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Phase Two Environmental Site Assessment

5360 Bank Street
Ottawa, Ontario

GEMTEC Project: 100227.101

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Submitted to:

Percy Pyper (1997) Ltd.
c/o Milestone Aggregate Consulting Services Inc.
1971 Old Prescott Road
Greely, Ontario
K4P 1N6

Phase Two Environmental Site Assessment

5360 Bank Street
Ottawa, Ontario

October 2, 2023
GEMTEC Project: 100227.101

GEMTEC Consulting Engineers and Scientists Limited
32 Steacie Drive
Ottawa, ON, Canada
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October 2, 2023 File: 100227.101

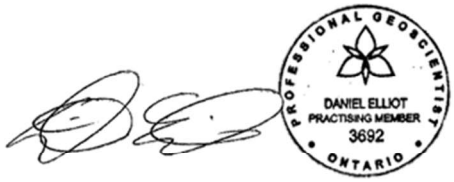
Percy Pyper (1997) Ltd.
c/o Milestone Aggregate Consulting Services Inc.
1971 Old Prescott Road
Greely, Ontario
K4P 1N6

Attention: Brent Pyper, President

Re: Phase Two Environmental Site Assessment
5360 Bank Street
Ottawa, Ontario

Please find enclosed GEMTEC's Phase Two Environmental Site Assessment per our proposal dated July 13, 2022. The Phase Two ESA was completed in general accordance with Ontario Regulation 153/04 and describes the interpreted environmental conditions at the above-noted property at the time the investigation was completed.

We trust this information is sufficient for your current needs. If you have any questions or require further information, please contact the undersigned.



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Enclosures
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EXECUTIVE SUMMARY

GEMTEC Consulting Engineers and Scientists Limited (GEMTEC) was retained by Milestone Aggregate Consulting Services Inc. on behalf of Percy Pyper (1997) Ltd. to carry out a Phase Two Environmental Site Assessment (ESA) in accordance with Ontario Regulation (O.Reg.) 153/04, as amended, for the property located at 5360 Bank Street, in Ottawa, Ontario (hereafter referred to as the "Site"). The site plan is provided in Figure 1, Appendix A.

Based on GEMTEC's Report entitled "Phase One Environmental Site Assessment 5360 Bank Street, Ottawa, Ontario" dated July 12, 2023, eleven areas of potential environmental concern (APECs) were identified on the Phase Two Property:

- **APEC 1:** Bulk storage of non-dyed diesel fuel in a fixed tank between the maintenance garage and shop near the maintenance garage bay door. Associated contaminants of potential concern (COPCs) are petroleum hydrocarbon fractions 1 to 4 (PHC F1-F4) and benzene, toluene, ethylbenzene, and xylene (BTEX).
- **APEC 2:** Bulk storage of motor oil in a fixed tank within the shop, beneath a workbench along the northern side of the building. Associated COPCs are PHC F1-F4 and BTEX.
- **APEC 3:** Bulk storage of dyed diesel in a fixed tank in the gravel area southwest of the maintenance garage and shop. Associated COPCs are PHC F1-F4 and BTEX.
- **APEC 4:** Bulk storage of furnace oil in a fixed tank between the shop and office buildings, west of the office. Associated COPCs are PHC F1-F4 and BTEX.
- **APEC 5:** Bulk storage of waste oil in a fixed tank within the maintenance garage in the southwestern corner. Associated COPCs are PHC F1-F4 and BTEX.
- **APEC 6:** Bulk storage of waste oil totes along the northern property boundary, northwest of the maintenance garage. Associated COPCs are PHC F1-F4 and BTEX.
- **APEC 7:** Bulk storage of salt in coverall domes along the northern property boundary, north of the parking area and northeast of the maintenance garage. Associated COPCs are electrical conductivity (EC), and sodium adsorption ratio (SAR) as surrogates for sodium and chloride.
- **APEC 8:** Bulk storage of cold patch asphalt on the southeastern portion of the Phase Two Property. Associated COPCs are PHC F1-F4, BTEX, and polycyclic aromatic hydrocarbons (PAHs).
- **APEC 9:** An oil water separator located in the gravel area southwest of the maintenance garage and shop, adjacent to APEC 3. Associated COPCs are PHC F1-F4 and BTEX.
- **APEC 10:** Bulk storage of furnace oil in a steel tank in the northwest corner of the shop area. Associated COPCs are PHC F1-F4 and BTEX.
- **APEC 11:** Bulk storage of dyed diesel in two tanks located in front of the CACE Construction coverall dome. Associated COPCs are PHC F1-F4 and BTEX.

As part of the Phase Two ESA investigation, a total of seven boreholes (BH23-01 to BH/MW23-07), were advanced with a Geoprobe drill rig to enable soil quality sampling. Five groundwater monitoring wells were installed at BH/MW23-03 through BH/MW23-07.

A total of 16 soil samples and six groundwater samples were collected and analyzed for the following contaminants of potential concern (COPCs): M&I, PAHs, and/or PHCs F1-F4 and BTEX.

Based on the analytical results of the Phase Two ESA, GEMTEC offers the following conclusions:

- The overburden observed at the Site during the subsurface investigation was generally described as glacial till consisting of sand and gravel, some silt, trace clay. The glacial till also contained cobbles and boulders.
- The reported concentrations of all soil and groundwater samples were compared to the MECP Table 2 and Table 8 SCS.
- The reported concentrations of all soil samples met the applicable Table 2 SCS and minor EC exceedances of Table 8 SCS were noted.
- The reported concentrations of all groundwater samples met the Table 2 and Table 8 SCS.
- No further environmental work is recommended at this time.

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1.0 INTRODUCTION

GEMTEC Consulting Engineers and Scientists Limited (GEMTEC) was retained by Milestone Aggregate Consulting Services Inc. on behalf of Percy Pyper (1997) Ltd. to carry out a Phase Two Environmental Site Assessment (ESA) in accordance with Ontario Regulation (O.Reg.) 153/04, as amended, for the property located at 5360 Bank Street, in Ottawa, Ontario (hereafter referred to as the "Site"). The site plan is provided on Figure A.1, Appendix A.

Based on GEMTEC's Report entitled "Phase One Environmental Site Assessment 5360 Bank Street, Ottawa, Ontario" dated July 12, 2023, eleven areas of potential environmental concern (APECs) were identified on the Phase Two Property

1.1 Site Description

The Site consists of one legal lot situated at civic address 5360 Bank Street in Ottawa, Ontario and has an area of approximately 24 hectares (60 acres). The Phase Two Property is currently owned and operated by Percy Pyper (1997) Ltd. as a supplier of topsoil, gravel, sand, stone and mulch to homeowners, contractors, and municipalities. The property consists of one large building with a garage, repair shop and office space. Coverall domes are present north of the parking lot for storage of salt and other aggregate material. A portion of the south of the Site is rented out to CACE Construction for yard space, a portable site trailer used as an office, and coverall dome for storage of materials and equipment.

The western half of the Site consists of a portion of an abandoned aggregate extraction pit formerly operated by Percy Pyper Limited, which was leased to Billie Construction and McKeown Contracting. The former pit was exhausted of marketable material prior to licencing requirements in 1972 under the Pits and Quarries Control Act (predecessor to the Aggregate Resources Act).

The industrial land use and building are considered legal non-conforming under the current zoning. However, it is the intention to proceed with a concurrent zoning by-law amendment to recognise the Site as light industrial zone rather than the presently designated rural zoning.

Pertinent details of the Site are provided in the table below:

Table 1.1: Summary of Phase Two Property

Detail	Source / Reference	Information
Legal Description	Service Ontario Parcel Register	PT LT 29 CON 4RF GLOUCESTER AS IN GL38672, EXCEPT CT123270, N726048, RO14492, GL61236 & CT182555; S/T GL36799; GLOUCESTER. SUBJECT TO AN EASEMENT IN GROSS OVER PART 6 ON 4R-21514 AS IN OC670199.;
Municipal Address	Client	5360 Bank Street Gloucester, ON K1X 1H1

Detail	Source / Reference	Information
Parcel Identification Number (PIN)	Service Ontario Parcel Register	04327-0069 (LT)
Current Owner	Service Ontario Parcel Register	Percy Pyper (1997) Ltd.
Owner Contact Information	Client	Percy Pyper (1997) Ltd 1971 Old Prescott Road Greely, Ontario K4P 1N6 Office: 613-821-3003 Fax: 613-821-4069
Site Area	GeoOttawa Mapping	60 acres (24 ha)
Current Zoning	GeoOttawa Mapping	RU – Rural Zone
Centroid UTM Co-ordinate	Google Earth Pro	4546450Easting 5014648 Northing

The location of the Site is shown on Figure A.1, Appendix A.

1.2 Current and Proposed Future Uses

The Site is currently used for light industrial purposes in an agricultural non-conforming land zone. It is GEMTEC's understanding that the Site is to be developed for future light industrial and commercial use.

1.3 Applicable Site Condition Standards

Site Condition Standards (SCS) were selected for the site in accordance with the requirements of O.Reg. 153/04, Record of Site Condition – Part XV.1 of the Environmental Protection Act (O. Reg. 153/04, Ministry of Environment and Climate Change (MECP), October 31, 2011), as amended.

The relevant Site characteristics were considered in the selection of the applicable regulatory criteria are as follows:

- Land Use: The most sensitive land use for the Site is commercial.
- Soil Texture: Section 42(2) of O.Reg. 153/04 defines coarse textured soil as "soil that contains more than 50 percent by mass of particles that are 75 micrometres or larger in mean diameter". The results of grain size analysis and the findings of the investigation indicate that at least 1/3 of the soil at the Site is considered "coarse textured".
- Soil Thickness and Proximity to Water Body: For the purposes of selection of the appropriate provincial standard, Section 43.1 of O.Reg. 153/04 identifies specific SCS be applied if any of the following circumstances exist:

(a) the property is a shallow soil property;

Based on the results of the field program completed during the environmental investigation, more than 2 metres of overburden was encountered in the advanced borehole locations without encountering bedrock to the depth of the borehole. Therefore, it is inferred that the Site is not considered a shallow soil property.

(b) the property includes all or part of a water body or is adjacent to a water body or includes land that is within 30 metres of a water body.

A stormwater management pond is present on the western portion of the Site remaining from historical aggregate extraction activities. As this is a pond for stormwater management, it is not considered a waterbody per O.Reg. 153/04.

However, the Site was noted to be within 30 metres of the John Boyce Municipal Drain. This drain acts as a channel that conducts water discharged from dewatering operations at an upstream property. The channel is located on the Site as it intersects the property north/south and continues to flow along the east boundary of the Site. Water flow within the channel was reported to be ephemeral, however, GEMTEC only observed water running within the channel.

Since the nature of the channel could not be confirmed, both site condition standards were selected in order to provide flexibility and options in the Site Plan in the case this 'waterbody' is considered applicable, and in the case that the 'waterbody' does not meet the considerations of a 'waterbody'.

- Groundwater Use: Potable water at the Site and surrounding properties is supplied by private wells. Therefore, the potable groundwater condition applies at the Site.
- Environmentally Sensitive Site: Environmental sensitivity is considered in the selection of appropriate provincial standards for comparison. Section 41 of O.Reg.153/04 states that a property is to be considered environmentally sensitive if any of the following are applicable:

(1) the property is,

(i) within an area of natural significance;

(ii) includes or is adjacent to an area of natural significance or part of such an area; or

(iii) includes land that is within 30 metres of an area of natural significance or part of such an area;

(2) the soil at the property has a pH value as follows:

(i) for surface soil, less than 5 or greater than 9;

(ii) for sub surface soil, less than 5 or greater than 11; or

(3) a qualified person is of the opinion that, given the characteristics of the property and the certifications the qualified person would be required to make in a record of site condition in relation to the property as specified in Schedule A, it is appropriate to apply this section to the property.

Through a review of samples submitted for analysis during the environmental investigation the pH value of the soils is between 7.38 and 9.75. Following a review of areas of natural significance, no areas were identified on, adjacent to or within 30 metres of the Site. Therefore, the Site is not considered to be an environmentally sensitive site.

Based on the review of site characteristics, the following provincial standards were considered to be applicable to the environmental results obtained during the investigation:

- MECP, 2011. Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act. ***Table 2:*** *Generic Site Condition Standards for full depth soils in a Potable Groundwater Condition.*

- MECP, 2011. Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act. ***Table 8:*** *Generic Site Condition Standards for Use within 30 m of a Water Body in a Potable Groundwater Condition.*

2.0 BACKGROUND INFORMATION

2.1 Physical Setting

The Site has a relatively flat topography and is at an elevation of approximately 110 metres above sea level (mASL). Surrounding topography is relatively flat but generally slopes in a southerly direction towards the John Boyce municipal drain.

Surficial soil and bedrock geology maps of the area indicate that the overburden in the study area is generally glaciofluvial deposits consisting of river deposits and delta topset facies, and till consisting of stone-poor, sandy silt to silty sand-textured till on Paleozoic. The overburden thickness ranges from 2 to 5 metres. The bedrock is mapped as lower Ordovician consisting of dolostone and sandstone from the Beekmantown Group.

Groundwater flow often reflects topographic features and typically flows toward nearby lakes, drains, rivers and wetland areas. Based on the topography of the area and local surface water features, it is expected that the local shallow groundwater flow will trend to the southwest towards the on-site stormwater management pond and drain. Regional groundwater flow is expected to flow to the northwest toward the Rideau River, located approximately 9 kilometers west of the Site.

2.2 Past Investigations

To GEMTEC's knowledge, no environmental investigations have been completed at the Site other than the Phase One ESA completed by GEMTEC in 2023 under separate cover.

3.0 OBJECTIVE AND SCOPE

The Phase Two ESA was completed to assess the soil and groundwater quality on Site within the Areas of Potential Environmental Concern (APECs) identified during the Phase One ESA (GEMTEC, 2023). The investigation was completed in general accordance with O.Reg. 153/04, to support a site plan application.

The objective of the Phase Two ESA was to provide subsurface information relative to the potential environmental impacts related to the areas of potential environmental concern (APECs) identified in the Phase Two ESA, namely:

Table 3.1: Investigation Rationale and Contaminants of Potential Concern

Area of Potential Environmental Concern	Sample Location	Summary of Analyses	
		Soil	Groundwater
1. Interior Furnace Oil UST	BH/MW23-03	PHCs F1-F4, BTEX	PHCs F1-F4, BTEX
2. Interior Motor Oil Bench UST	BH/MW23-07	PHCs F1-F4, BTEX	PHCs F1-F4, BTEX
3. Exterior Dyed Diesel UST	BH/MW23-04	PHCs F1-F4, BTEX	PHCs F1-F4, BTEX
4. Exterior Fiberglass Furnace Oil UST	BH/MW23-07	PHCs F1-F4, BTEX	PHCs F1-F4, BTEX
5. Interior Double Wall Waste Oil UST	BH/MW23-04 BH/MW23-05	PHCs F1-F4, BTEX	PHCs F1-F4, BTEX
6. Exterior Waste Oil Totes	BH/MW23-06	PHCs F1-F4, BTEX	PHCs F1-F4, BTEX
7. Bulk Storage of Road Salts	BH23-01	EC, SAR, PAHs PHCs F1-F4, BTEX	None
8. Asphaltic cold patch stockpile	BH23-02	PAHs PHCs F1-F4, BTEX	None
9. Oil water separator	BH/MW23-04	PHCs F1-F4, BTEX	PHCs F1-F4, BTEX
10. Exterior Furnace Oil UST	BH/MW23-07	PHCs F1-F4, BTEX	PHCs F1-F4, BTEX
11. Two Dyed Deisel USTs	BH/MW23-03	PHCs F1-F4, BTEX	PHCs F1-F4, BTEX

NOTES: EC – Electrical Conductivity
SAR – Sodium Adsorption Ratio
PAHs – Polycyclic Aromatic Hydrocarbons
PHC F1-F4 - petroleum hydrocarbon fractions 1 to 4
BTEX - benzene, toluene, ethylbenzene, and xylene

Environmental sampling was carried out to characterize the soil and groundwater quality within the APECs on the Site.The scope of work as outlined in GEMTEC's proposal included the following:

- Advancement of seven boreholes to 6 meters below ground surface (m bgs) via geoprobe drill rig to enable collection of soil quality samples
- Installment of five monitoring wells to enable collection of groundwater quality samples
- Submission of sixteen soil samples for laboratory analysis of one or more of the COPCs identified in the Phase One ESA: electrical conductivity (EC), sodium adsorption ration (SAR), polycyclic aromatic hydrocarbons (PAHs), Benzene, Toluene, Ethylbenzene and Xylene (BTEX), and Petroleum hydrocarbons (PHCs F1-F4).
- Submission of six groundwater samples for laboratory analysis of the COPCs identified in the Phase One ESA
- Submission of two duplicate soil sample, one groundwater duplicate sample, and one trip blank sample for the same COPCs as part of the field program Quality Assurance / Quality Control (QA/QC) requirements.
- Assessment of soil and groundwater analytical results to applicable provincial standards; and,
- Preparation of a Phase Two ESA report summarizing the purpose, methodology and results of the investigation (this report).

Deviations from the proposed scope which were discussed and agreed upon with the client prior to implementation.

4.0 FIELD PROGRAM METHODOLOGY

4.1 General

Prior to initiating the intrusive investigation, underground utilities were cleared by the locates subcontractor (USL) to identify the location of buried utilities on-site. Public and private utilities including telephone, gas, hydro, and municipal services were cleared.

4.2 Borehole Advancement

The borehole investigation and soil sampling program were carried out on August 21 and August 22, 2023. A total of seven boreholes (BH23-01 through BH23-07) were advanced on-site by Strata Drilling Group using a Geoprobe 7822 drill rig to approximately 6.0 metres below ground surface (m bgs). The drilling program was supervised by GEMTEC staff.

