217

ATTENTION TO: **Travis Tan**

PROJECT: **MRK-00243747**

AGAT WORK ORDER: **17T283430**

SOIL ANALYSIS REVIEWED BY: **Amanjot Bhela, Inorganic Coordinator**

TRACE ORGANICS REVIEWED BY: **Neli Popnikolova, Senior Chemist**

DATE REPORTED: **Nov 20, 2017**

PAGES (INCLUDING COVER): **12**

VERSION*: **3**

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

NOTES

VERSION 3:Version 3 supersedes version 2. Version 3: revision to sample identifications, issued December 08, 2017

All samples will be disposed of within 30 days following analysis. Please contact the lab if you require additional sample storage time.

AGAT Laboratories

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

Certificate of Analysis

AGAT WORK ORDER: 17T283430

PROJECT: MRK-00243747

CLIENT NAME: EXP Services Inc

ATTENTION TO: Travis Tan

SAMPLING SITE:

SAMPLED BY:

O. Reg. 153(511) - Metals (Including Hydrides) (Soil)

DATE RECEIVED: 2017-11-13

DATE REPORTED: 2017-11-20

		SAMPLE DESCRIPTION:		TH102-SS1	TH102-SS101	TH108-SS1
		SAMPLE TYPE:		Soil	Soil	Soil
		DATE SAMPLED:		2017-11-08	2017-11-08	2017-11-09
Parameter	Unit	G / S	RDL	8903249	8903254	8903316
Antimony	µg/g	7.5	0.8	<0.8	<0.8	<0.8
Arsenic	µg/g	18	1	6	5	12
Boron	µg/g	120	5	11	12	18
Barium	µg/g	390	2	80	85	80
Beryllium	µg/g	5	0.5	0.8	0.8	0.8
Cadmium	µg/g	1.2	0.5	<0.5	<0.5	<0.5
Chromium	µg/g	160	2	27	29	44
Cobalt	µg/g	22	0.5	15.0	15.5	9.3
Copper	µg/g	180	1	35	31	36
Lead	µg/g	120	1	17	23	**1020**
Molybdenum	µg/g	6.9	0.5	<0.5	<0.5	2.2
Nickel	µg/g	130	1	32	32	22
Selenium	µg/g	2.4	0.4	0.4	<0.4	2.0
Silver	µg/g	25	0.2	<0.2	<0.2	<0.2
Thallium	µg/g	1	0.4	<0.4	<0.4	<0.4
Uranium	µg/g	23	0.5	0.6	0.6	0.6
Vanadium	µg/g	86	1	30	31	27
Zinc	µg/g	340	5	72	71	215

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 3: Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition - Soil - Residential/Parkland/Institutional Property Use - Medium and Fine Textured Soils
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

Certified By: Amanjot Bhela

AGAT Laboratories

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

Certificate of Analysis

AGAT WORK ORDER: 17T283430

PROJECT: MRK-00243747

CLIENT NAME: EXP Services Inc

ATTENTION TO: Travis Tan

SAMPLING SITE:

SAMPLED BY:

O. Reg. 153(511) - PAHs (Soil)

DATE RECEIVED: 2017-11-13

DATE REPORTED: 2017-11-20

		SAMPLE DESCRIPTION:		TH102-SS2	TH102-SS6	TH108-SS1
		SAMPLE TYPE:		Soil	Soil	Soil
		DATE SAMPLED:		2017-11-08	2017-11-08	2017-11-09
Parameter	**Unit**	**G / S**	**RDL**	**8903255**	**8903257**	**8903316**
Naphthalene	µg/g	0.75	0.05	<0.05	<0.05	<0.05
Acenaphthylene	µg/g	0.17	0.05	<0.05	<0.05	<0.05
Acenaphthene	µg/g	58	0.05	<0.05	<0.05	<0.05
Fluorene	µg/g	69	0.05	<0.05	<0.05	<0.05
Phenanthrene	µg/g	7.8	0.05	<0.05	<0.05	<0.05
Anthracene	µg/g	0.74	0.05	<0.05	<0.05	<0.05
Fluoranthene	µg/g	0.69	0.05	<0.05	<0.05	<0.05
Pyrene	µg/g	78	0.05	<0.05	<0.05	<0.05
Benz(a)anthracene	µg/g	0.63	0.05	<0.05	<0.05	<0.05
Chrysene	µg/g	7.8	0.05	<0.05	<0.05	<0.05
Benzo(b)fluoranthene	µg/g	0.78	0.05	<0.05	<0.05	<0.05
Benzo(k)fluoranthene	µg/g	0.78	0.05	<0.05	<0.05	<0.05
Benzo(a)pyrene	µg/g	0.3	0.05	<0.05	<0.05	<0.05
Indeno(1,2,3-cd)pyrene	µg/g	0.48	0.05	<0.05	<0.05	<0.05
Dibenz(a,h)anthracene	µg/g	0.1	0.05	<0.05	<0.05	<0.05
Benzo(g,h,i)perylene	µg/g	7.8	0.05	<0.05	<0.05	<0.05
2-and 1-methyl Naphthalene	µg/g	3.4	0.05	<0.05	<0.05	0.08
Moisture Content	%		0.1	18.7	8.7	10.7
Surrogate	**Unit**	**Acceptable Limits**				
Chrysene-d12	%	50-140		94	96	55

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 3: Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition - Soil - Residential/Parkland/Institutional Property Use - Medium and Fine Textured Soils
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

8903255-8903316 Results are based on the dry weight of the soil.
Note: The result for Benzo(b)Fluoranthene is the total of the Benzo(b)&(j)Fluoranthene isomers because the isomers co-elute on the GC column.

Certified By: N Popnikolof

AGAT Laboratories

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

Certificate of Analysis

AGAT WORK ORDER: 17T283430

PROJECT: MRK-00243747

CLIENT NAME: EXP Services Inc

ATTENTION TO: Travis Tan

SAMPLING SITE:

SAMPLED BY:

O. Reg. 153(511) - PCBs (Soil)

DATE RECEIVED: 2017-11-13

DATE REPORTED: 2017-11-20

		SAMPLE DESCRIPTION:		TH104-SS1	TH104-SS101	TH105-SS1
		SAMPLE TYPE:		Soil	Soil	Soil
		DATE SAMPLED:		2017-11-09	2017-11-09	2017-11-10
Parameter	**Unit**	**G / S**	**RDL**	**8903293**	**8903296**	**8903308**
Aroclor 1242	µg/g		0.1	<0.1	<0.1	<0.1
Aroclor 1248	µg/g		0.1	<0.1	<0.1	<0.1
Aroclor 1254	µg/g		0.1	<0.1	<0.1	<0.1
Aroclor 1260	µg/g		0.1	<0.1	<0.1	<0.1
Polychlorinated Biphenyls	µg/g	0.35	0.1	<0.1	<0.1	<0.1
Moisture Content	%		0.1	6.1	5.3	13.0
Surrogate	**Unit**	**Acceptable Limits**				
Decachlorobiphenyl	%	60-140		92	92	92

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 3: Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition - Soil - Residential/Parkland/Institutional Property Use - Medium and Fine Textured Soils
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

8903293-8903308 Results are based on the dry weight of soil extracted.

Certified By: N Popnikolof

AGAT Laboratories

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Certificate of Analysis

AGAT WORK ORDER: 17T283430

PROJECT: MRK-00243747

CLIENT NAME: EXP Services Inc

ATTENTION TO: Travis Tan

SAMPLING SITE:

SAMPLED BY:

O. Reg. 153(511) - PHCs F1 - F4 (Soil)

DATE RECEIVED: 2017-11-13 **DATE REPORTED: 2017-11-20**

		SAMPLE DESCRIPTION:		TH103-SS9	TH104-SS6	TH105-SS5	TH106-SS5	TH108-SS2	TH111-SS2
		SAMPLE TYPE:		Soil	Soil	Soil	Soil	Soil	Soil
		DATE SAMPLED:		2017-11-06	2017-11-09	2017-11-10	2017-11-06	2017-11-09	2017-11-06
Parameter	**Unit**	**G / S**	**RDL**	**8903278**	**8903297**	**8903312**	**8903313**	**8903375**	**8903380**
Benzene	µg/g	0.17	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Toluene	µg/g	6	0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
Ethylbenzene	µg/g	15	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Xylene Mixture	µg/g	25	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
F1 (C6 to C10)	µg/g	65	5	<5	<5	<5	<5	<5	7
F1 (C6 to C10) minus BTEX	µg/g	65	5	<5	<5	<5	<5	<5	7
F2 (C10 to C16)	µg/g	150	10	<10	<10	<10	<10	<10	**350**
F3 (C16 to C34)	µg/g	1300	50	57	<50	<50	<50	<50	330
F4 (C34 to C50)	µg/g	5600	50	<50	<50	<50	<50	<50	<50
Gravimetric Heavy Hydrocarbons	µg/g	5600	50	NA	NA	NA	NA	NA	NA
Moisture Content	%		0.1	17.6	12.1	10.6	16.7	12.2	13.0
Surrogate	**Unit**	**Acceptable Limits**							
Terphenyl	%	60-140		84	72	63	68	63	72

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 3: Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition - Soil - Residential/Parkland/Institutional Property Use - Medium and Fine Textured Soils
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

8903278-8903380 Results are based on sample dry weight.
The C6-C10 fraction is calculated using Toluene response factor.
The C10 - C16, C16 - C34, and C34 - C50 fractions are calculated using the average response factor for n-C10, n-C16, and n-C34.
Gravimetric Heavy Hydrocarbons are not included in the Total C16-C50 and are only determined if the chromatogram of the C34 - C50 hydrocarbons indicates that hydrocarbons >C50 are present.
The chromatogram has returned to baseline by the retention time of nC50.
Total C6 - C50 results are corrected for BTEX contributions.
This method complies with the Reference Method for the CWS PHC and is validated for use in the laboratory.
nC6 and nC10 response factors are within 30% of Toluene response factor.
nC10, nC16 and nC34 response factors are within 10% of their average.
C50 response factor is within 70% of nC10 + nC16 + nC34 average.
Linearity is within 15%.
Extraction and holding times were met for this sample.
Fractions 1-4 are quantified with the contribution of PAHs. Under Ontario Regulation 153, results are considered valid without determining the PAH contribution if not requested by the client.
Quality Control Data is available upon request.

Certified By: N Popnikolof

AGAT Laboratories

Guideline Violation

AGAT WORK ORDER: 17T283430

PROJECT: MRK-00243747

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CLIENT NAME: EXP Services Inc

ATTENTION TO: Travis Tan

SAMPLEID	SAMPLE TITLE	GUIDELINE	ANALYSIS PACKAGE	PARAMETER	UNIT	GUIDEVALUE	RESULT
8903316	TH108-SS1	ON T3 S RPI MFT	O. Reg. 153(511) - Metals (Including Hydrides) (Soil)	Lead	µg/g	120	1020
8903380	TH111-SS2	ON T3 S RPI MFT	O. Reg. 153(511) - PHCs F1 - F4 (Soil)	F2 (C10 to C16)	µg/g	150	350

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Quality Assurance

CLIENT NAME: EXP Services Inc

AGAT WORK ORDER: 17T283430

PROJECT: MRK-00243747

ATTENTION TO: Travis Tan

SAMPLING SITE:

SAMPLED BY:

Soil Analysis

RPT Date: Nov 20, 2017			DUPLICATE				REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Method Blank	Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
O. Reg. 153(511) - Metals (Including Hydrides) (Soil)															
Antimony	8903931		<0.8	<0.8	NA	< 0.8	86%	70%	130%	117%	80%	120%	108%	70%	130%
Arsenic	8903931		1	1	NA	< 1	96%	70%	130%	104%	80%	120%	109%	70%	130%
Boron	8903931		<5	<5	NA	< 5	100%	70%	130%	104%	80%	120%	92%	70%	130%
Barium	8903931		10	11	9.5%	< 2	99%	70%	130%	97%	80%	120%	95%	70%	130%
Beryllium	8903931		<0.5	<0.5	NA	< 0.5	86%	70%	130%	97%	80%	120%	82%	70%	130%
Cadmium	8903931		<0.5	<0.5	NA	< 0.5	102%	70%	130%	96%	80%	120%	98%	70%	130%
Chromium	8903931		4	4	NA	< 2	91%	70%	130%	105%	80%	120%	110%	70%	130%
Cobalt	8903931		1.5	1.7	NA	< 0.5	96%	70%	130%	101%	80%	120%	99%	70%	130%
Copper	8903931		5	6	18.2%	< 1	95%	70%	130%	109%	80%	120%	101%	70%	130%
Lead	8903931		4	5	NA	< 1	100%	70%	130%	102%	80%	120%	102%	70%	130%
Molybdenum	8903931		<0.5	<0.5	NA	< 0.5	99%	70%	130%	104%	80%	120%	105%	70%	130%
Nickel	8903931		1	1	NA	< 1	96%	70%	130%	100%	80%	120%	96%	70%	130%
Selenium	8903931		<0.4	<0.4	NA	< 0.4	94%	70%	130%	100%	80%	120%	101%	70%	130%
Silver	8903931		<0.2	<0.2	NA	< 0.2	84%	70%	130%	96%	80%	120%	93%	70%	130%
Thallium	8903931		<0.4	<0.4	NA	< 0.4	91%	70%	130%	95%	80%	120%	95%	70%	130%
Uranium	8903931		<0.5	<0.5	NA	< 0.5	89%	70%	130%	90%	80%	120%	89%	70%	130%
Vanadium	8903931		5	6	18.2%	< 1	87%	70%	130%	100%	80%	120%	98%	70%	130%
Zinc	8903931		25	27	7.7%	< 5	93%	70%	130%	100%	80%	120%	93%	70%	130%

Comments: NA signifies Not Applicable.
Duplicate Qualifier: As the measured result approaches the RL, the uncertainty associated with the value increases dramatically, thus duplicate acceptance limits apply only where the average of the two duplicates is greater than five times the RL.

Certified By: Amanjot Bhela

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Quality Assurance

CLIENT NAME: EXP Services Inc

AGAT WORK ORDER: 17T283430

PROJECT: MRK-00243747

ATTENTION TO: Travis Tan

SAMPLING SITE:

SAMPLED BY:

Trace Organics Analysis

RPT Date: Nov 20, 2017

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
O. Reg. 153(511) - PAHs (Soil)															
Naphthalene	8906362		< 0.05	< 0.05	NA	< 0.05	91%	50%	140%	83%	50%	140%	71%	50%	140%
Acenaphthylene	8906362		< 0.05	< 0.05	NA	< 0.05	101%	50%	140%	86%	50%	140%	62%	50%	140%
Acenaphthene	8906362		< 0.05	< 0.05	NA	< 0.05	101%	50%	140%	85%	50%	140%	63%	50%	140%
Fluorene	8906362		< 0.05	< 0.05	NA	< 0.05	106%	50%	140%	90%	50%	140%	67%	50%	140%
Phenanthrene	8906362		< 0.05	< 0.05	NA	< 0.05	101%	50%	140%	89%	50%	140%	69%	50%	140%
Anthracene	8906362		< 0.05	< 0.05	NA	< 0.05	102%	50%	140%	93%	50%	140%	76%	50%	140%
Fluoranthene	8906362		< 0.05	< 0.05	NA	< 0.05	110%	50%	140%	74%	50%	140%	77%	50%	140%
Pyrene	8906362		< 0.05	< 0.05	NA	< 0.05	118%	50%	140%	79%	50%	140%	82%	50%	140%
Benz(a)anthracene	8906362		< 0.05	< 0.05	NA	< 0.05	95%	50%	140%	63%	50%	140%	75%	50%	140%
Chrysene	8906362		< 0.05	< 0.05	NA	< 0.05	100%	50%	140%	68%	50%	140%	78%	50%	140%
Benzo(b)fluoranthene	8906362		< 0.05	< 0.05	NA	< 0.05	115%	50%	140%	107%	50%	140%	96%	50%	140%
Benzo(k)fluoranthene	8906362		< 0.05	< 0.05	NA	< 0.05	108%	50%	140%	117%	50%	140%	100%	50%	140%
Benzo(a)pyrene	8906362		< 0.05	< 0.05	NA	< 0.05	119%	50%	140%	106%	50%	140%	89%	50%	140%
Indeno(1,2,3-cd)pyrene	8906362		< 0.05	< 0.05	NA	< 0.05	85%	50%	140%	74%	50%	140%	67%	50%	140%
Dibenz(a,h)anthracene	8906362		< 0.05	< 0.05	NA	< 0.05	92%	50%	140%	84%	50%	140%	66%	50%	140%
Benzo(g,h,i)perylene	8906362		< 0.05	< 0.05	NA	< 0.05	78%	50%	140%	71%	50%	140%	66%	50%	140%
2-and 1-methyl Naphthalene	8906362		< 0.05	< 0.05	NA	< 0.05	111%	50%	140%	91%	50%	140%	65%	50%	140%
O. Reg. 153(511) - PHCs F1 - F4 (Soil)															
Benzene	8903918		< 0.02	< 0.02	0.0%	< 0.02	77%	60%	130%	75%	60%	130%	73%	60%	130%
Toluene	8903918		< 0.08	< 0.08	0.0%	< 0.08	76%	60%	130%	84%	60%	130%	78%	60%	130%
Ethylbenzene	8903918		< 0.05	< 0.05	0.0%	< 0.05	74%	60%	130%	90%	60%	130%	83%	60%	130%
Xylene Mixture	8903918		< 0.05	< 0.05	0.0%	< 0.05	77%	60%	130%	88%	60%	130%	85%	60%	130%
F1 (C6 to C10)	8903918		< 5	< 5	0.0%	< 5	80%	60%	130%	93%	85%	115%	79%	70%	130%
F2 (C10 to C16)	8894295		< 10	< 10	NA	< 10	96%	60%	130%	106%	80%	120%	86%	70%	130%
F3 (C16 to C34)	8894295		< 50	< 50	NA	< 50	104%	60%	130%	80%	80%	120%	70%	70%	130%
F4 (C34 to C50)	8894295		< 50	< 50	NA	< 50	94%	60%	130%	80%	80%	120%	71%	70%	130%
O. Reg. 153(511) - PCBs (Soil)															
Aroclor 1242	8903293		< 0.1	< 0.1	NA	< 0.1	NA	60%	140%	NA	60%	140%	NA	60%	140%
Aroclor 1248	8903293		< 0.1	< 0.1	NA	< 0.1	NA	60%	140%	NA	60%	140%	NA	60%	140%
Aroclor 1254	8903293		< 0.1	< 0.1	NA	< 0.1	NA	60%	140%	NA	60%	140%	NA	60%	140%
Aroclor 1260	8903293		< 0.1	< 0.1	NA	< 0.1	NA	60%	140%	NA	60%	140%	NA	60%	140%
Polychlorinated Biphenyls	8903293		< 0.1	< 0.1	NA	< 0.1	110%	60%	140%	102%	60%	140%	100%	60%	140%

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

Certified By: N Popnikolof

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Method Summary

CLIENT NAME: EXP Services Inc

AGAT WORK ORDER: 17T283430

PROJECT: MRK-00243747

ATTENTION TO: Travis Tan

SAMPLING SITE:

SAMPLED BY:

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Soil Analysis			
Antimony	MET-93-6103	EPA SW-846 3050B & 6020A	ICP-MS
Arsenic	MET-93-6103	EPA SW-846 3050B & 6020A	ICP-MS
Boron	MET-93-6103	EPA SW-846 3050B & 6020A	ICP-MS
Barium	MET-93-6103	EPA SW-846 3050B & 6020A	ICP-MS
Beryllium	MET-93-6103	EPA SW-846 3050B & 6020A	ICP-MS
Cadmium	MET-93-6103	EPA SW-846 3050B & 6020A	ICP-MS
Chromium	MET-93-6103	EPA SW-846 3050B & 6020A	ICP-MS
Cobalt	MET-93-6103	EPA SW-846 3050B & 6020A	ICP-MS
Copper	MET-93-6103	EPA SW-846 3050B & 6020A	ICP-MS
Lead	MET-93-6103	EPA SW-846 3050B & 6020A	ICP-MS
Molybdenum	MET-93-6103	EPA SW-846 3050B & 6020A	ICP-MS
Nickel	MET-93-6103	EPA SW-846 3050B & 6020A	ICP-MS
Selenium	MET-93-6103	EPA SW-846 3050B & 6020A	ICP-MS
Silver	MET-93-6103	EPA SW-846 3050B & 6020A	ICP-MS
Thallium	MET-93-6103	EPA SW-846 3050B & 6020A	ICP-MS
Uranium	MET-93-6103	EPA SW-846 3050B & 6020A	ICP-MS
Vanadium	MET-93-6103	EPA SW-846 3050B & 6020A	ICP-MS
Zinc	MET-93-6103	EPA SW-846 3050B & 6020A	ICP-MS

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Method Summary

CLIENT NAME: EXP Services Inc

AGAT WORK ORDER: 17T283430

PROJECT: MRK-00243747

ATTENTION TO: Travis Tan

SAMPLING SITE:

SAMPLED BY:

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Trace Organics Analysis			
Naphthalene	ORG-91-5106	EPA SW846 3541 & 8270	GC/MS
Acenaphthylene	ORG-91-5106	EPA SW846 3541 & 8270	GC/MS
Acenaphthene	ORG-91-5106	EPA SW846 3541 & 8270	GC/MS
Fluorene	ORG-91-5106	EPA SW846 3541 & 8270	GC/MS
Phenanthrene	ORG-91-5106	EPA SW846 3541 & 8270	GC/MS
Anthracene	ORG-91-5106	EPA SW846 3541 & 8270	GC/MS
Fluoranthene	ORG-91-5106	EPA SW846 3541 & 8270	GC/MS
Pyrene	ORG-91-5106	EPA SW846 3541 & 8270	GC/MS
Benz(a)anthracene	ORG-91-5106	EPA SW846 3541 & 8270	GC/MS
Chrysene	ORG-91-5106	EPA SW846 3541 & 8270	GC/MS
Benzo(b)fluoranthene	ORG-91-5106	EPA SW846 3541 & 8270	GC/MS
Benzo(k)fluoranthene	ORG-91-5106	EPA SW846 3541 & 8270	GC/MS
Benzo(a)pyrene	ORG-91-5106	EPA SW846 3541 & 8270	GC/MS
Indeno(1,2,3-cd)pyrene	ORG-91-5106	EPA SW846 3541 & 8270	GC/MS
Dibenz(a,h)anthracene	ORG-91-5106	EPA SW846 3541 & 8270	GC/MS
Benzo(g,h,i)perylene	ORG-91-5106	EPA SW846 3541 & 8270	GC/MS
2-and 1-methyl Naphthalene	ORG-91-5106	EPA SW846 3541 & 8270	GC/MS
Moisture Content	ORG-91-5106	EPA SW-846 3541 & 8270	BALANCE
Chrysene-d12	ORG-91-5106	EPA SW846 3541 & 8270	GC/MS
Aroclor 1242	ORG-91-5113	EPA SW-846 3541 & 8082	GC/ECD
Aroclor 1248	ORG-91-5113	EPA SW-846 3541 & 8082	GC/ECD
Aroclor 1254	ORG-91-5113	EPA SW-846 3541 & 8082	GC/ECD
Aroclor 1260	ORG-91-5113	EPA SW-846 3541 & 8082	GC/ECD
Polychlorinated Biphenyls	ORG-91-5113	EPA SW-846 3541 & 8082	GC/ECD
Decachlorobiphenyl	ORG-91-5113	EPA SW-846 3541 & 8082	GC/ECD
Moisture Content		MOE E3139	BALANCE
Benzene	VOL-91-5009	EPA SW-846 5035 & 8260	P & T GC/MS
Toluene	VOL-91-5009	EPA SW-846 5035 & 8260	P & T GC/MS
Ethylbenzene	VOL-91-5009	EPA SW-846 5035 & 8260	P & T GC/MS
Xylene Mixture	VOL-91-5009	EPA SW-846 5035 & 8260	P & T GC/MS
F1 (C6 to C10)	VOL-91-5009	CCME Tier 1 Method	P & T GC/FID
F1 (C6 to C10) minus BTEX	VOL-91-5009	CCME Tier 1 Method	P & T GC/FID
F2 (C10 to C16)	VOL-91-5009	CCME Tier 1 Method, EPA SW846 8015	GC / FID
F3 (C16 to C34)	VOL-91-5009	CCME Tier 1 Method, EPA SW846 8015	GC / FID
F4 (C34 to C50)	VOL-91-5009	CCME Tier 1 Method, EPA SW846 8015	GC / FID
Gravimetric Heavy Hydrocarbons	VOL-91-5009	CCME Tier 1 Method	BALANCE
Moisture Content	VOL-91-5009	CCME Tier 1 Method	BALANCE
Terphenyl	VOL-91-5009		GC/FID

AGAT Laboratories

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Chain of Custody Record

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

Laboratory Use Only
Work Order #: 17T283430
Cooler Quantity:
Arrival Temperatures: 2.3 | 3.0 | 2.9 | 3.0 | 2.9 | 2.9
Custody Seal Intact: ☐Yes ☐No ☐N/A
Notes:

Report Information:
Company: Exp Services Inc
Contact: Travis Tan
Address: 220 Commerce Valley D.
Markham, ON
Phone: 9/695 3217 Fax:
Reports to be sent to:
1. Email: Travis.tan@exp.com
2. Email: Ajay.Jayaletti@exp.com

Project Information:
Project: 999-00055100-PP.
Site Location:
Sampled By:
AGAT Quote #: PO:
Please note: If quotation number is not provided, client will be billed full price for analysis.

Invoice Information:
Bill To Same: Yes ☐ No ☐
Company:
Contact:
Address:
Email:

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

☐ Regulation 153/04
Table 3 (Indicate One)
☐ Ind/Com ☐ Res/Park ☐ Agriculture
Soil Texture (Check One): ☐ Coarse ☐ Fine

☐ Sewer Use
☐ Sanitary ☐ Storm
Region (Indicate One)

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

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*

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 (Please Circle) Y / N	Metals and Inorganics	Metal Scan	Hydride Forming Metals	Client Custom Metals	ORPs: ☐B-HWS ☐Cl ☐CN ☐Cr^{6+} ☐EC ☐FOC ☐NO_3/NO_2 ☐Total N ☐Hg ☐pH ☐SAR	Nutrients: ☐TP ☐NH_3 ☐TKN ☐NO_3 ☐NO_2 ☐NO_3/NO_2	Volatiles: ☐VOC ☑BTEX ☐THM	CCME Fractions 1 to 4	ABNs	PAHs	Chlorophenols	PCBs	Organochlorine Pesticides	TCLP Metals/Inorganics	Sewer Use	PCB
TH103-SS1	8/11/17		1	S				✓								✓						
TH103-SS101			1					✓														
TH103-SS2			1					✓								✓						
TH103-SS201			2		OH Hold			✓								✓						
TH103-SS6																✓						
TH104-SS9	6/11/17		2										✓	✓								
TH105-SS1	9/11/17		1																		✓	
TH105-SS101			1																		✓	
TH105-SS6			2										✓	✓								
TH106-SS1	10/11/17		1																		✓	
TH106-SS5			2										✓	✓								

Samples Relinquished By (Print Name and Sign): Ajay Jayaletti	Date Nov 12/17	Time	Samples Received By (Print Name and Sign): Ilpm Craig	Date 11/02/17	Time 1125
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): Craig	Date 11/13/17	Time 9:00	Samples Received By (Print Name and Sign):	Date	Time

Page 1 of 2
№: T 037719

Document ID: DW-78-1011.011

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Date Issued: Feb 18, 2016

AGAT Laboratories

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

Chain of Custody Record

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

Report Information:

Company: Exp Services Inc
Contact: Travis Tan
Address: 220 Commerce Valley
D.D
Phone: Fax:
Reports to be sent to:
1. Email: Travis.tan@exp.com
2. Email: Greg.Taylor@exp.com

Project Information:

Project: 999-00055100-PP
Site Location:
Sampled By:
AGAT Quote #: PO:
Please note: If quotation number is not provided, client will be billed full price for analysis.

