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The Regional Municipality of York
17250 Yonge Street
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L5N 6T7

Soil Management Plan (SMP) – York Region North Road Operations Centre at 3525 Baseline Rd, Georgina, ON.

1 Introduction

Engtec Consulting Inc. (Engtec) was requested by GEC on behalf of York Region to complete a Soil Management Plan for the future removal of excess soil from York Region North Road Operations Centre at 3525 Baseline Road, Georgina, Ontario and provide Qualified Person (QP) services during the duration of this project.

The Project Area is a polygon shaped property in Georgina, Ontario, with an area of 70,221 m², under industrial property use with adjacent properties primarily designated for agricultural use. The Site area is approximately 7.11 ha. The Site consists of six (6) building structures on the property, including existing salt storage stockpile, existing garage shed, refueling station, and office building. The site includes a pond located on the northern side of the Project Area and a gravel area near the central line of the Project Area. Based on the toporama map, the existing ground surface at the site is sloped towards the northeast side towards Baseline Road with elevation mostly ranging between 260 m to 250 m. No Record of Site Condition (RSC) has been filed for the Site. Groundwater flow inferred to the northeast towards Lake Simcoe. Engtec is assisting this process of handling excess soil as per O.Reg. 406/19 (as amended), Onsite and Excess Soil Management, as amended. This Soil Management Plan (SMP) provides the data for the excess soil to be generated at the Project Area and procedures to be followed during the removal of the excess soil.

The following table contains the contact details for the Project Leader for this Project, Engtec's QP, and the Project team.

| | |
|--------------------------------------|---|
| Project Leader | The Regional Municipality of York |
| Project Manager | Kellie Shantz The Regional Municipality of York 17250 Yonge Street Newmarket, ON, L3Y 6Z1. Email: kellie.shantz@york.ca |
| Contractor | TBD (To Be Determined) |
| Contractor's Qualified Person | Hammad Din, P.Eng., QP ESA Engtec Consulting Inc. 1-2447 Anson Dr., Mississauga, ON, L5S 1G1. t: +1.905.856.2988 m: +1.647.825.6372 Email: hammad.din@engtec.ca |
| Environmental Specialist | Pranav Dave, M.Eng., Engtec Consulting Inc. 2447 Anson Dr., Mississauga, Ontario, L5S 1G1 t: +1.905.856-2988 m: +1.613.621.0359 Email: pranav.dave@engtec.ca |

For the purpose of this SMP, the following soil quality standards were applied in the reviewed reports:

- Table 1: Full Depth Background Site Condition Standards for Residential/Parkland/Institutional/Industrial/Commercial/Community Property Use, all texture soils (Table 1 SCS);
- Table 2.1: Full Depth Excess Soil Quality Standards in Potable Ground Water Condition (Volume independent) for Industrial/Commercial/Community Property Use (Table 2.1 ICC ESQS); and,
- Table 3.1: Full Depth Excess Soil Quality Standards in Potable Ground Water Condition (Volume independent) for Industrial/Commercial/Community Property Use (Table 3.1 ICC ESQS).

The Soil Management Plan (SMP) is prepared per O.Reg. 406/19 (as amended) for guidance on handling excess soil to be generated at the Project Area, as noted in the sections below.

2 Background

Engtec reviewed the previous reports, and the following details were noted from the reports given:

A report entitled “*Assessment of Past Uses: Plan Report York Region North Road Operations Centre at 3525 Baseline Rd, Georgina, ON.*”, dated December 6, 2024, was reviewed and following was noted:

- The objective of the APU was to identify APECs that may have resulted from past activities, particularly those involving the importation of fill material of unknown quality during the site's development. The assessment included a review of historical records, aerial photographs, environmental databases, and a site visit.