4.3 Monitoring Well Installment

Groundwater monitoring wells were installed by Strata using threaded 51 mm diameter at MW23-03 and 38mm diameter at the remaining well locations (MW23-04 to MW23-07), schedule 40, polyvinyl chloride (PVC) well screens and riser pipe, which were brought to the Site in sealed plastic bags. The annular space was filled with silica filter sand to at least 0.3 m above the well screen. The monitoring well was sealed with bentonite seal from the top of the sand pack and completed with a flush-mounted protective well casing. The riser pipes were sealed with a J-plug.

4.4 Surveying

GEMTEC completed a geodetic survey of each drilling location. The survey included the location and elevation (both the top of the flush mounted well cap and the top of the riser pipe) for each monitoring well. Elevations were determined relative to a permanent and recoverable benchmark (Geodetic Survey of Canada benchmark 001196745, elevation 338.139 masl). Well coordinates were obtained by GPS methods and reported in the NAD83 global coordinate system

4.5 Soil Sampling

Soil samples were recovered at regular intervals during drilling as well as when changes in soil texture, colour or evidence of contamination were observed. The soil samples were examined for texture and screened for visual and olfactory evidence of contamination in the field. Clean gloves were worn and changed between each sample to prevent cross contamination.

Borehole locations were identified as BHX-Y SAZ where X indicates the year the borehole was advanced, Y is the borehole identifier, and Z is the sample identifier. For example, BH23-02 SA1 indicates the borehole was constructed in 2023 and is identified as sample number 1 of borehole 2.

A summary of the soil samples which were collected from each location for laboratory analyses is summarized in Table 4.1.

Table 4.1: Summary of Soil Samples Submitted for Laboratory Analysis

Borehole	Sample	Depth of Sample (mbgs)	Soil Description	Vapour Readings	Laboratory Analyses
BH23-01	SA2	0.00–0.38	Brown silty sand and gravel	HEX: 0 IBI: 0	EC, SAR, pH, PAHs
BH23-01	SA2	0.38-0.76	Brown silty sand and gravel	HEX: 0 IBI: 0	EC, SAR, pH, PAHs
BH23-02	SA1	0.00–0.38	Brown silty sand and gravel	HEX: 0 IBI: 0	EC, SAR, pH, PAHs
BH23-02	SA2/SA201	1.52 – 2.29	Grey sand and gravel with some clay	HEX: 0 IBI: 0	EC, SAR, pH, PAHs
BH/MW23-03	SA2	0.38-0.76	Brown silty sand and gravel	HEX: 160 IBI: 2	PHCs F1-F4, BTEX
BH/MW23-03	SA6	4.56-5.33	Brown silty sand and gravel	HEX: 950 IBI: 2	PHCs F1-F4, BTEX
BH/MW23-04	SA1	0.38-0.76	Brown silty sand and gravel	HEX: 55 IBI: 0	PHCs F1-F4, BTEX

Borehole	Sample	Depth of Sample (mbgs)	Soil Description	Vapour Readings	Laboratory Analyses
BH/MW23-04	SA7	4.57-5.33	Grey sand and gravel with some clay	HEX: 290 IBI: 1	PHCs F1-F4, BTEX
BH/MW23-05	SA1	0.38-0.76	Brown silty sand and gravel	HEX: 0 IBI: 0	PHCs F1-F4, BTEX
BH/MW23-05	SA6	4.57-5.33	Brown silty sand and gravel	HEX:310 IBI: 1	PHCs F1-F4, BTEX
BH/MW23-06	SA1	0.38-0.76	Brown silty sand and gravel	HEX: 0 IBI: 0	PHCs F1-F4, BTEX
BH/MW23-06	SA6/SA601	5.33-6.09	Brown sand and gravel	HEX: 15 IBI:1	PHCs F1-F4, BTEX
BH/MW23-07	SA1	0.38-0.76	Brown sand and gravel	HEX:0 IBI: 0	PHCs F1-F4, BTEX
BH/MW23-07	SA2	0.38-0.76	Brown sand and gravel	HEX: 0 IBI: 0	PHCs F1-F4, BTEX

Notes: mbgs – metres below ground surface

4.6 Groundwater Sampling

Following drilling, the monitoring wells were developed on August 23, 2023, by removing three well volumes, or until the well was pumped dry, using dedicated Waterra® tubing and inertial pumps. During monitoring well development, qualitative observations were made of water colour, clarity, and the presence or absence of any hydrocarbon sheen or odours.

The depth to water in each well was measured using an electronic water level tape prior to purging. Monitoring wells were sampled using low flow techniques using a GeoPump peristaltic pump. Physical parameters pH, temperature, conductivity (EC), dissolved oxygen (DO), and redox potential (ORP) are monitored with samples collected upon stabilization. During purging and sampling, qualitative observations were made of water colour, clarity, and the presence of hydrocarbon sheen or odour.

Groundwater samples were placed in laboratory-prepared containers and stored on ice in a cooler until delivery to the analytical laboratory under chain-of-custody procedures. A summary of the groundwater samples submitted for analysis is presented below.

Table 4.2: Summary of Groundwater Samples Submitted for Laboratory Analysis

Monitoring Well/ Sample ID	Well Depth (m bgs)	Soil Description of Screened Interval	Evidence of Petroleum Hydrocarbon Product	Laboratory Analyses
BH/MW23-03	5.940	Silty sand and gravel, trace clay	None	PHCs F1-F4, BTEX
BH/MW23-04	6.495	Silty sand and gravel	None	PHCs F1-F4, BTEX
BH/MW23-05	4.910	Silty sand and gravel, trace clay	None	PHCs F1-F4, BTEX
BH/MW23-06	5.320	Silty sand and gravel	None	PHCs F1-F4, BTEX
BH/MW23-07	6.000	Silty sand and gravel	None	PHCs F1-F4, BTEX

4.7 Laboratory Analytical Program

All samples were stored and transported in laboratory supplied coolers with ice. Soil samples were submitted to AGAT Laboratories Ltd. (AGAT) of Ottawa, Ontario, for analysis of the COPCs. AGAT is accredited by the Standards Council of Canada (SCC) in cooperation with the Canadian Association of Laboratory Accreditation (CALA) for specific environmental tests listed in the scope of accreditation. The laboratory meets the ISO/IEC 17025 (2017) standards and employs in-house quality assurance and quality control programs to govern sample analysis including the analysis of method blanks, spiked blanks, and the analysis of duplicates (10%) for each sample batch.

4.8 Surveying

The boreholes were positioned to strategically assess potential impacts within the identified APECs. The coordinate locations and ground surface elevations were recorded using a Trimble R10 global positioning system referenced to NAD83 (CSRS) Epoch 2010, vertical network CGVD28 and are considered accurate within the tolerance of the instrument. The elevations of the top of each well casing were also documented using the same technique. The locations of the boreholes advanced on-site are shown on Figure A.4 in Appendix A.

4.9 Quality Assurance / Quality Control Program

Quality assurance and quality control of the soil samples was maintained by adherence to the following:

- The field investigation was completed under GEMTEC standard operating procedures (SOPs) for intrusive investigations;
- Samples were assigned unique identification numbers, as they were collected, identifying the project number, date, sample location, and depth. The sample numbers were recorded in field notes for each location;

- Sample containers provided by the analytical laboratory were used and laboratory requirements for sample size, container type, preservatives and filtering were maintained;
- Non-disposable sampling equipment was cleaned using Alconox© and distilled water following each use to avoid potential cross-contamination;
- A chain-of-custody (COC) form was filled out prior to submitting the selected samples to the laboratory. The COC documented sample movement from time of field collection to receipt at the laboratory and provided a record of sample identification, requested analysis and conditions of samples upon arrival at the laboratory (e.g., temperature, container status, etc.);
- Generally, one sample for every ten samples submitted is assessed by the laboratory internal QA/QC program. For each parameter, there is an acceptable upper and lower limit for measured concentrations.

5.0 RESULTS

5.1 Site Stratigraphy

The surficial geology of the Phase Two Property was visually observed and logged during the borehole program. The soil conditions identified in the boreholes advanced as part of this investigation are provided on the borehole logs in Appendix B. The borehole logs indicate the subsurface conditions encountered at the specific test locations only, conditions at other than the test locations may vary. Boundaries between zones on the logs are often not distinct, but rather are transitional and have been interpreted based on observations by GEMTEC field personnel. The following sections present a summary of the subsurface conditions observed in the boreholes advanced during this investigation.

A layer of brown silty sand with gravel was encountered at the ground surface in all borehole locations with varying amount of gravel and clay and extending to maximum borehole depths. The material can generally be described as glacial till, consisting of a heterogeneous mix of all grain sizes, which at this Site is described as sand and gravel, some silt, trace clay. The glacial till also contains cobbles and boulders.

5.2 Analytical Results

5.2.1 Soil Quality Results

Soil samples were selected for laboratory analysis based on visual, olfactory and tactile evidence of impact. A total of 16 soil samples were submitted to AGAT for analysis of the COPCs including EC, SAR, PAHs, PHCs F1-F4 and BTEX.

- There were no reported exceedances to MECP Table 2 SCS.
- Two parameters were reported in exceedance to MECP Table 8 SCS:
    - Electrical conductivity exceeded Table 8 SCS at BH23-02 in SA1 and SA201.

The analytical results are summarized in Table 5.1 below and are presented in Appendix C.

Table 5.1: Soil Exceedance to applicable Site Condition Standards

Sample ID	MECP Table 2 ICC SCS	MECP Table 8 RPI/ICC SCS
BH23-01 SA1	None	None
BH23-01 SA2	None	None
BH23-02 SA1	None	**EC**
BH23-02 SA2	None	None
BH23-02 SA201	None	**EC**
BH23-03 SA2	None	None
BH23-03 SA6	None	None
BH23-04 SA1	None	None
BH23-04 SA7	None	None
BH23-05 SA1	None	None
BH23-05 SA6	None	None
BH23-06 SA1	None	None
BH23-06 SA6	None	None
BH23-06 SA106	None	None
BH23-07 SA1	None	None
BH23-07 SA1	None	None

Notes:

None – No exceedances

MECP Table 2 SCS: Table 8: Generic Site Condition Standards (SCS) for full depth soils in Potable Groundwater Condition,/Commercial/Community (ICC) land use, coarse textured soils. (MECP, 2011).

MECP Table 8 SCS: Table 8: Generic Site Condition Standards (SCS) for Use within 30 m of a Water Body in Potable Groundwater Condition, Residential/Parkland/Institutional/Industrial/Commercial/Community (RPI/ICC) land use, coarse textured soils. (MECP, 2011).

5.2.2 Groundwater Quality Results

Groundwater samples were submitted from all wells in addition to a duplicate sample and trip blank sample. A total of 7 groundwater samples were submitted to AGAT for analysis of the COPCs including PHCs F1-F4 and BTEX. Exceedances to the selected MECP SCS Tables are summarized in Table 5.2 below and are presented in Figure A.2 of Appendix A.

Table 5.2: Groundwater exceedances to applicable Site Condition Standards

Sample ID	MECP Table 2 ICC SCS	MECP Table 8 RPI/ICC SCS
MW23-03	None	None
MW23-04	None	None
MW23-05	None	None
MW23-501	None	None
MW23-06	None	None
MW23-07	None	None

Notes:

None – No exceedances

MECP Table 2 SCS: Generic Site Condition Standards (SCS) for groundwater in Potable Groundwater Condition /Commercial/Community (ICC) land use, coarse textured soils. (MECP, 2011).

MECP Table 8 SCS: Generic Site Condition Standards (SCS) for groundwater within 30 m of a Water Body in Potable Groundwater Condition, Residential/Parkland/Institutional/Industrial/Commercial/Community (RPI/ICC) land use, coarse textured soils. (MECP, 2011).

5.3 Quality Assurance / Quality Control

The quality assurance assessment of the field duplicate sample results was conducted according to the MECP document "Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act", March 9, 2004 (amended in July 2009 and effective as of July 1, 2011) ("Analytical Protocol").

To determine the precision of the analytical methods and field sampling procedures, blind duplicate samples were collected during soil and groundwater sampling. Precision is determined by the relative percent difference ("RPD") between the duplicate and original samples and was calculated as follows:

$$RPD = \frac{|x_1 - x_2|}{x_m}$$

Where
x_1 initial sample results
x_2 duplicate sample results
x_m mean of x_1, x_2

RPDs were calculated for all parameters with concentrations above the reporting level. No parameters in soil or groundwater duplicate pairs returned concentrations above reporting levels.

It is noted that the trip blank sample was found to have no detectable concentrations during groundwater sampling event. The quality of the analytical results is further supported by analytical laboratory's internal quality assurance program that includes laboratory blanks, spikes, surrogates, and duplicate samples.

All certificates of analysis or analytical reports received pursuant to clause 47 (2) (b) of the regulation comply with subsection 47(3). A certificate of analysis or analytical report has been received for each sample submitted for analysis and is provided in Appendix D.

Accordingly, the analytical data generated during the investigation are valid and representative and may be used in this Phase Two ESA without further qualification.

6.0 PHASE TWO CONCEPTUAL SITE MODEL

The Phase Two ESA conceptual site model (CSM) is presented in the following sections.

The Phase Two CSM was prepared in accordance with Schedule E, Part V, Table 1, Section 6, of Ontario Regulation 153/04 (O. Reg. 153/04) and is described in the text below and in the following figures:

Figure A.1 Phase Two Property and Phase One Study Area
Figure A.2 Site Features
Figure A.3 PCAs and APECs
Figure A.4 Borehole and Monitoring Well Locations
Figure A.5 Groundwater Elevations and Inferred Flow
Figure A.6 Soil Quality Results
Figure A.7 Groundwater Quality Results

6.1 Property Description and History

The Site has an area of 24 hectares and is located at 5360 Bank Street in Ottawa, Ontario. The Phase Two Property is currently owned and operated by Percy Pyper (1997) Ltd. as a supplier of topsoil, gravel, sand, stone and mulch to homeowners, contractors, and municipalities. The property consists of one large building with a garage, repair shop and office space. Coverall domes are present north of the parking lot for storage of salt and other aggregate material. A portion of the south of the Site is rented out to CACE Construction for yard space, a portable site trailer used as an office, and coverall dome for storage of materials and equipment.

The western half of the Site consists of a portion of an abandoned aggregate extraction pit formerly operated by Percy Pyper Limited, which was leased to Billie Construction and McKeown Contracting. The former pit was exhausted of marketable material prior to licencing requirements in 1972 under the Pits and Quarries Control Act (predecessor to the Aggregate Resources Act). Site features are shown in Figure A.2. Table 6.1 provides details about the Phase Two Property.

Table 6.1: Phase Two Property Details

Detail	Source / Reference	Information
Legal Description	Service Ontario Parcel Register	PT LT 29 CON 4RF GLOUCESTER AS IN GL38672, EXCEPT CT123270, N726048, RO14492, GL61236 & CT182555; S/T GL36799; GLOUCESTER. SUBJECT TO AN EASEMENT IN GROSS OVER PART 6 ON 4R-21514 AS IN OC670199.;
Municipal Address	Client	5360 Bank Street Gloucester, ON K1X 1H1
Parcel Identification Number (PIN)	Service Ontario Parcel Register	04327-0069 (LT)
Current Owner	Service Ontario Parcel Register	Percy Pyper (1997) Ltd.
Owner Contact Information	Client	Percy Pyper (1997) Ltd 1971 Old Prescott Road Greely, Ontario K4P 1N6 Office: 613-821-3003 Fax: 613-821-4069
Site Area	GeoOttawa Mapping	60 acres (24 ha)
Current Zoning	GeoOttawa Mapping	RU – Rural Zone
Centroid UTM Co-ordinate	Google Earth Pro	4546450Easting 5014648 Northing

A summary of the current and past uses, based on the information reviewed as part of the 2023 Phase One ESA, is provided below:

Table 6.2: Current and Past Property Uses

Year	Owner	Description of Property Use
Prior to 1945 to 1958	Percy Pyper Ltd.	Agricultural
1958 to 1972	Percy Pyper Ltd. (leased to Billie Construction and McKeown Contracting)	Aggregate extraction operation
1972 to Present	Percy Pyper (1997) Ltd.	Light Industrial (Currently considered legal non-conforming but presently designated rural zoning)

As noted above, the Phase Two Property is currently owned by Percy Pyper (1997) Ltd.

6.2 Previous Investigation

The following lists the previous reports available for the Site. The Phase One ESA formed the basis for completing this Phase Two ESA.

- "Phase One Environmental Site Assessment, 5360 Bank Street, Ottawa, Ontario", prepared by GEMTEC, dated July 2023 (2023 Phase One ESA).

6.3 Potentially Contaminating Activities

The potentially contaminating activities (PCAs) identified via the 2023 Phase One ESA are summarized in Table 6.3 below. The PCAs identified resulted in 11 area of potential environmental concern (APECs).