Invoice Information:

Bill To Same: Yes ☐ No ☐
Company:
Contact:
Address:
Email:

Regulatory Requirements:

☐ No Regulatory Requirement
(Please check all applicable boxes)

☑ Regulation 153/04
Table 3 *Indicate One*
☐ Ind/Com
☑ Res/Park
☐ Agriculture
Soil Texture *(Check One)*
☐ Coarse
☐ Fine

☐ Sewer Use
☐ Sanitary
☐ Storm
Region *Indicate One*

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

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

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

Laboratory Use Only

Work Order #:
Cooler Quantity:
Arrival Temperatures: 3.3 | 3.0 | 2.9 | 3.0 | 2.9 | 2.6
Custody Seal Intact: ☐ Yes ☐ No ☐ N/A
Notes:

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*

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 (Please Circle) Y / N	Metals and Inorganics	Metal Scan	Hydride Forming Metals	Client Custom Metals	(Check Applicable) ORPs: ☐ B-HWS ☐ Cl ☐ CN ☐ Cr^{6+} ☐ EC ☐ FOC ☐ NO_3/NO_2 ☐ Total N ☐ Hg ☐ pH ☐ SAR	Nutrients: ☐ TP ☐ NH_3 ☐ TKN ☐ NO_3 ☐ NO_2 ☐ NO_3/NO_2	Volatiles: ☐ VOC ☑ BTEX ☐ THM	CCME Fractions 1 to 4	ABNs	PAHs	Chlorophenols	PCBs	Organochlorine Pesticides	TCLP Metals/Inorganics	Sewer Use
TH107-SS5	6/11/17		2	S									✓							
TH109-SS1	9/11/17		2	S				✓								✓				
TH109-SS2	↓		2	S									✓							
TH12-SS	6/11/17		2	S									✓							

Samples Relinquished By (Print Name and Sign):	Date	Time	Samples Received By (Print Name and Sign):	Date	Time
Greg Taylor	12/17	11 PM	Travis Tan	11/13/17	1625
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
	11/13/17	30			

Page 2 of 2
N°: T 037720

Document ID:DIv-78-1511.001

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http://www.agatlabs.com

CLIENT NAME: **EXP Services Inc**
220 Commerce Valley Drive West,Suite 500
Markham, ON, ON L3T0A8
(905) 695-3217

ATTENTION TO: **Travis Tan**

PROJECT: **MRK-00242747**

AGAT WORK ORDER: **17T286217**

SOIL ANALYSIS REVIEWED BY: **Amanjot Bhela, Inorganic Coordinator**

TRACE ORGANICS REVIEWED BY: **Neli Popnikolova, Senior Chemist**

DATE REPORTED: **Nov 27, 2017**

PAGES (INCLUDING COVER): **11**

VERSION*: **2**

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

NOTES

VERSION 2:Version 2 supersedes version 1. Version 2: revision to project number and sample identifications, issued December 01, 2017

All samples will be disposed of within 30 days following analysis. Please contact the lab if you require additional sample storage time.

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Certificate of Analysis

AGAT WORK ORDER: 17T286217

PROJECT: MRK-00242747

CLIENT NAME: EXP Services Inc

ATTENTION TO: Travis Tan

SAMPLING SITE:

SAMPLED BY:

O. Reg. 153(511) - Metals (Including Hydrides) (Soil)

DATE RECEIVED: 2017-11-18

DATE REPORTED: 2017-11-27

		SAMPLE DESCRIPTION:		TH109-SS2	TH110-SS1
		SAMPLE TYPE:		Soil	Soil
		DATE SAMPLED:		2017-11-13	2017-11-13
Parameter	Unit	G / S	RDL	8921971	8921985
Antimony	µg/g	7.5	0.8	<0.8	<0.8
Arsenic	µg/g	18	1	3	4
Boron	µg/g	120	5	6	6
Barium	µg/g	390	2	25	52
Beryllium	µg/g	5	0.5	<0.5	<0.5
Cadmium	µg/g	1.2	0.5	<0.5	<0.5
Chromium	µg/g	160	2	9	12
Cobalt	µg/g	22	0.5	4.7	5.6
Copper	µg/g	180	1	11	37
Lead	µg/g	120	1	5	36
Molybdenum	µg/g	6.9	0.5	<0.5	1.2
Nickel	µg/g	130	1	8	10
Selenium	µg/g	2.4	0.4	<0.4	**4.9**
Silver	µg/g	25	0.2	<0.2	<0.2
Thallium	µg/g	1	0.4	<0.4	<0.4
Uranium	µg/g	23	0.5	<0.5	<0.5
Vanadium	µg/g	86	1	12	13
Zinc	µg/g	340	5	24	48

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 3: Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition - Soil - Residential/Parkland/Institutional Property Use - Medium and Fine Textured Soils
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

Certified By: Amanjot Bhela

AGAT Laboratories

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Certificate of Analysis

AGAT WORK ORDER: 17T286217

PROJECT: MRK-00242747

CLIENT NAME: EXP Services Inc

ATTENTION TO: Travis Tan

SAMPLING SITE:

SAMPLED BY:

O. Reg. 153(511) - PAHs (Soil)

DATE RECEIVED: 2017-11-18

DATE REPORTED: 2017-11-27

		SAMPLE DESCRIPTION:		TH109-SS1	TH110-SS1
		SAMPLE TYPE:		Soil	Soil
		DATE SAMPLED:		2017-11-13	2017-11-13
Parameter	**Unit**	**G / S**	**RDL**	**8921957**	**8921985**
Naphthalene	µg/g	0.75	0.05	<0.05	<0.05
Acenaphthylene	µg/g	0.17	0.05	<0.05	<0.05
Acenaphthene	µg/g	58	0.05	<0.05	<0.05
Fluorene	µg/g	69	0.05	<0.05	<0.05
Phenanthrene	µg/g	7.8	0.05	<0.05	<0.05
Anthracene	µg/g	0.74	0.05	<0.05	<0.05
Fluoranthene	µg/g	0.69	0.05	<0.05	<0.05
Pyrene	µg/g	78	0.05	<0.05	<0.05
Benz(a)anthracene	µg/g	0.63	0.05	<0.05	<0.05
Chrysene	µg/g	7.8	0.05	<0.05	<0.05
Benzo(b)fluoranthene	µg/g	0.78	0.05	<0.05	<0.05
Benzo(k)fluoranthene	µg/g	0.78	0.05	<0.05	<0.05
Benzo(a)pyrene	µg/g	0.3	0.05	<0.05	<0.05
Indeno(1,2,3-cd)pyrene	µg/g	0.48	0.05	<0.05	<0.05
Dibenz(a,h)anthracene	µg/g	0.1	0.05	<0.05	<0.05
Benzo(g,h,i)perylene	µg/g	7.8	0.05	<0.05	<0.05
2-and 1-methyl Naphthalene	µg/g	3.4	0.05	<0.05	<0.05
Moisture Content	%		0.1	10.9	7.6
Surrogate	**Unit**	**Acceptable Limits**			
Chrysene-d12	%	50-140		52	86

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 3: Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition - Soil - Residential/Parkland/Institutional Property Use - Medium and Fine Textured Soils
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

8921957-8921985 Results are based on the dry weight of the soil.
Note: The result for Benzo(b)Fluoranthene is the total of the Benzo(b)&(j)Fluoranthene isomers because the isomers co-elute on the GC column.

Certified By: NPopowich

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Certificate of Analysis

AGAT WORK ORDER: 17T286217

PROJECT: MRK-00242747

CLIENT NAME: EXP Services Inc

ATTENTION TO: Travis Tan

SAMPLING SITE:

SAMPLED BY:

O. Reg. 153(511) - PCBs (Soil)

DATE RECEIVED: 2017-11-18

DATE REPORTED: 2017-11-27

		SAMPLE DESCRIPTION:		TH112-SS1
		SAMPLE TYPE:		Soil
		DATE SAMPLED:		2017-11-13
Parameter	**Unit**	**G / S**	**RDL**	**8921991**
Aroclor 1242	µg/g		0.1	<0.1
Aroclor 1248	µg/g		0.1	<0.1
Aroclor 1254	µg/g		0.1	<0.1
Aroclor 1260	µg/g		0.1	<0.1
Polychlorinated Biphenyls	µg/g	0.35	0.1	<0.1
Moisture Content	%		0.1	10.5
Surrogate	**Unit**	**Acceptable Limits**		
Decachlorobiphenyl	%	60-140		68

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 3: Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition - Soil - Residential/Parkland/Institutional Property Use - Medium and Fine Textured Soils
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

8921991 Results are based on the dry weight of soil extracted.

Certified By: N Popnikolof

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Certificate of Analysis

AGAT WORK ORDER: 17T286217

PROJECT: MRK-00242747

CLIENT NAME: EXP Services Inc

ATTENTION TO: Travis Tan

SAMPLING SITE:

SAMPLED BY:

O. Reg. 153(511) - PHCs F1 - F4 (Soil)

DATE RECEIVED: 2017-11-18 **DATE REPORTED: 2017-11-27**

		SAMPLE DESCRIPTION:		TH109-SS2	TH110- SS3	TH112-SS3	TP11-GR3	TP12-2m	TP13-2.5m	TP14-2m
		SAMPLE TYPE:		Soil	Soil	Soil	Soil	Soil	Soil	Soil
		DATE SAMPLED:		2017-11-13	2017-11-13	2017-11-13	2017-11-14	2017-11-14	2017-11-14	2017-11-14
Parameter	**Unit**	**G / S**	**RDL**	**8921971**	**8921988**	**8921995**	**8921998**	**8921999**	**8922001**	**8922006**
Benzene	µg/g	0.17	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Toluene	µg/g	6	0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
Ethylbenzene	µg/g	15	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Xylene Mixture	µg/g	25	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
F1 (C6 to C10)	µg/g	65	5	<5	<5	<5	<5	<5	48	26
F1 (C6 to C10) minus BTEX	µg/g	65	5	<5	<5	<5	<5	<5	48	26
F2 (C10 to C16)	µg/g	150	10	<10	16	<10	110	**660**	**3900**	**910**
F3 (C16 to C34)	µg/g	1300	50	<50	<50	<50	110	640	**2400**	280
F4 (C34 to C50)	µg/g	5600	50	<50	<50	<50	<50	<50	<50	<50
Gravimetric Heavy Hydrocarbons	µg/g	5600	50	NA	NA	NA	NA	NA	NA	NA
Moisture Content	%		0.1	16.3	14.6	15.3	18.1	18.7	10.3	16.2
Surrogate	**Unit**	**Acceptable Limits**								
Terphenyl	%	60-140		93	91	85	96	67	77	80

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 3: Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition - Soil - Residential/Parkland/Institutional Property Use - Medium and Fine Textured Soils
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

8921971-8922006 Results are based on sample dry weight.
The C6-C10 fraction is calculated using Toluene response factor.
The C10 - C16, C16 - C34, and C34 - C50 fractions are calculated using the average response factor for n-C10, n-C16, and n-C34.
Gravimetric Heavy Hydrocarbons are not included in the Total C16-C50 and are only determined if the chromatogram of the C34 - C50 hydrocarbons indicates that hydrocarbons >C50 are present.
The chromatogram has returned to baseline by the retention time of nC50.
Total C6 - C50 results are corrected for BTEX contributions.
This method complies with the Reference Method for the CWS PHC and is validated for use in the laboratory.
nC6 and nC10 response factors are within 30% of Toluene response factor.
nC10, nC16 and nC34 response factors are within 10% of their average.
C50 response factor is within 70% of nC10 + nC16 + nC34 average.
Linearity is within 15%.
Extraction and holding times were met for this sample.
Fractions 1-4 are quantified with the contribution of PAHs. Under Ontario Regulation 153, results are considered valid without determining the PAH contribution if not requested by the client.
Quality Control Data is available upon request.

Certified By: N Popnikolof

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Guideline Violation

AGAT WORK ORDER: 17T286217

PROJECT: MRK-00242747

CLIENT NAME: EXP Services Inc

ATTENTION TO: Travis Tan

SAMPLEID	SAMPLE TITLE	GUIDELINE	ANALYSIS PACKAGE	PARAMETER	UNIT	GUIDEVALUE	RESULT
8921985	TH110-SS1	ON T3 S RPI MFT	O. Reg. 153(511) - Metals (Including Hydrides) (Soil)	Selenium	µg/g	2.4	4.9
8921999	TP12-2m	ON T3 S RPI MFT	O. Reg. 153(511) - PHCs F1 - F4 (Soil)	F2 (C10 to C16)	µg/g	150	660
8922001	TP13-2.5m	ON T3 S RPI MFT	O. Reg. 153(511) - PHCs F1 - F4 (Soil)	F2 (C10 to C16)	µg/g	150	3900
8922001	TP13-2.5m	ON T3 S RPI MFT	O. Reg. 153(511) - PHCs F1 - F4 (Soil)	F3 (C16 to C34)	µg/g	1300	2400
8922006	TP14-2m	ON T3 S RPI MFT	O. Reg. 153(511) - PHCs F1 - F4 (Soil)	F2 (C10 to C16)	µg/g	150	910

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Quality Assurance

CLIENT NAME: EXP Services Inc

AGAT WORK ORDER: 17T286217

PROJECT: MRK-00242747

ATTENTION TO: Travis Tan

SAMPLING SITE:

SAMPLED BY:

Soil Analysis

RPT Date: Nov 27, 2017			DUPLICATE				REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Method Blank	Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
O. Reg. 153(511) - Metals (Including Hydrides) (Soil)															
Antimony	8925080		<0.8	<0.8	NA	< 0.8	88%	70%	130%	95%	80%	120%	97%	70%	130%
Arsenic	8925080		4	4	NA	< 1	110%	70%	130%	87%	80%	120%	86%	70%	130%
Boron	8925080		<5	<5	NA	< 5	91%	70%	130%	93%	80%	120%	71%	70%	130%
Barium	8925080		75	74	1.3%	< 2	107%	70%	130%	97%	80%	120%	91%	70%	130%
Beryllium	8925080		0.6	0.5	NA	< 0.5	77%	70%	130%	94%	80%	120%	77%	70%	130%
Cadmium	8925080		<0.5	<0.5	NA	< 0.5	107%	70%	130%	97%	80%	120%	94%	70%	130%
Chromium	8925080		26	25	3.9%	< 2	97%	70%	130%	109%	80%	120%	97%	70%	130%
Cobalt	8925080		10.6	10.4	1.9%	< 0.5	100%	70%	130%	100%	80%	120%	95%	70%	130%
Copper	8925080		24	24	0.0%	< 1	93%	70%	130%	106%	80%	120%	87%	70%	130%
Lead	8925080		14	13	7.4%	< 1	110%	70%	130%	103%	80%	120%	97%	70%	130%
Molybdenum	8925080		<0.5	<0.5	NA	< 0.5	103%	70%	130%	100%	80%	120%	93%	70%	130%
Nickel	8925080		22	22	0.0%	< 1	98%	70%	130%	98%	80%	120%	89%	70%	130%
Selenium	8925080		<0.4	<0.4	NA	< 0.4	115%	70%	130%	96%	80%	120%	95%	70%	130%
Silver	8925080		<0.2	<0.2	NA	< 0.2	95%	70%	130%	97%	80%	120%	88%	70%	130%
Thallium	8925080		<0.4	<0.4	NA	< 0.4	101%	70%	130%	94%	80%	120%	90%	70%	130%
Uranium	8925080		<0.5	<0.5	NA	< 0.5	99%	70%	130%	96%	80%	120%	94%	70%	130%
Vanadium	8925080		28	27	3.6%	< 1	92%	70%	130%	99%	80%	120%	80%	70%	130%
Zinc	8925080		53	52	1.9%	< 5	95%	70%	130%	101%	80%	120%	103%	70%	130%

Comments: NA signifies Not Applicable.
Duplicate Qualifier: As the measured result approaches the RL, the uncertainty associated with the value increases dramatically, thus duplicate acceptance limits apply only where the average of the two duplicates is greater than five times the RL

Certified By: Amanjot Bhela

AGAT Laboratories

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Quality Assurance

CLIENT NAME: EXP Services Inc

AGAT WORK ORDER: 17T286217

PROJECT: MRK-00242747

ATTENTION TO: Travis Tan

SAMPLING SITE:

SAMPLED BY:

Trace Organics Analysis

RPT Date: Nov 27, 2017

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
O. Reg. 153(511) - PAHs (Soil)															
Naphthalene	8919674		< 0.05	< 0.05	NA	< 0.05	81%	50%	140%	66%	50%	140%	69%	50%	140%
Acenaphthylene	8919674		< 0.05	< 0.05	NA	< 0.05	88%	50%	140%	67%	50%	140%	66%	50%	140%
Acenaphthene	8919674		< 0.05	< 0.05	NA	< 0.05	87%	50%	140%	65%	50%	140%	65%	50%	140%
Fluorene	8919674		< 0.05	< 0.05	NA	< 0.05	95%	50%	140%	72%	50%	140%	69%	50%	140%
Phenanthrene	8919674		< 0.05	< 0.05	NA	< 0.05	100%	50%	140%	74%	50%	140%	73%	50%	140%
Anthracene	8919674		< 0.05	< 0.05	NA	< 0.05	100%	50%	140%	84%	50%	140%	84%	50%	140%
Fluoranthene	8919674		< 0.05	< 0.05	NA	< 0.05	103%	50%	140%	77%	50%	140%	76%	50%	140%
Pyrene	8919674		< 0.05	< 0.05	NA	< 0.05	109%	50%	140%	83%	50%	140%	81%	50%	140%
Benz(a)anthracene	8919674		< 0.05	< 0.05	NA	< 0.05	84%	50%	140%	68%	50%	140%	66%	50%	140%
Chrysene	8919674		< 0.05	< 0.05	NA	< 0.05	98%	50%	140%	74%	50%	140%	71%	50%	140%
Benzo(b)fluoranthene	8919674		< 0.05	< 0.05	NA	< 0.05	121%	50%	140%	95%	50%	140%	98%	50%	140%
Benzo(k)fluoranthene	8919674		< 0.05	< 0.05	NA	< 0.05	134%	50%	140%	98%	50%	140%	115%	50%	140%
Benzo(a)pyrene	8919674		< 0.05	< 0.05	NA	< 0.05	119%	50%	140%	90%	50%	140%	94%	50%	140%
Indeno(1,2,3-cd)pyrene	8919674		< 0.05	< 0.05	NA	< 0.05	65%	50%	140%	76%	50%	140%	63%	50%	140%
Dibenz(a,h)anthracene	8919674		< 0.05	< 0.05	NA	< 0.05	60%	50%	140%	71%	50%	140%	78%	50%	140%
Benzo(g,h,i)perylene	8919674		< 0.05	< 0.05	NA	< 0.05	67%	50%	140%	84%	50%	140%	73%	50%	140%
2-and 1-methyl Naphthalene	8919674		< 0.05	< 0.05	NA	< 0.05	96%	50%	140%	68%	50%	140%	67%	50%	140%
O. Reg. 153(511) - PHCs F1 - F4 (Soil)															
Benzene	8922006	8922006	< 0.02	< 0.02	NA	< 0.02	74%	60%	130%	73%	60%	130%	75%	60%	130%
Toluene	8922006	8922006	< 0.08	< 0.08	NA	< 0.08	76%	60%	130%	73%	60%	130%	73%	60%	130%
Ethylbenzene	8922006	8922006	< 0.05	< 0.05	NA	< 0.05	76%	60%	130%	75%	60%	130%	79%	60%	130%
Xylene Mixture	8922006	8922006	< 0.05	< 0.05	NA	< 0.05	76%	60%	130%	75%	60%	130%	72%	60%	130%
F1 (C6 to C10)	8922006	8922006	26	27	3.8%	< 5	90%	60%	130%	96%	85%	115%	80%	70%	130%
F2 (C10 to C16)	8919530		< 10	< 10	NA	< 10	105%	60%	130%	100%	80%	120%	71%	70%	130%
F3 (C16 to C34)	8919530		< 50	< 50	NA	< 50	102%	60%	130%	93%	80%	120%	82%	70%	130%
F4 (C34 to C50)	8919530		< 50	< 50	NA	< 50	104%	60%	130%	99%	80%	120%	95%	70%	130%
O. Reg. 153(511) - PCBs (Soil)															
Aroclor 1242	8927134		< 0.1	< 0.1	NA	< 0.1	NA	60%	140%	NA	60%	140%	NA	60%	140%
Aroclor 1248	8927134		< 0.1	< 0.1	NA	< 0.1	NA	60%	140%	NA	60%	140%	NA	60%	140%
Aroclor 1254	8927134		< 0.1	< 0.1	NA	< 0.1	NA	60%	140%	NA	60%	140%	NA	60%	140%
Aroclor 1260	8927134		< 0.1	< 0.1	NA	< 0.1	NA	60%	140%	NA	60%	140%	NA	60%	140%
Polychlorinated Biphenyls	8927134		< 0.1	< 0.1	NA	< 0.1	97%	60%	140%	95%	60%	140%	95%	60%	140%

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

Certified By: N Popnikolof

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Method Summary

CLIENT NAME: EXP Services Inc

AGAT WORK ORDER: 17T286217

PROJECT: MRK-00242747

ATTENTION TO: Travis Tan

SAMPLING SITE:

SAMPLED BY:

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Soil Analysis			
Antimony	MET-93-6103	EPA SW-846 3050B & 6020A	ICP-MS
Arsenic	MET-93-6103	EPA SW-846 3050B & 6020A	ICP-MS
Boron	MET-93-6103	EPA SW-846 3050B & 6020A	ICP-MS
Barium	MET-93-6103	EPA SW-846 3050B & 6020A	ICP-MS
Beryllium	MET-93-6103	EPA SW-846 3050B & 6020A	ICP-MS
Cadmium	MET-93-6103	EPA SW-846 3050B & 6020A	ICP-MS
Chromium	MET-93-6103	EPA SW-846 3050B & 6020A	ICP-MS
Cobalt	MET-93-6103	EPA SW-846 3050B & 6020A	ICP-MS
Copper	MET-93-6103	EPA SW-846 3050B & 6020A	ICP-MS
Lead	MET-93-6103	EPA SW-846 3050B & 6020A	ICP-MS
Molybdenum	MET-93-6103	EPA SW-846 3050B & 6020A	ICP-MS
Nickel	MET-93-6103	EPA SW-846 3050B & 6020A	ICP-MS
Selenium	MET-93-6103	EPA SW-846 3050B & 6020A	ICP-MS
Silver	MET-93-6103	EPA SW-846 3050B & 6020A	ICP-MS
Thallium	MET-93-6103	EPA SW-846 3050B & 6020A	ICP-MS
Uranium	MET-93-6103	EPA SW-846 3050B & 6020A	ICP-MS
Vanadium	MET-93-6103	EPA SW-846 3050B & 6020A	ICP-MS
Zinc	MET-93-6103	EPA SW-846 3050B & 6020A	ICP-MS

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Method Summary

CLIENT NAME: EXP Services Inc

AGAT WORK ORDER: 17T286217

PROJECT: MRK-00242747

ATTENTION TO: Travis Tan

SAMPLING SITE:

SAMPLED BY:

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Trace Organics Analysis			
Naphthalene	ORG-91-5106	EPA SW846 3541 & 8270	GC/MS
Acenaphthylene	ORG-91-5106	EPA SW846 3541 & 8270	GC/MS
Acenaphthene	ORG-91-5106	EPA SW846 3541 & 8270	GC/MS
Fluorene	ORG-91-5106	EPA SW846 3541 & 8270	GC/MS
Phenanthrene	ORG-91-5106	EPA SW846 3541 & 8270	GC/MS
Anthracene	ORG-91-5106	EPA SW846 3541 & 8270	GC/MS
Fluoranthene	ORG-91-5106	EPA SW846 3541 & 8270	GC/MS
Pyrene	ORG-91-5106	EPA SW846 3541 & 8270	GC/MS
Benz(a)anthracene	ORG-91-5106	EPA SW846 3541 & 8270	GC/MS
Chrysene	ORG-91-5106	EPA SW846 3541 & 8270	GC/MS
Benzo(b)fluoranthene	ORG-91-5106	EPA SW846 3541 & 8270	GC/MS
Benzo(k)fluoranthene	ORG-91-5106	EPA SW846 3541 & 8270	GC/MS
Benzo(a)pyrene	ORG-91-5106	EPA SW846 3541 & 8270	GC/MS
Indeno(1,2,3-cd)pyrene	ORG-91-5106	EPA SW846 3541 & 8270	GC/MS
Dibenz(a,h)anthracene	ORG-91-5106	EPA SW846 3541 & 8270	GC/MS
Benzo(g,h,i)perylene	ORG-91-5106	EPA SW846 3541 & 8270	GC/MS
2-and 1-methyl Naphthalene	ORG-91-5106	EPA SW846 3541 & 8270	GC/MS
Moisture Content	ORG-91-5106	EPA SW-846 3541 & 8270	BALANCE
Chrysene-d12	ORG-91-5106	EPA SW846 3541 & 8270	GC/MS
Aroclor 1242	ORG-91-5113	EPA SW-846 3541 & 8082	GC/ECD
Aroclor 1248	ORG-91-5113	EPA SW-846 3541 & 8082	GC/ECD
Aroclor 1254	ORG-91-5113	EPA SW-846 3541 & 8082	GC/ECD
Aroclor 1260	ORG-91-5113	EPA SW-846 3541 & 8082	GC/ECD
Polychlorinated Biphenyls	ORG-91-5113	EPA SW-846 3541 & 8082	GC/ECD
Decachlorobiphenyl	ORG-91-5113	EPA SW-846 3541 & 8082	GC/ECD
Moisture Content		MOE E3139	BALANCE
Benzene	VOL-91-5009	EPA SW-846 5035 & 8260	P & T GC/MS
Toluene	VOL-91-5009	EPA SW-846 5035 & 8260	P & T GC/MS
Ethylbenzene	VOL-91-5009	EPA SW-846 5035 & 8260	P & T GC/MS
Xylene Mixture	VOL-91-5009	EPA SW-846 5035 & 8260	P & T GC/MS
F1 (C6 to C10)	VOL-91-5009	CCME Tier 1 Method	P & T GC/FID
F1 (C6 to C10) minus BTEX	VOL-91-5009	CCME Tier 1 Method	P & T GC/FID
F2 (C10 to C16)	VOL-91-5009	CCME Tier 1 Method, EPA SW846 8015	GC / FID
F3 (C16 to C34)	VOL-91-5009	CCME Tier 1 Method, EPA SW846 8015	GC / FID
F4 (C34 to C50)	VOL-91-5009	CCME Tier 1 Method, EPA SW846 8015	GC / FID
Gravimetric Heavy Hydrocarbons	VOL-91-5009	CCME Tier 1 Method	BALANCE
Moisture Content	VOL-91-5009	CCME Tier 1 Method	BALANCE
Terphenyl	VOL-91-5009		GC/FID

AGAT Laboratories

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Chain of Custody Record

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

Laboratory Use Only
Work Order #: 17T286217
Cooler Quantity: 1 Blk:
Arrival Temperatures: 3.0 | 2.4 | 2.8 (ice)
Custody Seal Intact: ☐Yes ☐No ☐N/A
Notes:

Report Information:
Company: Exp Services Inc
Contact: Travis Joyce
Address: 220 Commerce Valley Dr W
Phone: 9/6 695 3211 Fax:
Reports to be sent to:
1. Email: Travis.Joyce@exp.com
2. Email: Mary.Doyle@exp.com

Regulatory Requirements: ☐ No Regulatory Requirement
(Please check all applicable boxes)
☐ Regulation 153/04
Table 3 (Indicate One)
☐ Ind/Com ☐ Res/Park ☐ Agriculture
Soil Texture (Check One): ☐ Coarse ☐ Fine
☐ Sewer Use ☐ Sanitary ☐ Storm
Region (Indicate One)
☐ Regulation 558 ☐ CCME ☐ Prov. Water Quality Objectives (PWQO) ☐ Other (Indicate One)

Turnaround Time (TAT) Required:
Regular TAT ☑ 5 to 7 Business Days
Rush TAT (Rush Surcharges Apply)
☐ 3 Business Days ☐ 2 Business Days ☐ 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: 999-00055100-PR2
Site Location:
Sampled By:
AGAT Quote #: PO:
Please note: If quotation number is not provided, client will be billed full price for analysis.