Table 1: Areas of Potential Environmental Concern and Contaminants of Potential Concern

| APEC# | PCA# | PCA no. per Table 2 O.Reg. 153 | Location | Contaminants of Potential Concern (CoPC) |
|--------|-------|--|----------|--|
| APEC#1 | PCA#1 | PCA#30 (Importation of Fill material of Unknown Quality during the construction of building on Site) - Development of building and installing underground utilities at Site | On Site | Metals and Inorganics(M/I), Polycyclic Aromatic Hydrocarbons (PAHs) and Petroleum Hydrocarbons- Benzene, Toluene, Ethylbenzene, and Xylenes (PHCs-BTEX). |
| APEC#2 | PCA#2 | N/S (Application of de-icing agents) - Use of antifreeze chemicals or salt for winter maintenance | On Site | Electrical Conductivity (EC), and Sodium Adsorption Ratio (SAR) |
| APEC#3 | PCA#5 | PCA#28 (Gasoline and Associated Products Storage in Fixed Tanks) | On Site | PHCs/BTEX |
| APEC#4 | PCA#7 | PCA#52 (Storage, maintenance, fuelling and repair of equipment, vehicles, and material used to maintain transportation systems) | On Site | PHCs/BTEX |

- No other significant environmental concerns were identified during the site visit or records review.

A Report titled “*Sampling and Analysis Plan Report York Region North Road Operations Centre at 3525 Baseline Rd, Georgina, ON.*”, dated December 6, 2024, was reviewed and following was noted:

- A total of four (4) Areas of Potential Concern (APECs) were identified for the project area. The contaminants of potential concern include M & I, PHCs -BTEX, and PAHs.
- A total of fifty-three (53) soil samples and six (6) duplicate sample were collected for laboratory analysis of selected parameters to assess soil chemistry.

A report entitled “*Soil Characterization Report York Region North Road Operations Centre at 3525 Baseline Rd, Georgina, ON.*”, dated December 6, 2024, was reviewed and the Following was noted:

- Fifty-three (53) soil samples including six (6) field duplicate were collected from thirty-five (35) boreholes advanced at the Site, on October 23, October 24 and October 27, 2024.
- the collected soil samples to be submitted for M & I, PHCs -BTEX, and PAHs.
- Collect and submit one (1) soil sample for toxicity characteristic leaching procedure (TCLP) for metals, volatile organic compounds (VOCs), polychlorinated biphenyls (PCBs), Benzo(a)pyrene and Ignitability in addition to nine (9) soil samples for Modified Synthetic Precipitate Leaching Procedure (mSPLP).
- Exceedance of SAR and/or EC was noted for the soil samples which are G6, G8, G8 DUP, E-1-1, E-1-2, E-4-1, E-4-2, E-4-DUP, E-28-1, E-28-2, E-28-DUP, E-5-1, E-5-2, E-6-1, E-6-2, E-7-1, E-7-2, G-3-1, G-3-2, G-4-1, G-4-2, G-7-1, G-7-2, E26, E27, E25, E24, E8, E9, E10, E11, E21, E22, E23, E-19-2, E-19-2, E-20-1, E20-2, E-18-1, E-18-2, E-17-1, E-17-2, E-16-1, E-16-2, E-15-1, E-15-2, E14-1, E-13-2, E-12-1, E-12-2 for Table 1 RPICC SQS.
- Exceedance of SAR and/or EC was noted for the soil samples G6, G8, G8 DUP, E-4-2, E-4-DUP, E-28-1, E-28-2, E-28-DUP, E-6-1, G-3-1, G-3-2, G-7-1, G-7-2, E27, E25, E24, E8, E9, E10, E11, E21, E22, E-19-2, E-19-2, E-20-1, E20-2, E-18-1, E-17-1, E-17-2, E-16-1, E-16-2, E-15-2, E14-1, E-12-1, E-12-2 for Table 2.1 ICC ESQS and Table 3.1 ICC ESQS.
- Exceedances for PHCs were noted from soil samples E-5-2, E27, E25, E22, and E-20-1 for Table 1 RPICC SQS. While soil sample E27 showed exceedances for Table 2.1 ICC ESQS and E25 showed exceedances for Table 2.1 ICC ESQS and Table 3.1 ICC ESQS.
- The soil sample E25 exceeds for several PAHs for Table 1 RPICC SQS, Table 2.1 ICC ESQS and Table 3.1 ICC ESQS.
- The soil samples E-1-2 and E-3-2 showed exceedances for Barium (Metal) for Table 1 RPICC SQS.

