



April 15, 2014

Dave Fumerton, Manager
York Durham District Office
Ministry of the Environment
230 Westney Road South, 5th Floor
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**Subject: Soil Testing Plan Results and Summary – Response to MOE Comments
Durham York Energy Centre – 2013 Soil Sampling Plots
Project No. 111-26648-00 100-0414018**

Dear Mr. Fumerton:

On behalf of the Region of Durham, we are pleased to forward our response to your comments on the Soil Testing Plan Results for the Durham York Energy Centre. The comments and recommendations provided by the Ministry are contained in the letter dated January 28, 2014. The 2013 Soil Testing Results report was prepared by GENIVAR Inc. (now WSP) in accordance with the *Durham York Energy Centre Soils Testing Plan* (Soil Testing Plan) document which was approved by the Ministry of the Environment (MOE) after a second revision on February 8, 2013. The Soil Testing Plan was prepared to satisfy Conditions 7(10), 13(4) and 15(4) of Certificate of Approval #7306-8FDKNX (CofA). The response to the MOE comments are presented in the following sections, along with the initial comments provided by the MOE.

1. SOIL SAMPLING AMOUNTS

“The actual amount of soil collected from each subplot and location where the sample was collected from within the subplot should be provided.”

In accordance with Section 3.3 of the Soils Testing Plan, the laboratory (AGAT) was contacted prior to the soil sampling event to ensure that an adequate quantity of soil was collected for the required analysis suite, and for quality assurance/quality control.

- Equal portions of soil were obtained from each subplot for a total of 870 ml of sample per location.
- Exact sampling locations from within the nine subplots were not recorded as they were taken randomly within the 3.3 m by 3.3 m subplot area.

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2. LABORATORY ACCREDITATION

“It is understood that the laboratory used for the chemical analysis of the soil samples is an accredited laboratory however it should be stated whether or not this laboratory is accredited for the methods used.”

In accordance with the requirements of Sec 4.1 of the Soils Testing Plan, AGAT Laboratories is accredited by an internationally recognized accreditation body, the Canadian Association for Laboratory Accreditation (CALA) and Standards Council of Canada in accordance with the International Standard ISO/IEC17025:2005. AGAT Laboratories is accredited for all soil method parameters/contaminants listed under Table 1, Part XV.1 of the Environmental Protection Act, with the exception of:

- methyl mercury, which was subcontracted to Flett Research (accredited for soils method)
- dioxin and furan testing, which was subcontracted to AGAT Montreal (accredited for soils method).

3. SUITABILITY OF THE PLOT SAMPLING LOCATIONS

“It was noted that the metal, polycyclic aromatic hydrocarbon, and dioxin and furan concentrations were considered to be typical Ontario background concentrations (based on MOE Table 1 standards). The report should make a statement as to the suitability of these two sites for long-term monitoring around a potential source. It should also be stated how similar the contaminant concentrations are between the plots.”

The locations for soil testing were predetermined and approved by the Ministry of the Environment, and were outlined in Section 3.1 of the Soils Testing Plan. WSP does not have a concern about the suitability of the sample sites at this time. The chemical results for the selected locations were expected to be within the Table 1 Standards, based on the results from the baseline study during the EA process, which are considered to be representative of upper limits of typical province-wide background concentrations within uncontaminated soils.

As noted in Sections 4.1, 4.2, and 4.3 of the Soils Report, the soil sampling results at the downwind sample plot were generally similar to the sampling results at the upwind location; and data from the two predetermined sites obtained for metals, polycyclic aromatic hydrocarbons, and dioxins and furans are within the Table 1 Standards. The sampling results from the 2013 sampling event will provide a sufficient baseline for comparing future soil quality data.

In accordance with Condition 13 (4) of the Certificate of Approval, soil sampling and ambient air monitoring are conducted at the same locations. The suitability of the pre-approved sites for long-term monitoring of soil and ambient air quality will be re-evaluated after the facility commences operations in accordance with Section 9.2 of the Ambient Air Monitoring and Reporting Plan.

4. REVIEW AND EVALUATION

“The Report states that storing these samples will ‘affect the laboratory results for some parameters’. The parameters thought to be affected by storage should be stated.”

In accordance with Section 3.5 of the Soils Testing Plan, sample handling, container requirements for parameter analysis, storage, and preservation requirements were carried out in accordance with the reference document *Protocol for Analytical Methods Used in the Assessment of Properties Under Part XV.1 of the Environmental Protection Act by MOE Laboratory Services Branch July 1, 2011*. Sample handling and storage requirements are described in the reference document in *Table A: Soil and Sediment Sample Handling and Storage Requirements* on page 16. Also, AGAT Laboratories has established its own recommended holding times for the various parameter suites. The table below was prepared to compare the recommended holding times from Table A of the reference document to the AGAT holding times related to Soil.

PARAMETER/GROUP	AGAT LABORATORIES HOLDING TIME	PROTOCOL - MOE LAB SERVICES BRANCH HOLDING TIME
Metals	180 days	180 days
Hexavalent Chromium	28 days	30 days
Mercury/Methyl Mercury	28 days	28 days
PAHs	14 days	60 days
Dioxins/Furans	90 days	indefinite

All test results, with the exception of dioxins and furans, will be affected if/when tested after the prescribed holding times.

5. CLOSING

We trust that this letter report satisfies your requirements at this time. Should you have any questions, please feel free to contact the undersigned.

Yours truly,
WSP Canada Inc.



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Senior Project Engineer

SJT:jpc