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

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

Invoice Information: Bill To Same: Yes ☑ No ☐
Company:
Contact:
Address:
Email:

Sample Matrix Legend

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

Sample Identification	Date Sampled	Time Sampled	# of Containers	Sample Matrix	Comments/ Special Instructions	Field Filtered - Metals, Hg, CrVI (Please Circle) Y / N	Metals and Inorganics	Metal Scan	Hydride Forming Metals	Client Custom Metals	ORPs: ☐B-HWS ☐Cl⁻ ☐CN⁻ ☐C^{2-} ☐EC ☐FOC ☐NO_2/NO_3 ☐Total N ☐Hg ☐pH ☐SAR	Nutrients: ☐TP ☐NH_3 ☐TKN ☐NO_3 ☐NO_2 ☐NO_3/NO_2	Volatiles: ☐VOC ☑BTEX ☐THM	CCME Fractions 1 to 4	ABNs	PAHs	Chlorophenols	PCBs	Organochlorine Pesticides	TCLP Metals/Inorganics	Sewer Use	B PCB
TH110-SS1	13/11/17		1	S												✓						
TH110-SS2	↓		3	↓				✓					✓	✓								
TH111-SS1			2					✓								✓						
TH111-SS3			2										✓	✓								
TH113-SS1			1																		✓	
TH113-SS3	↓		2										✓	✓								
TP11-GR3	14/11/17		2										✓	✓								
TP12-2m			2										✓	✓								
TP13-2.5m			2										✓	✓								
TP14-2m	↓		2	↓									✓	✓								

Samples Relinquished By (Print Name and Sign):	Date	Time	Samples Received By (Print Name and Sign):	Date	Time
Mary Doyle	Nov	18/17 2pm	Neil Ramnarain	Nov.	18/17
Samples Relinquished By (Print Name and Sign):	Date	Time	Samples Received By (Print Name and Sign):	Date	Time 3:55PM
Samples Relinquished By (Print Name and Sign):	Date	Time	Samples Received By (Print Name and Sign):	Date	Time

Page 1 of 1
N°: T 037725

AGAT Laboratories

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CLIENT NAME: **EXP Services Inc**
220 Commerce Valley Drive West,Suite 500
Markham, ON, ON L3T0A8
(905) 695-3217

ATTENTION TO: **Travis Tan**

PROJECT: **MRK-00243747**

AGAT WORK ORDER: **17T282567**

TRACE ORGANICS REVIEWED BY: **Neli Popnikolova, Senior Chemist**

WATER ANALYSIS REVIEWED BY: **Nivine Basily, Inorganics Report Writer**

DATE REPORTED: **Nov 20, 2017**

PAGES (INCLUDING COVER): **17**

VERSION*: **2**

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

NOTES

VERSION 2:Project number revision from 999-00055100-PP to MRK-00243747 as per client request, issued December 07, 2017

All samples will be disposed of within 30 days following analysis. Please contact the lab if you require additional sample storage time.

AGAT Laboratories

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Certificate of Analysis

AGAT WORK ORDER: 17T282567

PROJECT: MRK-00243747

CLIENT NAME: EXP Services Inc

ATTENTION TO: Travis Tan

SAMPLING SITE:

SAMPLED BY:AF, AJ

O. Reg. 153(511) - PAHs (Water)

DATE RECEIVED: 2017-11-09

DATE REPORTED: 2017-11-20

		SAMPLE DESCRIPTION:		TRW12	TRW129	MW3-16	MW13-15
		SAMPLE TYPE:		Water	Water	Water	Water
		DATE SAMPLED:		2017-11-07	2017-11-07	2017-11-07	2017-11-08
Parameter	**Unit**	**G / S**	**RDL**	**8899299**	**8899309**	**8899317**	**8899325**
Naphthalene	µg/L	6400	0.20	<0.20	<0.20	<0.20	<0.20
Acenaphthylene	µg/L	1.8	0.20	<0.20	<0.20	<0.20	<0.20
Acenaphthene	µg/L	1700	0.20	0.55	0.58	<0.20	<0.20
Fluorene	µg/L	400	0.20	<0.20	<0.20	<0.20	<0.20
Phenanthrene	µg/L	580	0.10	<0.10	<0.10	<0.10	<0.10
Anthracene	µg/L	2.4	0.10	<0.10	<0.10	<0.10	<0.10
Fluoranthene	µg/L	130	0.20	<0.20	<0.20	<0.20	<0.20
Pyrene	µg/L	68	0.20	<0.20	<0.20	<0.20	<0.20
Benz(a)anthracene	µg/L	4.7	0.20	<0.20	<0.20	<0.20	<0.20
Chrysene	µg/L	1	0.10	<0.10	<0.10	<0.10	<0.10
Benzo(b)fluoranthene	µg/L	0.75	0.10	<0.10	<0.10	<0.10	<0.10
Benzo(k)fluoranthene	µg/L	0.4	0.10	<0.10	<0.10	<0.10	<0.10
Benzo(a)pyrene	µg/L	0.81	0.01	<0.01	<0.01	<0.01	<0.01
Indeno(1,2,3-cd)pyrene	µg/L	0.2	0.20	<0.20	<0.20	<0.20	<0.20
Dibenz(a,h)anthracene	µg/L	0.52	0.20	<0.20	<0.20	<0.20	<0.20
Benzo(g,h,i)perylene	µg/L	0.2	0.20	<0.20	<0.20	<0.20	<0.20
2-and 1-methyl Naphthalene	µg/L	1800	0.20	<0.20	<0.20	<0.20	<0.20
Surrogate	**Unit**	**Acceptable Limits**					
Chrysene-d12	%	50-140		133	116	101	90

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 3: Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition - Non-Potable Ground Water - All Types of Property Uses - Medium and Fine Textured Soils
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

8899299-8899325 Note: The result for Benzo(b)Flouranthene is the total of the Benzo(b)&(j)Flouranthene isomers because the isomers co-elute on the GC column.

Certified By: N Popnikolof

AGAT Laboratories

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Certificate of Analysis

AGAT WORK ORDER: 17T282567

PROJECT: MRK-00243747

CLIENT NAME: EXP Services Inc

ATTENTION TO: Travis Tan

SAMPLING SITE:

SAMPLED BY:AF, AJ

O. Reg. 153(511) - PHCs F1 - F4 (-BTEX) (Water)

DATE RECEIVED: 2017-11-09

DATE REPORTED: 2017-11-20

		SAMPLE DESCRIPTION:		TRW4	MW5-14	MW3-14	MW2-14	MW255	MW2559	MW225
		SAMPLE TYPE:		Water	Water	Water	Water	Water	Water	Water
		DATE SAMPLED:		2017-11-07	2017-11-08	2017-11-08	2017-11-08	2017-11-08	2017-11-08	2017-11-08
Parameter	**Unit**	**G / S**	**RDL**	**8899289**	**8899319**	**8899322**	**8899323**	**8899331**	**8899332**	**8899333**
F1 (C6 to C10)	µg/L	750	25	<25	<25	<25	<25	<25	<25	<25
F1 (C6 to C10) minus BTEX	µg/L	750	25	<25	<25	<25	<25	<25	<25	<25
F2 (C10 to C16)	µg/L	150	100	<100	<100	<100	<100	<100	<100	<100
F3 (C16 to C34)	µg/L	500	100	<100	<100	<100	<100	**3900**	**2500**	<100
F4 (C34 to C50)	µg/L	500	100	<100	<100	<100	<100	**510**	330	<100
Gravimetric Heavy Hydrocarbons	µg/L	500	500	NA	NA	NA	NA	NA	NA	NA
Surrogate	**Unit**	**Acceptable Limits**								
Terphenyl	%	60-140		83	91	98	93	90	98	98

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 3: Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition - Non-Potable Ground Water - All Types of Property Uses - Medium and Fine Textured Soils
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

8899289-8899333 The C6-C10 fraction is calculated using Toluene response factor.
The C10 - C16, C16 - C34, and C34 - C50 fractions are calculated using the average response factor for n-C10, n-C16, and nC34.
Gravimetric Heavy Hydrocarbons are not included in the Total C16 - C50 and are only determined if the chromatogram of the C34 - C50 Hydrocarbons indicated that hydrocarbons >C50 are present.
The chromatogram has returned to baseline by the retention time of nC50.
Total C6-C50 results are corrected for BTEX contributions.
This method complies with the Reference Method for the CWS PHC and is validated for use in the laboratory.
nC6 and nC10 response factors are within 30% of Toluene response factor.
nC10, nC16 and nC34 response factors are within 10% of their average.
C50 response factor is within 70% of nC10 + nC16 nC34 average.
Linearity is within 15%.
Extraction and holding times were met for this sample.
Fractions 1-4 are quantified with the contribution of PAHs. Under Ontario Regulation 153, results are considered valid without determining the PAH contribution if not requested by the client.

Certified By: N Popowkolof

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Certificate of Analysis

AGAT WORK ORDER: 17T282567

PROJECT: MRK-00243747

CLIENT NAME: EXP Services Inc

ATTENTION TO: Travis Tan

SAMPLING SITE:

SAMPLED BY:AF, AJ

O. Reg. 153(511) - PHCs F1 - F4 (Water)

DATE RECEIVED: 2017-11-09 **DATE REPORTED: 2017-11-20**

		SAMPLE DESCRIPTION:		MW240	MW249	TMW303	TMW306	TMW301	MW13-13
		SAMPLE TYPE:		Water	Water	Water	Water	Water	Water
		DATE SAMPLED:		2017-11-07	2017-11-07	2017-11-07	2017-11-07	2017-11-07	2017-11-08
Parameter	**Unit**	**G / S**	**RDL**	**8899271**	**8899286**	**8899287**	**8899312**	**8899313**	**8899328**
Benzene	µg/L	430	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Toluene	µg/L	18000	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Ethylbenzene	µg/L	2300	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Xylene Mixture	µg/L	4200	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
F1 (C6 to C10)	µg/L	750	25	<25	<25	<25	<25	51	<25
F1 (C6 to C10) minus BTEX	µg/L	750	25	<25	<25	<25	<25	51	<25
F2 (C10 to C16)	µg/L	150	100	140	130	<100	110	**360**	<100
F3 (C16 to C34)	µg/L	500	100	<100	<100	<100	<100	160	<100
F4 (C34 to C50)	µg/L	500	100	<100	<100	<100	<100	<100	<100
Gravimetric Heavy Hydrocarbons	µg/L	500	500	NA	NA	NA	NA	NA	NA
Surrogate	**Unit**	**Acceptable Limits**							
Terphenyl	%	60-140		93	75	80	73	102	105

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 3: Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition - Non-Potable Ground Water - All Types of Property Uses - Medium and Fine Textured Soils
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

8899271-8899328 The C6-C10 fraction is calculated using Toluene response factor.
The C10 - C16, C16 - C34, and C34 - C50 fractions are calculated using the average response factor for n-C10, n-C16, and nC34.
Gravimetric Heavy Hydrocarbons are not included in the Total C16 - C50 and are only determined if the chromatogram of the C34 - C50 Hydrocarbons indicated that hydrocarbons >C50 are present.
The chromatogram has returned to baseline by the retention time of nC50.
Total C6-C50 results are corrected for BTEX contributions.
This method complies with the Reference Method for the CWS PHC and is validated for use in the laboratory.
nC6 and nC10 response factors are within 30% of Toluene response factor.
nC10, nC16 and nC34 response factors are within 10% of their average.
C50 response factor is within 70% of nC10 + nC16 nC34 average.
Linearity is within 15%.
Extraction and holding times were met for this sample.
Fractions 1-4 are quantified with the contribution of PAHs. Under Ontario Regulation 153/04, results are considered valid without determining the PAH contribution if not requested by the client.
NA = Not Applicable

Certified By: 

AGAT Laboratories

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Certificate of Analysis

AGAT WORK ORDER: 17T282567

PROJECT: MRK-00243747

CLIENT NAME: EXP Services Inc

ATTENTION TO: Travis Tan

SAMPLING SITE:

SAMPLED BY:AF, AJ

O. Reg. 153(511) - PHCs F1 - F4 (with PAHs) (Water)

DATE RECEIVED: 2017-11-09

DATE REPORTED: 2017-11-20

		SAMPLE DESCRIPTION:		TRW12	MW3-16	MW13-15
		SAMPLE TYPE:		Water	Water	Water
		DATE SAMPLED:		2017-11-07	2017-11-07	2017-11-08
Parameter	**Unit**	**G / S**	**RDL**	**8899299**	**8899317**	**8899325**
Benzene	µg/L	430	0.20	<0.20	<0.20	<0.20
Toluene	µg/L	18000	0.20	<0.20	<0.20	<0.20
Ethylbenzene	µg/L	2300	0.10	<0.10	<0.10	<0.10
Xylene Mixture	µg/L	4200	0.20	<0.20	<0.20	<0.20
F1 (C6 to C10)	µg/L	750	25	<25	<25	<25
F1 (C6 to C10) minus BTEX	µg/L	750	25	<25	<25	<25
F2 (C10 to C16)	µg/L	150	100	<100	<100	<100
F2 (C10 to C16) minus Naphthalene	µg/L		100	<100	<100	<100
F3 (C16 to C34)	µg/L	500	100	150	<100	<100
F3 (C16 to C34) minus PAHs	µg/L		100	150	<100	<100
F4 (C34 to C50)	µg/L	500	100	<100	<100	<100
Gravimetric Heavy Hydrocarbons	µg/L	500	500	NA	NA	NA
Surrogate	**Unit**	**Acceptable Limits**				
Terphenyl	%	60-140		83	84	94

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 3: Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition - Non-Potable Ground Water - All Types of Property Uses - Medium and Fine Textured Soils
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

8899299-8899325 The C6-C10 fraction is calculated using Toluene response factor.
The C10 - C16, C16 - C34, and C34 - C50 fractions are calculated using the average response factor for n-C10, n-C16, and nC34.
Gravimetric Heavy Hydrocarbons are not included in the Total C16 - C50 and are only determined if the chromatogram of the C34 - C50 Hydrocarbons indicated that hydrocarbons >C50 are present.
The chromatogram has returned to baseline by the retention time of nC50.
Total C6-C50 results are corrected for BTEX and PAH contributions.
This method complies with the Reference Method for the CWS PHC and is validated for use in the laboratory.
nC6 and nC10 response factors are within 30% of Toluene response factor.
nC10, nC16 and nC34 response factors are within 10% of their average.
C50 response factor is within 70% of nC10 + nC16 nC34 average.
Linearity is within 15%.
Extraction and holding times were met for this sample.

Certified By: N Popnikolof

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AGAT WORK ORDER: 17T282567

PROJECT: MRK-00243747

CLIENT NAME: EXP Services Inc

ATTENTION TO: Travis Tan

SAMPLING SITE:

SAMPLED BY:AF, AJ

O. Reg. 153(511) - VOCs (Water)

DATE RECEIVED: 2017-11-09

DATE REPORTED: 2017-11-20

		SAMPLE DESCRIPTION:		TRW4	TRW43	MW5-14	MW3-14	MW2-14	MW255	MW2559	MW225
		SAMPLE TYPE:		Water	Water	Water	Water	Water	Water	Water	Water
		DATE SAMPLED:		2017-11-07	2017-11-07	2017-11-08	2017-11-08	2017-11-08	2017-11-08	2017-11-08	2017-11-08
Parameter	Unit	G / S	RDL	8899289	8899294	8899319	8899322	8899323	8899331	8899332	8899333
Dichlorodifluoromethane	µg/L	4400	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Vinyl Chloride	µg/L	1.7	0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17
Bromomethane	µg/L	56	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Trichlorofluoromethane	µg/L	2500	0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40
Acetone	µg/L	130000	1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,1-Dichloroethylene	µg/L	17	0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30
Methylene Chloride	µg/L	5500	0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30
trans- 1,2-Dichloroethylene	µg/L	17	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Methyl tert-butyl ether	µg/L	1400	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
1,1-Dichloroethane	µg/L	3100	0.30	<0.30	<0.30	<0.30	<0.30	<0.30	1.8	1.4	<0.30
Methyl Ethyl Ketone	µg/L	1500000	1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
cis- 1,2-Dichloroethylene	µg/L	17	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	3.4	2.5	<0.20
Chloroform	µg/L	22	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
1,2-Dichloroethane	µg/L	12	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
1,1,1-Trichloroethane	µg/L	6700	0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30
Carbon Tetrachloride	µg/L	8.4	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Benzene	µg/L	430	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
1,2-Dichloropropane	µg/L	140	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Trichloroethylene	µg/L	17	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Bromodichloromethane	µg/L	85000	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Methyl Isobutyl Ketone	µg/L	580000	1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,1,2-Trichloroethane	µg/L	30	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Toluene	µg/L	18000	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Dibromochloromethane	µg/L	82000	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Ethylene Dibromide	µg/L	0.83	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Tetrachloroethylene	µg/L	17	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
1,1,1,2-Tetrachloroethane	µg/L	28	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Chlorobenzene	µg/L	630	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Ethylbenzene	µg/L	2300	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
m & p-Xylene	µg/L		0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20

Certified By: N Popnikolof

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Certificate of Analysis

AGAT WORK ORDER: 17T282567

PROJECT: MRK-00243747

CLIENT NAME: EXP Services Inc

ATTENTION TO: Travis Tan

SAMPLING SITE:

SAMPLED BY:AF, AJ

O. Reg. 153(511) - VOCs (Water)

DATE RECEIVED: 2017-11-09 **DATE REPORTED: 2017-11-20**

		SAMPLE DESCRIPTION:		TRW4	TRW43	MW5-14	MW3-14	MW2-14	MW255	MW2559	MW225
		SAMPLE TYPE:		Water	Water	Water	Water	Water	Water	Water	Water
		DATE SAMPLED:		2017-11-07	2017-11-07	2017-11-08	2017-11-08	2017-11-08	2017-11-08	2017-11-08	2017-11-08
Parameter	**Unit**	**G / S**	**RDL**	**8899289**	**8899294**	**8899319**	**8899322**	**8899323**	**8899331**	**8899332**	**8899333**
Bromoform	µg/L	770	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Styrene	µg/L	9100	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
1,1,2,2-Tetrachloroethane	µg/L	15	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
o-Xylene	µg/L		0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
1,3-Dichlorobenzene	µg/L	9600	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
1,4-Dichlorobenzene	µg/L	67	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
1,2-Dichlorobenzene	µg/L	9600	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
1,3-Dichloropropene	µg/L	45	0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30
Xylene Mixture	µg/L	4200	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
n-Hexane	µg/L	520	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Surrogate	**Unit**	**Acceptable Limits**									
Toluene-d8	% Recovery	50-140		93	96	93	96	99	95	96	93
4-Bromofluorobenzene	% Recovery	50-140		80	84	86	82	83	85	84	88

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 3: Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition - Non-Potable Ground Water - All Types of Property Uses - Medium and Fine Textured Soils
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

Certified By: N Popnikolof

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Certificate of Analysis

AGAT WORK ORDER: 17T282567

PROJECT: MRK-00243747

CLIENT NAME: EXP Services Inc

ATTENTION TO: Travis Tan

SAMPLING SITE:

SAMPLED BY:AF, AJ

O. Reg. 153(511) - Metals (Including Hydrides) (Water)

DATE RECEIVED: 2017-11-09

DATE REPORTED: 2017-11-20

		SAMPLE DESCRIPTION:		TRW12	TRW129	MW3-16	MW13-15
		SAMPLE TYPE:		Water	Water	Water	Water
		DATE SAMPLED:		2017-11-07	2017-11-07	2017-11-07	2017-11-08
Parameter	Unit	G / S	RDL	8899299	8899309	8899317	8899325
Antimony	µg/L	20000	1.0	<1.0	<1.0	<1.0	<1.0
Arsenic	µg/L	1900	1.0	1.5	1.4	<1.0	<1.0
Barium	µg/L	29000	2.0	409	382	38.0	38.0
Beryllium	µg/L	67	0.5	<0.5	<0.5	<0.5	<0.5
Boron	µg/L	45000	10.0	537	497	882	466
Cadmium	µg/L	2.7	0.2	<0.2	<0.2	<0.2	<0.2
Chromium	µg/L	810	2.0	5.1	2.9	<2.0	<2.0
Cobalt	µg/L	66	0.5	0.8	0.7	<0.5	<0.5
Copper	µg/L	87	1.0	<1.0	<1.0	<1.0	<1.0
Lead	µg/L	25	0.5	<0.5	<0.5	<0.5	<0.5
Molybdenum	µg/L	9200	0.5	1.1	0.8	10.1	12.9
Nickel	µg/L	490	1.0	<1.0	<1.0	<1.0	<1.0
Selenium	µg/L	63	1.0	<1.0	1.5	<1.0	<1.0
Silver	µg/L	1.5	0.2	<0.2	<0.2	<0.2	<0.2
Thallium	µg/L	510	0.3	<0.3	<0.3	<0.3	<0.3
Uranium	µg/L	420	0.5	0.6	0.6	1.0	1.3
Vanadium	µg/L	250	0.4	<0.4	<0.4	<0.4	1.2
Zinc	µg/L	1100	5.0	<5.0	<5.0	<5.0	39.9

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 3: Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition - Non-Potable Ground Water - All Types of Property Uses - Medium and Fine Textured Soils
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

Certified By: Vivine Basily

AGAT Laboratories

Guideline Violation

AGAT WORK ORDER: 17T282567

PROJECT: MRK-00243747

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CLIENT NAME: EXP Services Inc

ATTENTION TO: Travis Tan

SAMPLEID	SAMPLE TITLE	GUIDELINE	ANALYSIS PACKAGE	PARAMETER	UNIT	GUIDEVALUE	RESULT
8899313	TMW301	ON T3 NPGW MFT	O. Reg. 153(511) - PHCs F1 - F4 (Water)	F2 (C10 to C16)	µg/L	150	360
8899331	MW255	ON T3 NPGW MFT	O. Reg. 153(511) - PHCs F1 - F4 (-BTEX) (Water)	F3 (C16 to C34)	µg/L	500	3900
8899331	MW255	ON T3 NPGW MFT	O. Reg. 153(511) - PHCs F1 - F4 (-BTEX) (Water)	F4 (C34 to C50)	µg/L	500	510
8899332	MW2559	ON T3 NPGW MFT	O. Reg. 153(511) - PHCs F1 - F4 (-BTEX) (Water)	F3 (C16 to C34)	µg/L	500	2500

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Quality Assurance

CLIENT NAME: EXP Services Inc

AGAT WORK ORDER: 17T282567

PROJECT: MRK-00243747

ATTENTION TO: Travis Tan

SAMPLING SITE:

SAMPLED BY:AF, AJ

Trace Organics Analysis

RPT Date: Nov 20, 2017

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
O. Reg. 153(511) - PHCs F1 - F4 (Water)															
Benzene	8900556		< 0.20	< 0.20	NA	< 0.20	96%	50%	140%	103%	60%	130%	103%	50%	140%
Toluene	8900556		< 0.20	< 0.20	NA	< 0.20	103%	50%	140%	113%	60%	130%	111%	50%	140%
Ethylbenzene	8900556		< 0.10	< 0.10	NA	< 0.10	98%	50%	140%	104%	60%	130%	108%	50%	140%
Xylene Mixture	8900556		< 0.20	< 0.20	NA	< 0.20	102%	50%	140%	93%	60%	130%	108%	50%	140%
F1 (C6 to C10)	8900556		< 25	< 25	NA	< 25	89%	60%	140%	85%	60%	140%	83%	60%	140%
F2 (C10 to C16)		TW	< 100	< 100	NA	< 100	107%	60%	140%	75%	60%	140%	68%	60%	140%
F3 (C16 to C34)		TW	< 100	< 100	NA	< 100	112%	60%	140%	110%	60%	140%	69%	60%	140%
F4 (C34 to C50)		TW	< 100	< 100	NA	< 100	89%	60%	140%	101%	60%	140%	74%	60%	140%

Comments: Tap water analysis has been performed as QC sample testing for duplicate and matrix spike due to insufficient sample volume.
When the average of the sample and duplicate results is less than 5x the RDL, the Relative Percent Difference (RPD) will be indicated as Not Applicable (NA).