A report entitled “*Soil Characterization Report: Stockpile Sampling and Delineation Samples for York Region North Road Operations Centre at 3525 Baseline Rd, Georgina, ON.*,” dated March 25, 2025, was reviewed and the Following was noted:

- Collecting seventy (70) soil samples and seven (7) duplicates were collected from Fifty-three (53) boreholes advanced at the Site, on March 10 and March 11, 2025.
- the collected soil samples to be submitted for M & I, PHCs -BTEX, and PAHs.
- The concentrations of all parameters in the soil samples submitted from the Site were either below the Table 2.1 ICC and Table 3.1 ICC ESQS except for the following:
 - Exceedance of SAR and/or EC was noted from the soil samples BHG6-B1-Dup for Table 2.1 ICC ESQS and Table 3.1 ICC ESQS.
 - the soil sample While soil samples E-25-B1, E-27-A1, E-27-B1, E-27-C1, E-25-B2, E-27-A2 and E-27-B2 exceeded for Table 2.1 ICC ESQS and Table 3.1 ICC ESQS.
- The stockpile sampling results indicated that the excess soil generated will either be reused to construct the new berm or taken to a property that accepts soil that meets Table 2.1 ICC ESQS and Table 3.1 ICC ESQS.
- For delineation samples near the pond area, the results showed that the excess soil can be reused onsite except the areas with the noted exceedances in Table 2.1 ICC ESQS and Table 3.1 ICC ESQS at one or more locations. Alternatively, the excess soil can be disposed of at designated soil-receiving sites or landfills that accept soil with these exceedances.
- For the delineation samples from the parking lot, the results indicated various exceedances which indicate that the southwest portion of the parking lot has impacts that will need to be disposed of as contaminated soil during construction.

This Soil Management Plan includes a summary of the data for the excess soil to be generated in the Project Area. Further, there is guidance to handle excess soil in the Project Area in a responsible and diligent manner.

3 Procedures to Follow During Soil Excavation

Based on Engtec's review of the reports provided, and an SCR prepared for the partial investigation, an elevated concentration of one or more analyzed parameters was noted in the soil samples. Soil being excavated from other areas (not known to be contaminated) should be monitored by the site workers for:

- The presence of significant debris in the soil excavated.
- Visual evidence of impacts.
- Olfactory evidence of impacts; and
- Any other concern that could indicate environmental impacts.

If the excess soil being excavated is suspected to be contaminated based on observations noted above at a particular area of the Site, the following procedures are to be implemented. If the excavated soil is stockpiled at the site for reuse procedures should be followed to limit the spread of contaminated soil.

3.1 Procedures to Deal with Impacted Soils

The excess soil generated at the Site is not anticipated to undergo any processing on the Site. Engtec and the Project leader from the Regional Municipality of York should be contacted immediately if there is evidence of other impacted soils during excavation at the Project Area. Suspect impacted soils should be separated from other soils when and if encountered and further excavation in the area from where the impacted soil is found must be paused. If impacts were not expected in this area of the Project Area additional sampling would be required by Engtec personnel in the area before exporting such soil. It is critical to take swift action to address the issue effectively. The following protocols should then be implemented:

- The observation of potentially impacted soil should be promptly reported to the contractor.
- All excavation activities in the affected area must be halted until further instructions are provided by city Contractor's Qualified Person.
- The area affected must be clearly identified and delineated to prevent further disruption.
- Any excavated soil from the impacted area should be segregated to avoid cross-contamination with other soil on site.
- The Contractor's QP shall conduct the necessary sampling and laboratory analysis of the impacted soil, as per the Sampling and Analysis AQ Plan. Based on the results, the extent of the impacted area must be determined, and appropriate disposal methods for the contaminated soil should be identified. Soil from the affected area must be disposed of in a timely manner at a licensed facility, with all necessary documentation provided.
- In collaboration with the Regional Municipality of York and the Project Leader's QP, the contractor must ensure an acceptable approach is in place to manage the potential contamination before excavation activities can resume. Any relevant documents should be updated accordingly, in compliance with O. Reg. 406/19.

To limit the spread of the contaminated soil during excavation at the impacted site proper management of the contaminated material is required. The potential cause of the spread of contaminated materials can be the transfer

of contaminants while handling the materials and transportation activities. The below-mentioned items are some of the potential ways contamination can spread.