Table 6.3: Summary of Potentially Contaminating Activities

PCA	Address / Location	Distance from Phase One Property	Description	Data Source	PCA Results in APEC
48	On the Phase One Property	N/A	Two large salt domes are present on the northeast portion of the Phase One Property.	Site visit, Interview	Yes Identified during the site reconnaissance and as per O.Reg. 153/04, any PCA identified on the Phase One Property must warrant an APEC
28	On the Phase One Property	N/A	Furnace oil tank, inside, 1000 Litres	Site visit, Interview	Yes Based on presence on Phase One Property
28	On the Phase One Property	N/A	Furnace oil tank, inside, 1000 Litres	Site visit, Interview	Yes Based on presence on Phase One Property
8	On the Phase One Property	N/A	Motor Oil Bench Tank, 1000 Litres (2021)	Site visit, Interview	Yes Based on presence on Phase One Property
28	On the Phase One Property	N/A	Dyed Diesel Tank, 4500 Litres (2013)	Site visit, Interview	Yes Based on presence on Phase One Property

PCA	Address / Location	Distance from Phase One Property	Description	Data Source	PCA Results in APEC
28	On the Phase One Property	N/A	Fiberglass Furnace Oil Tank Outside, 1000 Litres (2012)	Site visit, Interview	Yes Based on presence on Phase One Property
8	On the Phase One Property	N/A	1000 Litre Double Wall Steel Shop Waste Oil Tank Inside (1994)	Site visit, Interview	Yes Based on presence on Phase One Property
28	On the Phase One Property	N/A	Two 450 Litre Dyed Diesel Tanks	Site visit	Yes Based on presence on Phase One Property
OT5	On the Phase One Property	On the Phase One Property	A stockpile of cold patch asphalt is present on the Phase One Property on the portion rented to CACE Construction directly to the west of the John Boyce municipal drainage ditch (creek).	Site visit, Interview	Yes Based on presence on Phase One Property
OT6	On the Phase One Property	On the Phase One Property	An oil water separator is present outside to the west of the main building which connects to the main bay in the shop inside the building.	Site visit, Interview	Yes Based on presence on Phase One Property
28	5352 Bank Street	30m east/northeast	Two historical/delisted single wall underground storage tank containing gasoline installed in 1992. Record of expired fuel safety facility in customer shut down (no year)	ERIS	No Due to direction from the Phase one Property and inferred groundwater flow direction

PCA	Address / Location	Distance from Phase One Property	Description	Data Source	PCA Results in APEC
OT3	5352 Bank Street	30m east/northeast	Registered generator of organic laboratory chemicals from in 2021 and 2022.	ERIS	No Due to direction from the Phase one Property and inferred groundwater flow direction
OT1	5352 Bank Street	30m east/northeast	Registered generator of light fuels from in 2021 and 2022.	ERIS	No Due to direction from the Phase one Property and inferred groundwater flow direction
34	5389 Bank Street	99m east	Registered in Scott's Manufacturing Directory for Other Ornamental and Architectural Metal Products Manufacturing	ERIS	No Due to distance and/or direction from the Phase one Property
40	5339 Bank Street	105m east/northeast	Record in the Pesticide Registry as an active pesticide operator since 2020.	ERIS	No Due to distance and/or direction from the Phase one Property
28	5401 Bank Street	136m east	Reported spill incident in 1993 involving furnace oil to land due to an unknown cause. Volume was not reported. Soil contamination possible.	ERIS	No Due to distance and/or direction from the Phase one Property and inferred groundwater flow direction
28	5401 Bank Street	136m east	Reported spill incident in 1993 involving an above ground tank leak due to corrosion of 180 L of stove oil (furnace oil) to land. Soil contamination confirmed.	ERIS	No Due to distance and/or direction from the Phase one Property and inferred groundwater flow direction
28	5401 Bank Street	136m east	Reported spill incident in 1998 involving 1L of furnace oil to land from leaking tank. Soil contamination possible	ERIS	No Due to distance and/or direction from the Phase one Property and inferred groundwater flow direction

PCA	Address / Location	Distance from Phase One Property	Description	Data Source	PCA Results in APEC
28	5401 Bank Street	136m east	Reported spill incident in 1999 involving 450L of furnace oil to land from leaking tank. Soil contamination confirmed.	ERIS	No Due to distance and/or direction from the Phase one Property and inferred groundwater flow direction
OT1	5401 Bank Street, Suite 1022	136m east	Registered generator of light fuels from in 2021 and 2022.	ERIS	No Due to distance and/or direction from the Phase one Property as well as no evidence of bulk storage
OT4	5315 Bank Street	228m northeast	Registered generator of paint, pigment, coating residues from 2006 to 2010	ERIS	No Due to distance and/or direction from the Phase one Property as well as no evidence of bulk storage
OT1	5151 Albion Road	233 m west	Registered generator of petroleum distillates, and waste oils & lubricants from in 2013 to 2022.	ERIS	No Due to distance and/or direction from the Phase one Property as well as no evidence of bulk storage

6.4 Areas of Potential Environmental Concern

The areas of potential environmental concern (APECs) identified based on the PCAs and as set out in the 2023 Phase One ESA are summarized in Table 6.4 below. The borehole/monitoring well locations completed to investigate each of these APECs are also identified. Figure A.3 indicates the location of the APECs and Figure A.4 provides the investigation locations in relation to the APECs.

Table 6.4: Summary of APECs

APEC #	PCA Identifier	Location	Description	Media	COPCs	Investigation Location
1	28	On the Phase One Property – Between maintenance garage and shop	Furnace Oil Tank, inside	Soil/ GW	PHCs F1-F4, BTEX	BH/MW23-07
2	8	On the Phase One Property – Within the shop	Motor Oil Bench Tank, 1000 Litres (2021)	Soil	PHCs F1-F4, BTEX	BH/MW23-07
3	28	On the Phase One Property – Southwest of the shop	Dyed Diesel Tank, 4500 Litres (2013)	Soil/ GW	PHCs F1-F4, BTEX	BH/MW23-04
4	28	On the Phase One Property – Between the shop and office	Fiberglass Furnace Oil Tank Outside, 900 Litres (2012)	Soil/ GW	PHCs F1-F4, BTEX	BH/MW23-07
5	8	On the Phase One Property – Southwest corner of the maintenance garage	Double Wall Steel Shop Waste Oil Tank Inside (1994)	Soil	PHCs F1-F4, BTEX	BH/MW23-05
6	8	On the Phase One Property – Northern property boundary northwest of the maintenance garage	Waste Oil Totes	Soil/ GW	PHCs F1-F4, BTEX	BH/MW23-06
7	48	On the Phase One Property – Northern property boundary, northeast of the maintenance garage	Two large salt domes are present on the northeast portion of the Phase One Property	Soil	EC/ SAR	BH23-01
8	OT5	On the Phase One Property – Southern property boundary, south of CACE storage	Asphaltic cold patch stockpile on the southeast portion of the Phase One Property	Soil	PHCs F1-F4, BTEX, PAHs	BH23-02
9	OT6	On the Phase One Property – Adjacent to southern site of the maintenance garage	An oil water separator is present outside to the west of the main building which connects to the main bay in the shop inside the building	Soil/ GW	PHCs F1-F4, BTEX	BH/MW23-04
10	28	Northwest corner of the shop	Furnace Oil Tank, inside	Soil/ GW	PHCs F1-F4, BTEX	BH/MW23-04
11	28	CACE Construction yard space	Two Dyed Deisel Tanks	Soil/ GW	PHCs F1-F4, BTEX	BH/MW23-03

Notes:
GW – Groundwater

6.5 Subsurface Structures and Utilities

Buried utility service locates were completed prior to the drilling program and indicated underground electrical services, hydro services and fibre optic cables. Domestic water well and septic tank services were determined to be present on the Phase Two Property.

Given the conditions encountered during drilling and the lab results, buried services are not considered to have facilitated the migration of contaminants at the Site.

6.6 Physical Setting

Topography

The Site has a relatively flat topography and is at an elevation of approximately 110 metres above sea level (mASL). Surrounding topography is relatively flat but generally slopes in a southerly direction towards the John Boyce municipal drain.

Surficial soil and bedrock geology maps of the area indicate that the overburden in the study area is generally glaciofluvial deposits consisting of river deposits and delta topset facies, and till consisting of stone-poor, sandy silt to silty sand-textured till on Paleozoic. The overburden thickness ranges from 2 to 5 metres. The bedrock is mapped as lower Ordovician consisting of dolostone and sandstone from the Beekmantown Group.

Groundwater flow often reflects topographic features and typically flows toward nearby lakes, drains, rivers and wetland areas. Based on the topography of the area and local water bodies, it is expected that the local shallow groundwater flow will trend to the southwest towards the on-site ponded water and drain. Regional groundwater flow is expected to flow to the northwest toward the Rideau River, located approximately 9 kilometers west of the Site.

Stratigraphy - Boreholes

In general, the subsurface soil conditions encountered in the boreholes and monitoring wells advanced as part of this Phase Two ESA included a layer of brown silty sand with gravel encountered at the ground surface in all borehole locations with varying amount of gravel and clay and extending to maximum borehole depths. The material can generally be described as glacial till, consisting of a heterogeneous mix of all grain sizes, which at this Site is described as sand and gravel, some silt, trace clay. The glacial till also contains cobbles and boulders. Boreholes were advanced to depths between 3.96 to 6.86 mbgs.

Depth to Bedrock

The MECP well records indicate that limestone bedrock was encountered at depths ranging from 1.8 to 2.4 metres. Bedrock was not encountered during the Phase Two ESA which extended boreholes to depths between 3.96 and 6.86 mbgs.

Hydrogeological Characteristics

Based on the topography of the area and local water bodies, it is expected that the local shallow groundwater flow will trend to the southwest towards the on-site ponded water and drain. Regional groundwater flow is expected to flow to the northwest toward the Rideau River, located approximately 9 kilometers west of the Phase One Property.

Based on the interpreted groundwater elevation contours for water level measured on August 25, 2023, the inferred direction of shallow groundwater flow is generally to the southeast

The average horizontal hydraulic gradient for shallow groundwater conditions measured on August 25, 2023 was 0.022 m/m. Vertical hydraulic gradient for shallow groundwater conditions were not calculated as nesting monitoring wells were not installed at the Site.

Depth to Groundwater

Water levels measured in the monitoring wells ranged from 3.43 m to 3.95 m bgs on the August 25, 2023 monitoring event. Groundwater elevations ranged from 104.94 to 106.68 meters above sea level (m asl) relative to the geodetic datum on August 25, 2023.

Environmentally Sensitive Areas

No areas of natural significance were identified on the Site or within the Phase Two Study Area.

Shallow Soil Property or Water Body

Overburden soil at the Site extended beyond the depth of investigation (i.e., beyond 6.86 m bgs). Therefore, Section 43.1(a) of the Regulation does not apply to the Phase Two Property.

A stormwater management pond is present on the western portion of the Site remaining from historical aggregate extraction activities. As this is a man-made pond, it is not considered a waterbody per O.Reg. 153/04. The Site is within 30 metres of the John Boyce Municipal Drain. This drain acts as a channel that conducts water discharge from dewatering operations at an upstream property. The channel is located on the Site as it intersects the property north/south and continues to flow along the east boundary of the Site.

It is unclear if the John Boyce Municipal Drain is applicable. Therefore, Section 43.1(b) of the Regulation was applied to the Phase Two Property, alongside the case where Section 43.1(b) does not apply.

Excess Soil

No evidence of stockpiled fill material or fill with debris or deleterious material was observed on the Phase Two Property during the Phase One site reconnaissance. However, a stockpile of

aggregate gravel was observed during the Phase One site reconnaissance and a parking lot is present on the Phase Two Property, which is likely to contain engineered subgrade material beneath the asphaltic surface. The Phase One investigation indicated an access road was constructed along the western property boundary of the Phase One Property between 2005 and 2006. Access road material appears to be the same as aggregate material being extracted from the surrounding aggregate extraction activities. The aggregate stockpile and road base materials are not considered PCAs for the Phase Two Property and samples related to the materials were not submitted for laboratory analysis.

6.7 Site Condition Standards

Site Condition Standards (SCS) were selected for the Site in accordance with the requirements of O.Reg. 153/04, Record of Site Condition – Part XV.1 of the Environmental Protection Act (O. Reg. 153/04, Ministry of Environment and Climate Change (MECP), October 31, 2011), as amended.

The relevant Site characteristics considered in the selection of the applicable regulatory criteria are as follows:

- Land Use: The most sensitive land use for the Site is commercial.
- Soil Texture: Section 42(2) of O.Reg. 153/04 defines coarse textured soil as “soil that contains more than 50 percent by mass of particles that are 75 micrometres or larger in mean diameter”. The results of grain size analysis and the findings of the investigation indicate that at least 1/3 of the soil at the Site is considered “coarse textured”.
- Soil Thickness and Proximity to Water Body: For the purposes of selection of the appropriate provincial standard, Section 43.1 of O.Reg. 153/04 identifies specific SCS be applied if any of the following circumstances exist:

  (a) the property is a shallow soil property;

  Based on the results of the field program completed during the environmental investigation, more than 2 metres of overburden was encountered in the advanced borehole locations without encountering bedrock to the depth of the borehole. Therefore, it is inferred that the Site is not considered a shallow soil property.

  (b) the property includes all or part of a water body or is adjacent to a water body or includes land that is within 30 metres of a water body.

  A stormwater management pond is present on the western portion of the Site remaining from historical aggregate extraction activities. As this is a pond for stormwater management, it is not considered a waterbody per O.Reg. 153/04.

  However, the Site was noted to be within 30 metres of the John Boyce Municipal Drain. This drain acts as a channel that conducts water discharged from dewatering operations at an upstream property. The channel is located on the Site as it intersects the property

north/south and continues to flow along the east boundary of the Site. Water flow within the channel was reported to be ephemeral, however, GEMTEC only observed water running within the channel.

Since the nature of the channel could not be confirmed, both site condition standards were selected in order to provide flexibility and options in the Site Plan in the case this 'waterbody' is considered applicable, and in the case that the 'waterbody' does not meet the considerations of a 'waterbody'.

- Groundwater Use: Potable water at the Site and surrounding properties is supplied by private wells. Therefore, the potable groundwater condition applies at the Site.
- Environmentally Sensitive Site: Environmental sensitivity is considered in the selection of appropriate provincial standards for comparison. Section 41 of O.Reg.153/04 states that a property is to be considered environmentally sensitive if any of the following are applicable:

  (1) the property is,

  (i) within an area of natural significance;

  (ii) includes or is adjacent to an area of natural significance or part of such an area; or

  (iii) includes land that is within 30 metres of an area of natural significance or part of such an area;

  (2) the soil at the property has a pH value as follows:

  (i) for surface soil, less than 5 or greater than 9;

  (ii) for sub surface soil, less than 5 or greater than 11; or

  (3) a qualified person is of the opinion that, given the characteristics of the property and the certifications the qualified person would be required to make in a record of site condition in relation to the property as specified in Schedule A, it is appropriate to apply this section to the property.

Through a review of samples submitted for analysis during the environmental investigation the pH value of the soils is between 7.38 and 9.75. Following a review of areas of natural significance, no areas were identified on, adjacent to or within 30 metres of the Site. Therefore, the Site is not considered to be an environmentally sensitive site.

Based on the review of site characteristics, the following provincial standards were considered to be applicable to the environmental results obtained during the investigation:

- MECP, 2011. Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act. ***Table 2:*** *Generic Site Condition Standards for full depth soils in a Potable Groundwater Condition.*

- MECP, 2011. Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act. ***Table 8:*** *Generic Site Condition Standards for Use within 30 m of a Water Body in a Potable Groundwater Condition.*

6.8 Contaminated Media

The Phase Two ESA identified no exceedances of the applicable standard for soil or groundwater with the exception of EC from one borehole. Elevated EC from BH23-02 is considered to be from winter road/yard maintenance activities. GEMTEC does not believe elevated EC within soil at BH23-02 to be a concern for ecological or human health receptor on or off the Site.

6.9 Potential Influence of Utilities on Contaminant Migration

Underground utilities are present on-Site based on the locates reviewed prior to drilling. Given the conditions encountered during drilling and laboratory results, buried services are not considered to have facilitated the migration of contaminants at the Site.

6.10 Contaminant Migration

No significant exceedances of the applicable standards were present on the Site after review of laboratory results. Based on this, contaminant migration is not a concern.

6.11 Meteorological and Climatic Considerations

Seasonal fluctuation in water levels on the Site should be expected. Considering one groundwater monitoring event, seasonal trends could not be identified. Shallow groundwater water levels are typically highest following the spring recharge and decline throughout the summer and fall months into the winter. Given no exceedances of the applicable standards were identified in the laboratory results for groundwater, the results are not considered to have been influenced by metrological or climate conditions.

6.12 Potential Exposure Pathways and Receptors

Given no significant exceedances of the applicable standards were identified in the laboratory results, potential exposure to ecological and human receptors is not a concern.

7.0 CONCLUSIONS AND RECOMMENDATIONS

Based on the analytical results of the Phase Two ESA, GEMTEC offers the following conclusions:

- The overburden observed at the Site during the subsurface investigation was generally described as glacial till consisting of sand and gravel, some silt, trace clay. The glacial till also contained cobbles and boulders.
- The reported concentrations of all soil and groundwater samples were compared to the MECP Table 2 and Table 8 SCS.
- The reported concentrations of all soil samples met the applicable Table 2 SCS and minor EC exceedances of Table 8 SCS were noted.
- The reported concentrations of all groundwater samples met the Table 2 and Table 8 SCS.
- No further environmental work is recommended at this time.

8.0 LIMITATION OF LIABILITY

The Phase Two Environmental Site Assessment has been supervised and reviewed by a qualified person. This Phase Two ESA was carried out in general with Ontario Regulation 153/04 made under the Environmental Protection Act and meets the requirements of Part VII (Sections 23 to 31) and Schedule D of the regulation.

The results of this Phase Two ESA should in no way be construed as a warranty that the Phase Two Property is free from any and all contaminants other than those noted in this report, nor that all compliance issues have been addressed.

This report was prepared for the exclusive use of Percy Pyper (1997) Ltd. and is based on data and information collected during the Phase Two ESA of the property conducted by GEMTEC. This report may not be relied upon by any other person or entity without the express written consent of GEMTEC and Percy Pyper (1997) Ltd.. In evaluating this Phase Two Property, GEMTEC has relied in good faith on information provided by others. We accept no responsibility for any deficiencies or inaccuracies in this report as a result of omissions, misinterpretations, or fraudulent acts of others.