O. Reg. 153(511) - VOCs (Water)															
Dichlorodifluoromethane	8888478		< 0.20	< 0.20	NA	< 0.20	95%	50%	140%	71%	50%	140%	77%	50%	140%
Vinyl Chloride	8888478		< 0.17	< 0.17	NA	< 0.17	117%	50%	140%	80%	50%	140%	112%	50%	140%
Bromomethane	8888478		< 0.20	< 0.20	NA	< 0.20	77%	50%	140%	74%	50%	140%	95%	50%	140%
Trichlorofluoromethane	8888478		< 0.40	< 0.40	NA	< 0.40	88%	50%	140%	109%	50%	140%	75%	50%	140%
Acetone	8888478		< 1.0	< 1.0	NA	< 1.0	110%	50%	140%	98%	50%	140%	93%	50%	140%
1,1-Dichloroethylene	8888478		< 0.30	< 0.30	NA	< 0.30	79%	50%	140%	102%	60%	130%	90%	50%	140%
Methylene Chloride	8888478		< 0.30	< 0.30	NA	< 0.30	90%	50%	140%	92%	60%	130%	105%	50%	140%
trans- 1,2-Dichloroethylene	8888478		< 0.20	< 0.20	NA	< 0.20	100%	50%	140%	74%	60%	130%	73%	50%	140%
Methyl tert-butyl ether	8888478		< 0.20	< 0.20	NA	< 0.20	122%	50%	140%	87%	60%	130%	101%	50%	140%
1,1-Dichloroethane	8888478		< 0.30	< 0.30	NA	< 0.30	86%	50%	140%	80%	60%	130%	84%	50%	140%
Methyl Ethyl Ketone	8888478		< 1.0	< 1.0	NA	< 1.0	102%	50%	140%	72%	50%	140%	88%	50%	140%
cis- 1,2-Dichloroethylene	8888478		< 0.20	< 0.20	NA	< 0.20	79%	50%	140%	82%	60%	130%	88%	50%	140%
Chloroform	8888478		< 0.20	< 0.20	NA	< 0.20	94%	50%	140%	87%	60%	130%	86%	50%	140%
1,2-Dichloroethane	8888478		< 0.20	< 0.20	NA	< 0.20	95%	50%	140%	90%	60%	130%	111%	50%	140%
1,1,1-Trichloroethane	8888478		< 0.30	< 0.30	NA	< 0.30	72%	50%	140%	75%	60%	130%	105%	50%	140%
Carbon Tetrachloride	8888478		< 0.20	< 0.20	NA	< 0.20	70%	50%	140%	82%	60%	130%	72%	50%	140%
Benzene	8888478		< 0.20	< 0.20	NA	< 0.20	74%	50%	140%	75%	60%	130%	84%	50%	140%
1,2-Dichloropropane	8888478		< 0.20	< 0.20	NA	< 0.20	89%	50%	140%	75%	60%	130%	87%	50%	140%
Trichloroethylene	8888478		< 0.20	< 0.20	NA	< 0.20	72%	50%	140%	70%	60%	130%	76%	50%	140%
Bromodichloromethane	8888478		< 0.20	< 0.20	NA	< 0.20	98%	50%	140%	78%	60%	130%	88%	50%	140%
Methyl Isobutyl Ketone	8888478		< 1.0	< 1.0	NA	< 1.0	91%	50%	140%	119%	50%	140%	120%	50%	140%
1,1,2-Trichloroethane	8888478		< 0.20	< 0.20	NA	< 0.20	86%	50%	140%	113%	60%	130%	117%	50%	140%
Toluene	8888478		< 0.20	< 0.20	NA	< 0.20	97%	50%	140%	97%	60%	130%	93%	50%	140%
Dibromochloromethane	8888478		< 0.10	< 0.10	NA	< 0.10	90%	50%	140%	120%	60%	130%	110%	50%	140%
Ethylene Dibromide	8888478		< 0.10	< 0.10	NA	< 0.10	86%	50%	140%	108%	60%	130%	106%	50%	140%
Tetrachloroethylene	8888478		< 0.20	< 0.20	NA	< 0.20	96%	50%	140%	93%	60%	130%	83%	50%	140%
1,1,1,2-Tetrachloroethane	8888478		< 0.10	< 0.10	NA	< 0.10	90%	50%	140%	108%	60%	130%	103%	50%	140%

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Quality Assurance

CLIENT NAME: EXP Services Inc

AGAT WORK ORDER: 17T282567

PROJECT: MRK-00243747

ATTENTION TO: Travis Tan

SAMPLING SITE:

SAMPLED BY:AF, AJ

Trace Organics Analysis (Continued)

RPT Date: Nov 20, 2017			DUPLICATE				REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Method Blank	Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
Chlorobenzene	8888478		< 0.10	< 0.10	NA	< 0.10	117%	50%	140%	100%	60%	130%	96%	50%	140%
Ethylbenzene	8888478		< 0.10	< 0.10	NA	< 0.10	110%	50%	140%	94%	60%	130%	87%	50%	140%
m & p-Xylene	8888478		< 0.20	< 0.20	NA	< 0.20	115%	50%	140%	99%	60%	130%	89%	50%	140%
Bromoform	8888478		< 0.10	< 0.10	NA	< 0.10	94%	50%	140%	118%	60%	130%	114%	50%	140%
Styrene	8888478		< 0.10	< 0.10	NA	< 0.10	103%	50%	140%	96%	60%	130%	79%	50%	140%
1,1,2,2-Tetrachloroethane	8888478		< 0.10	< 0.10	NA	< 0.10	92%	50%	140%	83%	60%	130%	81%	50%	140%
o-Xylene	8888478		< 0.10	< 0.10	NA	< 0.10	120%	50%	140%	103%	60%	130%	97%	50%	140%
1,3-Dichlorobenzene	8888478		< 0.10	< 0.10	NA	< 0.10	90%	50%	140%	100%	60%	130%	87%	50%	140%
1,4-Dichlorobenzene	8888478		< 0.10	< 0.10	NA	< 0.10	98%	50%	140%	105%	60%	130%	95%	50%	140%
1,2-Dichlorobenzene	8888478		< 0.10	< 0.10	NA	< 0.10	102%	50%	140%	104%	60%	130%	97%	50%	140%
1,3-Dichloropropene	8888478		< 0.30	< 0.30	NA	< 0.30	100%	50%	140%	82%	60%	130%	98%	50%	140%
n-Hexane	8888478		< 0.20	< 0.20	NA	< 0.20	93%	50%	140%	103%	60%	130%	110%	50%	140%
O. Reg. 153(511) - PAHs (Water)															
Naphthalene		TW	< 0.20	< 0.20	NA	< 0.20	112%	50%	140%	110%	50%	140%	104%	50%	140%
Acenaphthylene		TW	< 0.20	< 0.20	NA	< 0.20	129%	50%	140%	95%	50%	140%	113%	50%	140%
Acenaphthene		TW	< 0.20	< 0.20	NA	< 0.20	105%	50%	140%	98%	50%	140%	99%	50%	140%
Fluorene		TW	< 0.20	< 0.20	NA	< 0.20	112%	50%	140%	111%	50%	140%	105%	50%	140%
Phenanthrene		TW	< 0.10	< 0.10	NA	< 0.10	103%	50%	140%	103%	50%	140%	96%	50%	140%
Anthracene		TW	< 0.10	< 0.10	NA	< 0.10	105%	50%	140%	109%	50%	140%	111%	50%	140%
Fluoranthene		TW	< 0.20	< 0.20	NA	< 0.20	127%	50%	140%	122%	50%	140%	118%	50%	140%
Pyrene		TW	< 0.20	< 0.20	NA	< 0.20	108%	50%	140%	112%	50%	140%	114%	50%	140%
Benz(a)anthracene		TW	< 0.20	< 0.20	NA	< 0.20	76%	50%	140%	65%	50%	140%	76%	50%	140%
Chrysene		TW	< 0.10	< 0.10	NA	< 0.10	73%	50%	140%	111%	50%	140%	84%	50%	140%
Benzo(b)fluoranthene		TW	< 0.10	< 0.10	NA	< 0.10	88%	50%	140%	65%	50%	140%	61%	50%	140%
Benzo(k)fluoranthene		TW	< 0.10	< 0.10	NA	< 0.10	119%	50%	140%	117%	50%	140%	105%	50%	140%
Benzo(a)pyrene		TW	< 0.01	< 0.01	NA	< 0.01	109%	50%	140%	94%	50%	140%	105%	50%	140%
Indeno(1,2,3-cd)pyrene		TW	< 0.20	< 0.20	NA	< 0.20	123%	50%	140%	83%	50%	140%	75%	50%	140%
Dibenz(a,h)anthracene		TW	< 0.20	< 0.20	NA	< 0.20	121%	50%	140%	66%	50%	140%	58%	50%	140%
Benzo(g,h,i)perylene		TW	< 0.20	< 0.20	NA	< 0.20	119%	50%	140%	110%	50%	140%	106%	50%	140%
2-and 1-methyl Naphthalene		TW	< 0.20	< 0.20	NA	< 0.20	122%	50%	140%	106%	50%	140%	104%	50%	140%

Certified By: N Popnikolof

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Quality Assurance

CLIENT NAME: EXP Services Inc

AGAT WORK ORDER: 17T282567

PROJECT: MRK-00243747

ATTENTION TO: Travis Tan

SAMPLING SITE:

SAMPLED BY:AF, AJ

Water Analysis

RPT Date: Nov 20, 2017			DUPLICATE				REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Method Blank	Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
O. Reg. 153(511) - Metals (Including Hydrides) (Water)															
Antimony	8901554		<1.0	<1.0	NA	< 1.0	97%	70%	130%	99%	80%	120%	90%	70%	130%
Arsenic	8901554		<1.0	<1.0	NA	< 1.0	98%	70%	130%	98%	80%	120%	125%	70%	130%
Barium	8901554		37.1	37.7	1.6%	< 2.0	101%	70%	130%	99%	80%	120%	96%	70%	130%
Beryllium	8901554		<0.5	<0.5	NA	< 0.5	98%	70%	130%	105%	80%	120%	121%	70%	130%
Boron	8901554		<10.0	<10.0	NA	< 10.0	102%	70%	130%	102%	80%	120%	99%	70%	130%
Cadmium	8901554		<0.2	<0.2	NA	< 0.2	100%	70%	130%	101%	80%	120%	116%	70%	130%
Chromium	8901554		3.1	3.0	NA	< 2.0	100%	70%	130%	101%	80%	120%	92%	70%	130%
Cobalt	8901554		<0.5	<0.5	NA	< 0.5	97%	70%	130%	99%	80%	120%	98%	70%	130%
Copper	8901554		10.7	10.6	0.9%	< 1.0	105%	70%	130%	104%	80%	120%	84%	70%	130%
Lead	8901554		0.9	0.9	NA	< 0.5	100%	70%	130%	102%	80%	120%	95%	70%	130%
Molybdenum	8901554		<0.5	<0.5	NA	< 0.5	101%	70%	130%	100%	80%	120%	98%	70%	130%
Nickel	8901554		<1.0	<1.0	NA	< 1.0	100%	70%	130%	100%	80%	120%	96%	70%	130%
Selenium	8901554		<1.0	<1.0	NA	< 1.0	98%	70%	130%	99%	80%	120%	102%	70%	130%
Silver	8901554		<0.2	<0.2	NA	< 0.2	96%	70%	130%	106%	80%	120%	98%	70%	130%
Thallium	8901554		<0.3	<0.3	NA	< 0.3	98%	70%	130%	100%	80%	120%	95%	70%	130%
Uranium	8901554		<0.5	<0.5	NA	< 0.5	99%	70%	130%	102%	80%	120%	97%	70%	130%
Vanadium	8901554		<0.4	<0.4	NA	< 0.4	101%	70%	130%	101%	80%	120%	99%	70%	130%
Zinc	8901554		229	229	0.1%	< 5.0	100%	70%	130%	103%	80%	120%	118%	70%	130%

Comments: NA signifies Not Applicable.
Duplicate Qualifier: As the measured result approaches the RL, the uncertainty associated with the value increases dramatically, thus duplicate acceptance limits apply only where the average of the two duplicates is greater than five times the RL.

Certified By: Divine Basily

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Method Summary

CLIENT NAME: EXP Services Inc

AGAT WORK ORDER: 17T282567

PROJECT: MRK-00243747

ATTENTION TO: Travis Tan

SAMPLING SITE:

SAMPLED BY:AF, AJ

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Trace Organics Analysis			
Naphthalene	ORG-91-5105	EPA SW-846 3510 & 8270	GC/MS
Acenaphthylene	ORG-91-5105	EPA SW-846 3510 & 8270	GC/MS
Acenaphthene	ORG-91-5105	EPA SW-846 3510 & 8270	GC/MS
Fluorene	ORG-91-5105	EPA SW-846 3510 & 8270	GC/MS
Phenanthrene	ORG-91-5105	EPA SW-846 3510 & 8270	GC/MS
Anthracene	ORG-91-5105	EPA SW-846 3510 & 8270	GC/MS
Fluoranthene	ORG-91-5105	EPA SW-846 3510 & 8270	GC/MS
Pyrene	ORG-91-5105	EPA SW-846 3510 & 8270	GC/MS
Benz(a)anthracene	ORG-91-5105	EPA SW-846 3510 & 8270	GC/MS
Chrysene	ORG-91-5105	EPA SW-846 3510 & 8270	GC/MS
Benzo(b)fluoranthene	ORG-91-5105	EPA SW-846 3510 & 8270	GC/MS
Benzo(k)fluoranthene	ORG-91-5105	EPA SW-846 3510 & 8270	GC/MS
Benzo(a)pyrene	ORG-91-5105	EPA SW-846 3510 & 8270	GC/MS
Indeno(1,2,3-cd)pyrene	ORG-91-5105	EPA SW-846 3510 & 8270	GC/MS
Dibenz(a,h)anthracene	ORG-91-5105	EPA SW-846 3510 & 8270	GC/MS
Benzo(g,h,i)perylene	ORG-91-5105	EPA SW-846 3510 & 8270	GC/MS
2-and 1-methyl Naphthalene	ORG-91-5105	EPA SW-846 3510 & 8270	GC/MS
Chrysene-d12	ORG-91-5105	EPA SW-846 3510 & 8270	GC/MS
F1 (C6 to C10)	VOL-91-5010	MOE PHC E3421	(P&T)GC/FID
F1 (C6 to C10) minus BTEX	VOL-91-5010	MOE PHC E3421	(P&T)GC/FID
F2 (C10 to C16)	VOL-91-5010	MOE PHC E3421	GC / FID
F3 (C16 to C34)	VOL-91-5010	MOE PHC E3421	GC / FID
F4 (C34 to C50)	VOL-91-5010	MOE PHC E3421	GC / FID
Gravimetric Heavy Hydrocarbons	VOL-91-5010	MOE PHC E3421	BALANCE
Terphenyl	VOL-91-5010		GC/FID
Benzene	VOL-91-5010	MOE PHC-E3421	(P&T)GC/FID
Toluene	VOL-91-5010	MOE PHC-E3421	(P&T)GC/FID
Ethylbenzene	VOL-91-5010	MOE PHC-E3421	(P&T)GC/FID
Xylene Mixture	VOL-91-5010	MOE PHC-E3421	(P&T)GC/FID
F1 (C6 to C10)	VOL-91-5010	MOE PHC-E3421	(P&T)GC/FID
F1 (C6 to C10) minus BTEX	VOL-91-5010	MOE PHC-E3421	(P&T)GC/FID
F2 (C10 to C16)	VOL-91-5010	MOE PHC-E3421	GC/FID
F3 (C16 to C34)	VOL-91-5010	MOE PHC-E3421	GC/FID
F4 (C34 to C50)	VOL-91-5010	MOE PHC-E3421	GC/FID
Gravimetric Heavy Hydrocarbons	VOL-91-5010	MOE PHC-E3421	BALANCE
Benzene	VOL-91-5010	MOE PHC E3421	(P&T)GC/MS
Toluene	VOL-91-5010	MOE PHC E3421	(P&T)GC/MS
Ethylbenzene	VOL-91-5010	MOE PHC E3421	(P&T)GC/MS
Xylene Mixture	VOL-91-5010	MOE PHC E3421	(P&T)GC/MS
F2 (C10 to C16)	VOL-91-5010	MOE PHC E3421	GC/FID
F2 (C10 to C16) minus Naphthalene	VOL-91-5010	MOE PHC E3421	GC/FID
F3 (C16 to C34)	VOL-91-5010	MOE PHC E3421	GC/FID
F3 (C16 to C34) minus PAHs	VOL-91-5010	MOE PHC E3421	GC/FID
F4 (C34 to C50)	VOL -91- 5010	MOE PHC- E3421	GC/FID
Dichlorodifluoromethane	VOL-91-5001	EPA SW-846 5030 & 8260	(P&T)GC/MS
Vinyl Chloride	VOL-91-5001	EPA SW-846 5030 & 8260	(P&T)GC/MS
Bromomethane	VOL-91-5001	EPA SW-846 5030 & 8260	(P&T)GC/MS
Trichlorofluoromethane	VOL-91-5001	EPA SW-846 5030 & 8260	(P&T)GC/MS
Acetone	VOL-91-5001	EPA SW-846 5030 & 8260	(P&T)GC/MS

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Method Summary

CLIENT NAME: EXP Services Inc

AGAT WORK ORDER: 17T282567

PROJECT: MRK-00243747

ATTENTION TO: Travis Tan

SAMPLING SITE:

SAMPLED BY:AF, AJ

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
1,1-Dichloroethylene	VOL-91-5001	EPA SW-846 5030 & 8260	(P&T)GC/MS
Methylene Chloride	VOL-91-5001	EPA SW-846 5030 & 8260	(P&T)GC/MS
trans- 1,2-Dichloroethylene	VOL-91-5001	EPA SW-846 5030 & 8260	(P&T)GC/MS
Methyl tert-butyl ether	VOL-91-5001	EPA SW-846 5030 & 8260	(P&T)GC/MS
1,1-Dichloroethane	VOL-91-5001	EPA SW-846 5030 & 8260	(P&T)GC/MS
Methyl Ethyl Ketone	VOL-91-5001	EPA SW-846 5030 & 8260	(P&T)GC/MS
cis- 1,2-Dichloroethylene	VOL-91-5001	EPA SW-846 5030 & 8260	(P&T)GC/MS
Chloroform	VOL-91-5001	EPA SW-846 5030 & 8260	(P&T)GC/MS
1,2-Dichloroethane	VOL-91-5001	EPA SW-846 5030 & 8260	(P&T)GC/MS
1,1,1-Trichloroethane	VOL-91-5001	EPA SW-846 5030 & 8260	(P&T)GC/MS
Carbon Tetrachloride	VOL-91-5001	EPA SW-846 5030 & 8260	(P&T)GC/MS
Benzene	VOL-91-5001	EPA SW-846 5030 & 8260	(P&T)GC/MS
1,2-Dichloropropane	VOL-91-5001	EPA SW-846 5030 & 8260	(P&T)GC/MS
Trichloroethylene	VOL-91-5001	EPA SW-846 5030 & 8260	(P&T)GC/MS
Bromodichloromethane	VOL-91-5001	EPA SW-846 5030 & 8260	(P&T)GC/MS
Methyl Isobutyl Ketone	VOL-91-5001	EPA SW-846 5030 & 8260	(P&T)GC/MS
1,1,2-Trichloroethane	VOL-91-5001	EPA SW-846 5030 & 8260	(P&T)GC/MS
Toluene	VOL-91-5001	EPA SW-846 5030 & 8260	(P&T)GC/MS
Dibromochloromethane	VOL-91-5001	EPA SW-846 5030 & 8260	(P&T)GC/MS
Ethylene Dibromide	VOL-91-5001	EPA SW-846 5030 & 8260	(P&T)GC/MS
Tetrachloroethylene	VOL-91-5001	EPA SW-846 5030 & 8260	(P&T)GC/MS
1,1,1,2-Tetrachloroethane	VOL-91-5001	EPA SW-846 5030 & 8260	(P&T)GC/MS
Chlorobenzene	VOL-91-5001	EPA SW-846 5030 & 8260	(P&T)GC/MS
Ethylbenzene	VOL-91-5001	EPA SW-846 5030 & 8260	(P&T)GC/MS
m & p-Xylene	VOL-91-5001	EPA SW-846 5030 & 8260	(P&T)GC/MS
Bromoform	VOL-91-5001	EPA SW-846 5030 & 8260	(P&T)GC/MS
Styrene	VOL-91-5001	EPA SW-846 5030 & 8260	(P&T)GC/MS
1,1,2,2-Tetrachloroethane	VOL-91-5001	EPA SW-846 5030 & 8260	(P&T)GC/MS
o-Xylene	VOL-91-5001	EPA SW-846 5030 & 8260	(P&T)GC/MS
1,3-Dichlorobenzene	VOL-91-5001	EPA SW-846 5030 & 8260	(P&T)GC/MS
1,4-Dichlorobenzene	VOL-91-5001	EPA SW-846 5030 & 8260	(P&T)GC/MS
1,2-Dichlorobenzene	VOL-91-5001	EPA SW-846 5030 & 8260	(P&T)GC/MS
1,3-Dichloropropene	VOL-91-5001	EPA SW-846 5030 & 8260	(P&T)GC/MS
Xylene Mixture	VOL-91-5001	EPA SW-846 5030 & 8260	(P&T)GC/MS
n-Hexane	VOL-91-5001	EPA SW-846 5030 & 8260	(P&T)GC/MS
Toluene-d8	VOL-91-5001	EPA SW-846 5030 & 8260	(P&T)GC/MS
4-Bromofluorobenzene	VOL-91-5001	EPA SW-846 5030 & 8260	(P&T)GC/MS

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Method Summary

CLIENT NAME: EXP Services Inc

AGAT WORK ORDER: 17T282567

PROJECT: MRK-00243747

ATTENTION TO: Travis Tan

SAMPLING SITE:

SAMPLED BY:AF, AJ

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Water Analysis			
Antimony	MET-93-6103	EPA SW-846 6020A & 200.8	ICP-MS
Arsenic	MET-93-6103	EPA SW-846 6020A & 200.8	ICP-MS
Barium	MET-93-6103	EPA SW-846 6020A & 200.8	ICP-MS
Beryllium	MET-93-6103	EPA SW-846 6020A & 200.8	ICP-MS
Boron	MET-93-6103	EPA SW-846 6020A & 200.8	ICP-MS
Cadmium	MET-93-6103	EPA SW-846 6020A & 200.8	ICP-MS
Chromium	MET-93-6103	EPA SW-846 6020A & 200.8	ICP-MS
Cobalt	MET-93-6103	EPA SW-846 6020A & 200.8	ICP-MS
Copper	MET-93-6103	EPA SW-846 6020A & 200.8	ICP-MS
Lead	MET-93-6103	EPA SW-846 6020A & 200.8	ICP-MS
Molybdenum	MET-93-6103	EPA SW-846 6020A & 200.8	ICP-MS
Nickel	MET-93-6103	EPA SW-846 6020A & 200.8	ICP-MS
Selenium	MET-93-6103	EPA SW-846 6020A & 200.8	ICP-MS
Silver	MET-93-6103	EPA SW-846 6020A & 200.8	ICP-MS
Thallium	MET-93-6103	EPA SW-846 6020A & 200.8	ICP-MS
Uranium	MET-93-6103	EPA SW-846 6020A & 200.8	ICP-MS
Vanadium	MET-93-6103	EPA SW-846 6020A & 200.8	ICP-MS
Zinc	MET-93-6103	EPA SW-846 6020A & 200.8	ICP-MS

2 large blank

AGAT Laboratories

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

Chain of Custody Record

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

Laboratory Use Only

Work Order #: 17T282567

Cooler Quantity:

Arrival Temperatures: 5.1 | 5.5 | 5.3
7.1 | 6.8 | 6.4

Custody Seal Intact: ☐Yes ☐No ☐N/A

Notes:

Report Information:

Company: EXP Services Inc.
Contact: Travis Tan
Address: 220 Commerce Valley Dr W Suite 110, Markham
Phone: 905 695 3217 Fax:
Reports to be sent to:
1. Email: travis.tan@exp.com
2. Email: ajay.jayalath@exp.com

Regulatory Requirements:

☐ No Regulatory Requirement
(Please check all applicable boxes)

☒ Regulation 153/04
Table 3 (Indicate One)
☒ Ind/Com
☒ Res/Park
☐ Agriculture

Soil Texture *(Check One)*
☐ Coarse
☒ Fine

☐ Sewer Use
☐ Sanitary
☐ Storm

Region _____ (Indicate One)

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

_____ (Indicate One)

Turnaround Time (TAT) Required:

Regular TAT ☒ 5 to 7 Business Days

Rush TAT (Rush Surcharges Apply)

☐ 3 Business Days ☐ 2 Business Days ☐ 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: 999-000 55100-PP
Site Location:
Sampled By: A Fernandes & A Jayalath
AGAT Quote #: PO:
Please note: If quotation number is not provided, client will be billed full price for analysis.

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

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

Invoice Information:

Bill To Same: Yes ☒ No ☐

Company:
Contact:
Address:
Email:

Sample Matrix Legend

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

Sample Identification	Date Sampled	Time Sampled	# of Containers	Sample Matrix	Comments/ Special Instructions	Field Filtered - Metals, Hg, CrVI (Please Circle) Y / N	Metals and Inorganics	Metal Scan	Hydride Forming Metals	Client Custom Metals	(Check Applicable) ORPs: ☐B-HWS ☐Cl⁻ ☐CN⁻ ☐Cr^{6+} ☐EC ☐FOC ☐NO_3/NO_2 ☐Total N ☐Hg ☐pH ☐SAR	Nutrients: ☐TP ☐NH_3 ☐TKN ☐NO_3 ☐NO_2 ☐NO_3/NO_2	Volatiles: ☐VOC ☒BTEX ☐THM	CCME Fractions 1 to 4	ABNs	PAHs	Chlorophenols	PCBs	Organochlorine Pesticides	TCLP Metals/Inorganics	Sewer Use	VOC	Metals
MW 240	Nov7/17	AM	4	GW									X	X								
MW249	"	"	4	GW									X	X								
TMW 303	"	"	4	"									X	X								
TRW4	"	"	4	"										X							X	
TRW43	"	↓	3	"																	X	
TRW12	"	PM	6	"		Y							X	X		X						X
TRW129	"	"	2	"		Y										X						X
TMW306	"	"	4	"									X	X								
TMW301	"	"	4	"									X	X								
MW3-16	↓	↓	6	"		Y							X	X		X						X
MW5-14	Nov8/17	AM	4	↓										X							X	

Samples Relinquished By (Print Name and Sign):	Date	Time	Samples Received By (Print Name and Sign):	Date	Time
A Fernandes	Nov9/17	12:30pm	Preeti Patel	9/11/17	12:30
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

Page 1 of 2

Nº: T 037649

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5835 Coopers Avenue
Mississauga, Ontario L4Z 1Y2
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webearth.agatlabs.com

Chain of Custody Record

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

Laboratory Use Only
Work Order #:
Cooler Quantity:
Arrival Temperatures:
Custody Seal Intact: ☐Yes ☐No ☐N/A
Notes:

Report Information:
Company: EXP Services Inc.
Contact: Travis Tan
Address: 220 Commerce Valley Dr W Suite 110, Markham
Phone: 905 695 3217 Fax:
Reports to be sent to:
1. Email: travis.tan@exp.com
2. Email: ajay.jayalath@exp.com

Regulatory Requirements: ☐ No Regulatory Requirement
(Please check all applicable boxes)
☒ Regulation 153/04 — Table 3 (Indicate One) — ☒ Ind/Com ☒ Res/Park ☐ Agriculture
Soil Texture (Check One): ☐ Coarse ☒ Fine
☐ Sewer Use — ☐ Sanitary ☐ Storm — Region (Indicate One)
☐ Regulation 558 ☐ CCME ☐ Prov. Water Quality Objectives (PWQO) ☐ Other (Indicate One)

Turnaround Time (TAT) Required:
Regular TAT ☒ 5 to 7 Business Days
Rush TAT (Rush Surcharges Apply)
☐ 3 Business Days ☐ 2 Business Days ☐ Next Business Day
OR Date Required (Rush Surcharges May Apply):
Please provide prior notification for rush TAT
**TAT is exclusive of weekends and statutory holidays*
For 'Same Day' analysis, please contact your AGAT CPM

Project Information:
Project: 999-000 55100-PP
Site Location:
Sampled By: AF & AJ
AGAT Quote #: PO:
Please note: If quotation number is not provided, client will be billed full price for analysis.