- High amount of dust generation due to the constant movement of equipment and construction vehicles at the Site.
- Potential for dust and volatile emission during the construction activities such as excavation, storage, transferring etc., from the impacted soil.
- Due to unlined and uncovered stockpiles and excavated pits, leaching contaminants can occur into soil, groundwater, and surface water.
- The contaminants can also spread due to improper handling, disposal, and transportation of contaminated soil to an uncontaminated site.

Construction equipment such as excavators, dump trucks, cranes, and other vehicles transferring building materials to the site are also considered as potential modes of transporting the contaminants from the site. General Best Management Practices (BMP) to limit the spread of the contaminated soil include:

- Limiting the entry to the work site to avoid exposure and transfer of contaminants.
- Locating the surface drainage and subsurface utility systems.
- Preventing the mixing of runoff to the contaminated soils by using appropriate barriers or other similar measures at the excess soil receiving facility as well as the site under construction.
- The surface water runoff should be captured by in a depression, or a lined pit or appropriate provisions should be made to divert it into a lined area or depression.
- To limit the spread of contaminated material, approved dust control materials or water can be used to spray the site to limit the dust from spreading. However, during wet weather no spraying of water will be needed and materials at the site used should be approved by the QP.
- Decontaminating procedures for the equipment and vehicles used at the contaminated area and the excess soil receiving facilities should be established to limit the spread of contaminated soil.
- The excess soil receiving facility and the site should cover the contaminated soil with liners all the time when stored in piles or transferred to the storage facility.
- If the soil is contaminated or suspected of contamination it should be stored that the leaching in the groundwater can be prevented.
- If Engtec determines it is necessary to keep the sampled soil segregated from the soil that needs sampling, the contaminated soil should be protected from the impact of precipitation and runoff.
- If evidence of free product is found, the soil must be directly placed into a lined, roll-off container and cannot be reused. This soil needs to be disposed of at the licensed landfill facility.

A thorough understanding of the contaminants should be sought from Engtec and appropriate handling and management of them should be considered in advance of undertaking any construction or excavation work.

4 Excess Soil Destinations

Available analytical data pertaining to this material should be forwarded to the potential receiver for review. Written authorization, indicating that this data was received and reviewed, and that the receiver accepts the excavated material, will be provided to the Site representative by the receiver. At this time, no destination site has been identified; it will be determined once confirmed with the contractor.

It is important to note that salt-impacted soils can be reused in the parking lot area, provided that geotechnical feasibility is confirmed. Additionally, clean soil can be reused in the construction of the berm. Approximate quantities for this reuse are provided separately.

It is critical to take swift action to address the issue effectively. The following protocols should then be implemented:

- The observation of potentially impacted soil should be promptly reported to the contractor.
- All excavation activities in the affected area must be halted until further instructions are provided by city Contractor's Qualified Person.
- The area affected must be clearly identified and delineated to prevent further disruption.
- Any excavated soil from the impacted area should be segregated to avoid cross-contamination with other soil on site.
- The Contractor's QP shall conduct the necessary sampling and laboratory analysis of the impacted soil, as per the Sampling and Analysis AQ Plan. Based on the results, the extent of the impacted area must be determined, and appropriate disposal methods for the contaminated soil should be identified. Soil from the affected area must be disposed of in a timely manner at a licensed facility, with all necessary documentation provided.
- In collaboration with the Regional Municipality of York and the Project Leader's QP, the contractor must ensure an acceptable approach is in place to manage the potential contamination before excavation activities can resume. Any relevant documents should be updated accordingly, in compliance with O. Reg. 406/19.

5 Tracking System

The following sections summarize the tracking system and the records to be retained or compiled in relation to the tracking system. The location of the records and the name and contact information of a person that can provide these records upon request shall be provided. The haulage routes for transporting excess soil from the project area will be determined once the destination site is confirmed.

A record will be maintained of all soil transported off-Site, imported to the Site, or moved around the Site, including dates, quantities, source/destination information, etc., as well as records of all groundwater transported off-Site (if applicable). For tracking soils from the Site, weekly updates will be provided with excess soil reports from the tracking instrument. The specific tracking system or digital software is not known at the time of preparation of this SMP. A copy of the haulage record will be prepared and provided upon commencement and completion of the hauling activities, in accordance with regulatory requirements. The Contractor's Qualified Person will monitor the hauling records for compliance with the regulatory and contract requirements and will provide the weekly record summary describing the soil activities. Additional record-keeping requirements for the Soil Management Plan are noted below.