The investigation undertaken by GEMTEC with respect to this report and any conclusions or recommendations made in this report reflect the best judgements of GEMTEC based on the Site conditions observed during the investigations undertaken at the date(s) identified in the report and on the information available at the time the report was prepared. This report has been prepared for the application noted and it is based, in part, on visual observations made at the Site, subsurface investigations at discrete locations and depths and laboratory analyses of specific chemical parameters and material during a specific time interval, all as described in the report. Unless otherwise stated, the findings contained in this report cannot be extrapolated or extended to previous or future Site conditions, portions of the Site that were unavailable for direct investigation, subsurface locations on the Site that were not investigated directly, or chemical parameters, materials or analysis which were not addressed. Chemical parameters other than those addressed by the investigation described in this report may exist in soil and groundwater elsewhere on the Site, the chemical parameters addressed in the report may exist in soil and groundwater at other locations at the Site that were not investigated, and concentrations of the chemical parameters addressed which are different than those reported may exist at other locations on the Site than those from where the samples were taken.

Should new information become available during future work, including excavations, borings or other studies, GEMTEC should be requested to review the information and, if necessary, re-assess the conclusions presented herein.

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9.0 REFERENCES

GEMTEC. Phase One Environmental Site Assessment, 5360 Bank Street Ottawa, Ontario. Dated July 2023.

Google Earth™ Satellite Imagery, 2019.

Ontario Ministry of the Environment and Climate Change (MOE). Guidance on sampling and analytical methods for use at contaminated sites in Ontario. Revised December 1996.

Ontario Ministry of the Environment, Laboratory Services Branch (MOE). Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act. March 9, 2004, amended as of July 1, 2011.

Ontario Ministry of the Environment, Conservation and Parks (MECP). Ontario Regulation 153/04, Made under the Environmental Protection Act, Part XV.1 – Records of Site Condition. October 31, 2011 updated January 1, 2014.

10.0 CLOSURE

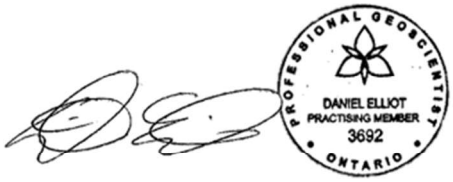
We trust this report provides sufficient information for your present purposes. If you have any questions concerning this report, please do not hesitate to contact our office.

Sincerely,

GEMTEC Consulting Engineers and Scientists Limited

.

Ester Wilson, B.Sc., GIT
Junior Environmental Scientist

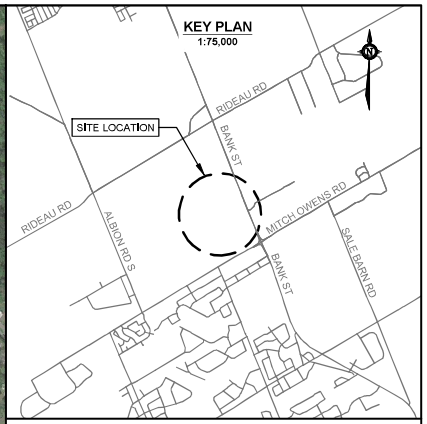


Daniel Elliot, B.Sc., P.Geo., QP_{ESA}
Senior Geoscientist

Mike Kosiw, B.Sc., EP, $CESA_{II}$
Senior Environmental Scientist

APPENDIX A

Figures



LEGEND

PHASE TWO PROPERTY

PHASE ONE STUDY AREA
(250 m RADIUS AROUND PHASE TWO PROPERTY)

GENERAL NOTE(S)

1. Coordinate system: NAD83, UTM ZONE 18.
2. Contains information licensed under the Open Government Licence - Ontario.
3. Maps Data: Google, @2023 CNES / Airbus, First Base Solutions, Maxar Technologies.
4. Geographic dataset source: Ontario GeoHub.

SCALE

1:4000

0 80 160 240m

DRAWING
PHASE TWO PROPERTY AND PHASE ONE STUDY AREA

CLIENT
PERCY PYPER (1997) LTD.
C/O MILESTONE AGGREGATE CONSULTING SERVICES INC.

PROJECT
PHASE TWO
ENVIRONMENTAL SITE ASSESSMENT
5360 BANK STREET
OTTAWA, ONTARIO

DRAWN BY	CHECKED BY
C.Z.	D.E./M.K.
PROJECT NO.	REVISION NO.
100227.101	0
DATE	FIGURE NO.
SEPTEMBER 2023	FIGURE A.1

GEMTEC
CONSULTING ENGINEERS AND SCIENTISTS
32 Steacie Drive
Ottawa, ON K2K 2A9
Tel: (613) 836-1422
www.gemtec.ca
ottawa@gemtec.ca

N:\PROJECTS\100200\100227.101\DRAFTING\1. DRAWINGS\ESA TWO R0\100227.101_ESA_TWO_R0_2023-08.DWG

LEGEND

PHASE TWO PROPERTY

JOHN BOYCE MUNICIPAL DRAIN

GENERAL NOTE(S)

1. Coordinate system: NAD83, UTM ZONE 18.
2. Contains information licensed under the Open Government Licence - Ontario.
3. Maps Data: Google, @2023 CNES / Airbus, First Base Solutions, Maxar Technologies.
4. Geographic dataset source: Ontario GeoHub.

SCALE

1:2500

0 50 100 150m

DRAWING

SITE FEATURES

CLIENT

PERCY PYPER (1997) LTD.
C/O MILESTONE AGGREGATE CONSULTING SERVICES INC.

PROJECT

PHASE TWO
ENVIRONMENTAL SITE ASSESSMENT
5360 BANK STREET
OTTAWA, ONTARIO

DRAWN BY	CHECKED BY
C.Z.	D.E./M.K.
PROJECT NO.	REVISION NO.
100227.101	0
DATE	FIGURE NO.
SEPTEMBER 2023	FIGURE A.2

GEMTEC
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Tel: (613) 836-1422
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ottawa@gemtec.ca

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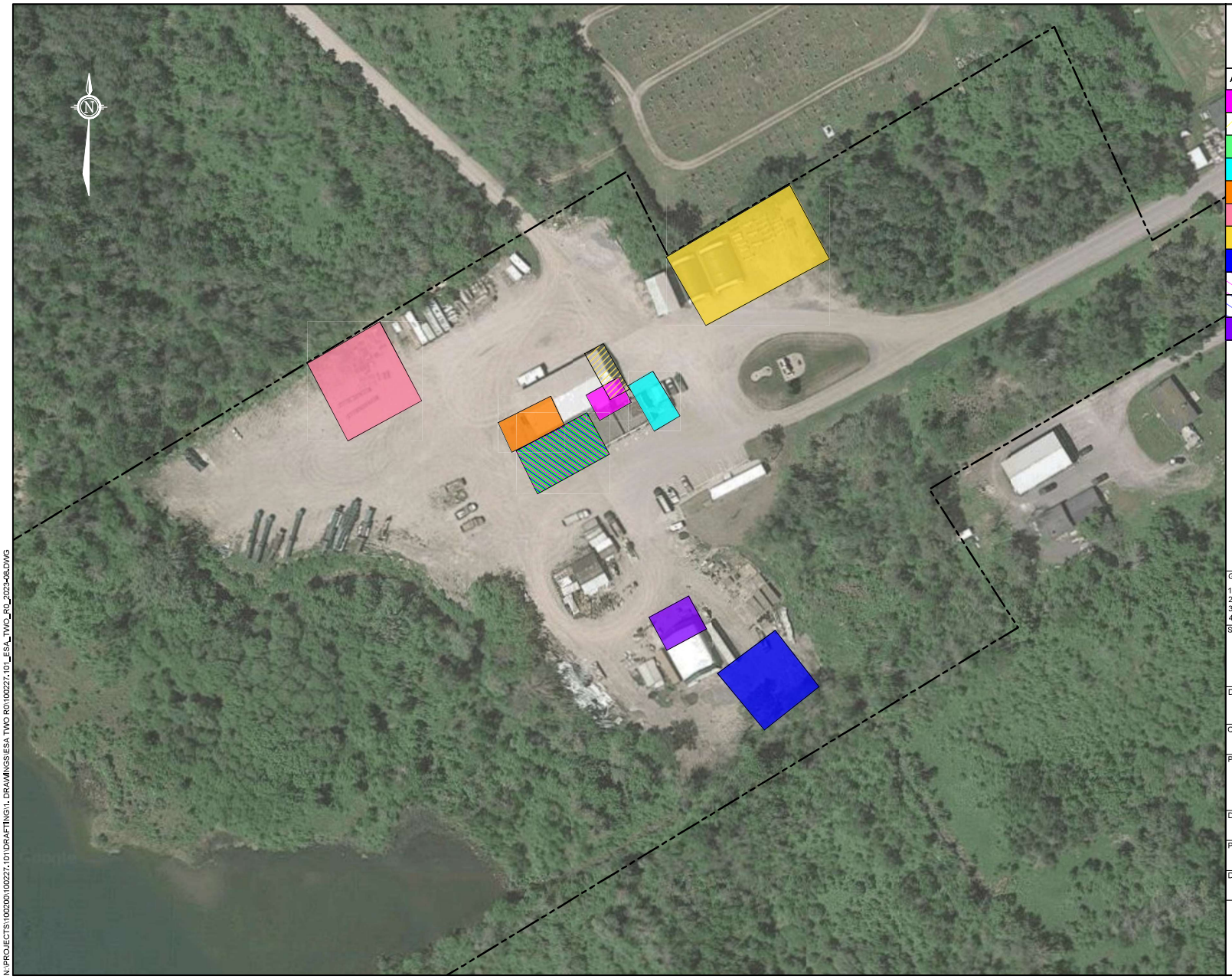

LEGEND

PHASE TWO PROPERTY

APEC NUMBER	AREA OF POTENTIAL ENVIRONMENTAL CONCERN
1	PCA #28, INTERIOR FURNACE OIL TANK
2	PCA #8, MOTOR OIL BENCH TANK
3	PCA #28, DYED DIESEL TANK
4	PCA #28, FIBERGLASS FURNACE OIL TANK
5	PCA #8, WASTE OIL STORAGE TANK
6	PCA #8, WASTE OIL STORAGE TOTES
7	PCA #48, BULK STORAGE OF ROAD SALTS
8	PCA OT.5 STOCKPILING OF ASPHALT COLD PATCH
9	PCA OT.6 OIL WATER SEPARATOR
10	PCA #28, FURNACE OIL TANK
11	PCA #28, TWO DYED DIESEL TANKS

GENERAL NOTE(S)

1. Coordinate system: NAD83, UTM ZONE 18.
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3. Maps Data: Google, @2023 CNES / Airbus, First Base Solutions, Maxar Technologies.
4. Geographic dataset source: Ontario GeoHub.

SCALE

1:1250

0 25 50 75m

DRAWING

POTENTIALLY CONTAMINATING ACTIVITIES AND AREAS OF POTENTIAL ENVIRONMENTAL CONCERN

CLIENT

PERCY PYPER (1997) LTD.
C/O MILESTONE AGGREGATE CONSULTING SERVICES INC.

PROJECT

PHASE TWO
ENVIRONMENTAL SITE ASSESSMENT
5360 BANK STREET
OTTAWA, ONTARIO

DRAWN BY	CHECKED BY
C.Z.	D.E./M.K.
PROJECT NO.	REVISION NO.
100227.101	0
DATE	FIGURE NO.
SEPTEMBER 2023	FIGURE A.3

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LEGEND

BH/ MW # — BOREHOLE/ MONITORING WELL ID

XX.XX — GROUND SURFACE ELEVATION, IN METRES GEODETIC DATUM

BOREHOLE LOCATION (current investigation by GEMTEC)

MONITORING LOCATION (current investigation by GEMTEC)

PHASE TWO PROPERTY

APEC NUMBER	AREA OF POTENTIAL ENVIRONMENTAL CONCERN
1	PCA #28, INTERIOR FURNACE OIL TANK
2	PCA #8, MOTOR OIL BENCH TANK
3	PCA #28, DYED DIESEL TANK
4	PCA #28, FIBERGLASS FURNACE OIL TANK
5	PCA #8, WASTE OIL STORAGE TANK
6	PCA #8, WASTE OIL STORAGE TOTES
7	PCA #48, BULK STORAGE OF ROAD SALTS
8	PCA OT.5 STOCKPILING OF ASPHALT COLD PATCH
9	PCA OT.6 OIL WATER SEPARATOR
10	PCA #28, FURNACE OIL TANK
11	PCA #28, TWO DYED DIESEL TANKS

GENERAL NOTE(S)

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4. Geographic dataset source: Ontario GeoHub.

SCALE

1:1250

0 25 50 75m

DRAWING

BOREHOLE AND MONITORING WELL LOCATIONS

CLIENT

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PHASE TWO
ENVIRONMENTAL SITE ASSESSMENT
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PROJECT NO.	REVISION NO.
100227.101	0
DATE	FIGURE NO.
SEPTEMBER 2023	FIGURE A.4

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LEGEND

- BH/MW # — BOREHOLE/ MONITORING WELL ID
- XX.XX — GROUND WATER ELEVATION (AUGUST 25, 2023), IN METRES, GEODETIC DATUM
- BOREHOLE LOCATION (current investigation by GEMTEC)
- MONITORING LOCATION (current investigation by GEMTEC)
- PHASE TWO PROPERTY
- 100 — MAJOR GROUNDWATER CONTOUR (AUGUST 25, 2023), IN METRES
- MINOR GROUNDWATER CONTOUR (AUGUST 25, 2023), IN METRES
- APPROXIMATE GROUNDWATER DIRECTIONAL FLOW

GENERAL NOTE(S)

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3. Maps Data: Google, @2023 CNES / Airbus, First Base Solutions, Maxar Technologies.
4. Geographic dataset source: Ontario GeoHub.

SCALE

1:1250

0 25 50 75m

DRAWING

GROUNDWATER ELEVATIONS AND INFERRED FLOW

CLIENT

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PROJECT

PHASE TWO
ENVIRONMENTAL SITE ASSESSMENT
5360 BANK STREET
OTTAWA, ONTARIO

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PROJECT NO.	REVISION NO.
100227.101	0
DATE	FIGURE NO.
SEPTEMBER 2023	FIGURE A.5

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LEGEND

BH/ MW # — BOREHOLE/ MONITORING WELL ID

XX.XX — GROUND SURFACE ELEVATION, IN METRES GEODETIC DATUM

BOREHOLE LOCATION
(current investigation by GEMTEC)

MONITORING LOCATION
(current investigation by GEMTEC)

MEETS TABLE 2 SCS COARSE SOIL STANDARDS AND TABLE 8 SCS COARSE SOIL STANDARDS

EXCEEDS TABLE 2 SCS COARSE SOIL STANDARDS AND/ OR TABLE 8 SCS COARSE SOIL STANDARDS

PHASE TWO PROPERTY

NOTES:
MECP Table 2: Ontario Ministry of the Environment, "Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act," March 2004, amended July 1, 2011, Full Depth Generic Site Condition Standards for Soil (other than Sediment) in a Potable Ground Water Condition for Coarse Soils for Industrial/ Commercial/ Community (ICC) Property Use.

MECP Table 8: Ontario Ministry of the Environment, "Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act," March 2004, amended July 1, 2011, Generic Site Condition Standards for Soil (other than Sediment) for Use within 30 m of a Water Body in a Potable Groundwater Condition for Residential/ Parkland/ Institutional (RPI)/ Industrial/ Commercial/ Community (ICC) Property Use.

GENERAL NOTE(S)

1. Coordinate system: NAD83, UTM ZONE 18.
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3. Maps Data: Google, @2023 CNES / Airbus, First Base Solutions, Maxar Technologies.
4. Geographic dataset source: Ontario GeoHub.

SCALE

1:1250

0 25 50 75m

DRAWING

SOIL EXCEEDANCE PLAN

CLIENT

PERCY PYPER (1997) LTD.
C/O MILESTONE AGGREGATE CONSULTING SERVICES INC.

PROJECT

PHASE TWO
ENVIRONMENTAL SITE ASSESSMENT
5360 BANK STREET
OTTAWA, ONTARIO

DRAWN BY	CHECKED BY
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PROJECT NO.	REVISION NO.
100227.101	0
DATE	FIGURE NO.
SEPTEMBER 2023	FIGURE A.6

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LEGEND

BH/ MW # — BOREHOLE/ MONITORING WELL ID

XX.XX — GROUND SURFACE ELEVATION, IN METRES GEODETIC DATUM

BOREHOLE LOCATION
(current investigation by GEMTEC)

MONITORING LOCATION
(current investigation by GEMTEC)

MEETS TABLE 2 SCS GROUNDWATER STANDARDS AND TABLE 8 SCS GROUNDWATER STANDARDS

EXCEEDS TABLE 2 SCS GROUNDWATER STANDARDS AND TABLE 8 SCS GROUNDWATER STANDARDS

PHASE TWO PROPERTY

NOTES:
MECP Table 2: Ontario Ministry of the Environment, "Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act," March 2004, amended July 1, 2011, Full Depth Generic Site Condition Standards for Groundwater in a Potable Ground Water Condition.

MECP Table 8: Ontario Ministry of the Environment, "Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act," March 2004, amended July 1, 2011, Generic Site Condition Standards for Groundwater for Use within 30 m of a Water Body in a Potable Groundwater Condition.

GENERAL NOTE(S)

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3. Maps Data: Google, @2023 CNES / Airbus, First Base Solutions, Maxar Technologies.
4. Geographic dataset source: Ontario GeoHub.

SCALE

1:1250

0 25 50 75m

DRAWING

GROUNDWATER EXCEEDANCES PLAN

CLIENT

PERCY PYPER (1997) LTD.
C/O MILESTONE AGGREGATE CONSULTING SERVICES INC.