Is this submission for a **Record of Site Condition?** ☒ Yes ☐ No
Report Guideline on *Certificate of Analysis* ☒ Yes ☐ No

Invoice Information: Bill To Same: Yes ☒ No ☐
Company:
Contact:
Address:
Email:

Sample Matrix Legend

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

Sample Identification	Date Sampled	Time Sampled	# of Containers	Sample Matrix	Comments/ Special Instructions	Field Filtered - Metals, Hg, CrVI (Y/N)	O. Reg 153: Metals and Inorganics (☐ All Metals ☐ 153 Metals (excl. Hydrides) ☐ Hydride Metals)	ORPs: ☐ B-HWS ☐ Cl ☐ CN ☐ Cr^{6+} ☐ EC ☐ FOC ☐ Hg ☐ pH ☐ SAR	Full Metals Scan	Regulation/Custom Metals	Nutrients: ☐ TP ☐ NH_3 ☐ TKN ☐ NO_3 ☐ NO_2 ☐ NO_3+NO_2	Volatiles: ☐ VOC ☒ BTEX ☐ THM	CCME Fractions 1 to 4	ABNs	PAHs	PCBs: ☐ Total ☐ Aroclors	Organochlorine Pesticides	TCLP: ☐ M&I ☐ VOCs ☐ ABNs ☐ B(a)P ☐ PCBs	Sewer Use	VOC	Metals				
MW3-14	Nov8/17	AM	4	GW									X							X					
MW2-14	↓	↓	4	↓									X							X					
MW13-15		↓	6			Y						X	X		X						X				
MW13-13		PM	4									X	X												
MW25S		↓	4										X							X					
MW2S59			4										X							X					
MW225	↓	↓	4	↓									X							X					

Samples Relinquished By (Print Name and Sign):	Date	Time	Samples Received By (Print Name and Sign):	Date	Time
A Fernandes	Nov 9/17	12:30pm	Praveli Patel	9/11/17	12:30
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

Page 2 of 2
Nº: T 045669

AGAT Laboratories

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http://www.agatlabs.com

CLIENT NAME: **EXP Services Inc**
220 Commerce Valley Drive West,Suite 500
Markham, ON, ON L3T0A8
(905) 695-3217

ATTENTION TO: **Travis Tan**

PROJECT: **MRK-00243747**

AGAT WORK ORDER: **17T283734**

TRACE ORGANICS REVIEWED BY: **Neli Popnikolova, Senior Chemist**

WATER ANALYSIS REVIEWED BY: **Amanjot Bhela, Inorganic Coordinator**

DATE REPORTED: **Nov 21, 2017**

PAGES (INCLUDING COVER): **17**

VERSION*: **2**

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

NOTES

VERSION 2:Project number revision from 999-00055100-PP to MRK-00243747 as per client request, issued December 07, 2017

All samples will be disposed of within 30 days following analysis. Please contact the lab if you require additional sample storage time.

AGAT Laboratories

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Certificate of Analysis

AGAT WORK ORDER: 17T283734

PROJECT: MRK-00243747

CLIENT NAME: EXP Services Inc

ATTENTION TO: Travis Tan

SAMPLING SITE:

SAMPLED BY:AF, AJ

O. Reg. 153(511) - PAHs (Water)

DATE RECEIVED: 2017-11-14

DATE REPORTED: 2017-11-21

		SAMPLE DESCRIPTION:		MW 5-06	MW 23-07	MW 5-05
		SAMPLE TYPE:		Water	Water	Water
		DATE SAMPLED:		2017-11-13	2017-11-13	2017-11-13
Parameter	Unit	G / S	RDL	8904899	8904938	8904972
Naphthalene	µg/L	6400	0.20	<0.20	<0.20	<0.20
Acenaphthylene	µg/L	1.8	0.20	<0.20	<0.20	<0.20
Acenaphthene	µg/L	1700	0.20	<0.20	<0.20	<0.20
Fluorene	µg/L	400	0.20	<0.20	<0.20	<0.20
Phenanthrene	µg/L	580	0.10	<0.10	<0.10	<0.10
Anthracene	µg/L	2.4	0.10	<0.10	<0.10	<0.10
Fluoranthene	µg/L	130	0.20	<0.20	<0.20	<0.20
Pyrene	µg/L	68	0.20	<0.20	<0.20	<0.20
Benz(a)anthracene	µg/L	4.7	0.20	<0.20	<0.20	<0.20
Chrysene	µg/L	1	0.10	<0.10	<0.10	<0.10
Benzo(b)fluoranthene	µg/L	0.75	0.10	<0.10	<0.10	<0.10
Benzo(k)fluoranthene	µg/L	0.4	0.10	<0.10	<0.10	<0.10
Benzo(a)pyrene	µg/L	0.81	0.01	<0.01	<0.01	<0.01
Indeno(1,2,3-cd)pyrene	µg/L	0.2	0.20	<0.20	<0.20	<0.20
Dibenz(a,h)anthracene	µg/L	0.52	0.20	<0.20	<0.20	<0.20
Benzo(g,h,i)perylene	µg/L	0.2	0.20	<0.20	<0.20	<0.20
2-and 1-methyl Naphthalene	µg/L	1800	0.20	<0.20	<0.20	<0.20
Surrogate	**Unit**	**Acceptable Limits**				
Chrysene-d12	%	50-140		70	72	62

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 3: Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition - Non-Potable Ground Water - All Types of Property Uses - Medium and Fine Textured Soils
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

8904899-8904972 Note: The result for Benzo(b)Flouranthene is the total of the Benzo(b)&(j)Flouranthene isomers because the isomers co-elute on the GC column.

Certified By: N Popnikolof

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Certificate of Analysis

AGAT WORK ORDER: 17T283734

PROJECT: MRK-00243747

CLIENT NAME: EXP Services Inc

ATTENTION TO: Travis Tan

SAMPLING SITE:

SAMPLED BY:AF, AJ

O. Reg. 153(511) - PHCs F1 - F4 (-BTEX) (Water)

DATE RECEIVED: 2017-11-14

DATE REPORTED: 2017-11-21

		SAMPLE DESCRIPTION:		MW 219	MW 215	MW 211	MW 232	MW 233
		SAMPLE TYPE:		Water	Water	Water	Water	Water
		DATE SAMPLED:		2017-11-13	2017-11-10	2017-11-10	2017-11-13	2017-11-13
Parameter	**Unit**	**G / S**	**RDL**	**8904869**	**8904876**	**8904880**	**8904885**	**8904891**
F1 (C6 to C10)	µg/L	750	25	<25	<25	<25	<25	<25
F1 (C6 to C10) minus BTEX	µg/L	750	25	<25	<25	<25	<25	<25
F2 (C10 to C16)	µg/L	150	100	<100	<100	<100	<100	<100
F3 (C16 to C34)	µg/L	500	100	<100	<100	<100	<100	<100
F4 (C34 to C50)	µg/L	500	100	<100	<100	<100	<100	<100
Gravimetric Heavy Hydrocarbons	µg/L	500	500	NA	NA	NA	NA	NA
Surrogate	**Unit**	**Acceptable Limits**						
Terphenyl	%	60-140		85	96	86	64	77

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 3: Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition - Non-Potable Ground Water - All Types of Property Uses - Medium and Fine Textured Soils
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

8904869-8904891 The C6-C10 fraction is calculated using Toluene response factor.
The C10 - C16, C16 - C34, and C34 - C50 fractions are calculated using the average response factor for n-C10, n-C16, and nC34.
Gravimetric Heavy Hydrocarbons are not included in the Total C16 - C50 and are only determined if the chromatogram of the C34 - C50 Hydrocarbons indicated that hydrocarbons >C50 are present.
The chromatogram has returned to baseline by the retention time of nC50.
Total C6-C50 results are corrected for BTEX contributions.
This method complies with the Reference Method for the CWS PHC and is validated for use in the laboratory.
nC6 and nC10 response factors are within 30% of Toluene response factor.
nC10, nC16 and nC34 response factors are within 10% of their average.
C50 response factor is within 70% of nC10 + nC16 nC34 average.
Linearity is within 15%.
Extraction and holding times were met for this sample.
Fractions 1-4 are quantified with the contribution of PAHs. Under Ontario Regulation 153, results are considered valid without determining the PAH contribution if not requested by the client.

Certified By: N Popnikolof

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Certificate of Analysis

AGAT WORK ORDER: 17T283734

PROJECT: MRK-00243747

CLIENT NAME: EXP Services Inc

ATTENTION TO: Travis Tan

SAMPLING SITE:

SAMPLED BY:AF, AJ

O. Reg. 153(511) - PHCs F1 - F4 (Water)

DATE RECEIVED: 2017-11-14 **DATE REPORTED: 2017-11-21**

		SAMPLE DESCRIPTION:		MW 1-16
		SAMPLE TYPE:		Water
		DATE SAMPLED:		2017-11-10
Parameter	**Unit**	**G / S**	**RDL**	**8904895**
Benzene	µg/L	430	0.20	<0.20
Toluene	µg/L	18000	0.20	<0.20
Ethylbenzene	µg/L	2300	0.10	<0.10
Xylene Mixture	µg/L	4200	0.20	<0.20
F1 (C6 to C10)	µg/L	750	25	34
F1 (C6 to C10) minus BTEX	µg/L	750	25	34
F2 (C10 to C16)	µg/L	150	100	**370**
F3 (C16 to C34)	µg/L	500	100	180
F4 (C34 to C50)	µg/L	500	100	<100
Gravimetric Heavy Hydrocarbons	µg/L	500	500	NA
Surrogate	**Unit**	**Acceptable Limits**		
Terphenyl	%	60-140		90

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 3: Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition - Non-Potable Ground Water - All Types of Property Uses - Medium and Fine Textured Soils
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

8904895 The C6-C10 fraction is calculated using Toluene response factor.
The C10 - C16, C16 - C34, and C34 - C50 fractions are calculated using the average response factor for n-C10, n-C16, and nC34.
Gravimetric Heavy Hydrocarbons are not included in the Total C16 - C50 and are only determined if the chromatogram of the C34 - C50 Hydrocarbons indicated that hydrocarbons >C50 are present.
The chromatogram has returned to baseline by the retention time of nC50.
Total C6-C50 results are corrected for BTEX contributions.
This method complies with the Reference Method for the CWS PHC and is validated for use in the laboratory.
nC6 and nC10 response factors are within 30% of Toluene response factor.
nC10, nC16 and nC34 response factors are within 10% of their average.
C50 response factor is within 70% of nC10 + nC16 nC34 average.
Linearity is within 15%.
Extraction and holding times were met for this sample.
Fractions 1-4 are quantified with the contribution of PAHs. Under Ontario Regulation 153/04, results are considered valid without determining the PAH contribution if not requested by the client.
NA = Not Applicable

Certified By: N Popnikolof

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Certificate of Analysis

AGAT WORK ORDER: 17T283734

PROJECT: MRK-00243747

CLIENT NAME: EXP Services Inc

ATTENTION TO: Travis Tan

SAMPLING SITE:

SAMPLED BY:AF, AJ

O. Reg. 153(511) - PHCs F1 - F4 (with PAHs) (Water)

DATE RECEIVED: 2017-11-14

DATE REPORTED: 2017-11-21

		SAMPLE DESCRIPTION:		MW 23-07	MW 5-05
		SAMPLE TYPE:		Water	Water
		DATE SAMPLED:		2017-11-13	2017-11-13
Parameter	Unit	G / S	RDL	8904938	8904972
Benzene	µg/L	430	0.20	<0.20	<0.20
Toluene	µg/L	18000	0.20	<0.20	<0.20
Ethylbenzene	µg/L	2300	0.10	<0.10	<0.10
Xylene Mixture	µg/L	4200	0.20	<0.20	<0.20
F1 (C6 to C10)	µg/L	750	25	<25	<25
F1 (C6 to C10) minus BTEX	µg/L	750	25	<25	<25
F2 (C10 to C16)	µg/L	150	100	<100	<100
F2 (C10 to C16) minus Naphthalene	µg/L		100	<100	<100
F3 (C16 to C34)	µg/L	500	100	<100	<100
F3 (C16 to C34) minus PAHs	µg/L		100	<100	<100
F4 (C34 to C50)	µg/L	500	100	<100	<100
Gravimetric Heavy Hydrocarbons	µg/L	500	500	NA	NA
Surrogate	**Unit**	**Acceptable Limits**			
Terphenyl	%	60-140		106	96

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 3: Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition - Non-Potable Ground Water - All Types of Property Uses - Medium and Fine Textured Soils
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

8904938-8904972 The C6-C10 fraction is calculated using Toluene response factor.
The C10 - C16, C16 - C34, and C34 - C50 fractions are calculated using the average response factor for n-C10, n-C16, and nC34.
Gravimetric Heavy Hydrocarbons are not included in the Total C16 - C50 and are only determined if the chromatogram of the C34 - C50 Hydrocarbons indicated that hydrocarbons >C50 are present.
The chromatogram has returned to baseline by the retention time of nC50.
Total C6-C50 results are corrected for BTEX and PAH contributions.
This method complies with the Reference Method for the CWS PHC and is validated for use in the laboratory.
nC6 and nC10 response factors are within 30% of Toluene response factor.
nC10, nC16 and nC34 response factors are within 10% of their average.
C50 response factor is within 70% of nC10 + nC16 nC34 average.
Linearity is within 15%.
Extraction and holding times were met for this sample.

Certified By: N Popnikolof

AGAT Laboratories

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Certificate of Analysis

AGAT WORK ORDER: 17T283734

PROJECT: MRK-00243747

CLIENT NAME: EXP Services Inc

ATTENTION TO: Travis Tan

SAMPLING SITE:

SAMPLED BY:AF, AJ

O. Reg. 153(511) - PHCs F1 - F4 (with PAHs) (Water)

DATE RECEIVED: 2017-11-14 **DATE REPORTED: 2017-11-21**

		SAMPLE DESCRIPTION:		MW 5-06
		SAMPLE TYPE:		Water
		DATE SAMPLED:		2017-11-13
Parameter	**Unit**	**G / S**	**RDL**	**8904899**
F1 (C6 to C10)	µg/L	750	25	<25
F1 (C6 to C10) minus BTEX	µg/L	750	25	<25
F2 (C10 to C16)	µg/L	150	100	<100
F2 (C10 to C16) minus Naphthalene	µg/L		100	<100
F3 (C16 to C34)	µg/L	500	100	<100
F3 (C16 to C34) minus PAHs	µg/L		100	<100
F4 (C34 to C50)	µg/L	500	100	<100
Gravimetric Heavy Hydrocarbons	µg/L	500	500	NA
Surrogate	**Unit**	**Acceptable Limits**		
Terphenyl	%	60-140		88

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 3: Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition - Non-Potable Ground Water - All Types of Property Uses - Medium and Fine Textured Soils
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

8904899 The C6-C10 fraction is calculated using Toluene response factor.
The C10 - C16, C16 - C34, and C34 - C50 fractions are calculated using the average response factor for n-C10, n-C16, and nC34.
Gravimetric Heavy Hydrocarbons are not included in the Total C16 - C50 and are only determined if the chromatogram of the C34 - C50 Hydrocarbons indicated that hydrocarbons >C50 are present.
The chromatogram has returned to baseline by the retention time of nC50.
Total C6-C50 results are corrected for BTEX and PAH contributions.
This method complies with the Reference Method for the CWS PHC and is validated for use in the laboratory.
nC6 and nC10 response factors are within 30% of Toluene response factor.
nC10, nC16 and nC34 response factors are within 10% of their average.
C50 response factor is within 70% of nC10 + nC16 nC34 average.
Linearity is within 15%.
Extraction and holding times were met for this sample.

Certified By: N Popnikolof

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Certificate of Analysis

AGAT WORK ORDER: 17T283734

PROJECT: MRK-00243747

CLIENT NAME: EXP Services Inc

ATTENTION TO: Travis Tan

SAMPLING SITE:

SAMPLED BY:AF, AJ

O. Reg. 153(511) - VOCs (Water)

DATE RECEIVED: 2017-11-14

DATE REPORTED: 2017-11-21

		SAMPLE DESCRIPTION:		MW 219	MW 215	MW 211	MW 232	MW 233	MW 5-06	Trip Blank
		SAMPLE TYPE:		Water	Water	Water	Water	Water	Water	Water
		DATE SAMPLED:		2017-11-13	2017-11-10	2017-11-10	2017-11-13	2017-11-13	2017-11-13	2017-11-13
Parameter	Unit	G / S	RDL	8904869	8904876	8904880	8904885	8904891	8904899	8904978
Dichlorodifluoromethane	µg/L	4400	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Vinyl Chloride	µg/L	1.7	0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17
Bromomethane	µg/L	56	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Trichlorofluoromethane	µg/L	2500	0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40
Acetone	µg/L	130000	1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,1-Dichloroethylene	µg/L	17	0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30
Methylene Chloride	µg/L	5500	0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30
trans- 1,2-Dichloroethylene	µg/L	17	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Methyl tert-butyl ether	µg/L	1400	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
1,1-Dichloroethane	µg/L	3100	0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30
Methyl Ethyl Ketone	µg/L	1500000	1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
cis- 1,2-Dichloroethylene	µg/L	17	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Chloroform	µg/L	22	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
1,2-Dichloroethane	µg/L	12	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
1,1,1-Trichloroethane	µg/L	6700	0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30
Carbon Tetrachloride	µg/L	8.4	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Benzene	µg/L	430	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
1,2-Dichloropropane	µg/L	140	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Trichloroethylene	µg/L	17	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Bromodichloromethane	µg/L	85000	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Methyl Isobutyl Ketone	µg/L	580000	1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,1,2-Trichloroethane	µg/L	30	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Toluene	µg/L	18000	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Dibromochloromethane	µg/L	82000	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Ethylene Dibromide	µg/L	0.83	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Tetrachloroethylene	µg/L	17	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
1,1,1,2-Tetrachloroethane	µg/L	28	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Chlorobenzene	µg/L	630	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Ethylbenzene	µg/L	2300	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
m & p-Xylene	µg/L		0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20

Certified By: N Popowkolof

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Certificate of Analysis

AGAT WORK ORDER: 17T283734

PROJECT: MRK-00243747

CLIENT NAME: EXP Services Inc

ATTENTION TO: Travis Tan

SAMPLING SITE:

SAMPLED BY:AF, AJ

O. Reg. 153(511) - VOCs (Water)

DATE RECEIVED: 2017-11-14

DATE REPORTED: 2017-11-21

		SAMPLE DESCRIPTION:		MW 219	MW 215	MW 211	MW 232	MW 233	MW 5-06	Trip Blank
		SAMPLE TYPE:		Water	Water	Water	Water	Water	Water	Water
		DATE SAMPLED:		2017-11-13	2017-11-10	2017-11-10	2017-11-13	2017-11-13	2017-11-13	2017-11-13
Parameter	**Unit**	**G / S**	**RDL**	**8904869**	**8904876**	**8904880**	**8904885**	**8904891**	**8904899**	**8904978**
Bromoform	µg/L	770	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Styrene	µg/L	9100	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
1,1,2,2-Tetrachloroethane	µg/L	15	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
o-Xylene	µg/L		0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
1,3-Dichlorobenzene	µg/L	9600	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
1,4-Dichlorobenzene	µg/L	67	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
1,2-Dichlorobenzene	µg/L	9600	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
1,3-Dichloropropene	µg/L	45	0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30
Xylene Mixture	µg/L	4200	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
n-Hexane	µg/L	520	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Surrogate	**Unit**	**Acceptable Limits**								
Toluene-d8	% Recovery	50-140		111	105	72	78	92	84	102
4-Bromofluorobenzene	% Recovery	50-140		109	94	91	97	96	120	101

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 3: Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition - Non-Potable Ground Water - All Types of Property Uses - Medium and Fine Textured Soils
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

Certified By: N Popnikolof

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Certificate of Analysis

AGAT WORK ORDER: 17T283734

PROJECT: MRK-00243747

CLIENT NAME: EXP Services Inc

ATTENTION TO: Travis Tan

SAMPLING SITE:

SAMPLED BY:AF, AJ

O. Reg. 153(511) - Metals (Including Hydrides) (Water)

DATE RECEIVED: 2017-11-14

DATE REPORTED: 2017-11-21

		SAMPLE DESCRIPTION:		MW 5-06	MW 23-07	MW 5-05
		SAMPLE TYPE:		Water	Water	Water
		DATE SAMPLED:		2017-11-13	2017-11-13	2017-11-13
Parameter	Unit	G / S	RDL	8904899	8904938	8904972
Antimony	µg/L	20000	1.0	<1.0	<1.0	<1.0
Arsenic	µg/L	1900	1.0	1.6	1.2	2.0
Barium	µg/L	29000	2.0	50.3	27.6	36.7
Beryllium	µg/L	67	0.5	<0.5	<0.5	<0.5
Boron	µg/L	45000	10.0	186	248	441
Cadmium	µg/L	2.7	0.2	<0.2	<0.2	<0.2
Chromium	µg/L	810	2.0	2.2	<2.0	<2.0
Cobalt	µg/L	66	0.5	2.9	0.7	1.4
Copper	µg/L	87	1.0	2.2	1.3	<1.0
Lead	µg/L	25	0.5	<0.5	<0.5	<0.5
Molybdenum	µg/L	9200	0.5	0.8	1.0	<0.5
Nickel	µg/L	490	1.0	<1.0	<1.0	2.5
Selenium	µg/L	63	1.0	1.7	<1.0	2.0
Silver	µg/L	1.5	0.2	<0.2	<0.2	<0.2
Thallium	µg/L	510	0.3	<0.3	<0.3	<0.3
Uranium	µg/L	420	0.5	2.4	2.7	1.3
Vanadium	µg/L	250	0.4	<0.4	<0.4	<0.4
Zinc	µg/L	1100	5.0	127	6.0	6.4

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 3: Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition - Non-Potable Ground Water - All Types of Property Uses - Medium and Fine Textured Soils
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

Certified By: Amanjot Bhela

AGAT Laboratories

Guideline Violation

AGAT WORK ORDER: 17T283734

PROJECT: MRK-00243747

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CLIENT NAME: EXP Services Inc

ATTENTION TO: Travis Tan

SAMPLEID	SAMPLE TITLE	GUIDELINE	ANALYSIS PACKAGE	PARAMETER	UNIT	GUIDEVALUE	RESULT
8904895	MW 1-16	ON T3 NPGW MFT	O. Reg. 153(511) - PHCs F1 - F4 (Water)	F2 (C10 to C16)	µg/L	150	370

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Quality Assurance

CLIENT NAME: EXP Services Inc
AGAT WORK ORDER: 17T283734
PROJECT: MRK-00243747
ATTENTION TO: Travis Tan
SAMPLING SITE:
SAMPLED BY:AF, AJ

Trace Organics Analysis

RPT Date: Nov 21, 2017			DUPLICATE				REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Method Blank	Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
O. Reg. 153(511) - VOCs (Water)															
Dichlorodifluoromethane	8907386		< 0.20	< 0.20	NA	< 0.20	81%	50%	140%	77%	50%	140%	96%	50%	140%
Vinyl Chloride	8907386		< 0.17	< 0.17	NA	< 0.17	114%	50%	140%	128%	50%	140%	125%	50%	140%
Bromomethane	8907386		< 0.20	< 0.20	NA	< 0.20	73%	50%	140%	102%	50%	140%	106%	50%	140%
Trichlorofluoromethane	8907386		< 0.40	< 0.40	NA	< 0.40	73%	50%	140%	101%	50%	140%	94%	50%	140%
Acetone	8907386		< 1.0	< 1.0	NA	< 1.0	119%	50%	140%	83%	50%	140%	114%	50%	140%
1,1-Dichloroethylene	8907386		< 0.30	< 0.30	NA	< 0.30	75%	50%	140%	71%	60%	130%	77%	50%	140%
Methylene Chloride	8907386		< 0.30	< 0.30	NA	< 0.30	91%	50%	140%	90%	60%	130%	104%	50%	140%
trans- 1,2-Dichloroethylene	8907386		< 0.20	< 0.20	NA	< 0.20	92%	50%	140%	71%	60%	130%	93%	50%	140%
Methyl tert-butyl ether	8907386		< 0.20	< 0.20	NA	< 0.20	116%	50%	140%	73%	60%	130%	110%	50%	140%
1,1-Dichloroethane	8907386		< 0.30	< 0.30	NA	< 0.30	81%	50%	140%	74%	60%	130%	71%	50%	140%
Methyl Ethyl Ketone	8907386		< 1.0	< 1.0	NA	< 1.0	110%	50%	140%	83%	50%	140%	91%	50%	140%
cis- 1,2-Dichloroethylene	8907386		< 0.20	< 0.20	NA	< 0.20	74%	50%	140%	75%	60%	130%	78%	50%	140%
Chloroform	8907386		< 0.20	< 0.20	NA	< 0.20	88%	50%	140%	78%	60%	130%	76%	50%	140%
1,2-Dichloroethane	8907386		< 0.20	< 0.20	NA	< 0.20	83%	50%	140%	78%	60%	130%	77%	50%	140%
1,1,1-Trichloroethane	8907386		< 0.30	< 0.30	NA	< 0.30	71%	50%	140%	73%	60%	130%	70%	50%	140%
Carbon Tetrachloride	8907386		< 0.20	< 0.20	NA	< 0.20	72%	50%	140%	71%	60%	130%	72%	50%	140%
Benzene	8907386		< 0.20	< 0.20	NA	< 0.20	71%	50%	140%	74%	60%	130%	72%	50%	140%
1,2-Dichloropropane	8907386		< 0.20	< 0.20	NA	< 0.20	83%	50%	140%	72%	60%	130%	77%	50%	140%
Trichloroethylene	8907386		< 0.20	< 0.20	NA	< 0.20	73%	50%	140%	74%	60%	130%	73%	50%	140%
Bromodichloromethane	8907386		< 0.20	< 0.20	NA	< 0.20	93%	50%	140%	74%	60%	130%	75%	50%	140%
Methyl Isobutyl Ketone	8907386		< 1.0	< 1.0	NA	< 1.0	114%	50%	140%	104%	50%	140%	115%	50%	140%
1,1,2-Trichloroethane	8907386		< 0.20	< 0.20	NA	< 0.20	92%	50%	140%	107%	60%	130%	85%	50%	140%
Toluene	8907386		< 0.20	< 0.20	NA	< 0.20	101%	50%	140%	99%	60%	130%	102%	50%	140%
Dibromochloromethane	8907386		< 0.10	< 0.10	NA	< 0.10	114%	50%	140%	106%	60%	130%	110%	50%	140%
Ethylene Dibromide	8907386		< 0.10	< 0.10	NA	< 0.10	87%	50%	140%	108%	60%	130%	121%	50%	140%
Tetrachloroethylene	8907386		< 0.20	< 0.20	NA	< 0.20	98%	50%	140%	95%	60%	130%	101%	50%	140%
1,1,1,2-Tetrachloroethane	8907386		< 0.10	< 0.10	NA	< 0.10	118%	50%	140%	107%	60%	130%	111%	50%	140%
Chlorobenzene	8907386		< 0.10	< 0.10	NA	< 0.10	118%	50%	140%	103%	60%	130%	111%	50%	140%
Ethylbenzene	8907386		< 0.10	< 0.10	NA	< 0.10	113%	50%	140%	98%	60%	130%	103%	50%	140%
m & p-Xylene	8907386		< 0.20	< 0.20	NA	< 0.20	116%	50%	140%	102%	60%	130%	104%	50%	140%
Bromoform	8907386		< 0.10	< 0.10	NA	< 0.10	94%	50%	140%	110%	60%	130%	120%	50%	140%
Styrene	8907386		< 0.10	< 0.10	NA	< 0.10	98%	50%	140%	89%	60%	130%	113%	50%	140%
1,1,2,2-Tetrachloroethane	8907386		< 0.10	< 0.10	NA	< 0.10	95%	50%	140%	117%	60%	130%	76%	50%	140%
o-Xylene	8907386		< 0.10	< 0.10	NA	< 0.10	107%	50%	140%	109%	60%	130%	110%	50%	140%
1,3-Dichlorobenzene	8907386		< 0.10	< 0.10	NA	< 0.10	97%	50%	140%	99%	60%	130%	112%	50%	140%
1,4-Dichlorobenzene	8907386		< 0.10	< 0.10	NA	< 0.10	94%	50%	140%	108%	60%	130%	121%	50%	140%
1,2-Dichlorobenzene	8907386		< 0.10	< 0.10	NA	< 0.10	94%	50%	140%	103%	60%	130%	113%	50%	140%
1,3-Dichloropropene	8907386		< 0.30	< 0.30	NA	< 0.30	87%	50%	140%	92%	60%	130%	88%	50%	140%
n-Hexane	8907386		< 0.20	< 0.20	NA	< 0.20	83%	50%	140%	99%	60%	130%	113%	50%	140%