The activities carried out under the Soil Management Plan will be documented in a field logbook to be completed, which is to be kept in the Project Area. Engtec can assist the Contractor in documenting certain tasks, as noted below. The following is to be documented by the Contractor:

- 1) Name of Site Representative, Contractor, and Client.
- 2) Weather and working hours each day.
- 3) Dust monitoring results include visual observations and data along with dust control measures put in force.

- 4) Identity of waste haulers and waste receivers used.
- 5) Complaints (if any) related to dust emissions/odors and other on-Site activities.
- 6) Description of measures taken to address the cause of complaints and to prevent similar occurrences in the future.
- 7) Bills of landing for off-Site disposal for the soils.
- 8) Volume of 'clean' fill imported to the Site and re-used excess soils (if any).
- 9) Names of suppliers of the imported fill material and source locations (if and as applicable).
- 10) The following will be observed by Engtec, with input from the Contractor. If and as requested:
 - a) The location, extent, and volume of excavated areas, as well as logging any movement and/or stockpiling of excavated soil on the Site, or movement of soil off-Site for disposal. The location and extent of excavated areas are to be recorded.
 - b) Soil and waste characterization sampling locations (if and as applicable)
 - c) Summary of soil, waste characterization, and backfill analytical results (if and as applicable)
 - d) The location and quantity of any remaining soil impacts will be recorded for the duration of the soil management work and provided upon request.

Furthermore, the tracking system must be capable of monitoring and retaining the following information for each load of excess soil removed from the project area:

- The specific locations within the project area where the soil was excavated and stockpiled, if applicable, along with the associated soil quality for those locations and stockpiles.
- The quality of the excess soil being removed from the project area unless it is designated for sampling at a Class 2 soil management site or a local waste transfer facility.
- The quantity of excess soil being removed from the project area.
- The location of the receiving site where the excess soil will be deposited, as communicated to the vehicle operator.
- The date and time when the excess soil left the project area.
- The name and contact details of the individual responsible for overseeing the loading of excess soil at the project area.
- The name of the corporation, partnership, or firm transporting the excess soil, including the vehicle operator's name and the license plate details, as per the Highway Traffic Act.
- The date and time when the excess soil was received at the destination site.
- The contact information of the person at the receiving site who acknowledged receipt of the excess soil.
- Verification that the same vehicle and quantity of soil deposited at the receiving site matches the vehicle and soil volume leaving the project area.
- If excess soil is managed temporarily at a Class 2 soil management site or local waste transfer facility, the tracking system must record all the above information, substituting "project area" with "Class 2 soil management site" or "local waste transfer facility," as applicable. The system must also track the total number of vehicles, and the cumulative volume of excess soil transported from the project area to the final receiving site, ensuring the data aligns with the records from the destination.
- The system must be capable of generating reports upon request to address inquiries regarding the tracked information for each load of excess soil. Additionally, it must include procedures to verify the accuracy of the tracked data and methods to prevent any fraudulent activity or wrongdoing in the management and

transportation of excess soil.

6 Soil Import / Fill Management Plan

Earth fill that is imported to the Project Area from an off-site source (if any) shall be imported in accordance with the requirements of O. Reg. 406/19 and this SMP as outlined in the following subsections.

6.1 Import of Non-Excess Soil Material

In accordance with the O. Reg. 406/19, materials sourced from the following locations are excluded from the Imported Soil Acceptance Protocol as set out below and do not require testing prior to import on-site.

1. Recycled concrete and/or recycled asphalt (i.e. non-aggregate materials) do not meet the definition of soil and are not included in the scope of this SMP.
2. Consolidated or unconsolidated aggregate sourced as virgin material from a pit or quarry licensed by the Ontario Ministry of Natural Resources is not considered excess soil and is not included in the scope of this SMP. Consolidated or unconsolidated aggregate from any other source may meet the definition of excess soil and should be evaluated by the QP prior to import.

6.2 Imported Soil Acceptance Procedure

No excess soil is currently planned to be imported to the Project Area. It should be noted that excess soil includes soil, crushed rock, and soil mixed with crushed rock.