PROJECT

PHASE TWO
ENVIRONMENTAL SITE ASSESSMENT
5360 BANK STREET
OTTAWA, ONTARIO

DRAWN BY	CHECKED BY
C.Z.	D.E./M.K.
PROJECT NO.	REVISION NO.
100227.101	0
DATE	FIGURE NO.
SEPTEMBER 2023	FIGURE A.7

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APPENDIX B

Borehole Logs

RECORD OF BOREHOLE 23-01

CLIENT: PERCY PYPER (1997) LTD.
PROJECT: 5360 Bank Street Phase Two ESA
JOB#: 100227.101
LOCATION: Salt Domes

SHEET: 1 OF 1
DATUM: CGVD28
BORING DATE: Aug 21 2023

DEPTH SCALE METRES	BORING METHOD	SOIL PROFILE: DESCRIPTION	SOIL PROFILE: STRATA PLOT	SOIL PROFILE: ELEV. / DEPTH (m)	SAMPLE DATA: NUMBER	SAMPLE DATA: TYPE	SAMPLE DATA: RECOVERY (mm)	SAMPLE DATA: BLOWS/0.3m	SAMPLE DATA: LABORATORY ANALYSES	COMBUSTIBLE VAPOUR CONCENTRATION (ppm)	ODOUR	TPH (mg/kg)	MONITORING WELL INSTALLATION AND NOTES
		Ground Surface											
0	Direct Push	Brown gravelly sand with trace silt			SA1	CS			M&I, BTEX, PHCs F1-F4		None		
					SA2	CS			M&I, BTEX, PHCs F1-F4		None		
1					NR								
					SA3	CS					None		
2					SA4	CS					None		
					NR								
3					SA5	CS					None		
					SA6	CS					None		
		End of Borehole Refusal		3.96									

GEMTEC
Consulting Engineers and Scientists

LOGGED: CZ
CHECKED: EW

ENV - BOREHOLE LOG 100227101_GINT_BOREHOLE LOGS.GPJ GEMTEC 2018.GDT 8/31/23

RECORD OF BOREHOLE 23-02

CLIENT: PERCY PYPER (1997) LTD.
PROJECT: 5360 Bank Street Phase Two ESA
JOB#: 100227.101
LOCATION: Cold Patch Pile

SHEET: 1 OF 1
DATUM: CGVD28
BORING DATE: Aug 21 2023

DEPTH SCALE METRES	BORING METHOD	SOIL PROFILE: DESCRIPTION	SOIL PROFILE: STRATA PLOT	SOIL PROFILE: ELEV. / DEPTH (m)	SAMPLE DATA: NUMBER	SAMPLE DATA: TYPE	SAMPLE DATA: RECOVERY (mm)	SAMPLE DATA: BLOWS/0.3m	SAMPLE DATA: LABORATORY ANALYSES	COMBUSTIBLE VAPOUR CONCENTRATION (ppm)	ODOUR	TPH (mg/kg)	MONITORING WELL INSTALLATION AND NOTES
		Ground Surface											
0	Direct Push	Dark brown silty sand, trace clay (top soil)			SA1	CS			M&I, BTEX, PHCs F1-F4		None		
1					NR								
2		Orangey brown silty sand (beach sand)		1.83	SA2	CS			M&I, BTEX, PHCs F1-F4		None		
3					NR								
					SA3	CS					None		
		End of Borehole Refusal		3.96									

GEMTEC
Consulting Engineers and Scientists

LOGGED: CZ
CHECKED: EW

ENV - BOREHOLE LOG 100227101_GINT_BOREHOLE LOGS.GPJ GEMTEC 2018.GDT 8/31/23

RECORD OF BOREHOLE 23-03 (MW)

CLIENT: PERCY PYPER (1997) LTD.
PROJECT: 5360 Bank Street Phase Two ESA
JOB#: 100227.101
LOCATION: Tanks Outside CACE

SHEET: 1 OF 1
DATUM: CGVD28
BORING DATE: Aug 21 2023

DEPTH SCALE METRES	BORING METHOD	SOIL PROFILE: DESCRIPTION	STRATA PLOT	ELEV. / DEPTH (m)	SAMPLE DATA: NUMBER	TYPE	RECOVERY (mm)	BLOWS/0.3m	LABORATORY ANALYSES	COMBUSTIBLE VAPOUR CONCENTRATION (ppm)	ODOUR	TPH (mg/kg)	MONITORING WELL INSTALLATION AND NOTES
		Ground Surface		108.84									
0	Auger	Light brown medium sand		0.03	NR								
		Dark brown silty sand, trace clay			SA1	CS				HEX: 115, IBI: 2	None		
1					NR								
				107.01	SA2	CS			BTEX, PHCs F1-F4	HEX: 160, IBI: 2	None		
2		Crushed/ pulverized rock		1.83									
				106.71	SA3	CS				HEX: 0, IBI: 1	None		
		Grey brown sand with gravel		2.13									
3	Direct Push				NR								
				105.49	SA4	CS					None		
		Crushed/ pulverized rock		3.35									
				105.18									
		Wet, brown grey medium sand with trace clay		3.66	SA5	CS				HEX: 0, IBI: 0	None		
4					NR								
													50mm diameter PVC well screen
5					SA6	CS			BTEX, PHCs F1-F4	HEX: 950, IBI: 2	None		
				103.51									
		Crushed rock		5.33									
				103.35									
		Brown sandy gravel with some silt		5.49	SA7	CS				HEX: 0, IBI: 2	None		
6					NR								
				102.74									
		End of Borehole Intersected Water Table		6.10									

GROUNDWATER OBSERVATIONS

DATE	DEPTH (m)	ELEVATION (m)
Aug. 23/23	3.86 ▽	104.94
Aug. 25/23	3.86 ▼	104.94

GEMTEC
Consulting Engineers and Scientists

LOGGED: CZ
CHECKED: EW

ENV - BOREHOLE LOG 100227101_GINT_BOREHOLE LOGS.GPJ GEMTEC 2018.GDT 8/31/23

RECORD OF BOREHOLE 23-04 (MW)

CLIENT: PERCY PYPER (1997) LTD.
PROJECT: 5360 Bank Street Phase Two ESA
JOB#: 100227.101
LOCATION: Side of Building

SHEET: 1 OF 1
DATUM: CGVD28
BORING DATE: Aug 21 2023

DEPTH SCALE METRES	BORING METHOD	SOIL PROFILE: DESCRIPTION	STRATA PLOT	ELEV. / DEPTH (m)	SAMPLE DATA: NUMBER	TYPE	RECOVERY (mm)	BLOWS/0.3m	LABORATORY ANALYSES	COMBUSTIBLE VAPOUR CONCENTRATION (ppm)	ODOUR	TPH (mg/kg)	MONITORING WELL INSTALLATION AND NOTES
		Ground Surface		109.77									
0	Direct Push	Brown sandy gravel (Fill)			NR								
		Grey brown sand and gravel		0.30	SA1	CS			BTEX, PHCs F1-F4	HEX: 55, IBI: 0	None		
					SA2	CS				HEX: 10, IBI: 0	None		
1					NR								
2					SA3	CS				HEX: 15, IBI: 0	None		
					SA4	CS				HEX: 0, IBI: 0	None		
3					SA5	CS				HEX: 0, IBI: 0	None		
4		Grey sand and gravel, some silt		3.96 / 105.19	SA6	CS				HEX: 0, IBI: 1	None		
		Brown sand and silt with gravel		4.58 / 104.81	SA7	CS			BTEX, PHCs F1-F4	HEX: 290, IBI: 1	None		38 mm diameter PVC well screen
5		Grey sand and wilt with crushed rock		4.96	SA8	CS				HEX: 0, IBI: 0	None		
6				103.67									
		Grey clayey silt, wet		6.10 / 102.91	SA9	CS				HEX: 55, IBI: 0	None		
		End of Borehole Intersected Water Table		6.86									

GROUNDWATER OBSERVATIONS

DATE	DEPTH (m)	ELEVATION (m)
Aug. 23/23	3.24 ▽	106.45
Aug. 25/23	3.65 ▼	106.03

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Consulting Engineers and Scientists

LOGGED: CZ
CHECKED: EW

ENV - BOREHOLE LOG 100227101_GINT_BOREHOLE LOGS.GPJ GEMTEC 2018.GDT 8/31/23

RECORD OF BOREHOLE 23-05 (MW)

CLIENT: PERCY PYPER (1997) LTD.
PROJECT: 5360 Bank Street Phase Two ESA
JOB#: 100227.101
LOCATION: Beside Diesel Tank

SHEET: 1 OF 1
DATUM: CGVD28
BORING DATE: Aug 21 2023

DEPTH SCALE METRES	BORING METHOD	SOIL PROFILE: DESCRIPTION	STRATA PLOT	ELEV. / DEPTH (m)	SAMPLE DATA: NUMBER	TYPE	RECOVERY (mm)	BLOWS/0.3m	LABORATORY ANALYSES	COMBUSTIBLE VAPOUR CONCENTRATION (ppm)	ODOUR	TPH (mg/kg)	MONITORING WELL INSTALLATION AND NOTES
		Ground Surface		110.60									
0	Auger	Greyish brown silty sand with crushed rock and gravel (Fill)			NR								
					SA1	CS			BTEX, PHCs F1-F4	HEX: 0, IBI: 0	None		
1					NR								
					SA2	CS				HEX: 0, IBI: 0	None		
2				108.47									
		Grey sandy silt, trace clay		2.13	SA3	CS				HEX: 0, IBI: 0	None		
					NR								
3	Direct Push			107.55									
		Grey brown silty sand and gravel, trace clay		3.05	SA4	CS				HEX: 0, IBI: 0	None		
					SA5	CS				HEX: 0, IBI: 0	None		38 mm diameter PVC well screen
4				106.33									
		Grey brown clayey silt with sand, wet to 5.64 mbgs		4.27	NR								
					SA6	CS			BTEX, PHCs F1-F4	HEX: 310, IBI: 1	None		
5					SA7	CS				HEX: 0, IBI: 0	None		
					NR								
6				104.50									
		End of borehole Intersection of Water Table Caved to 5.94 mbgs		6.10									

GROUNDWATER OBSERVATIONS

DATE	DEPTH (m)	ELEVATION (m)
Aug. 23/23	3.51 ▽	106.85
Aug. 25/23	3.70 ▼	106.66

GEMTEC
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LOGGED: CZ
CHECKED: EW

RECORD OF BOREHOLE 23-06 (MW)

CLIENT: PERCY PYPER (1997) LTD.
PROJECT: 5360 Bank Street Phase Two ESA
JOB#: 100227.101
LOCATION: Beside Sea Cans

SHEET: 1 OF 1
DATUM: CGVD28
BORING DATE: Aug 22 2023

DEPTH SCALE METRES	BORING METHOD	SOIL PROFILE: DESCRIPTION	STRATA PLOT	ELEV. / DEPTH (m)	SAMPLE DATA: NUMBER	TYPE	RECOVERY (mm)	BLOWS/0.3m	LABORATORY ANALYSES	COMBUSTIBLE VAPOUR CONCENTRATION (ppm)	ODOUR	TPH (mg/kg)	MONITORING WELL INSTALLATION AND NOTES
		Ground Surface		110.29									
0	Auger	Dark brown silty sand, trace clay (Topsoil)			NR								
					SA1	CS			BTEX, PHCs F1-F4	HEX: 0, IBI: 0	None		
1					NR								
					SA2	CS				HEX: 0, IBI: 0	None		
2				108.31									
		Grey brown sand, trace silt (Beach sand)		1.98									
					NR								
3	Direct Push				SA3	CS				HEX: 0, IBI: 2	None		
				106.48									
		Wet, brown silty sand. Organic debris at 3.2 mbgs.		3.81									
4					SA4	CS				HEX: 0, IBI: 0	None		50 mm diameter PVC well screen
					SA5	CS				HEX: 0, IBI: 0	None		
5													
					SA6	CS			BTEX, PHCs F1-F4	HEX: 15, IBI: 1	None		
6				104.20									
		End of Borehole Intersection of Water Table		6.10									

GROUNDWATER OBSERVATIONS

DATE	DEPTH (m)	ELEVATION (m)
Aug. 23/23	3.92 ▽	106.22
Aug. 25/23	3.95 ▼	106.20

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Consulting Engineers and Scientists

LOGGED: CZ
CHECKED: EW

ENV - BOREHOLE LOG 100227101_GINT_BOREHOLE LOGS.GPJ GEMTEC 2018.GDT 8/31/23

RECORD OF BOREHOLE 23-07 (MW)

CLIENT: PERCY PYPER (1997) LTD.
PROJECT: 5360 Bank Street Phase Two ESA
JOB#: 100227.101
LOCATION: Asphalt Front of Building

SHEET: 1 OF 1
DATUM: CGVD28
BORING DATE: Aug 22 2023

DEPTH SCALE METRES	BORING METHOD	SOIL PROFILE: DESCRIPTION	STRATA PLOT	ELEV. / DEPTH (m)	SAMPLE DATA: NUMBER	TYPE	RECOVERY (mm)	BLOWS/0.3m	LABORATORY ANALYSES	COMBUSTIBLE VAPOUR CONCENTRATION (ppm)	ODOUR	TPH (mg/kg)	MONITORING WELL INSTALLATION AND NOTES
		Ground Surface		110.20									
0	Auger	Asphalt			NR								
		Light brown silty sand, trace gravel and rock			SA1	CS			BTEX, PHCs F1-F4	HEX: 0, IBL: 0	None		
1					NR								
					SA2	CS			BTEX, PHCs F1-F4	HEX: 0, IBL: 0	None		
2	Direct Push				SA3	CS				HEX: 0, IBL: 0	None		
3					SA4	CS				HEX: 0, IBL: 0	None		
4					SA5	CS				HEX: 0, IBL: 0	None		38 mm diameter PVC well screen
		End of Borehole Auger Refusal at 3.96 mbgs, Core Refusal at 4.57 mbgs		105.63 4.57									

GROUNDWATER OBSERVATIONS

DATE	DEPTH (m)	ELEVATION (m)
Aug. 23/23	3.40 ▽	106.71
Aug. 23/23	3.43 ▼	106.68

GEMTEC
Consulting Engineers and Scientists

LOGGED: CZ
CHECKED: EW

APPENDIX C

Summary of Analytical Results

TABLE C.1
Soil Analytical Results
Site Condition Standards
5360 Bank Street
Ottawa, Ontario

Parameter	Units	RDL	Table 2 ICC SCS	Table 8 IC/RPI SCS	Sample ID:	BH23-01 SA1	BH23-01 SA2	BH23-02 SA1	BH23-02 SA2	BH23-02 SA201	BH23-03 SA2	BH23-03 SA6	BH23-04 SA1	BH23-04 SA7	BH23-05 SA1	BH23-05 SA6	BH23-06 SA1	BH23-06 SA6	BH23-06 SA106	BH23-07 SA1	BH23-07 SA2
					Laboratory Sample ID:	5231342	5231343	5231344	5231345	5231346	5231348	5231349	5231350	5231351	5231352	5231353	5231354	5231355	5231356	5231357	5231358
					Date Sampled (yyyy-mm-dd):	2023-08-21	2023-08-21	2023-08-21	2023-08-21	2023-08-21	2023-08-21	2023-08-21	2023-08-21	2023-08-21	2023-08-21	2023-08-21	2023-08-22	2023-08-22	2023-08-22	2023-08-22	2023-08-22
					Sample Depth (mbgs):	0.00–0.38	0.38-0.76	0.00–0.38	1.52 – 2.29	1.52 – 2.29	0.38-0.76	4.56-5.33	0.38-0.76	4.57-5.33	0.38-0.76	4.57-5.33	0.38-0.76	5.33-6.09	5.33-6.09	0.38-0.76	0.38-0.76
Physical Parameters																					
Electrical Conductivity (2:1)	mS/cm	0.005	1.4	0.7		0.139	0.095	1.06	0.597	0.701	-	-	-	-	-	-	-	-	-	-	-
Sodium Adsorption Ratio (2:1) (Calc.)	N/A	N/A	12	5		0.356	0.396	0.171	0.401	0.419	-	-	-	-	-	-	-	-	-	-	-
pH, 2:1 CaCl2 Extraction	pH Units	N/A	5.0-9.0	5.0-9.0		7.3	7.51	7.34	7.16	7.06	-	-	-	-	-	-	-	-	-	-	-
Benzene, Toulene, Ethylbenzene, Xylene (BTEX)																					
Benzene	µg/g	0.02	0.32	0.02		-	-	-	-	-	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Toluene	µg/g	0.05	6.4	0.2		-	-	-	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Ethylbenzene	µg/g	0.05	1.1	0.05		-	-	-	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
m & p-Xylene	µg/g	0.05	NV	NV		-	-	-	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
o-Xylene	µg/g	0.05	NV	NV		-	-	-	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Xylenes (Total)	µg/g	0.05	26	0.05		-	-	-	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Petroleum Hydrocarbons (PHCs)																					
F1 PHCs (C6-C10)	µg/g	5	55	NV		-	-	-	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
F2 PHCs (C10-C16)	µg/g	10	230	10		-	-	-	-	-	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
F3 PHCs (C16-C34)	µg/g	50	1700	240		-	-	-	-	-	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
F4 PHCs (C34-C50)	µg/g	50	3300	120		-	-	-	-	-	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
Polyaromatic Hydrocarbons (PAHs)																					
Naphthalene	µg/g	0.05	9.6	0.09		<0.05	<0.05	<0.05	<0.05	<0.05	-	-	-	-	-	-	-	-	-	-	-
Acenaphthylene	µg/g	0.05	0.15	0.093		<0.05	<0.05	<0.05	<0.05	<0.05	-	-	-	-	-	-	-	-	-	-	-
Acenaphthene	µg/g	0.05	21	0.072		<0.05	<0.05	<0.05	<0.05	<0.05	-	-	-	-	-	-	-	-	-	-	-
Fluorene	µg/g	0.05	62	0.19		<0.05	<0.05	<0.05	<0.05	<0.05	-	-	-	-	-	-	-	-	-	-	-
Phenanthrene	µg/g	0.05	12	0.69		<0.05	<0.05	<0.05	<0.05	<0.05	-	-	-	-	-	-	-	-	-	-	-
Anthracene	µg/g	0.05	0.67	0.22		<0.05	<0.05	<0.05	<0.05	<0.05	-	-	-	-	-	-	-	-	-	-	-
Fluoranthene	µg/g	0.05	9.6	0.69		<0.05	<0.05	<0.05	<0.05	<0.05	-	-	-	-	-	-	-	-	-	-	-
Pyrene	µg/g	0.05	96	1		<0.05	<0.05	<0.05	<0.05	<0.05	-	-	-	-	-	-	-	-	-	-	-
Benz(a)anthracene	µg/g	0.05	0.96	0.36		<0.05	<0.05	<0.05	<0.05	<0.05	-	-	-	-	-	-	-	-	-	-	-
Chrysene	µg/g	0.05	9.6	2.8		<0.05	<0.05	<0.05	<0.05	<0.05	-	-	-	-	-	-	-	-	-	-	-
Benzo(b)fluoranthene	µg/g	0.05	0.96	0.47		<0.05	<0.05	<0.05	<0.05	<0.05	-	-	-	-	-	-	-	-	-	-	-
Benzo(k)fluoranthene	µg/g	0.05	0.96	0.48		<0.05	<0.05	<0.05	<0.05	<0.05	-	-	-	-	-	-	-	-	-	-	-
Benzo(a)pyrene	µg/g	0.05	0.3	0.3		<0.05	<0.05	<0.05	<0.05	<0.05	-	-	-	-	-	-	-	-	-	-	-
Indeno(1,2,3-cd)pyrene	µg/g	0.05	0.76	0.23		<0.05	<0.05	<0.05	<0.05	<0.05	-	-	-	-	-	-	-	-	-	-	-
Dibenz(a,h)anthracene	µg/g	0.05	0.1	0.1		<0.05	<0.05	<0.05	<0.05	<0.05	-	-	-	-	-	-	-	-	-	-	-
Benzo(g,h,i)perylene	µg/g	0.05	9.6	0.68		<0.05	<0.05	<0.05	<0.05	<0.05	-	-	-	-	-	-	-	-	-	-	-
1 and 2 Methylnaphthalene	µg/g	0.05	30	0.59		<0.05	<0.05	<0.05	<0.05	<0.05	-	-	-	-	-	-	-	-	-	-	-