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Quality Assurance

CLIENT NAME: EXP Services Inc

AGAT WORK ORDER: 17T283734

PROJECT: MRK-00243747

ATTENTION TO: Travis Tan

SAMPLING SITE:

SAMPLED BY:AF, AJ

Trace Organics Analysis (Continued)

RPT Date: Nov 21, 2017			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
O. Reg. 153(511) - PHCs F1 - F4 (-BTEX) (Water)															
F1 (C6 to C10)	8904972	8904972	< 25	< 25	NA	< 25	89%	60%	140%	86%	60%	140%	82%	60%	140%
F2 (C10 to C16)		TW	< 100	< 100	NA	< 100	105%	60%	140%	63%	60%	140%	66%	60%	140%
F3 (C16 to C34)		TW	< 100	< 100	NA	< 100	114%	60%	140%	72%	60%	140%	86%	60%	140%
F4 (C34 to C50)		TW	< 100	< 100	NA	< 100	103%	60%	140%	81%	60%	140%	91%	60%	140%
O. Reg. 153(511) - PAHs (Water)															
Naphthalene		TW	< 0.20	< 0.20	NA	< 0.20	83%	50%	140%	87%	50%	140%	87%	50%	140%
Acenaphthylene		TW	< 0.20	< 0.20	NA	< 0.20	98%	50%	140%	87%	50%	140%	88%	50%	140%
Acenaphthene		TW	< 0.20	< 0.20	NA	< 0.20	97%	50%	140%	85%	50%	140%	85%	50%	140%
Fluorene		TW	< 0.20	< 0.20	NA	< 0.20	104%	50%	140%	91%	50%	140%	88%	50%	140%
Phenanthrene		TW	< 0.10	< 0.10	NA	< 0.10	102%	50%	140%	93%	50%	140%	89%	50%	140%
Anthracene		TW	< 0.10	< 0.10	NA	< 0.10	105%	50%	140%	102%	50%	140%	93%	50%	140%
Fluoranthene		TW	< 0.20	< 0.20	NA	< 0.20	88%	50%	140%	89%	50%	140%	77%	50%	140%
Pyrene		TW	< 0.20	< 0.20	NA	< 0.20	87%	50%	140%	93%	50%	140%	79%	50%	140%
Benz(a)anthracene		TW	< 0.20	< 0.20	NA	< 0.20	74%	50%	140%	67%	50%	140%	72%	50%	140%
Chrysene		TW	< 0.10	< 0.10	NA	< 0.10	81%	50%	140%	78%	50%	140%	66%	50%	140%
Benzo(b)fluoranthene		TW	< 0.10	< 0.10	NA	< 0.10	132%	50%	140%	109%	50%	140%	106%	50%	140%
Benzo(k)fluoranthene		TW	< 0.10	< 0.10	NA	< 0.10	123%	50%	140%	122%	50%	140%	123%	50%	140%
Benzo(a)pyrene		TW	< 0.01	< 0.01	NA	< 0.01	115%	50%	140%	112%	50%	140%	108%	50%	140%
Indeno(1,2,3-cd)pyrene		TW	< 0.20	< 0.20	NA	< 0.20	86%	50%	140%	77%	50%	140%	70%	50%	140%
Dibenz(a,h)anthracene		TW	< 0.20	< 0.20	NA	< 0.20	90%	50%	140%	94%	50%	140%	83%	50%	140%
Benzo(g,h,i)perylene		TW	< 0.20	< 0.20	NA	< 0.20	77%	50%	140%	85%	50%	140%	68%	50%	140%
2-and 1-methyl Naphthalene		TW	< 0.20	< 0.20	NA	< 0.20	105%	50%	140%	94%	50%	140%	94%	50%	140%

Comments: Tap water analysis has been performed as QC sample testing for duplicate and matrix spike due to insufficient sample volume.
When the average of the sample and duplicate results is less than 5x the RDL, the Relative Percent Difference (RPD) will be indicated as Not Applicable (NA).

Certified By: N Popnikolof

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Quality Assurance

CLIENT NAME: EXP Services Inc
AGAT WORK ORDER: 17T283734
PROJECT: MRK-00243747
ATTENTION TO: Travis Tan
SAMPLING SITE:
SAMPLED BY:AF, AJ

Water Analysis

RPT Date: Nov 21, 2017			DUPLICATE				REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Method Blank	Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
O. Reg. 153(511) - Metals (Including Hydrides) (Water)															
Antimony	8905780		<1.0	<1.0	NA	< 1.0	100%	70%	130%	107%	80%	120%	109%	70%	130%
Arsenic	8905780		<1.0	<1.0	NA	< 1.0	102%	70%	130%	102%	80%	120%	109%	70%	130%
Barium	8905780		82.9	84.7	2.1%	< 2.0	104%	70%	130%	105%	80%	120%	102%	70%	130%
Beryllium	8905780		<0.5	<0.5	NA	< 0.5	100%	70%	130%	100%	80%	120%	108%	70%	130%
Boron	8905780		19.6	19.5	NA	< 10.0	99%	70%	130%	98%	80%	120%	103%	70%	130%
Cadmium	8905780		<0.2	<0.2	NA	< 0.2	100%	70%	130%	102%	80%	120%	106%	70%	130%
Chromium	8905780		<2.0	<2.0	NA	< 2.0	103%	70%	130%	104%	80%	120%	106%	70%	130%
Cobalt	8905780		<0.5	<0.5	NA	< 0.5	98%	70%	130%	100%	80%	120%	100%	70%	130%
Copper	8905780		<1.0	<1.0	NA	< 1.0	100%	70%	130%	103%	80%	120%	96%	70%	130%
Lead	8905780		<0.5	<0.5	NA	< 0.5	101%	70%	130%	104%	80%	120%	97%	70%	130%
Molybdenum	8905780		1.6	1.6	NA	< 0.5	95%	70%	130%	94%	80%	120%	99%	70%	130%
Nickel	8905780		<1.0	<1.0	NA	< 1.0	101%	70%	130%	102%	80%	120%	99%	70%	130%
Selenium	8905780		<1.0	1.0	NA	< 1.0	101%	70%	130%	99%	80%	120%	107%	70%	130%
Silver	8905780		<0.2	<0.2	NA	< 0.2	98%	70%	130%	108%	80%	120%	101%	70%	130%
Thallium	8905780		<0.3	<0.3	NA	< 0.3	103%	70%	130%	104%	80%	120%	99%	70%	130%
Uranium	8905780		4.0	4.1	2.5%	< 0.5	99%	70%	130%	102%	80%	120%	104%	70%	130%
Vanadium	8905780		<0.4	<0.4	NA	< 0.4	99%	70%	130%	102%	80%	120%	107%	70%	130%
Zinc	8905780		<5.0	<5.0	NA	< 5.0	103%	70%	130%	105%	80%	120%	106%	70%	130%

Comments: NA signifies Not Applicable.
Duplicate Qualifier: As the measured result approaches the RL, the uncertainty associated with the value increases dramatically, thus duplicate acceptance limits apply only where the average of the two duplicates is greater than five times the RL

Certified By: Amanjot Bhela

AGAT Laboratories

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FAX (905)712-5122
http://www.agatlabs.com

Method Summary

CLIENT NAME: EXP Services Inc

AGAT WORK ORDER: 17T283734

PROJECT: MRK-00243747

ATTENTION TO: Travis Tan

SAMPLING SITE:

SAMPLED BY:AF, AJ

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Trace Organics Analysis			
Naphthalene	ORG-91-5105	EPA SW-846 3510 & 8270	GC/MS
Acenaphthylene	ORG-91-5105	EPA SW-846 3510 & 8270	GC/MS
Acenaphthene	ORG-91-5105	EPA SW-846 3510 & 8270	GC/MS
Fluorene	ORG-91-5105	EPA SW-846 3510 & 8270	GC/MS
Phenanthrene	ORG-91-5105	EPA SW-846 3510 & 8270	GC/MS
Anthracene	ORG-91-5105	EPA SW-846 3510 & 8270	GC/MS
Fluoranthene	ORG-91-5105	EPA SW-846 3510 & 8270	GC/MS
Pyrene	ORG-91-5105	EPA SW-846 3510 & 8270	GC/MS
Benz(a)anthracene	ORG-91-5105	EPA SW-846 3510 & 8270	GC/MS
Chrysene	ORG-91-5105	EPA SW-846 3510 & 8270	GC/MS
Benzo(b)fluoranthene	ORG-91-5105	EPA SW-846 3510 & 8270	GC/MS
Benzo(k)fluoranthene	ORG-91-5105	EPA SW-846 3510 & 8270	GC/MS
Benzo(a)pyrene	ORG-91-5105	EPA SW-846 3510 & 8270	GC/MS
Indeno(1,2,3-cd)pyrene	ORG-91-5105	EPA SW-846 3510 & 8270	GC/MS
Dibenz(a,h)anthracene	ORG-91-5105	EPA SW-846 3510 & 8270	GC/MS
Benzo(g,h,i)perylene	ORG-91-5105	EPA SW-846 3510 & 8270	GC/MS
2-and 1-methyl Naphthalene	ORG-91-5105	EPA SW-846 3510 & 8270	GC/MS
Chrysene-d12	ORG-91-5105	EPA SW-846 3510 & 8270	GC/MS
F1 (C6 to C10)	VOL-91-5010	MOE PHC E3421	(P&T)GC/FID
F1 (C6 to C10) minus BTEX	VOL-91-5010	MOE PHC E3421	(P&T)GC/FID
F2 (C10 to C16)	VOL-91-5010	MOE PHC E3421	GC / FID
F3 (C16 to C34)	VOL-91-5010	MOE PHC E3421	GC / FID
F4 (C34 to C50)	VOL-91-5010	MOE PHC E3421	GC / FID
Gravimetric Heavy Hydrocarbons	VOL-91-5010	MOE PHC E3421	BALANCE
Terphenyl	VOL-91-5010		GC/FID
Benzene	VOL-91-5010	MOE PHC-E3421	(P&T)GC/FID
Toluene	VOL-91-5010	MOE PHC-E3421	(P&T)GC/FID
Ethylbenzene	VOL-91-5010	MOE PHC-E3421	(P&T)GC/FID
Xylene Mixture	VOL-91-5010	MOE PHC-E3421	(P&T)GC/FID
F1 (C6 to C10)	VOL-91-5010	MOE PHC-E3421	(P&T)GC/FID
F1 (C6 to C10) minus BTEX	VOL-91-5010	MOE PHC-E3421	(P&T)GC/FID
F2 (C10 to C16)	VOL-91-5010	MOE PHC-E3421	GC/FID
F3 (C16 to C34)	VOL-91-5010	MOE PHC-E3421	GC/FID
F4 (C34 to C50)	VOL-91-5010	MOE PHC-E3421	GC/FID
Gravimetric Heavy Hydrocarbons	VOL-91-5010	MOE PHC-E3421	BALANCE
Benzene	VOL-91-5010	MOE PHC E3421	(P&T)GC/MS
Toluene	VOL-91-5010	MOE PHC E3421	(P&T)GC/MS
Ethylbenzene	VOL-91-5010	MOE PHC E3421	(P&T)GC/MS
Xylene Mixture	VOL-91-5010	MOE PHC E3421	(P&T)GC/MS
F2 (C10 to C16)	VOL-91-5010	MOE PHC E3421	GC/FID
F2 (C10 to C16) minus Naphthalene	VOL-91-5010	MOE PHC E3421	GC/FID
F3 (C16 to C34)	VOL-91-5010	MOE PHC E3421	GC/FID
F3 (C16 to C34) minus PAHs	VOL-91-5010	MOE PHC E3421	GC/FID
F4 (C34 to C50)	VOL -91- 5010	MOE PHC- E3421	GC/FID
Dichlorodifluoromethane	VOL-91-5001	EPA SW-846 5030 & 8260	(P&T)GC/MS
Vinyl Chloride	VOL-91-5001	EPA SW-846 5030 & 8260	(P&T)GC/MS
Bromomethane	VOL-91-5001	EPA SW-846 5030 & 8260	(P&T)GC/MS
Trichlorofluoromethane	VOL-91-5001	EPA SW-846 5030 & 8260	(P&T)GC/MS
Acetone	VOL-91-5001	EPA SW-846 5030 & 8260	(P&T)GC/MS

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http://www.agatlabs.com

Method Summary

CLIENT NAME: EXP Services Inc

AGAT WORK ORDER: 17T283734

PROJECT: MRK-00243747

ATTENTION TO: Travis Tan

SAMPLING SITE:

SAMPLED BY:AF, AJ

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
1,1-Dichloroethylene	VOL-91-5001	EPA SW-846 5030 & 8260	(P&T)GC/MS
Methylene Chloride	VOL-91-5001	EPA SW-846 5030 & 8260	(P&T)GC/MS
trans- 1,2-Dichloroethylene	VOL-91-5001	EPA SW-846 5030 & 8260	(P&T)GC/MS
Methyl tert-butyl ether	VOL-91-5001	EPA SW-846 5030 & 8260	(P&T)GC/MS
1,1-Dichloroethane	VOL-91-5001	EPA SW-846 5030 & 8260	(P&T)GC/MS
Methyl Ethyl Ketone	VOL-91-5001	EPA SW-846 5030 & 8260	(P&T)GC/MS
cis- 1,2-Dichloroethylene	VOL-91-5001	EPA SW-846 5030 & 8260	(P&T)GC/MS
Chloroform	VOL-91-5001	EPA SW-846 5030 & 8260	(P&T)GC/MS
1,2-Dichloroethane	VOL-91-5001	EPA SW-846 5030 & 8260	(P&T)GC/MS
1,1,1-Trichloroethane	VOL-91-5001	EPA SW-846 5030 & 8260	(P&T)GC/MS
Carbon Tetrachloride	VOL-91-5001	EPA SW-846 5030 & 8260	(P&T)GC/MS
Benzene	VOL-91-5001	EPA SW-846 5030 & 8260	(P&T)GC/MS
1,2-Dichloropropane	VOL-91-5001	EPA SW-846 5030 & 8260	(P&T)GC/MS
Trichloroethylene	VOL-91-5001	EPA SW-846 5030 & 8260	(P&T)GC/MS
Bromodichloromethane	VOL-91-5001	EPA SW-846 5030 & 8260	(P&T)GC/MS
Methyl Isobutyl Ketone	VOL-91-5001	EPA SW-846 5030 & 8260	(P&T)GC/MS
1,1,2-Trichloroethane	VOL-91-5001	EPA SW-846 5030 & 8260	(P&T)GC/MS
Toluene	VOL-91-5001	EPA SW-846 5030 & 8260	(P&T)GC/MS
Dibromochloromethane	VOL-91-5001	EPA SW-846 5030 & 8260	(P&T)GC/MS
Ethylene Dibromide	VOL-91-5001	EPA SW-846 5030 & 8260	(P&T)GC/MS
Tetrachloroethylene	VOL-91-5001	EPA SW-846 5030 & 8260	(P&T)GC/MS
1,1,1,2-Tetrachloroethane	VOL-91-5001	EPA SW-846 5030 & 8260	(P&T)GC/MS
Chlorobenzene	VOL-91-5001	EPA SW-846 5030 & 8260	(P&T)GC/MS
Ethylbenzene	VOL-91-5001	EPA SW-846 5030 & 8260	(P&T)GC/MS
m & p-Xylene	VOL-91-5001	EPA SW-846 5030 & 8260	(P&T)GC/MS
Bromoform	VOL-91-5001	EPA SW-846 5030 & 8260	(P&T)GC/MS
Styrene	VOL-91-5001	EPA SW-846 5030 & 8260	(P&T)GC/MS
1,1,2,2-Tetrachloroethane	VOL-91-5001	EPA SW-846 5030 & 8260	(P&T)GC/MS
o-Xylene	VOL-91-5001	EPA SW-846 5030 & 8260	(P&T)GC/MS
1,3-Dichlorobenzene	VOL-91-5001	EPA SW-846 5030 & 8260	(P&T)GC/MS
1,4-Dichlorobenzene	VOL-91-5001	EPA SW-846 5030 & 8260	(P&T)GC/MS
1,2-Dichlorobenzene	VOL-91-5001	EPA SW-846 5030 & 8260	(P&T)GC/MS
1,3-Dichloropropene	VOL-91-5001	EPA SW-846 5030 & 8260	(P&T)GC/MS
Xylene Mixture	VOL-91-5001	EPA SW-846 5030 & 8260	(P&T)GC/MS
n-Hexane	VOL-91-5001	EPA SW-846 5030 & 8260	(P&T)GC/MS
Toluene-d8	VOL-91-5001	EPA SW-846 5030 & 8260	(P&T)GC/MS
4-Bromofluorobenzene	VOL-91-5001	EPA SW-846 5030 & 8260	(P&T)GC/MS

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http://www.agatlabs.com

Method Summary

CLIENT NAME: EXP Services Inc

AGAT WORK ORDER: 17T283734

PROJECT: MRK-00243747

ATTENTION TO: Travis Tan

SAMPLING SITE:

SAMPLED BY:AF, AJ

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Water Analysis			
Antimony	MET-93-6103	EPA SW-846 6020A & 200.8	ICP-MS
Arsenic	MET-93-6103	EPA SW-846 6020A & 200.8	ICP-MS
Barium	MET-93-6103	EPA SW-846 6020A & 200.8	ICP-MS
Beryllium	MET-93-6103	EPA SW-846 6020A & 200.8	ICP-MS
Boron	MET-93-6103	EPA SW-846 6020A & 200.8	ICP-MS
Cadmium	MET-93-6103	EPA SW-846 6020A & 200.8	ICP-MS
Chromium	MET-93-6103	EPA SW-846 6020A & 200.8	ICP-MS
Cobalt	MET-93-6103	EPA SW-846 6020A & 200.8	ICP-MS
Copper	MET-93-6103	EPA SW-846 6020A & 200.8	ICP-MS
Lead	MET-93-6103	EPA SW-846 6020A & 200.8	ICP-MS
Molybdenum	MET-93-6103	EPA SW-846 6020A & 200.8	ICP-MS
Nickel	MET-93-6103	EPA SW-846 6020A & 200.8	ICP-MS
Selenium	MET-93-6103	EPA SW-846 6020A & 200.8	ICP-MS
Silver	MET-93-6103	EPA SW-846 6020A & 200.8	ICP-MS
Thallium	MET-93-6103	EPA SW-846 6020A & 200.8	ICP-MS
Uranium	MET-93-6103	EPA SW-846 6020A & 200.8	ICP-MS
Vanadium	MET-93-6103	EPA SW-846 6020A & 200.8	ICP-MS
Zinc	MET-93-6103	EPA SW-846 6020A & 200.8	ICP-MS

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ILG

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Chain of Custody Record

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

Laboratory Use Only

Work Order #: 17T283734

Cooler Quantity:

Arrival Temperatures: 5.9 | 5.3 | 4.8

Custody Seal Intact: ☐ Yes ☐ No ☐ N/A

Notes: on ice

Report Information:

Company: exp Services Inc.
Contact: Travis Tan
Address: 220 Commerce Valley Dr W Suite 110, Markham
Phone: 905 695 3217 Fax:
Reports to be sent to:
1. Email: travis.tan@exp.com
2. Email: ajay.jayalath@exp.com

Regulatory Requirements:

☐ No Regulatory Requirement

(Please check all applicable boxes)

☒ Regulation 153/04
Table 3 (Indicate One)
☒ Ind/Com
☒ Res/Park
☐ Agriculture
Soil Texture (Check One)
☐ Coarse
☒ Fine

☐ Sewer Use
☐ Sanitary
☐ Storm
Region (Indicate One)
☐ MISA

☐ 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 ☐ 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: 999-00055100-PP
Site Location:
Sampled By: A Fernandes & A Jayalath
AGAT Quote #: PO:
Please note: If quotation number is not provided, client will be billed full price for analysis.

Invoice Information:

Bill To Same: Yes ☒ No ☐

Company:
Contact:
Address:
Email:

Sample Matrix Legend

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

Sample Identification	Date Sampled	Time Sampled	# of Containers	Sample Matrix	Comments/ Special Instructions	Field Filtered - Metals, Hg, CrVI (Y/N)	O. Reg 153: Metals and Inorganics	Full Metals Scan	Regulation/Custom Metals	Nutrients: ☐ TP ☐ NH_3 ☐ TKN ☐ NO_3 ☐ NO_2 ☐ NO_2+NO_2	Volatiles: ☒ VOC ☐ BTEX ☐ THM	CCME Fractions 1 to 4	ABNs	PAHs	PCBs: ☐ Total ☐ Aroclors	Organochlorine Pesticides	TCLP: ☐ M&I ☐ VOCs ☐ ABNs ☐ B(a)P ☐ PCBs	Sewer Use	BTEX	Metals
MW219	Nov13/17	AM		GW							X	X								
MW 215	Nov10/17	AM									X	X								
MW 211	Nov10/17	PM									X	X								
MW232	Nov13/17	AM									X	X								
MW233	↓	AM									X	X								
MW1-16	Nov10/17	PM										X						~~X~~	X	
MW5-06	Nov13/17	AM				Y					X	X		X						X
MW23-07	↓	PM				Y						X		X					X	X
MW5-05	↓	PM		↓		Y						X		X					X	X
Trip Blank	Nov13/17			GW							X									

Samples Relinquished By (Print Name and Sign):	Date	Time	Samples Received By (Print Name and Sign):	Date	Time
A Fernandes ~~Anderson~~	Nov14/17	1:40pm	Simon	17/11/14	150
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

Page 1 of 1

N°: T 055498

Pink Copy - Client | Yellow Copy - AGAT | White Copy- AGAT

AGAT Laboratories

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FAX (905)712-5122
http://www.agatlabs.com

CLIENT NAME: **EXP Services Inc**
220 Commerce Valley Drive West,Suite 500
Markham, ON, ON L3T0A8
(905) 695-3217

ATTENTION TO: **Travis Tan**

PROJECT: **999-00055100-PP**

AGAT WORK ORDER: **17T285277**

TRACE ORGANICS REVIEWED BY: **Oksana Gushyla, Trace Organics Lab Supervisor**

WATER ANALYSIS REVIEWED BY: **Nivine Basily, Inorganics Report Writer**

DATE REPORTED: **Nov 23, 2017**

PAGES (INCLUDING COVER): **20**

VERSION*: **2**

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

NOTES

VERSION 2:Version 2 supersedes version 1. Version 2: revision to sample identifications, issued December 01, 2017

All samples will be disposed of within 30 days following analysis. Please contact the lab if you require additional sample storage time.

AGAT Laboratories

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http://www.agatlabs.com

Certificate of Analysis

AGAT WORK ORDER: 17T285277

PROJECT: 999-00055100-PP

CLIENT NAME: EXP Services Inc

ATTENTION TO: Travis Tan

SAMPLING SITE:

SAMPLED BY:

O. Reg. 153(511) - PAHs (Water)

DATE RECEIVED: 2017-11-16

DATE REPORTED: 2017-11-23

		SAMPLE DESCRIPTION:		TH108	MW1-06	GR1	GR2	GR3	GR23
		SAMPLE TYPE:		Water	Water	Water	Water	Water	Water
		DATE SAMPLED:		2017-11-15	2017-11-15	2017-11-14	2017-11-14	2017-11-14	2017-11-14
Parameter	**Unit**	**G / S**	**RDL**	**8913980**	**8914354**	**8914373**	**8914378**	**8914379**	**8914380**
Naphthalene	µg/L	6400	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Acenaphthylene	µg/L	1.8	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Acenaphthene	µg/L	1700	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Fluorene	µg/L	400	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Phenanthrene	µg/L	580	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Anthracene	µg/L	2.4	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Fluoranthene	µg/L	130	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Pyrene	µg/L	68	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Benz(a)anthracene	µg/L	4.7	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Chrysene	µg/L	1	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Benzo(b)fluoranthene	µg/L	0.75	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Benzo(k)fluoranthene	µg/L	0.4	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Benzo(a)pyrene	µg/L	0.81	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Indeno(1,2,3-cd)pyrene	µg/L	0.2	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Dibenz(a,h)anthracene	µg/L	0.52	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Benzo(g,h,i)perylene	µg/L	0.2	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
2-and 1-methyl Naphthalene	µg/L	1800	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Surrogate	**Unit**	**Acceptable Limits**							
Chrysene-d12	%	50-140		112	84	109	103	103	97

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 3: Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition - Non-Potable Ground Water - All Types of Property Uses - Medium and Fine Textured Soils
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

8913980-8914380 Note: The result for Benzo(b)Flouranthene is the total of the Benzo(b)&(j)Flouranthene isomers because the isomers co-elute on the GC column.