The following only applies if soil is to be imported in the future. Soil intended to be imported and finally placed in the Project Area must be sampled, analyzed and deemed appropriate for reuse at the Project Area by a QP in accordance with the O. Reg. 406/19 and the Soil Rules prior to importation.

Soil imported to the Project Area shall meet the following conditions as determined by the QP and in accordance with any written instructions from the QP prior to placement at the Project Area:

1. Imported soil must be sampled and analyzed prior to import and deemed acceptable by the QP. Should it be determined that additional sampling and analysis are required for approval, the proposed sampling and analysis plan is to be provided for review to the QP in advance of implementation.
2. Imported soils must meet O. Reg. 406/19 Table 2.1 ESQS for industrial/commercial/community (ICC) property use prior to final placement within the Project Area. Salt-impacted soils that meet Table 2.1 ICC property use, excluding EC and SAR, may be finally placed on Site, since the Site is expected to continue to be used as community land. Salt impacted soils cannot be placed within 30 m of a waterbody, within 100 m of a property that is serviced or may be serviced with a potable well, or within the top 1.5 m of soil at a location that will be used for growing crops or pasture.
3. Imported soil must be geotechnically suitable and cannot contain any deleterious materials, organic materials (except in the case of topsoil imports), construction debris, etc. The moisture content should be within 2 percent of its optimum based on the standard Proctor maximum dry density tests.
4. Imported soil cannot exhibit any staining or odours associated with petroleum hydrocarbons (PHCs) or other contaminants.

5. Imported soil must have been sampled and analyzed for appropriate parameters, as determined by the Source Site QP and agreed to by the Reuse Site QP based on:
 - a. the history and prior usage of the imported soil, as ascertained from previous environmental investigations made available to the QP, and,
 - b. other relevant factors as determined by the QP, including potentially contaminating activities.
6. Soil sampling and analysis must be conducted by the Source Site QP in accordance with the requirements outlined in O. Reg 406/19 and subject to approval by the QP.

6.3 Imported Soil Acceptance Protocol

The completion of the Site-Specific Soil Importation Form and all associated environmental documentation prepared for excess soil intended for import to the Project Area shall be provided to the QP for review, comment and approval prior to the intended date to commence the importation activities. The environmental documentation provided should comply with the requirements outlined in O. Reg 406/19 and should contain information including (but not limited to) the following:

1. The rationale for the choice of parameters analyzed,
2. The description of the methods used to ensure uniform and representative sample collection,
3. The number, location and depths of soil samples collected,
4. The volume of each stockpile or area sampled in situ,
5. Laboratory certificates of analysis for soil samples analyzed,
6. A comparison of the testing results to the applicable ESQS, as applicable, and
7. The opinion of the Source Site QP that the excess fill material to be exported is suitable for reuse at the Reuse Site (Receiving Site) and adheres to this Excess Fill Acceptance Protocol.

It is understood that no excess soil is currently planned to be imported to the Project Area.

Soil shall not be imported to the Project Area without prior written approval from the QP overseeing this SMP and written authorization for the material having been provided from the Project Area Leader (Owner) to the Source Site authorities.

7 Conclusion

It is understood that the excess soil will be sent to a designated reuse site(s) depending on the soil types. The destination will be identified once confirmed with the contractor, as the contractor is yet to be determined. The procedures noted in this soil management plan related to excavation, encountering impacted soil, tracking excess soil, and fill import will be followed. This SMP will be updated upon the completion of additional sampling if required, and upon the identification of the potential reuse site for the excess soil to be generated from the Project Area. Salt-impacted soil can be reused in the parking lot area, while clean soil can be reused in the construction of the berm. Approximate quantities for this reuse are provided separately.


8 Closure

We trust that this submission meets your requirements. Should you have any questions, please don't hesitate to contact this office.

Yours truly,

A handwritten signature in blue ink, appearing to read 'Pranav Dave', with a stylized flourish at the end.

Pranav Dave, M.Eng.,
Environmental Specialist
Engtec Consulting Inc.

A handwritten signature in blue ink, appearing to read 'Hammad Din', with a large loop at the beginning and a long horizontal stroke at the end.

Hammad Din., P. Eng.
Manager, Environmental Services
Engtec Consulting Inc.