Notes:
RDL - Reportable Detection Limit
"-" Not Analyzed
'mbgs' - Metres Below Ground Surface
'NV' - No Standard/ Guideline Value
"<" - Below RDL
MECP Table 2 ICC: Ontario Ministry of the Environment, "Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act, " March 2004, amended July 1, 2011, Generic Site Condition Standards for Soil (other than Sediment) for Use in a Potable Groundwater Condition for Industrial/Commercial/Community Property Use, (MECP, April 15, 2011)

MECP Table 8 RPI/ICC: Ontario Ministry of the Environment, "Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act, " March 2004, amended July 1, 2011, Generic Site Condition Standards for Soil (other than Sediment) for Use in a Potable Groundwater Condition for Industrial/Commercial/Community Property Use, (MECP, April 15, 2011)

Bold - Exceeds Table 2 ICC SCS
Underlined - Exceeds Table 8 RPI/ICC SCS

TABLE C.2
Groundwater Analytical Results
Site Condition Standards
5360 Bank Street
Ottawa, Ontario

				Sample ID:	MW23-03	MW23-04	MW23-05	MW23-501	MW23-06	MW23-07	TRIP BLANK
				Laboratory Sample ID:	5245856	5245917	5245933	5245934	5245946	5245950	5246225
				Date Sampled (yyyy-mm-dd):	2023-08-25	2023-08-25	2023-08-25	2023-08-25	2023-08-25	2023-08-25	2023-08-25
Parameter	Units	RDL	Table 2 ICC SCS	Table 8 ICC/RPI SCS							
Benzene, Toulene, Ethylbenzene, Xylene (BTEX)											
Benzene	µg/L	0.2	5	5	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Toluene	µg/L	0.2	24	22	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Ethylbenzene	µg/L	0.1	2.4	2.4	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
m & p-Xylene	µg/L	0.2	NV	NV	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
o-Xylene	µg/L	0.1	NV	NV	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Xylenes (Total)	µg/L	0.2	300	300	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Petroleum Hydrocarbons (PHCs)											
F1 (C6-C10)	µg/L	25	750	NV	<25	<25	<25	<25	<25	<25	<25
F2 (C10 to C16)	µg/L	100	150	150	<100	<100	<100	<100	<100	<100	-
F3 (C16 to C34)	µg/L	100	500	500	<100	<100	<100	<100	<100	<100	-
F4 (C34 to C50)	µg/L	100	500	500	<100	<100	<100	<100	<100	<100	-

Notes:
RDL - Reportable Detection Limit
'mbgs' - Metres Below Ground Surface
'NV' - No Standard/ Guideline Value
"<" - Below RDL
'NA' - Not Analyzed
MECP Table 2 ICC: Ontario Ministry of the Environment, "Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act, " March 2004, amended July 1, 2011. Generic Site Condition Standards for Soil (other than Sediment) for Use in a Potable Groundwater Condition for all Property Use. (MECP, April 15, 2011)
MECP Table 8 RPI/ICC: Ontario Ministry of the Environment, "Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act, " March 2004, amended July 1, 2011. Generic Site Condition Standards for Groundwater in a Potable Groundwater Condition for all Property Use. (MECP, April 15, 2011)

Bold	- Exceeds Table 2 RPI SCS
Underlined	- Exceeds Table 8 SCS

APPENDIX D

Laboratory Certificates of Analysis

AGAT Laboratories

5835 COOPERS AVENUE
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CLIENT NAME: GEMTEC CONSULTING ENGINEERS AND SCIENTISTS
32 STEACIE DRIVE
OTTAWA, ON K2K 2A9
(613) 836-1422

ATTENTION TO: Ester Wilson

PROJECT: 100227.101

AGAT WORK ORDER: 23Z060365

SOIL ANALYSIS REVIEWED BY: Amanjot Bhela, Lab Operation Manager

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

DATE REPORTED: Sep 18, 2023

PAGES (INCLUDING COVER): 16

VERSION*: 2

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

*Notes

VERSION 2:V2 issued 2023-09-18. Metals & Inorganics removed from CoA by client request. Supersedes previous version.

AGAT Laboratories

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Certificate of Analysis

AGAT WORK ORDER: 23Z060365

PROJECT: 100227.101

CLIENT NAME: GEMTEC CONSULTING ENGINEERS AND SCIENTISTS

ATTENTION TO: Ester Wilson

SAMPLING SITE:5360 Bank St.

SAMPLED BY:E. Wilson

Particle Size by Sieve (Wet)

DATE RECEIVED: 2023-08-22

DATE REPORTED: 2023-09-18

				SAMPLE DESCRIPTION:	BH23-01 SA1	BH23-04 SA7
				SAMPLE TYPE:	Soil	Soil
				DATE SAMPLED:	2023-08-21 09:30	2023-08-21 14:00
Parameter	**Unit**	**G / S**	**RDL**		**5231342**	**5231351**
Sieve Analysis - 75 µm (retained)	%		NA		72.90	51.00
Sieve Analysis - 75 µm (passing)	%		NA		27.10	49.00
Soil Texture (Toronto)					Coarse	Coarse

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

5231342-5231351 Value reported is the amount of sample passing through or retained on sieve after wash with water and represents proportion by weight particles smaller or larger than indicated sieve size.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By:

Amanjot Bhela

ASSOCIATION OF THE CHEMICAL PROFESSION OF ONTARIO CHARTERED AMANJOT BHELA CHEMIST

AGAT Laboratories

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Certificate of Analysis

AGAT WORK ORDER: 23Z060365

PROJECT: 100227.101

CLIENT NAME: GEMTEC CONSULTING ENGINEERS AND SCIENTISTS

ATTENTION TO: Ester Wilson

SAMPLING SITE:5360 Bank St.

SAMPLED BY:E. Wilson

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

DATE RECEIVED: 2023-08-22

DATE REPORTED: 2023-09-18

		SAMPLE DESCRIPTION:		BH23-01 SA1	BH23-01 SA2	BH23-02 SA1	BH23-02 SA2	BH23-02 SA201
		SAMPLE TYPE:		Soil	Soil	Soil	Soil	Soil
		DATE SAMPLED:		2023-08-21 09:30	2023-08-21 09:30	2023-08-21 11:00	2023-08-21 11:00	2023-08-21 11:00
Parameter	**Unit**	**G / S**	**RDL**	**5231342**	**5231343**	**5231344**	**5231345**	**5231346**
Naphthalene	µg/g	0.05	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Acenaphthylene	µg/g	0.093	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Acenaphthene	µg/g	0.05	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Fluorene	µg/g	0.05	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Phenanthrene	µg/g	0.19	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Anthracene	µg/g	0.05	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Fluoranthene	µg/g	0.24	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Pyrene	µg/g	0.19	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Benz(a)anthracene	µg/g	0.095	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Chrysene	µg/g	0.18	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo(b)fluoranthene	µg/g	0.3	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo(k)fluoranthene	µg/g	0.05	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo(a)pyrene	µg/g	0.05	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Indeno(1,2,3-cd)pyrene	µg/g	0.11	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Dibenz(a,h)anthracene	µg/g	0.1	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo(g,h,i)perylene	µg/g	0.2	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
1 and 2 Methlynaphthalene	µg/g	0.05	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Moisture Content	%		0.1	5.4	7.4	7.0	17.5	17.0
Surrogate	**Unit**	**Acceptable Limits**						
Naphthalene-d8	%	50-140		85	105	85	105	110
Acridine-d9	%	50-140		90	95	90	85	95
Terphenyl-d14	%	50-140		105	70	100	85	90

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 1: Full Depth Background Site Condition Standards - Soil - Agricultural or Other Property Use
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.

5231342-5231346 Results are based on the dry weight of the soil.
Note: The result for Benzo(b)Fluoranthene is the total of the Benzo(b)&j)Fluoranthene isomers because the isomers co-elute on the GC column.
2- and 1-Methyl Naphthalene is a calculated parameter. The calculated value is the sum of 2-Methyl Naphthalene and 1-Methyl Naphthalene.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By:

AGAT Laboratories

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Certificate of Analysis

AGAT WORK ORDER: 23Z060365

PROJECT: 100227.101

CLIENT NAME: GEMTEC CONSULTING ENGINEERS AND SCIENTISTS

ATTENTION TO: Ester Wilson

SAMPLING SITE:5360 Bank St.

SAMPLED BY:E. Wilson

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

DATE RECEIVED: 2023-08-22

DATE REPORTED: 2023-09-18

SAMPLE DESCRIPTION:				BH23-03 SA2	BH23-03 SA6	BH23-04 SA1	BH23-04 SA7	BH23-05 SA1	BH23-05 SA6	BH23-06 SA1	BH23-06 SA6
SAMPLE TYPE:				Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
DATE SAMPLED:				2023-08-21 13:00	2023-08-21 13:00	2023-08-21 14:00	2023-08-21 14:00	2023-08-21 16:00	2023-08-21 16:00	2023-08-22 10:00	2023-08-22 10:00
Parameter	**Unit**	**G / S**	**RDL**	**5231348**	**5231349**	**5231350**	**5231351**	**5231352**	**5231353**	**5231354**	**5231355**
Benzene	µg/g	0.02	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Toluene	µg/g	0.2	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Ethylbenzene	µg/g	0.05	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
m & p-Xylene	µg/g		0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
o-Xylene	µg/g		0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Xylenes (Total)	µg/g	0.05	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
F1 (C6 - C10)	µg/g	17	5	<5	<5	<5	<5	<5	<5	<5	<5
F1 (C6 to C10) minus BTEX	µg/g	17	5	<5	<5	<5	<5	<5	<5	<5	<5
F2 (C10 to C16)	µg/g	10	10	<10	<10	<10	<10	<10	<10	<10	<10
F3 (C16 to C34)	µg/g	240	50	<50	<50	<50	<50	<50	<50	<50	<50
F4 (C34 to C50)	µg/g	120	50	<50	<50	<50	<50	<50	<50	<50	<50
Gravimetric Heavy Hydrocarbons	µg/g	120	50	NA	NA	NA	NA	NA	NA	NA	NA
Moisture Content	%		0.1	14.1	8.6	11.5	9.4	11.6	13.0	15.8	16.0
Surrogate	**Unit**	**Acceptable Limits**									
Toluene-d8	% Recovery	60-140		95	85	85	91	84	92	78	84
Terphenyl	%	60-140		87	70	92	87	79	84	77	87

Certified By:

AGAT Laboratories

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Certificate of Analysis

AGAT WORK ORDER: 23Z060365

PROJECT: 100227.101

CLIENT NAME: GEMTEC CONSULTING ENGINEERS AND SCIENTISTS

ATTENTION TO: Ester Wilson

SAMPLING SITE:5360 Bank St.

SAMPLED BY:E. Wilson

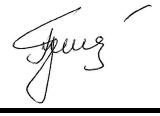
O. Reg. 153(511) - PHCs F1 - F4 (Soil)

DATE RECEIVED: 2023-08-22

DATE REPORTED: 2023-09-18

				SAMPLE DESCRIPTION:	BH23-06 SA106	BH23-07 SA1	BH23-07 SA2
				SAMPLE TYPE:	Soil	Soil	Soil
				DATE SAMPLED:	2023-08-22 10:00	2023-08-22 11:30	2023-08-22 11:30
Parameter	**Unit**	**G / S**	**RDL**		**5231356**	**5231357**	**5231358**
Benzene	µg/g	0.02	0.02		<0.02	<0.02	<0.02
Toluene	µg/g	0.2	0.05		<0.05	<0.05	<0.05
Ethylbenzene	µg/g	0.05	0.05		<0.05	<0.05	<0.05
m & p-Xylene	µg/g		0.05		<0.05	<0.05	<0.05
o-Xylene	µg/g		0.05		<0.05	<0.05	<0.05
Xylenes (Total)	µg/g	0.05	0.05		<0.05	<0.05	<0.05
F1 (C6 - C10)	µg/g	17	5		<5	<5	<5
F1 (C6 to C10) minus BTEX	µg/g	17	5		<5	<5	<5
F2 (C10 to C16)	µg/g	10	10		<10	<10	<10
F3 (C16 to C34)	µg/g	240	50		<50	<50	<50
F4 (C34 to C50)	µg/g	120	50		<50	<50	<50
Gravimetric Heavy Hydrocarbons	µg/g	120	50		NA	NA	NA
Moisture Content	%		0.1		14.3	4.0	3.8
Surrogate	**Unit**	**Acceptable Limits**					
Toluene-d8	% Recovery	60-140			80	94	76
Terphenyl	%	60-140			94	85	85

Certified By:



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Certificate of Analysis

AGAT WORK ORDER: 23Z060365

PROJECT: 100227.101

CLIENT NAME: GEMTEC CONSULTING ENGINEERS AND SCIENTISTS

ATTENTION TO: Ester Wilson

SAMPLING SITE:5360 Bank St.

SAMPLED BY:E. Wilson

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

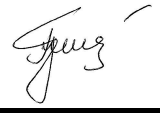
DATE RECEIVED: 2023-08-22 **DATE REPORTED: 2023-09-18**

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 1: Full Depth Background Site Condition Standards - Soil - Agricultural or Other Property Use
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.

5231348-5231358 Results are based on sample dry weight.
The C6-C10 fraction is calculated using Toluene response factor.
Xylenes is a calculated parameter. The calculated value is the sum of m&p-Xylene and o-Xylene.
C6–C10 (F1 minus BTEX) is a calculated parameter. The calculated value is F1 minus BTEX.
The calculated parameters are non-accredited. The parameters that are components of the calculation are accredited.
The C10 - C16, C16 - C34, and C34 - C50 fractions are calculated using the average response factor for n-C10, n-C16, and n-C34.
Gravimetric Heavy Hydrocarbons are not included in the Total C16-C50 and are only determined if the chromatogram of the C34 - C50 hydrocarbons indicates that hydrocarbons >C50 are present.
The chromatogram has returned to baseline by the retention time of nC50.
Total C6 - C50 results are corrected for BTEX contribution.
This method complies with the Reference Method for the CWS PHC and is validated for use in the laboratory.
nC6 and nC10 response factors are within 30% of Toluene response factor.
nC10, nC16 and nC34 response factors are within 10% of their average.
C50 response factor is within 70% of nC10 + nC16 + nC34 average.
Linearity is within 15%.
Extraction and holding times were met for this sample.
Fractions 1-4 are quantified 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.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By:



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AGAT WORK ORDER: 23Z060365

PROJECT: 100227.101

CLIENT NAME: GEMTEC CONSULTING ENGINEERS AND SCIENTISTS

ATTENTION TO: Ester Wilson

SAMPLING SITE:5360 Bank St.