Certified By:

AGAT Laboratories

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http://www.agatlabs.com

Certificate of Analysis

AGAT WORK ORDER: 17T285277

PROJECT: 999-00055100-PP

CLIENT NAME: EXP Services Inc

ATTENTION TO: Travis Tan

SAMPLING SITE:

SAMPLED BY:

O. Reg. 153(511) - PHCs F1 - F4 (-BTEX) (Water)

DATE RECEIVED: 2017-11-16

DATE REPORTED: 2017-11-23

		SAMPLE DESCRIPTION:		TH101	TH102	TH110	TH1000	TH112
		SAMPLE TYPE:		Water	Water	Water	Water	Water
		DATE SAMPLED:		2017-11-15	2017-11-15	2017-11-15	2017-11-14	2017-11-14
Parameter	**Unit**	**G / S**	**RDL**	**8913972**	**8913976**	**8914347**	**8914368**	**8915524**
F1 (C6 to C10)	µg/L	750	25	<25	<25	400	<25	<25
F1 (C6 to C10) minus BTEX	µg/L	750	25	<25	<25	390	<25	<25
F2 (C10 to C16)	µg/L	150	100	<100	<100	**2000**	<100	<100
F3 (C16 to C34)	µg/L	500	100	<100	<100	**830**	<100	<100
F4 (C34 to C50)	µg/L	500	100	<100	<100	<100	<100	<100
Gravimetric Heavy Hydrocarbons	µg/L	500	500	NA	NA	NA	NA	NA
Surrogate	**Unit**	**Acceptable Limits**						
Terphenyl	%	60-140		67	89	72	71	62

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 3: Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition - Non-Potable Ground Water - All Types of Property Uses - Medium and Fine Textured Soils
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

8913972-8915524 The C6-C10 fraction is calculated using Toluene response factor.
The C10 - C16, C16 - C34, and C34 - C50 fractions are calculated using the average response factor for n-C10, n-C16, and nC34.
Gravimetric Heavy Hydrocarbons are not included in the Total C16 - C50 and are only determined if the chromatogram of the C34 - C50 Hydrocarbons indicated that hydrocarbons >C50 are present.
The chromatogram has returned to baseline by the retention time of nC50.
Total C6-C50 results are corrected for BTEX contributions.
This method complies with the Reference Method for the CWS PHC and is validated for use in the laboratory.
nC6 and nC10 response factors are within 30% of Toluene response factor.
nC10, nC16 and nC34 response factors are within 10% of their average.
C50 response factor is within 70% of nC10 + nC16 nC34 average.
Linearity is within 15%.
Extraction and holding times were met for this sample.
Fractions 1-4 are quantified with the contribution of PAHs. Under Ontario Regulation 153, results are considered valid without determining the PAH contribution if not requested by the client.

Certified By:

AGAT Laboratories

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Certificate of Analysis

AGAT WORK ORDER: 17T285277

PROJECT: 999-00055100-PP

CLIENT NAME: EXP Services Inc

ATTENTION TO: Travis Tan

SAMPLING SITE:

SAMPLED BY:

O. Reg. 153(511) - PHCs F1 - F4 (Water)

DATE RECEIVED: 2017-11-16

DATE REPORTED: 2017-11-23

		SAMPLE DESCRIPTION:		TH104	TH105	TH109	TH111
		SAMPLE TYPE:		Water	Water	Water	Water
		DATE SAMPLED:		2017-11-15	2017-11-15	2017-11-15	2017-11-15
Parameter	**Unit**	**G / S**	**RDL**	**8913977**	**8913978**	**8914342**	**8914348**
Benzene	µg/L	430	0.20	<0.20	<0.20	<0.20	<0.20
Toluene	µg/L	18000	0.20	<0.20	<0.20	<0.20	0.38
Ethylbenzene	µg/L	2300	0.10	<0.10	<0.10	<0.10	0.16
Xylene Mixture	µg/L	4200	0.20	<0.20	<0.20	<0.20	0.74
F1 (C6 to C10)	µg/L	750	25	<25	<25	<25	<25
F1 (C6 to C10) minus BTEX	µg/L	750	25	<25	<25	<25	<25
F2 (C10 to C16)	µg/L	150	100	<100	<100	<100	<100
F3 (C16 to C34)	µg/L	500	100	<100	<100	<100	<100
F4 (C34 to C50)	µg/L	500	100	<100	<100	<100	<100
Gravimetric Heavy Hydrocarbons	µg/L	500	500	NA	NA	NA	NA
Surrogate	**Unit**	**Acceptable Limits**					
Terphenyl	%	60-140		83	90	79	68

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 3: Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition - Non-Potable Ground Water - All Types of Property Uses - Medium and Fine Textured Soils
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

8913977-8914348 The C6-C10 fraction is calculated using Toluene response factor.
The C10 - C16, C16 - C34, and C34 - C50 fractions are calculated using the average response factor for n-C10, n-C16, and nC34.
Gravimetric Heavy Hydrocarbons are not included in the Total C16 - C50 and are only determined if the chromatogram of the C34 - C50 Hydrocarbons indicated that hydrocarbons >C50 are present.
The chromatogram has returned to baseline by the retention time of nC50.
Total C6-C50 results are corrected for BTEX contributions.
This method complies with the Reference Method for the CWS PHC and is validated for use in the laboratory.
nC6 and nC10 response factors are within 30% of Toluene response factor.
nC10, nC16 and nC34 response factors are within 10% of their average.
C50 response factor is within 70% of nC10 + nC16 nC34 average.
Linearity is within 15%.
Extraction and holding times were met for this sample.
Fractions 1-4 are quantified with the contribution of PAHs. Under Ontario Regulation 153/04, results are considered valid without determining the PAH contribution if not requested by the client.
NA = Not Applicable

Certified By:

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Certificate of Analysis

AGAT WORK ORDER: 17T285277

PROJECT: 999-00055100-PP

CLIENT NAME: EXP Services Inc

ATTENTION TO: Travis Tan

SAMPLING SITE:

SAMPLED BY:

O. Reg. 153(511) - PHCs F1 - F4 (with PAHs) (Water)

DATE RECEIVED: 2017-11-16

DATE REPORTED: 2017-11-23

		SAMPLE DESCRIPTION:		TH108		MW1-06		GR1	GR2	GR3	GR23
		SAMPLE TYPE:		Water		Water		Water	Water	Water	Water
		DATE SAMPLED:		2017-11-15		2017-11-15		2017-11-14	2017-11-14	2017-11-14	2017-11-14
Parameter	**Unit**	**G / S**	**RDL**	**8913980**	**RDL**	**8914354**	**RDL**	**8914373**	**8914378**	**8914379**	**8914380**
F1 (C6 to C10)	µg/L	750	25	<25	25	<25	25	<25	<25	<25	<25
F1 (C6 to C10) minus BTEX	µg/L	750	25	<25	25	<25	25	<25	<25	<25	<25
F2 (C10 to C16)	µg/L	150	100	<100	150	<150	100	<100	<100	<100	<100
F2 (C10 to C16) minus Naphthalene	µg/L		100	<100	150	<150	100	<100	<100	<100	<100
F3 (C16 to C34)	µg/L	500	100	<100	200	<200	100	<100	<100	<100	<100
F3 (C16 to C34) minus PAHs	µg/L		100	<100	200	<200	100	<100	<100	<100	<100
F4 (C34 to C50)	µg/L	500	100	<100	200	<200	100	<100	<100	<100	<100
Gravimetric Heavy Hydrocarbons	µg/L	500	500	NA	500	NA	500	NA	NA	NA	NA
Surrogate	**Unit**	**Acceptable Limits**									
Terphenyl	%	60-140		62		100		76	93	115	85

Certified By:

AGAT Laboratories

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AGAT WORK ORDER: 17T285277

PROJECT: 999-00055100-PP

CLIENT NAME: EXP Services Inc

ATTENTION TO: Travis Tan

SAMPLING SITE:

SAMPLED BY:

O. Reg. 153(511) - PHCs F1 - F4 (with PAHs) (Water)

DATE RECEIVED: 2017-11-16 **DATE REPORTED: 2017-11-23**

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 3: Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition - Non-Potable Ground Water - All Types of Property Uses - Medium and Fine Textured Soils
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

8913980
The C6-C10 fraction is calculated using Toluene response factor.
The C10 - C16, C16 - C34, and C34 - C50 fractions are calculated using the average response factor for n-C10, n-C16, and nC34.
Gravimetric Heavy Hydrocarbons are not included in the Total C16 - C50 and are only determined if the chromatogram of the C34 - C50 Hydrocarbons indicated that hydrocarbons >C50 are present.
The chromatogram has returned to baseline by the retention time of nC50.
Total C6-C50 results are corrected for BTEX and PAH contributions.
This method complies with the Reference Method for the CWS PHC and is validated for use in the laboratory.
nC6 and nC10 response factors are within 30% of Toluene response factor.
nC10, nC16 and nC34 response factors are within 10% of their average.
C50 response factor is within 70% of nC10 + nC16 nC34 average.
Linearity is within 15%.
Extraction and holding times were met for this sample.

8914354
Dilution factor=2
The sample was diluted because there was limited water available to perform the analysis. The reporting detection limit has been corrected for the dilution factor used.
The C6-C10 fraction is calculated using Toluene response factor.
The C10 - C16, C16 - C34, and C34 - C50 fractions are calculated using the average response factor for n-C10, n-C16, and nC34.
Gravimetric Heavy Hydrocarbons are not included in the Total C16 - C50 and are only determined if the chromatogram of the C34 - C50 Hydrocarbons indicated that hydrocarbons >C50 are present.
The chromatogram has returned to baseline by the retention time of nC50.
Total C6-C50 results are corrected for BTEX and PAH contributions.
This method complies with the Reference Method for the CWS PHC and is validated for use in the laboratory.
nC6 and nC10 response factors are within 30% of Toluene response factor.
nC10, nC16 and nC34 response factors are within 10% of their average.
C50 response factor is within 70% of nC10 + nC16 nC34 average.
Linearity is within 15%.
Extraction and holding times were met for this sample.

8914373-8914380
The C6-C10 fraction is calculated using Toluene response factor.
The C10 - C16, C16 - C34, and C34 - C50 fractions are calculated using the average response factor for n-C10, n-C16, and nC34.
Gravimetric Heavy Hydrocarbons are not included in the Total C16 - C50 and are only determined if the chromatogram of the C34 - C50 Hydrocarbons indicated that hydrocarbons >C50 are present.
The chromatogram has returned to baseline by the retention time of nC50.
Total C6-C50 results are corrected for BTEX and PAH contributions.
This method complies with the Reference Method for the CWS PHC and is validated for use in the laboratory.
nC6 and nC10 response factors are within 30% of Toluene response factor.
nC10, nC16 and nC34 response factors are within 10% of their average.
C50 response factor is within 70% of nC10 + nC16 nC34 average.
Linearity is within 15%.
Extraction and holding times were met for this sample.

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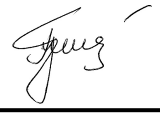

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AGAT WORK ORDER: 17T285277

PROJECT: 999-00055100-PP

CLIENT NAME: EXP Services Inc

ATTENTION TO: Travis Tan

SAMPLING SITE:

SAMPLED BY:

O. Reg. 153(511) - VOCs (Water)

DATE RECEIVED: 2017-11-16

DATE REPORTED: 2017-11-23

		SAMPLE DESCRIPTION:		TH101	TH102	TH108	TH110	MW1-06	MW250	TH1000	GR1
		SAMPLE TYPE:		Water	Water	Water	Water	Water	Water	Water	Water
		DATE SAMPLED:		2017-11-15	2017-11-15	2017-11-15	2017-11-15	2017-11-15	2017-11-15	2017-11-14	2017-11-14
Parameter	Unit	G / S	RDL	8913972	8913976	8913980	8914347	8914354	8914367	8914368	8914373
Dichlorodifluoromethane	µg/L	4400	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Vinyl Chloride	µg/L	1.7	0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17
Bromomethane	µg/L	56	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Trichlorofluoromethane	µg/L	2500	0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40
Acetone	µg/L	130000	1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,1-Dichloroethylene	µg/L	17	0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30
Methylene Chloride	µg/L	5500	0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30
trans- 1,2-Dichloroethylene	µg/L	17	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Methyl tert-butyl ether	µg/L	1400	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
1,1-Dichloroethane	µg/L	3100	0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30
Methyl Ethyl Ketone	µg/L	1500000	1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
cis- 1,2-Dichloroethylene	µg/L	17	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Chloroform	µg/L	22	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
1,2-Dichloroethane	µg/L	12	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
1,1,1-Trichloroethane	µg/L	6700	0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30
Carbon Tetrachloride	µg/L	8.4	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Benzene	µg/L	430	0.20	<0.20	<0.20	<0.20	4.9	<0.20	<0.20	<0.20	<0.20
1,2-Dichloropropane	µg/L	140	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Trichloroethylene	µg/L	17	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Bromodichloromethane	µg/L	85000	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Methyl Isobutyl Ketone	µg/L	580000	1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,1,2-Trichloroethane	µg/L	30	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Toluene	µg/L	18000	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	0.33	<0.20
Dibromochloromethane	µg/L	82000	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Ethylene Dibromide	µg/L	0.83	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Tetrachloroethylene	µg/L	17	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
1,1,1,2-Tetrachloroethane	µg/L	28	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Chlorobenzene	µg/L	630	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Ethylbenzene	µg/L	2300	0.10	<0.10	<0.10	<0.10	0.89	<0.10	<0.10	<0.10	<0.10
m & p-Xylene	µg/L		0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20

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Certificate of Analysis

AGAT WORK ORDER: 17T285277

PROJECT: 999-00055100-PP

CLIENT NAME: EXP Services Inc

ATTENTION TO: Travis Tan

SAMPLING SITE:

SAMPLED BY:

O. Reg. 153(511) - VOCs (Water)

DATE RECEIVED: 2017-11-16 **DATE REPORTED: 2017-11-23**

		SAMPLE DESCRIPTION:		TH101	TH102	TH108	TH110	MW1-06	MW250	TH1000	GR1
		SAMPLE TYPE:		Water	Water	Water	Water	Water	Water	Water	Water
		DATE SAMPLED:		2017-11-15	2017-11-15	2017-11-15	2017-11-15	2017-11-15	2017-11-15	2017-11-14	2017-11-14
Parameter	**Unit**	**G / S**	**RDL**	**8913972**	**8913976**	**8913980**	**8914347**	**8914354**	**8914367**	**8914368**	**8914373**
Bromoform	µg/L	770	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Styrene	µg/L	9100	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
1,1,2,2-Tetrachloroethane	µg/L	15	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
o-Xylene	µg/L		0.10	<0.10	<0.10	<0.10	0.11	<0.10	<0.10	<0.10	<0.10
1,3-Dichlorobenzene	µg/L	9600	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
1,4-Dichlorobenzene	µg/L	67	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
1,2-Dichlorobenzene	µg/L	9600	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
1,3-Dichloropropene	µg/L	45	0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30
Xylene Mixture	µg/L	4200	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
n-Hexane	µg/L	520	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Surrogate	**Unit**	**Acceptable Limits**									
Toluene-d8	% Recovery	50-140		102	102	106	104	111	106	111	107
4-Bromofluorobenzene	% Recovery	50-140		118	113	115	98	110	108	112	105

Certified By:

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Certificate of Analysis

AGAT WORK ORDER: 17T285277

PROJECT: 999-00055100-PP

CLIENT NAME: EXP Services Inc

ATTENTION TO: Travis Tan

SAMPLING SITE:

SAMPLED BY:

O. Reg. 153(511) - VOCs (Water)

DATE RECEIVED: 2017-11-16

DATE REPORTED: 2017-11-23

		SAMPLE DESCRIPTION:		GR2	GR3	GR23	Trip Blank	TH112	TH1110
		SAMPLE TYPE:		Water	Water	Water	Water	Water	Water
		DATE SAMPLED:		2017-11-14	2017-11-14	2017-11-14	2017-11-14	2017-11-14	2017-11-14
Parameter	Unit	G / S	RDL	8914378	8914379	8914380	8914382	8915524	8916778
Dichlorodifluoromethane	µg/L	4400	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Vinyl Chloride	µg/L	1.7	0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17
Bromomethane	µg/L	56	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Trichlorofluoromethane	µg/L	2500	0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40
Acetone	µg/L	130000	1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,1-Dichloroethylene	µg/L	17	0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30
Methylene Chloride	µg/L	5500	0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30
trans- 1,2-Dichloroethylene	µg/L	17	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Methyl tert-butyl ether	µg/L	1400	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
1,1-Dichloroethane	µg/L	3100	0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30
Methyl Ethyl Ketone	µg/L	1500000	1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
cis- 1,2-Dichloroethylene	µg/L	17	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Chloroform	µg/L	22	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
1,2-Dichloroethane	µg/L	12	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
1,1,1-Trichloroethane	µg/L	6700	0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30
Carbon Tetrachloride	µg/L	8.4	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Benzene	µg/L	430	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	6.1
1,2-Dichloropropane	µg/L	140	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Trichloroethylene	µg/L	17	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Bromodichloromethane	µg/L	85000	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Methyl Isobutyl Ketone	µg/L	580000	1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,1,2-Trichloroethane	µg/L	30	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Toluene	µg/L	18000	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Dibromochloromethane	µg/L	82000	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Ethylene Dibromide	µg/L	0.83	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Tetrachloroethylene	µg/L	17	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
1,1,1,2-Tetrachloroethane	µg/L	28	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Chlorobenzene	µg/L	630	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Ethylbenzene	µg/L	2300	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	1.1
m & p-Xylene	µg/L		0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20

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Certificate of Analysis

AGAT WORK ORDER: 17T285277

PROJECT: 999-00055100-PP

CLIENT NAME: EXP Services Inc

ATTENTION TO: Travis Tan

SAMPLING SITE:

SAMPLED BY:

O. Reg. 153(511) - VOCs (Water)

DATE RECEIVED: 2017-11-16 **DATE REPORTED: 2017-11-23**

		SAMPLE DESCRIPTION:		GR2	GR3	GR23	Trip Blank	TH112	TH1110
		SAMPLE TYPE:		Water	Water	Water	Water	Water	Water
		DATE SAMPLED:		2017-11-14	2017-11-14	2017-11-14	2017-11-14	2017-11-14	2017-11-14
Parameter	**Unit**	**G / S**	**RDL**	**8914378**	**8914379**	**8914380**	**8914382**	**8915524**	**8916778**
Bromoform	µg/L	770	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Styrene	µg/L	9100	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
1,1,2,2-Tetrachloroethane	µg/L	15	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
o-Xylene	µg/L		0.10	<0.10	<0.10	<0.10	<0.10	<0.10	0.13
1,3-Dichlorobenzene	µg/L	9600	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
1,4-Dichlorobenzene	µg/L	67	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
1,2-Dichlorobenzene	µg/L	9600	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
1,3-Dichloropropene	µg/L	45	0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30
Xylene Mixture	µg/L	4200	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
n-Hexane	µg/L	520	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Surrogate	**Unit**	**Acceptable Limits**							
Toluene-d8	% Recovery	50-140		108	105	104	106	107	102
4-Bromofluorobenzene	% Recovery	50-140		110	104	111	90	104	101

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 3: Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition - Non-Potable Ground Water - All Types of Property Uses - Medium and Fine Textured Soils
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

Certified By:

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AGAT WORK ORDER: 17T285277

PROJECT: 999-00055100-PP

CLIENT NAME: EXP Services Inc

ATTENTION TO: Travis Tan

SAMPLING SITE:

SAMPLED BY:

O. Reg. 153(511) - Metals (Including Hydrides) (Water)

DATE RECEIVED: 2017-11-16 **DATE REPORTED: 2017-11-23**

		SAMPLE DESCRIPTION:		TH108	MW1-06	GR1	GR2	GR3	GR23
		SAMPLE TYPE:		Water	Water	Water	Water	Water	Water
		DATE SAMPLED:		2017-11-15	2017-11-15	2017-11-14	2017-11-14	2017-11-14	2017-11-14
Parameter	Unit	G / S	RDL	8913980	8914354	8914373	8914378	8914379	8914380
Antimony	µg/L	20000	1.0	<1.0	1.4	<1.0	<1.0	<1.0	<1.0
Arsenic	µg/L	1900	1.0	2.7	<1.0	1.1	1.1	<1.0	1.1
Barium	µg/L	29000	2.0	51.7	25.0	23.7	23.6	23.0	23.7
Beryllium	µg/L	67	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Boron	µg/L	45000	10.0	908	72.0	35.2	32.1	31.0	30.9
Cadmium	µg/L	2.7	0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Chromium	µg/L	810	2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Cobalt	µg/L	66	0.5	0.8	<0.5	<0.5	<0.5	<0.5	<0.5
Copper	µg/L	87	1.0	<1.0	1.6	1.2	<1.0	1.4	1.1
Lead	µg/L	25	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Molybdenum	µg/L	9200	0.5	6.8	1.8	1.4	1.5	1.4	1.5
Nickel	µg/L	490	1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Selenium	µg/L	63	1.0	1.5	1.4	1.1	2.1	<1.0	<1.0
Silver	µg/L	1.5	0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Thallium	µg/L	510	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Uranium	µg/L	420	0.5	1.8	2.4	<0.5	<0.5	<0.5	<0.5
Vanadium	µg/L	250	0.4	0.8	0.7	0.8	0.7	0.7	0.6
Zinc	µg/L	1100	5.0	<5.0	5.7	<5.0	<5.0	<5.0	<5.0

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 3: Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition - Non-Potable Ground Water - All Types of Property Uses - Medium and Fine Textured Soils
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

Certified By: Vivine Basily

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Guideline Violation

AGAT WORK ORDER: 17T285277

PROJECT: 999-00055100-PP

CLIENT NAME: EXP Services Inc

ATTENTION TO: Travis Tan

SAMPLEID	SAMPLE TITLE	GUIDELINE	ANALYSIS PACKAGE	PARAMETER	UNIT	GUIDEVALUE	RESULT
8914347	TH110	ON T3 NPGW MFT	O. Reg. 153(511) - PHCs F1 - F4 (-BTEX) (Water)	F2 (C10 to C16)	µg/L	150	2000
8914347	TH110	ON T3 NPGW MFT	O. Reg. 153(511) - PHCs F1 - F4 (-BTEX) (Water)	F3 (C16 to C34)	µg/L	500	830

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Quality Assurance

CLIENT NAME: EXP Services Inc

AGAT WORK ORDER: 17T285277

PROJECT: 999-00055100-PP

ATTENTION TO: Travis Tan

SAMPLING SITE:

SAMPLED BY:

Trace Organics Analysis

RPT Date: Nov 23, 2017			DUPLICATE				REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Method Blank	Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
O. Reg. 153(511) - VOCs (Water)															
Dichlorodifluoromethane	8911744		< 0.20	< 0.20	NA	< 0.20	94%	50%	140%	74%	50%	140%	117%	50%	140%
Vinyl Chloride	8911744		< 0.17	< 0.17	NA	< 0.17	128%	50%	140%	124%	50%	140%	101%	50%	140%
Bromomethane	8911744		< 0.20	< 0.20	NA	< 0.20	94%	50%	140%	102%	50%	140%	93%	50%	140%
Trichlorofluoromethane	8911744		< 0.40	< 0.40	NA	< 0.40	103%	50%	140%	79%	50%	140%	123%	50%	140%
Acetone	8911744		< 1.0	< 1.0	NA	< 1.0	116%	50%	140%	102%	50%	140%	116%	50%	140%
1,1-Dichloroethylene	8911744		< 0.30	< 0.30	NA	< 0.30	96%	50%	140%	76%	60%	130%	87%	50%	140%
Methylene Chloride	8911744		< 0.30	< 0.30	NA	< 0.30	91%	50%	140%	109%	60%	130%	97%	50%	140%
trans- 1,2-Dichloroethylene	8911744		< 0.20	< 0.20	NA	< 0.20	73%	50%	140%	77%	60%	130%	84%	50%	140%
Methyl tert-butyl ether	8911744		< 0.20	< 0.20	NA	< 0.20	117%	50%	140%	114%	60%	130%	90%	50%	140%
1,1-Dichloroethane	8911744		< 0.30	< 0.30	NA	< 0.30	85%	50%	140%	80%	60%	130%	91%	50%	140%
Methyl Ethyl Ketone	8911744		< 1.0	< 1.0	NA	< 1.0	91%	50%	140%	76%	50%	140%	107%	50%	140%
cis- 1,2-Dichloroethylene	8911744		< 0.20	< 0.20	NA	< 0.20	82%	50%	140%	82%	60%	130%	89%	50%	140%
Chloroform	8911744		< 0.20	< 0.20	NA	< 0.20	103%	50%	140%	87%	60%	130%	99%	50%	140%
1,2-Dichloroethane	8911744		< 0.20	< 0.20	NA	< 0.20	103%	50%	140%	86%	60%	130%	106%	50%	140%
1,1,1-Trichloroethane	8911744		< 0.30	< 0.30	NA	< 0.30	75%	50%	140%	77%	60%	130%	84%	50%	140%
Carbon Tetrachloride	8911744		< 0.20	< 0.20	NA	< 0.20	73%	50%	140%	73%	60%	130%	88%	50%	140%
Benzene	8911744		< 0.20	< 0.20	NA	< 0.20	75%	50%	140%	76%	60%	130%	83%	50%	140%
1,2-Dichloropropane	8911744		< 0.20	< 0.20	NA	< 0.20	92%	50%	140%	74%	60%	130%	81%	50%	140%
Trichloroethylene	8911744		< 0.20	< 0.20	NA	< 0.20	72%	50%	140%	80%	60%	130%	82%	50%	140%
Bromodichloromethane	8911744		< 0.20	< 0.20	NA	< 0.20	108%	50%	140%	77%	60%	130%	92%	50%	140%
Methyl Isobutyl Ketone	8911744		< 1.0	< 1.0	NA	< 1.0	108%	50%	140%	108%	50%	140%	118%	50%	140%
1,1,2-Trichloroethane	8911744		< 0.20	< 0.20	NA	< 0.20	121%	50%	140%	106%	60%	130%	99%	50%	140%
Toluene	8911744		< 0.20	< 0.20	NA	< 0.20	83%	50%	140%	97%	60%	130%	89%	50%	140%
Dibromochloromethane	8911744		< 0.10	< 0.10	NA	< 0.10	109%	50%	140%	98%	60%	130%	103%	50%	140%
Ethylene Dibromide	8911744		< 0.10	< 0.10	NA	< 0.10	117%	50%	140%	101%	60%	130%	101%	50%	140%
Tetrachloroethylene	8911744		< 0.20	< 0.20	NA	< 0.20	81%	50%	140%	98%	60%	130%	90%	50%	140%
1,1,1,2-Tetrachloroethane	8911744		< 0.10	< 0.10	NA	< 0.10	114%	50%	140%	103%	60%	130%	98%	50%	140%
Chlorobenzene	8911744		< 0.10	< 0.10	NA	< 0.10	101%	50%	140%	100%	60%	130%	89%	50%	140%
Ethylbenzene	8911744		< 0.10	< 0.10	NA	< 0.10	94%	50%	140%	98%	60%	130%	87%	50%	140%
m & p-Xylene	8911744		< 0.20	< 0.20	NA	< 0.20	99%	50%	140%	101%	60%	130%	92%	50%	140%
Bromoform	8911744		< 0.10	< 0.10	NA	< 0.10	91%	50%	140%	108%	60%	130%	109%	50%	140%
Styrene	8911744		< 0.10	< 0.10	NA	< 0.10	88%	50%	140%	89%	60%	130%	85%	50%	140%
1,1,2,2-Tetrachloroethane	8911744		< 0.10	< 0.10	NA	< 0.10	77%	50%	140%	107%	60%	130%	120%	50%	140%
o-Xylene	8911744		< 0.10	< 0.10	NA	< 0.10	110%	50%	140%	107%	60%	130%	96%	50%	140%
1,3-Dichlorobenzene	8911744		< 0.10	< 0.10	NA	< 0.10	110%	50%	140%	95%	60%	130%	88%	50%	140%
1,4-Dichlorobenzene	8911744		< 0.10	< 0.10	NA	< 0.10	115%	50%	140%	93%	60%	130%	100%	50%	140%
1,2-Dichlorobenzene	8911744		< 0.10	< 0.10	NA	< 0.10	119%	50%	140%	100%	60%	130%	97%	50%	140%
1,3-Dichloropropene	8911744		< 0.30	< 0.30	NA	< 0.30	80%	50%	140%	98%	60%	130%	102%	50%	140%
n-Hexane	8911744		< 0.20	< 0.20	NA	< 0.20	80%	50%	140%	74%	60%	130%	107%	50%	140%