SAMPLED BY:E. Wilson

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

DATE RECEIVED: 2023-08-22 **DATE REPORTED: 2023-09-18**

				SAMPLE DESCRIPTION:	BH23-01 SA1	BH23-01 SA2	BH23-02 SA1	BH23-02 SA2	BH23-02 SA201
				SAMPLE TYPE:	Soil	Soil	Soil	Soil	Soil
				DATE SAMPLED:	2023-08-21 09:30	2023-08-21 09:30	2023-08-21 11:00	2023-08-21 11:00	2023-08-21 11:00
Parameter	**Unit**	**G / S**	**RDL**		**5231342**	**5231343**	**5231344**	**5231345**	**5231346**
Benzene	µg/g	0.02	0.02		<0.02	<0.02	<0.02	<0.02	<0.02
Toluene	µg/g	0.2	0.05		<0.05	<0.05	<0.05	<0.05	<0.05
Ethylbenzene	µg/g	0.05	0.05		<0.05	<0.05	<0.05	<0.05	<0.05
m & p-Xylene	µg/g		0.05		<0.05	<0.05	<0.05	<0.05	<0.05
o-Xylene	µg/g		0.05		<0.05	<0.05	<0.05	<0.05	<0.05
Xylenes (Total)	µg/g	0.05	0.05		<0.05	<0.05	<0.05	<0.05	<0.05
F1 (C6 - C10)	µg/g	17	5		<5	<5	<5	<5	<5
F1 (C6 to C10) minus BTEX	µg/g	17	5		<5	<5	<5	<5	<5
F2 (C10 to C16)	µg/g	10	10		<10	<10	<10	<10	<10
F2 (C10 to C16) minus Naphthalene	µg/g		10		<10	<10	<10	<10	<10
F3 (C16 to C34)	µg/g	240	50		<50	<50	<50	<50	<50
F3 (C16 to C34) minus PAHs	µg/g		50		<50	<50	<50	<50	<50
F4 (C34 to C50)	µg/g	120	50		<50	<50	<50	<50	<50
Gravimetric Heavy Hydrocarbons	µg/g	120	50		NA	NA	NA	NA	NA
Moisture Content	%		0.1		5.4	7.4	7.0	17.5	17.0
Surrogate	**Unit**	**Acceptable Limits**							
Toluene-d8	% Recovery	60-140			116	100	109	102	119
Terphenyl	%	60-140			87	94	97	78	73

Certified By:

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AGAT WORK ORDER: 23Z060365

PROJECT: 100227.101

CLIENT NAME: GEMTEC CONSULTING ENGINEERS AND SCIENTISTS

ATTENTION TO: Ester Wilson

SAMPLING SITE:5360 Bank St.

SAMPLED BY:E. Wilson

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

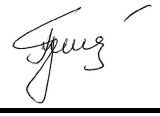
DATE RECEIVED: 2023-08-22 **DATE REPORTED: 2023-09-18**

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 1: Full Depth Background Site Condition Standards - Soil - Agricultural or Other Property Use
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.

5231342-5231346 Results are based on sample dry weight.
The C6-C10 fraction is calculated using toluene response factor.
Xylenes total is a calculated parameter. The calculated value is the sum of m&p-Xylene and o-Xylene.
C6–C10 (F1 minus BTEX) is a calculated parameter. The calculated value is F1 minus BTEX.
The calculated parameters are non-accredited. The parameters that are components of the calculation are accredited.
The C10 - C16, C16 - C34, and C34 - C50 fractions are calculated using the average response factor for n-C10, n-C16, and n-C34.
Gravimetric Heavy Hydrocarbons are not included in the Total C16-C50 and are only determined if the chromatogram of the C34 - C50 hydrocarbons indicates that hydrocarbons >C50 are present.
The chromatogram has returned to baseline by the retention time of nC50.
Total C6 - C50 results are corrected for BTEX and PAH contributions.
C>10 – C16 (F2- Naphthalene) is a calculated parameter. The calculated value is F2 - Naphthalene.
C>16 - C34 (F3-PAH) is a calculated parameter. The calculated value is F3-PAH (PAH: sum of Phenanthrene, Benzo(a)anthracene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Benzo(a)pyrene, Fluoranthene, Dibenzo(a,h)anthracene, Indeno(1,2,3-c,d)pyrene and Pyrene).
This method complies with the Reference Method for the CWS PHC and is validated for use in the laboratory.
nC10, nC16 and nC34 response factors are within 10% of their average.
C50 response factor is within 70% of nC10 + nC16 + nC34 average.
Linearity is within 15%.
Extraction and holding times were met for this sample.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By:



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Quality Assurance

CLIENT NAME: GEMTEC CONSULTING ENGINEERS AND SCIENTISTS

AGAT WORK ORDER: 23Z060365

PROJECT: 100227.101

ATTENTION TO: Ester Wilson

SAMPLING SITE:5360 Bank St.

SAMPLED BY:E. Wilson

Soil Analysis

RPT Date: Sep 18, 2023			DUPLICATE				REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Method Blank	Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
O. Reg. 153(511) - Metals & Inorganics (Soil)															
Antimony	5231342	5231342	<0.8	<0.8	NA	< 0.8	114%	70%	130%	114%	80%	120%	86%	70%	130%
Arsenic	5231342	5231342	4	4	NA	< 1	118%	70%	130%	114%	80%	120%	95%	70%	130%
Barium	5231342	5231342	25.4	25.3	0.4%	< 2.0	108%	70%	130%	109%	80%	120%	103%	70%	130%
Beryllium	5231342	5231342	<0.5	<0.5	NA	< 0.5	119%	70%	130%	115%	80%	120%	111%	70%	130%
Boron	5231342	5231342	6	6	NA	< 5	98%	70%	130%	112%	80%	120%	102%	70%	130%
Boron (Hot Water Soluble)	5234393		<0.10	<0.10	NA	< 0.10	88%	60%	140%	102%	70%	130%	98%	60%	140%
Cadmium	5231342	5231342	<0.5	<0.5	NA	< 0.5	81%	70%	130%	117%	80%	120%	104%	70%	130%
Chromium	5231342	5231342	14	14	NA	< 5	116%	70%	130%	110%	80%	120%	103%	70%	130%
Cobalt	5231342	5231342	4.7	4.8	2.1%	< 0.8	106%	70%	130%	110%	80%	120%	101%	70%	130%
Copper	5231342	5231342	10.5	11.1	5.6%	< 1.0	101%	70%	130%	109%	80%	120%	93%	70%	130%
Lead	5231342	5231342	9	8	11.8%	< 1	112%	70%	130%	111%	80%	120%	96%	70%	130%
Molybdenum	5231342	5231342	2.8	2.9	3.5%	< 0.5	118%	70%	130%	115%	80%	120%	111%	70%	130%
Nickel	5231342	5231342	7	8	13.3%	< 1	107%	70%	130%	108%	80%	120%	100%	70%	130%
Selenium	5231342	5231342	<0.8	<0.8	NA	< 0.8	87%	70%	130%	113%	80%	120%	104%	70%	130%
Silver	5231342	5231342	<0.5	<0.5	NA	< 0.5	108%	70%	130%	114%	80%	120%	97%	70%	130%
Thallium	5231342	5231342	<0.5	<0.5	NA	< 0.5	108%	70%	130%	111%	80%	120%	98%	70%	130%
Uranium	5231342	5231342	0.52	0.61	NA	< 0.50	113%	70%	130%	112%	80%	120%	106%	70%	130%
Vanadium	5231342	5231342	16.1	16.4	1.8%	< 2.0	121%	70%	130%	110%	80%	120%	110%	70%	130%
Zinc	5231342	5231342	22	23	NA	< 5	103%	70%	130%	115%	80%	120%	104%	70%	130%
Chromium, Hexavalent	5234372		<0.2	<0.2	NA	< 0.2	100%	70%	130%	94%	80%	120%	87%	70%	130%
Cyanide, WAD	5231345	5231345	<0.040	<0.040	NA	< 0.040	104%	70%	130%	108%	80%	120%	79%	70%	130%
Mercury	5231342	5231342	<0.10	<0.10	NA	< 0.10	116%	70%	130%	102%	80%	120%	100%	70%	130%
Electrical Conductivity (2:1)	5231342	5231342	0.139	0.132	5.2%	< 0.005	96%	80%	120%	NA			NA		
Sodium Adsorption Ratio (2:1) (Calc.)	5231342	5231342	0.356	0.343	3.7%	N/A	NA			NA			NA		
pH, 2:1 CaCl2 Extraction	5230699		6.34	6.53	3.0%	NA	101%	80%	120%	NA			NA		

Comments: NA signifies Not Applicable.
pH duplicates QA acceptance criteria was met relative as stated in Table 5-15 of Analytical Protocol document.
Duplicate NA: results are under 5X the RDL and will not be calculated.

Particle Size by Sieve (Wet)

Sieve Analysis - 75 µm (retained)	5238523		31.64	32.40	2.4%		97%	75%	125%	NA			NA		
Sieve Analysis - 75 µm (passing)	5238523		68.36	67.60	1.1%					NA			NA		

Comments: NA Signifies Not Applicable

Certified By: Amanjot Bhela

CHARTERED CHEMIST AMANJOT BHELA — ASSOCIATION OF THE CHEMICAL PROFESSION OF ONTARIO

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Quality Assurance

CLIENT NAME: GEMTEC CONSULTING ENGINEERS AND SCIENTISTS

AGAT WORK ORDER: 23Z060365

PROJECT: 100227.101

ATTENTION TO: Ester Wilson

SAMPLING SITE:5360 Bank St.

SAMPLED BY:E. Wilson

Trace Organics Analysis

RPT Date: Sep 18, 2023			DUPLICATE				REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Method Blank	Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
O. Reg. 153(511) - PHCs F1 - F4 (with PAHs) (Soil)															
Benzene	5232831		<0.02	<0.02	NA	< 0.02	88%	60%	140%	85%	60%	140%	77%	60%	140%
Toluene	5232831		<0.05	<0.05	NA	< 0.05	77%	60%	140%	76%	60%	140%	82%	60%	140%
Ethylbenzene	5232831		<0.05	<0.05	NA	< 0.05	79%	60%	140%	72%	60%	140%	93%	60%	140%
m & p-Xylene	5232831		<0.05	<0.05	NA	< 0.05	98%	60%	140%	83%	60%	140%	87%	60%	140%
o-Xylene	5232831		<0.05	<0.05	NA	< 0.05	88%	60%	140%	73%	60%	140%	78%	60%	140%
F1 (C6 - C10)	5232831		<5	<5	NA	< 5	102%	60%	140%	105%	60%	140%	102%	60%	140%
F2 (C10 to C16)	5225176		< 10	< 10	NA	< 10	98%	60%	140%	94%	60%	140%	115%	60%	140%
F3 (C16 to C34)	5225176		< 50	< 50	NA	< 50	111%	60%	140%	94%	60%	140%	110%	60%	140%
F4 (C34 to C50)	5225176		< 50	< 50	NA	< 50	87%	60%	140%	93%	60%	140%	69%	60%	140%
O. Reg. 153(511) - PAHs (Soil)															
Naphthalene	5234372		<0.05	<0.05	NA	< 0.05	101%	50%	140%	75%	50%	140%	78%	50%	140%
Acenaphthylene	5234372		<0.05	<0.05	NA	< 0.05	113%	50%	140%	85%	50%	140%	83%	50%	140%
Acenaphthene	5234372		<0.05	<0.05	NA	< 0.05	98%	50%	140%	75%	50%	140%	90%	50%	140%
Fluorene	5234372		<0.05	<0.05	NA	< 0.05	101%	50%	140%	80%	50%	140%	90%	50%	140%
Phenanthrene	5234372		<0.05	<0.05	NA	< 0.05	113%	50%	140%	103%	50%	140%	95%	50%	140%
Anthracene	5234372		<0.05	<0.05	NA	< 0.05	107%	50%	140%	103%	50%	140%	80%	50%	140%
Fluoranthene	5234372		<0.05	<0.05	NA	< 0.05	91%	50%	140%	80%	50%	140%	76%	50%	140%
Pyrene	5234372		<0.05	<0.05	NA	< 0.05	98%	50%	140%	83%	50%	140%	73%	50%	140%
Benz(a)anthracene	5234372		<0.05	<0.05	NA	< 0.05	84%	50%	140%	75%	50%	140%	73%	50%	140%
Chrysene	5234372		<0.05	<0.05	NA	< 0.05	111%	50%	140%	78%	50%	140%	113%	50%	140%
Benzo(b)fluoranthene	5234372		<0.05	<0.05	NA	< 0.05	96%	50%	140%	73%	50%	140%	103%	50%	140%
Benzo(k)fluoranthene	5234372		<0.05	<0.05	NA	< 0.05	113%	50%	140%	95%	50%	140%	83%	50%	140%
Benzo(a)pyrene	5234372		<0.05	<0.05	NA	< 0.05	105%	50%	140%	93%	50%	140%	93%	50%	140%
Indeno(1,2,3-cd)pyrene	5234372		<0.05	<0.05	NA	< 0.05	101%	50%	140%	75%	50%	140%	83%	50%	140%
Dibenz(a,h)anthracene	5234372		<0.05	<0.05	NA	< 0.05	101%	50%	140%	80%	50%	140%	83%	50%	140%
Benzo(g,h,i)perylene	5234372		<0.05	<0.05	NA	< 0.05	105%	50%	140%	78%	50%	140%	93%	50%	140%

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

O. Reg. 153(511) - PHCs F1 - F4 (Soil)															
Benzene	5232831		<0.02	<0.02	NA	< 0.02	88%	60%	140%	85%	60%	140%	77%	60%	140%
Toluene	5232831		<0.05	<0.05	NA	< 0.05	77%	60%	140%	76%	60%	140%	82%	60%	140%
Ethylbenzene	5232831		<0.05	<0.05	NA	< 0.05	79%	60%	140%	72%	60%	140%	93%	60%	140%
m & p-Xylene	5232831		<0.05	<0.05	NA	< 0.05	98%	60%	140%	83%	60%	140%	87%	60%	140%
o-Xylene	5232831		<0.05	<0.05	NA	< 0.05	88%	60%	140%	73%	60%	140%	78%	60%	140%
F1 (C6 - C10)	5232831		<5	<5	NA	< 5	102%	60%	140%	105%	60%	140%	102%	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).

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Quality Assurance

CLIENT NAME: GEMTEC CONSULTING ENGINEERS AND SCIENTISTS

AGAT WORK ORDER: 23Z060365

PROJECT: 100227.101

ATTENTION TO: Ester Wilson

SAMPLING SITE:5360 Bank St.

SAMPLED BY:E. Wilson

Trace Organics Analysis (Continued)

RPT Date: Sep 18, 2023			DUPLICATE				REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Method Blank	Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper

Certified By:

AGAT Laboratories

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Method Summary

CLIENT NAME: GEMTEC CONSULTING ENGINEERS AND SCIENTISTS | **AGAT WORK ORDER: 23Z060365**

PROJECT: 100227.101 | **ATTENTION TO: Ester Wilson**

SAMPLING SITE:5360 Bank St. | **SAMPLED BY:E. Wilson**

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Soil Analysis			
Antimony	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Arsenic	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Barium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Beryllium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Boron	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Boron (Hot Water Soluble)	MET-93-6104	modified from EPA 6010D and MSA PART 3, CH 21	ICP/OES
Cadmium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Chromium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Cobalt	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Copper	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Lead	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Molybdenum	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Nickel	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Selenium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Silver	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Thallium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Uranium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Vanadium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Zinc	MET 93 -6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Chromium, Hexavalent	INOR-93-6068	modified from EPA 3060 and EPA 7196	SPECTROPHOTOMETER
Cyanide, WAD	INOR-93-6052	modified from ON MOECC E3015, SM 4500-CN- I, G-387	SEGMENTED FLOW ANALYSIS
Mercury	MET-93-6103	modified from EPA 7471B and SM 3112 B	ICP-MS
Electrical Conductivity (2:1)	INOR-93-6075	modified from MSA PART 3, CH 14 and SM 2510 B	PC TITRATE
Sodium Adsorption Ratio (2:1) (Calc.)	INOR-93-6007	modified from EPA 6010D & Analytical Protocol	ICP/OES
pH, 2:1 CaCl2 Extraction	INOR-93-6075	modified from EPA 9045D, MCKEAGUE 3.11 E3137	PC TITRATE
Sieve Analysis - 75 µm (retained)	INOR-93-6065	Modified from ASTM D1140-17	SIEVE
Sieve Analysis - 75 µm (passing)	INOR-93-6065	Modified from ASTM D1140-17	SIEVE

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Method Summary

CLIENT NAME: GEMTEC CONSULTING ENGINEERS AND SCIENTISTS

AGAT WORK ORDER: 23Z060365

PROJECT: 100227.101

ATTENTION TO: Ester Wilson

SAMPLING SITE:5360 Bank St.

SAMPLED BY:E. Wilson

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Trace Organics Analysis			
Naphthalene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Acenaphthylene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Acenaphthene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Fluorene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Phenanthrene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Anthracene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Fluoranthene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Pyrene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Benz(a)anthracene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Chrysene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Benzo(b)fluoranthene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Benzo(k)fluoranthene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Benzo(a)pyrene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Indeno(1,2,3-cd)pyrene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Dibenz(a,h)anthracene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Benzo(g,h,i)perylene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
1 and 2 Methlynaphthalene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Naphthalene-d8	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Acridine-d9	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Terphenyl-d14	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Moisture Content	VOL-91-5009	modified from CCME Tier 1 Method	BALANCE
Benzene	VOL-91-5009	modified from CCME Tier 1 Method	(P&T)GC/MS
Toluene	VOL-91-5009	modified from CCME Tier 1 Method	(P&T)GC/MS
Ethylbenzene	VOL-91-5009	modified from CCME Tier 1 Method	(P&T)GC/MS
m & p-Xylene	VOL-91-5009	modified from CCME Tier 1 Method	(P&T)GC/MS
o-Xylene	VOL-91-5009	modified from CCME Tier 1 Method	(P&T)GC/MS
Xylenes (Total)	VOL-91-5009	modified from CCME Tier 1 Method	(P&T)GC/MS
F1 (C6 - C10)	VOL-91-5009	modified from CCME Tier 1 Method	(P&T)GC/FID
F1 (C6 to C10) minus BTEX	VOL-91-5009	modified from CCME Tier 1 Method	P&T GC/FID
Toluene-d8	VOL-91-5009	modified from EPA SW-846 5030C & 8260D	(P&T)GC/MS
F2 (C10 to C16)	VOL-91-5009	modified from CCME Tier 1 Method	GC/FID
F3 (C16 to C34)	VOL-91-5009	modified from CCME Tier 1 Method	GC/FID
F4 (C34 to C50)	VOL-91-5009	modified from CCME Tier 1 Method	GC/FID

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Method Summary

CLIENT NAME: GEMTEC CONSULTING ENGINEERS AND SCIENTISTS

AGAT WORK ORDER: 23Z060365

PROJECT: 100227.101

ATTENTION TO: Ester Wilson

SAMPLING SITE:5360 Bank St.