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Quality Assurance

CLIENT NAME: EXP Services Inc
AGAT WORK ORDER: 17T285277
PROJECT: 999-00055100-PP
ATTENTION TO: Travis Tan
SAMPLING SITE:
SAMPLED BY:

Trace Organics Analysis (Continued)

RPT Date: Nov 23, 2017			DUPLICATE				REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Method Blank	Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
O. Reg. 153(511) - PHCs F1 - F4 (-BTEX) (Water)															
F1 (C6 to C10)	8913977	8891397	< 25	< 25	NA	< 25	104%	60%	140%	103%	60%	140%	101%	60%	140%
F2 (C10 to C16)		TW	< 100	< 100	NA	< 100	95%	60%	140%	61%	60%	140%	66%	60%	140%
F3 (C16 to C34)		TW	< 100	< 100	NA	< 100	96%	60%	140%	61%	60%	140%	72%	60%	140%
F4 (C34 to C50)		TW	< 100	< 100	NA	< 100	106%	60%	140%	92%	60%	140%	93%	60%	140%
O. Reg. 153(511) - PHCs F1 - F4 (Water)															
Benzene	8913977	8911397	< 0.20	< 0.20	NA	< 0.20	74%	50%	140%	78%	60%	130%	67%	50%	140%
Toluene	8913977	8911397	< 0.20	< 0.20	NA	< 0.20	74%	50%	140%	66%	60%	130%	74%	50%	140%
Ethylbenzene	8913977	8911397	< 0.10	< 0.10	NA	< 0.10	72%	50%	140%	70%	60%	130%	81%	50%	140%
Xylene Mixture	8913977	8911397	< 0.20	< 0.20	NA	< 0.20	62%	50%	140%	82%	60%	130%	99%	50%	140%
F1 (C6 to C10)	8913977	8911397	< 25	< 25	NA	< 25	104%	60%	140%	103%	60%	140%	101%	60%	140%
O. Reg. 153(511) - PAHs (Water)															
Naphthalene	8911545		5.1	5.3	3.8%	< 0.20	112%	50%	140%	118%	50%	140%	94%	50%	140%
Acenaphthylene	8911545		0.33	0.30	NA	< 0.20	129%	50%	140%	122%	50%	140%	109%	50%	140%
Acenaphthene	8911545		0.29	0.25	NA	< 0.20	105%	50%	140%	116%	50%	140%	111%	50%	140%
Fluorene	8911545		0.47	0.36	NA	< 0.20	112%	50%	140%	125%	50%	140%	121%	50%	140%
Phenanthrene	8911545		< 0.10	< 0.10	NA	< 0.10	103%	50%	140%	121%	50%	140%	122%	50%	140%
Anthracene	8911545		< 0.10	< 0.10	NA	< 0.10	105%	50%	140%	125%	50%	140%	121%	50%	140%
Fluoranthene	8911545		< 0.20	< 0.20	NA	< 0.20	127%	50%	140%	123%	50%	140%	122%	50%	140%
Pyrene	8911545		< 0.20	< 0.20	NA	< 0.20	108%	50%	140%	112%	50%	140%	118%	50%	140%
Benz(a)anthracene	8911545		< 0.20	< 0.20	NA	< 0.20	76%	50%	140%	79%	50%	140%	79%	50%	140%
Chrysene	8911545		< 0.10	< 0.10	NA	< 0.10	73%	50%	140%	118%	50%	140%	129%	50%	140%
Benzo(b)fluoranthene	8911545		< 0.10	< 0.10	NA	< 0.10	88%	50%	140%	80%	50%	140%	85%	50%	140%
Benzo(k)fluoranthene	8911545		< 0.10	< 0.10	NA	< 0.10	119%	50%	140%	102%	50%	140%	97%	50%	140%
Benzo(a)pyrene	8911545		< 0.01	< 0.01	NA	< 0.01	109%	50%	140%	118%	50%	140%	111%	50%	140%
Indeno(1,2,3-cd)pyrene	8911545		< 0.20	< 0.20	NA	< 0.20	123%	50%	140%	108%	50%	140%	92%	50%	140%
Dibenz(a,h)anthracene	8911545		< 0.20	< 0.20	NA	< 0.20	121%	50%	140%	86%	50%	140%	77%	50%	140%
Benzo(g,h,i)perylene	8911545		< 0.20	< 0.20	NA	< 0.20	119%	50%	140%	120%	50%	140%	108%	50%	140%
2-and 1-methyl Naphthalene	8911545		11	8.2	29.2%	< 0.20	122%	50%	140%	121%	50%	140%	111%	50%	140%

Comments: Tap water analysis has been performed as QC sample testing for duplicate and matrix spike due to insufficient sample volume.
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:

AGAT Laboratories

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Quality Assurance

CLIENT NAME: EXP Services Inc

AGAT WORK ORDER: 17T285277

PROJECT: 999-00055100-PP

ATTENTION TO: Travis Tan

SAMPLING SITE:

SAMPLED BY:

Water Analysis

RPT Date: Nov 23, 2017			DUPLICATE				REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Method Blank	Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
O. Reg. 153(511) - Metals (Including Hydrides) (Water)															
Antimony	8919470		1.1	1.5	NA	< 1.0	95%	70%	130%	98%	80%	120%	107%	70%	130%
Arsenic	8919470		1.3	<1.0	NA	< 1.0	103%	70%	130%	105%	80%	120%	116%	70%	130%
Barium	8919470		526	517	1.7%	< 2.0	94%	70%	130%	97%	80%	120%	99%	70%	130%
Beryllium	8919470		<0.5	<0.5	NA	< 0.5	103%	70%	130%	110%	80%	120%	116%	70%	130%
Boron	8919470		145	143	1.4%	< 10.0	102%	70%	130%	105%	80%	120%	93%	70%	130%
Cadmium	8919470		<0.2	<0.2	NA	< 0.2	101%	70%	130%	104%	80%	120%	116%	70%	130%
Chromium	8919470		<2.0	<2.0	NA	< 2.0	99%	70%	130%	103%	80%	120%	97%	70%	130%
Cobalt	8919470		0.7	0.6	NA	< 0.5	100%	70%	130%	102%	80%	120%	104%	70%	130%
Copper	8919470		1.4	1.4	NA	< 1.0	102%	70%	130%	107%	80%	120%	102%	70%	130%
Lead	8919470		<0.5	<0.5	NA	< 0.5	103%	70%	130%	109%	80%	120%	100%	70%	130%
Molybdenum	8919470		3.2	3.3	3.1%	< 0.5	97%	70%	130%	99%	80%	120%	104%	70%	130%
Nickel	8919470		1.3	1.3	NA	< 1.0	101%	70%	130%	102%	80%	120%	103%	70%	130%
Selenium	8919470		1.2	1.1	NA	< 1.0	100%	70%	130%	103%	80%	120%	112%	70%	130%
Silver	8919470		<0.2	<0.2	NA	< 0.2	96%	70%	130%	104%	80%	120%	98%	70%	130%
Thallium	8919470		<0.3	<0.3	NA	< 0.3	103%	70%	130%	106%	80%	120%	99%	70%	130%
Uranium	8919470		1.2	1.2	NA	< 0.5	101%	70%	130%	104%	80%	120%	103%	70%	130%
Vanadium	8919470		<0.4	1.2	NA	< 0.4	99%	70%	130%	100%	80%	120%	99%	70%	130%
Zinc	8919470		111	117	5.3%	< 5.0	103%	70%	130%	105%	80%	120%	106%	70%	130%

Comments: NA signifies Not Applicable.
Duplicate Qualifier: As the measured result approaches the RL, the uncertainty associated with the value increases dramatically, thus duplicate acceptance limits apply only where the average of the two duplicates is greater than five times the RL

Certified By: Divine Basily

AGAT Laboratories

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

Method Summary

CLIENT NAME: EXP Services Inc

AGAT WORK ORDER: 17T285277

PROJECT: 999-00055100-PP

ATTENTION TO: Travis Tan

SAMPLING SITE:

SAMPLED BY:

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Trace Organics Analysis			
Naphthalene	ORG-91-5105	EPA SW-846 3510 & 8270	GC/MS
Acenaphthylene	ORG-91-5105	EPA SW-846 3510 & 8270	GC/MS
Acenaphthene	ORG-91-5105	EPA SW-846 3510 & 8270	GC/MS
Fluorene	ORG-91-5105	EPA SW-846 3510 & 8270	GC/MS
Phenanthrene	ORG-91-5105	EPA SW-846 3510 & 8270	GC/MS
Anthracene	ORG-91-5105	EPA SW-846 3510 & 8270	GC/MS
Fluoranthene	ORG-91-5105	EPA SW-846 3510 & 8270	GC/MS
Pyrene	ORG-91-5105	EPA SW-846 3510 & 8270	GC/MS
Benz(a)anthracene	ORG-91-5105	EPA SW-846 3510 & 8270	GC/MS
Chrysene	ORG-91-5105	EPA SW-846 3510 & 8270	GC/MS
Benzo(b)fluoranthene	ORG-91-5105	EPA SW-846 3510 & 8270	GC/MS
Benzo(k)fluoranthene	ORG-91-5105	EPA SW-846 3510 & 8270	GC/MS
Benzo(a)pyrene	ORG-91-5105	EPA SW-846 3510 & 8270	GC/MS
Indeno(1,2,3-cd)pyrene	ORG-91-5105	EPA SW-846 3510 & 8270	GC/MS
Dibenz(a,h)anthracene	ORG-91-5105	EPA SW-846 3510 & 8270	GC/MS
Benzo(g,h,i)perylene	ORG-91-5105	EPA SW-846 3510 & 8270	GC/MS
2-and 1-methyl Naphthalene	ORG-91-5105	EPA SW-846 3510 & 8270	GC/MS
Chrysene-d12	ORG-91-5105	EPA SW-846 3510 & 8270	GC/MS
F1 (C6 to C10)	VOL-91-5010	MOE PHC E3421	(P&T)GC/FID
F1 (C6 to C10) minus BTEX	VOL-91-5010	MOE PHC E3421	(P&T)GC/FID
F2 (C10 to C16)	VOL-91-5010	MOE PHC E3421	GC / FID
F3 (C16 to C34)	VOL-91-5010	MOE PHC E3421	GC / FID
F4 (C34 to C50)	VOL-91-5010	MOE PHC E3421	GC / FID
Gravimetric Heavy Hydrocarbons	VOL-91-5010	MOE PHC E3421	BALANCE
Terphenyl	VOL-91-5010		GC/FID
Benzene	VOL-91-5010	MOE PHC-E3421	(P&T)GC/FID
Toluene	VOL-91-5010	MOE PHC-E3421	(P&T)GC/FID
Ethylbenzene	VOL-91-5010	MOE PHC-E3421	(P&T)GC/FID
Xylene Mixture	VOL-91-5010	MOE PHC-E3421	(P&T)GC/FID
F1 (C6 to C10)	VOL-91-5010	MOE PHC-E3421	(P&T)GC/FID
F1 (C6 to C10) minus BTEX	VOL-91-5010	MOE PHC-E3421	(P&T)GC/FID
F2 (C10 to C16)	VOL-91-5010	MOE PHC-E3421	GC/FID
F3 (C16 to C34)	VOL-91-5010	MOE PHC-E3421	GC/FID
F4 (C34 to C50)	VOL-91-5010	MOE PHC-E3421	GC/FID
Gravimetric Heavy Hydrocarbons	VOL-91-5010	MOE PHC-E3421	BALANCE
F2 (C10 to C16)	VOL-91-5010	MOE PHC E3421	GC/FID
F2 (C10 to C16) minus Naphthalene	VOL-91-5010	MOE PHC E3421	GC/FID
F3 (C16 to C34)	VOL-91-5010	MOE PHC E3421	GC/FID
F3 (C16 to C34) minus PAHs	VOL-91-5010	MOE PHC E3421	GC/FID
F4 (C34 to C50)	VOL -91- 5010	MOE PHC- E3421	GC/FID
Dichlorodifluoromethane	VOL-91-5001	EPA SW-846 5030 & 8260	(P&T)GC/MS
Vinyl Chloride	VOL-91-5001	EPA SW-846 5030 & 8260	(P&T)GC/MS
Bromomethane	VOL-91-5001	EPA SW-846 5030 & 8260	(P&T)GC/MS
Trichlorofluoromethane	VOL-91-5001	EPA SW-846 5030 & 8260	(P&T)GC/MS
Acetone	VOL-91-5001	EPA SW-846 5030 & 8260	(P&T)GC/MS
1,1-Dichloroethylene	VOL-91-5001	EPA SW-846 5030 & 8260	(P&T)GC/MS
Methylene Chloride	VOL-91-5001	EPA SW-846 5030 & 8260	(P&T)GC/MS
trans- 1,2-Dichloroethylene	VOL-91-5001	EPA SW-846 5030 & 8260	(P&T)GC/MS
Methyl tert-butyl ether	VOL-91-5001	EPA SW-846 5030 & 8260	(P&T)GC/MS

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Method Summary

CLIENT NAME: EXP Services Inc

AGAT WORK ORDER: 17T285277

PROJECT: 999-00055100-PP

ATTENTION TO: Travis Tan

SAMPLING SITE:

SAMPLED BY:

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
1,1-Dichloroethane	VOL-91-5001	EPA SW-846 5030 & 8260	(P&T)GC/MS
Methyl Ethyl Ketone	VOL-91-5001	EPA SW-846 5030 & 8260	(P&T)GC/MS
cis- 1,2-Dichloroethylene	VOL-91-5001	EPA SW-846 5030 & 8260	(P&T)GC/MS
Chloroform	VOL-91-5001	EPA SW-846 5030 & 8260	(P&T)GC/MS
1,2-Dichloroethane	VOL-91-5001	EPA SW-846 5030 & 8260	(P&T)GC/MS
1,1,1-Trichloroethane	VOL-91-5001	EPA SW-846 5030 & 8260	(P&T)GC/MS
Carbon Tetrachloride	VOL-91-5001	EPA SW-846 5030 & 8260	(P&T)GC/MS
Benzene	VOL-91-5001	EPA SW-846 5030 & 8260	(P&T)GC/MS
1,2-Dichloropropane	VOL-91-5001	EPA SW-846 5030 & 8260	(P&T)GC/MS
Trichloroethylene	VOL-91-5001	EPA SW-846 5030 & 8260	(P&T)GC/MS
Bromodichloromethane	VOL-91-5001	EPA SW-846 5030 & 8260	(P&T)GC/MS
Methyl Isobutyl Ketone	VOL-91-5001	EPA SW-846 5030 & 8260	(P&T)GC/MS
1,1,2-Trichloroethane	VOL-91-5001	EPA SW-846 5030 & 8260	(P&T)GC/MS
Toluene	VOL-91-5001	EPA SW-846 5030 & 8260	(P&T)GC/MS
Dibromochloromethane	VOL-91-5001	EPA SW-846 5030 & 8260	(P&T)GC/MS
Ethylene Dibromide	VOL-91-5001	EPA SW-846 5030 & 8260	(P&T)GC/MS
Tetrachloroethylene	VOL-91-5001	EPA SW-846 5030 & 8260	(P&T)GC/MS
1,1,1,2-Tetrachloroethane	VOL-91-5001	EPA SW-846 5030 & 8260	(P&T)GC/MS
Chlorobenzene	VOL-91-5001	EPA SW-846 5030 & 8260	(P&T)GC/MS
Ethylbenzene	VOL-91-5001	EPA SW-846 5030 & 8260	(P&T)GC/MS
m & p-Xylene	VOL-91-5001	EPA SW-846 5030 & 8260	(P&T)GC/MS
Bromoform	VOL-91-5001	EPA SW-846 5030 & 8260	(P&T)GC/MS
Styrene	VOL-91-5001	EPA SW-846 5030 & 8260	(P&T)GC/MS
1,1,2,2-Tetrachloroethane	VOL-91-5001	EPA SW-846 5030 & 8260	(P&T)GC/MS
o-Xylene	VOL-91-5001	EPA SW-846 5030 & 8260	(P&T)GC/MS
1,3-Dichlorobenzene	VOL-91-5001	EPA SW-846 5030 & 8260	(P&T)GC/MS
1,4-Dichlorobenzene	VOL-91-5001	EPA SW-846 5030 & 8260	(P&T)GC/MS
1,2-Dichlorobenzene	VOL-91-5001	EPA SW-846 5030 & 8260	(P&T)GC/MS
1,3-Dichloropropene	VOL-91-5001	EPA SW-846 5030 & 8260	(P&T)GC/MS
Xylene Mixture	VOL-91-5001	EPA SW-846 5030 & 8260	(P&T)GC/MS
n-Hexane	VOL-91-5001	EPA SW-846 5030 & 8260	(P&T)GC/MS
Toluene-d8	VOL-91-5001	EPA SW-846 5030 & 8260	(P&T)GC/MS
4-Bromofluorobenzene	VOL-91-5001	EPA SW-846 5030 & 8260	(P&T)GC/MS

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Method Summary

CLIENT NAME: EXP Services Inc

AGAT WORK ORDER: 17T285277

PROJECT: 999-00055100-PP

ATTENTION TO: Travis Tan

SAMPLING SITE:

SAMPLED BY:

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Water Analysis			
Antimony	MET-93-6103	EPA SW-846 6020A & 200.8	ICP-MS
Arsenic	MET-93-6103	EPA SW-846 6020A & 200.8	ICP-MS
Barium	MET-93-6103	EPA SW-846 6020A & 200.8	ICP-MS
Beryllium	MET-93-6103	EPA SW-846 6020A & 200.8	ICP-MS
Boron	MET-93-6103	EPA SW-846 6020A & 200.8	ICP-MS
Cadmium	MET-93-6103	EPA SW-846 6020A & 200.8	ICP-MS
Chromium	MET-93-6103	EPA SW-846 6020A & 200.8	ICP-MS
Cobalt	MET-93-6103	EPA SW-846 6020A & 200.8	ICP-MS
Copper	MET-93-6103	EPA SW-846 6020A & 200.8	ICP-MS
Lead	MET-93-6103	EPA SW-846 6020A & 200.8	ICP-MS
Molybdenum	MET-93-6103	EPA SW-846 6020A & 200.8	ICP-MS
Nickel	MET-93-6103	EPA SW-846 6020A & 200.8	ICP-MS
Selenium	MET-93-6103	EPA SW-846 6020A & 200.8	ICP-MS
Silver	MET-93-6103	EPA SW-846 6020A & 200.8	ICP-MS
Thallium	MET-93-6103	EPA SW-846 6020A & 200.8	ICP-MS
Uranium	MET-93-6103	EPA SW-846 6020A & 200.8	ICP-MS
Vanadium	MET-93-6103	EPA SW-846 6020A & 200.8	ICP-MS
Zinc	MET-93-6103	EPA SW-846 6020A & 200.8	ICP-MS

AGAT Laboratories

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

Chain of Custody Record

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

Report Information:

Company: Exp Services Inc
Contact: Travis Tan
Address: 220 Commerce Valley Dr W
Markham, ON
Phone: 905 695 3217 Fax:
Reports to be sent to:
1. Email: travis.tan@exp.com
2. Email: ajay.jayakathi@exp.com

Project Information:

Project: 999-00055100-BP
Site Location:
Sampled By:
AGAT Quote #: PO:
Please note: If quotation number is not provided, client will be billed full price for analysis.

Invoice Information:

Bill To Same: Yes ☒ No ☐
Company:
Contact:
Address:
Email:

Regulatory Requirements:

☐ No Regulatory Requirement
(Please check all applicable boxes)

☒ Regulation 153/04
Table 3 *Indicate One*
☐ Ind/Com
☒ Res/Park
☐ Agriculture
Soil Texture *(Check One)*
☐ Coarse
☒ Fine

☐ Sewer Use
☐ Sanitary
☐ Storm
Region *Indicate One*

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

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

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

Laboratory Use Only

Work Order #: 17T285277
Cooler Quantity:
Arrival Temperatures: 3.2 | 3.0 | 2.7 / 2.3 | 3.6 | 3.5
Custody Seal Intact: ☐ Yes ☐ No ☐ N/A
Notes:

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*

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 (Please Circle) Y / N	Metals and Inorganics	Metal Scan	Hydride Forming Metals	Client Custom Metals	(Check Applicable) ORPs: ☐ B-HWS ☐ Cl⁻ ☐ CN ☐ Cr^{6+} ☐ EC ☐ FOC ☐ NO_3/NO_2 ☐ Total N ☐ Hg ☐ pH ☐ SAR	Nutrients: ☐ TP ☐ NH_3 ☐ TKN ☐ NO_3 ☐ NO_2 ☐ NO_3/NO_2	Volatiles: ☐ VOC ☐ BTEX ☐ THM	CCME Fractions 1 to 4	ABNs	PAHs	Chlorophenols	PCBs	Organochlorine Pesticides	TCLP Metals/Inorganics	Sewer Use	BTEX	O.Reg 153 Metals
TH101	Nov15/17		4	GW									X	X									
TH103	Nov15/17		4										X	X									
~~TH104~~	~~TRIP~~																						
TH105	Nov15/17		4											X								X	
TH106	NOV15/17		4											X								X	
TH109	Nov15/17		6			Y							X	X		X						X	X
TH110	Nov15/17		4											X								X	
TH111	Nov15/17		4										X	X									
TH112	Nov15/17		4											X								X	
TH113	Nov15/17		4										X	X									
MW1-06	Nov15/17		5		Impacted Sample								X	X		X							X

Samples Relinquished By (Print Name and Sign): Haim Mandelzweig	Date: Nov 15/17	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:
Samples Relinquished By (Print Name and Sign):	Date:	Time:	Samples Received By (Print Name and Sign):	Date:	Time:

Page 1 of 2

N°: T 037722

Document ID: DOC-FM-16-1.011

Pink Copy - Client | Yellow Copy - AGAT | White Copy- AGAT

Date Issued: Feb 15, 2016

AGAT Laboratories

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webearth.agatlabs.com

Chain of Custody Record

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

Report Information:

Company: exp Services Inc
Contact: Travis Tan
Address: 220 Commerce Valley Dr W
Markham, ON
Phone: 905 695 3217 Fax:
Reports to be sent to:
1. Email: travis.tan@exp.com
2. Email: Jay.Jayplath@exp.com

Project Information:

Project: 999-00055100-PP
Site Location:
Sampled By:
AGAT Quote #: PO:
Please note: If quotation number is not provided, client will be billed full price for analysis.

Invoice Information:

Bill To Same: Yes ☒ No ☐
Company:
Contact:
Address:
Email:

Regulatory Requirements:

☐ No Regulatory Requirement
(Please check all applicable boxes)

☒ Regulation 153/04
Table 3 *Indicate One*
☐ Ind/Com
☒ Res/Park
☐ Agriculture
Soil Texture *(Check One)*
☐ Coarse
☒ Fine

☐ Sewer Use
☐ Sanitary
☐ Storm
Region *Indicate One*

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

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

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

Laboratory Use Only

Work Order #:
Cooler Quantity:
Arrival Temperatures: 2.6 2.3 2.7
Custody Seal Intact: ☐ Yes ☐ No ☐ N/A
Notes:

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*

Sample Matrix Legend

B	Biota
GW	Ground Water
O	Oil
P	Paint
S	Soil
SD	Sediment
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Sample Identification	Date Sampled	Time Sampled	# of Containers	Sample Matrix	Comments/ Special Instructions	Field Filtered - Metals, Hg, CrVI (Please Circle)	Metals and Inorganics	Metal Scan	Hydride Forming Metals	Client Custom Metals	(Check Applicable) ORPs: B-HWS, Cl, CN, Cr6+, EC, FOC, NO3/NO2, Total N, Hg, pH, SAR	Nutrients: TP, NH3, TKN, NO3, NO2, NO3/NO2	Volatiles: VOC, BTEX, THM	CCME Fractions 1 to 4	ABNs	PAHs	Chlorophenols	PCBs	Organochlorine Pesticides	TCLP Metals/Inorganics	Sewer Use	VOCs	O.Reg 153 Metals
MW250	Nov15/17	Am/Pm	2	GW	limited sample									X	NV	X	NV					X	
TH1100V	Nov14/17	Am/Pm	4	GW										X		X						X	
GR1	Nov15/17	Am/Pm	6	SW		Y								X		X						X	X
GR2			6			Y								X		X						X	X
GR3			6			Y								X		X						X	X
GR23			6			Y								X		X						X	X
TRIP BLANK	Nov14/17	Am/Pm	3	GW																		X	

Samples Relinquished By (Print Name and Sign): Harry Nandkumar	Date: Nov 15/17	Time:	Samples Received By (Print Name and Sign):	Date: 11/16/17	Time: 1240
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: 11/16/17	Time: 1600	Samples Received By (Print Name and Sign):	Date:	Time:

Page 2 of 2
N°: T 037723