SAMPLED BY:E. Wilson

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Gravimetric Heavy Hydrocarbons	VOL-91-5009	modified from CCME Tier 1 Method	BALANCE
Terphenyl	VOL-91-5009	modified from CCME Tier 1 Method	GC/FID
F2 (C10 to C16) minus Naphthalene	VOL-91-5009	modified from CCME Tier 1 Method	GC/FID
F3 (C16 to C34)	VOL-91-5009	modified from CCME Tier 1 Method	GC/FID
F3 (C16 to C34) minus PAHs	VOL-91-5009	modified from CCME Tier 1 Method	GC/FID

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ATTENTION TO: Ester Wilson

PROJECT: 5360 Bank Street (100227.101)

AGAT WORK ORDER: 23Z062367

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

WATER ANALYSIS REVIEWED BY: Nivine Basily, Inorganics Report Writer

DATE REPORTED: Sep 18, 2023

PAGES (INCLUDING COVER): 9

VERSION*: 2

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

*Notes

VERSION 2:V2 issued 2023-09-18. Metals analysis removed from CoA by client request. Supersedes previous version.

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Certificate of Analysis

AGAT WORK ORDER: 23Z062367

PROJECT: 5360 Bank Street (100227.101)

CLIENT NAME: GEMTEC CONSULTING ENGINEERS AND SCIENTISTS

ATTENTION TO: Ester Wilson

SAMPLING SITE:5360 Bank Street

SAMPLED BY:Estor Wilson

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

DATE RECEIVED: 2023-08-25

DATE REPORTED: 2023-09-18

		SAMPLE DESCRIPTION:		MW23-03	MW23-04	MW23-05	MW23-501	MW23-06	MW23-07
		SAMPLE TYPE:		Water	Water	Water	Water	Water	Water
		DATE SAMPLED:		2023-08-25	2023-08-25	2023-08-25	2023-08-25	2023-08-25	2023-08-25
Parameter	Unit	G / S	RDL	5245856	5245917	5245933	5245934	5245946	5245950
Benzene	µg/L	0.5	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Toluene	µg/L	0.8	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Ethylbenzene	µg/L	0.5	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
o-Xylene	µg/L		0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Xylenes (Total)	µg/L	72	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
F1 (C6 - C10)	µg/L	420	25	<25	<25	<25	<25	<25	<25
C6 - C10 (F1 minus BTEX)	µg/L	420	25	<25	<25	<25	<25	<25	<25
F2 (C10 to C16)	µg/L	150	100	<100	<100	<100	<100	<100	<100
F3 (C16 to C34)	µg/L	500	100	<100	<100	<100	<100	<100	<100
F4 (C34 to C50)	µg/L	500	100	<100	<100	<100	<100	<100	<100
Gravimetric Heavy Hydrocarbons	µg/L		500	NA	NA	NA	NA	NA	NA
Sediment				1	3	1	1	1	1
Surrogate	Unit	Acceptable Limits							
Toluene-d8	% Recovery	60-140		73	103	92	106	114	92
Terphenyl	% Recovery	60-140		116	81	76	88	89	96

Certified By:

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Certificate of Analysis

AGAT WORK ORDER: 23Z062367

PROJECT: 5360 Bank Street (100227.101)

CLIENT NAME: GEMTEC CONSULTING ENGINEERS AND SCIENTISTS

ATTENTION TO: Ester Wilson

SAMPLING SITE:5360 Bank Street

SAMPLED BY:Estor Wilson

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

DATE RECEIVED: 2023-08-25

DATE REPORTED: 2023-09-18

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 1: Full Depth Background Site Condition Standards - Ground Water - All Types of Property Uses
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.

5245856-5245950 The C6-C10 fraction is calculated using Toluene response factor.
Xylenes total is a calculated parameter. The calculated value is the sum of m&p-Xylene and o-Xylene.
C6–C10 (F1 minus BTEX) is a calculated parameter. The calculated value is F1 minus BTEX.
The calculated parameters are non-accredited. The parameters that are components of the calculation are accredited.
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 contribution.
This method complies with the Reference Method for the CWS PHC and is validated for use in the laboratory.
nC6 and nC10 response factors are within 30% of Toluene response factor.
nC10, nC16 and nC34 response factors are within 10% of their average.
C50 response factor is within 70% of nC10 + nC16 nC34 average.
Linearity is within 15%.
Extraction and holding times were met for this sample.
Fractions 1-4 are quantified 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

Sediment parameter is comment only based on visual inspection of the sample prior to extraction and is not an accredited test.
Legend: 1 = no sediment present; 2 = sediment present; 3 = sediment present in trace amounts

Analysis performed at AGAT Toronto (unless marked by *)

Certified By:

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Certificate of Analysis

AGAT WORK ORDER: 23Z062367

PROJECT: 5360 Bank Street (100227.101)

CLIENT NAME: GEMTEC CONSULTING ENGINEERS AND SCIENTISTS

ATTENTION TO: Ester Wilson

SAMPLING SITE:5360 Bank Street

SAMPLED BY:Estor Wilson

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

DATE RECEIVED: 2023-08-25

DATE REPORTED: 2023-09-18

		SAMPLE DESCRIPTION:		TRIP BLANK
		SAMPLE TYPE:		Water
		DATE SAMPLED:		
Parameter	Unit	G / S	RDL	5246225
Benzene	µg/L	0.5	0.20	<0.20
Toluene	µg/L	0.8	0.20	<0.20
Ethylbenzene	µg/L	0.5	0.10	<0.10
m & p-Xylene	µg/L		0.20	<0.20
o-Xylene	µg/L		0.10	<0.10
Xylenes (Total)	µg/L	72	0.20	<0.20
F1 (C6-C10)	µg/L	420	25	<25
F1 (C6 to C10) minus BTEX	µg/L	420	25	<25
Surrogate	Unit	Acceptable Limits		
Toluene-d8	% Recovery	60-140		95

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 1: Full Depth Background Site Condition Standards - Ground Water - All Types of Property Uses
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.

5246225 The C6-C10 fraction is calculated using Toluene response factor.
Total C6-C10 results are corrected for BTEX contributions.
Xylenes total is a calculated parameter. The calculated value is the sum of m&p-Xylene and o-Xylene.
C6–C10 (F1 minus BTEX) is a calculated parameter. The calculated value is F1 minus BTEX.
The calculated parameters are non-accredited. The parameters that are components of the calculation are accredited.
This method complies with the Reference Method for the CWS PHC and is validated for use in the laboratory.
nC6 and nC10 response factors are within 30% of Toluene response factor.
Extraction and holding times were met for this sample.
NA = Not Applicable

Analysis performed at AGAT Toronto (unless marked by *)

Certified By:

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Quality Assurance

CLIENT NAME: GEMTEC CONSULTING ENGINEERS AND SCIENTISTS
AGAT WORK ORDER: 23Z062367

PROJECT: 5360 Bank Street (100227.101)
ATTENTION TO: Ester Wilson

SAMPLING SITE:5360 Bank Street
SAMPLED BY:Estor Wilson

Trace Organics Analysis

RPT Date: Sep 18, 2023			DUPLICATE				REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Method Blank	Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
O. Reg. 153(511) - PHCs F1/BTEX (Water)															
Benzene	5245950	5245950	<0.20	<0.20	NA	< 0.20	71%	60%	140%	87%	60%	140%	81%	60%	140%
Toluene	5245950	5245950	<0.20	<0.20	NA	< 0.20	74%	60%	140%	80%	60%	140%	86%	60%	140%
Ethylbenzene	5245950	5245950	<0.10	<0.10	NA	< 0.10	100%	60%	140%	108%	60%	140%	76%	60%	140%
m & p-Xylene	5245950	5245950	<0.20	<0.20	NA	< 0.20	74%	60%	140%	83%	60%	140%	74%	60%	140%
o-Xylene	5245950	5245950	<0.10	<0.10	NA	< 0.10	100%	60%	140%	92%	60%	140%	89%	60%	140%
F1 (C6-C10)	5245950	5245950	<25	<25	NA	< 25	97%	60%	140%	102%	60%	140%	100%	60%	140%
O. Reg. 153(511) - PHCs F1 - F4 (Water)															
Benzene	5245950	5245950	<0.20	<0.20	NA	< 0.20	71%	60%	140%	87%	60%	140%	81%	60%	140%
Toluene	5245950	5245950	<0.20	<0.20	NA	< 0.20	74%	60%	140%	80%	60%	140%	86%	60%	140%
Ethylbenzene	5245950	5245950	<0.10	<0.10	NA	< 0.10	100%	60%	140%	108%	60%	140%	76%	60%	140%
m & p-Xylene	5245950	5245950	<0.20	<0.20	NA	< 0.20	74%	60%	140%	83%	60%	140%	74%	60%	140%
o-Xylene	5245950	5245950	<0.10	<0.10	NA	< 0.10	100%	60%	140%	92%	60%	140%	89%	60%	140%
F1 (C6 - C10)	5245950	5245950	<25	<25	NA	< 25	97%	60%	140%	102%	60%	140%	100%	60%	140%
F2 (C10 to C16)	5245946	5245946	<100	<100	NA	< 100	95%	60%	140%	67%	60%	140%	64%	60%	140%
F3 (C16 to C34)	5245946	5245946	<100	<100	NA	< 100	104%	60%	140%	73%	60%	140%	63%	60%	140%
F4 (C34 to C50)	5245946	5245946	<100	<100	NA	< 100	97%	60%	140%	87%	60%	140%	91%	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:

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Quality Assurance

CLIENT NAME: GEMTEC CONSULTING ENGINEERS AND SCIENTISTS
AGAT WORK ORDER: 23Z062367
PROJECT: 5360 Bank Street (100227.101)
ATTENTION TO: Ester Wilson
SAMPLING SITE:5360 Bank Street
SAMPLED BY:Estor Wilson

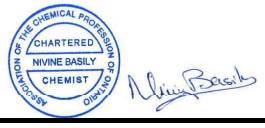
Water Analysis

RPT Date: Sep 18, 2023			DUPLICATE				REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Method Blank	Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
O. Reg. 153(511) - All Metals (Water)															
Dissolved Antimony	5246241		1.2	1.1	NA	< 1.0	102%	70%	130%	106%	80%	120%	113%	70%	130%
Dissolved Arsenic	5246241		1.9	1.9	NA	< 1.0	100%	70%	130%	108%	80%	120%	111%	70%	130%
Dissolved Barium	5246241		62.1	56.9	8.7%	< 2.0	100%	70%	130%	101%	80%	120%	104%	70%	130%
Dissolved Beryllium	5246241		<0.5	<0.5	NA	< 0.5	103%	70%	130%	109%	80%	120%	113%	70%	130%
Dissolved Boron	5246241		441	423	4.2%	< 10.0	108%	70%	130%	119%	80%	120%	122%	70%	130%
Dissolved Cadmium	5246241		<0.20	<0.20	NA	< 0.20	100%	70%	130%	102%	80%	120%	107%	70%	130%
Dissolved Chromium	5246241		<2.0	<2.0	NA	< 2.0	99%	70%	130%	103%	80%	120%	104%	70%	130%
Dissolved Cobalt	5246241		1.98	1.66	NA	< 0.50	104%	70%	130%	107%	80%	120%	107%	70%	130%
Dissolved Copper	5246241		<1.0	<1.0	NA	< 1.0	99%	70%	130%	100%	80%	120%	98%	70%	130%
Dissolved Lead	5246241		<0.50	<0.50	NA	< 0.50	95%	70%	130%	99%	80%	120%	96%	70%	130%
Dissolved Molybdenum	5246241		35.2	33.6	4.7%	< 0.50	101%	70%	130%	111%	80%	120%	107%	70%	130%
Dissolved Nickel	5246241		5.4	5.3	1.9%	< 1.0	97%	70%	130%	115%	80%	120%	98%	70%	130%
Dissolved Selenium	5246241		2.6	3.0	NA	< 1.0	98%	70%	130%	102%	80%	120%	116%	70%	130%
Dissolved Silver	5246241		<0.20	<0.20	NA	< 0.20	104%	70%	130%	112%	80%	120%	96%	70%	130%
Dissolved Thallium	5246241		<0.30	<0.30	NA	< 0.30	101%	70%	130%	104%	80%	120%	104%	70%	130%
Dissolved Uranium	5246241		14.6	15.1	3.4%	< 0.50	100%	70%	130%	102%	80%	120%	105%	70%	130%
Dissolved Vanadium	5246241		0.51	<0.40	NA	< 0.40	110%	70%	130%	110%	80%	120%	114%	70%	130%
Dissolved Zinc	5246241		<5.0	<5.0	NA	< 5.0	95%	70%	130%	95%	80%	120%	90%	70%	130%
Mercury	5246241		<0.02	<0.02	NA	< 0.02	101%	70%	130%	98%	80%	120%	100%	70%	130%
Chromium VI	5247951		323	325	0.6%	< 2	104%	70%	130%	100%	80%	120%	NA	70%	130%

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

Matrix spike NA: Spike level < native concentration. Matrix spike acceptance limits do not apply and are not calculated.

Certified By:



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Method Summary

CLIENT NAME: GEMTEC CONSULTING ENGINEERS AND SCIENTISTS

AGAT WORK ORDER: 23Z062367

PROJECT: 5360 Bank Street (100227.101)

ATTENTION TO: Ester Wilson

SAMPLING SITE:5360 Bank Street

SAMPLED BY:Estor Wilson

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Trace Organics Analysis			
Benzene	VOL-91-5010	modified from MOE PHC-E3421	(P&T)GC/MS
Toluene	VOL-91-5010	modified from MOE PHC-E3421	(P&T)GC/MS
Ethylbenzene	VOL-91-5010	modified from MOE PHC-E3421	(P&T)GC/MS
m & p-Xylene	VOL-91-5010	modified from MOE PHC-E3421	(P&T)GC/MS
o-Xylene	VOL-91-5010	modified from MOE PHC-E3421	(P&T)GC/MS
Xylenes (Total)	VOL-91-5010	modified from MOE PHC-E3421	(P&T)GC/MS
F1 (C6 - C10)	VOL-91-5010	modified from MOE PHC-E3421	(P&T)GC/FID
C6 - C10 (F1 minus BTEX)	VOL - 5010	MOE E3421	(P&T)GC/MS
Toluene-d8	VOL-91-5010	modified from MOE PHC-E3421	(P&T)GC/MS
F2 (C10 to C16)	VOL-91-5010	modified from MOE PHC-E3421	GC/FID
F3 (C16 to C34)	VOL-91-5010	modified from MOE PHC-E3421	GC/FID
F4 (C34 to C50)	VOL-91-5010	modified from MOE PHC-E3421	GC/FID
Gravimetric Heavy Hydrocarbons	VOL-91-5010	modified from MOE PHC-E3421	BALANCE
Terphenyl	VOL-91-5010	modified from MOE PHC-E3421	GC/FID
Sediment			N/A
Benzene	VOL-91-5010	modified from EPA SW-846 5030C & 8260D	(P&T)GC/MS
Toluene	VOL-91-5010	modified from EPA SW-846 5030C & 8260D	(P&T)GC/MS
Ethylbenzene	VOL-91-5010	modified from EPA SW-846 5030C & 8260D	(P&T)GC/MS
m & p-Xylene	VOL-91-5010	modified from EPA SW-846 5030C & 8260D	(P&T)GC/MS
o-Xylene	VOL-91-5010	modified from EPA SW-846 5030C & 8260D	(P&T)GC/MS
Xylenes (Total)	VOL-91-5010	modified from EPA SW-846 5030C & 8260D	(P&T)GC/MS
F1 (C6-C10)	VOL-91-5010	modified from MOE E3421	(P&T)GC/FID
F1 (C6 to C10) minus BTEX	VOL-91-5010	modified from MOE E3421	(P&T)GC/FID
Toluene-d8	VOL-91-5010	modified from MOE PHC-E3421	(P&T)GC/MS

AGAT Laboratories

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

Method Summary

CLIENT NAME: GEMTEC CONSULTING ENGINEERS AND SCIENTISTS
AGAT WORK ORDER: 23Z062367
PROJECT: 5360 Bank Street (100227.101)
ATTENTION TO: Ester Wilson
SAMPLING SITE:5360 Bank Street
SAMPLED BY:Estor Wilson

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Water Analysis			
Dissolved Antimony	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Arsenic	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Barium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Beryllium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Boron	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Cadmium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Chromium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Cobalt	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Copper	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Lead	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Molybdenum	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Nickel	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Selenium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Silver	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Thallium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Uranium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Vanadium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Zinc	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Mercury	MET-93-6100	modified from EPA 245.2 and SM 3112 B	CVAAS
Chromium VI	INOR-93-6073	modified from SM 3500-CR B	LACHAT FIA

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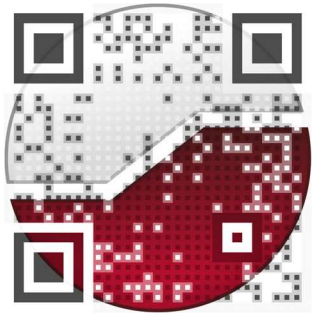

civil	civil
geotechnical	géotechnique
environmental	environnement
structural	structures
field services	surveillance de chantier
materials testing	service de laboratoire des matériaux

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