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EAAB File No.: EA-08-02
CR File No.: EA-05-09

Mirka Januszkiewicz, P. Eng
Director, Waste Management
The Regional Municipality of Durham
605 Rossland Road East
Whitby ON L1N 6A3

Laura McDowell, P. Eng
Director, Environmental Promotion and Protection
The Regional Municipality of York
17250 Yonge Street
Newmarket ON L3Y 6Z1

**Re: Durham/York Energy from Waste Project
Ambient Air Monitoring 2018, Second Quarterly Report
Notice of Approval, Condition 11**

Dear Ms. Januszkiewicz and Ms. McDowell,

A data validation review was conducted for the 2018 Second Quarterly Report prepared by Stantec on behalf of Durham and York Regions for the continuous and periodic parameters measured at Stations 45201 (Courtice) and 45200 (Rundle).

During the second quarter of 2018, there were no daily PM_{2.5} concentrations above the daily reference level of 28 µg/m³ at Courtice and Rundle stations.

There were four daily Benzo(a)pyrene (BaP) exceedances, two at Courtice and two at Rundle stations. BaP daily concentrations above the AAQC of 0.05 ng/m³ at Courtice station occurred on May 2 and May 26, with measurements of 0.06 ng/m³ and 0.18 ng/m³ respectively. At Rundle station, BaP daily exceedances also occurred on May 2 and May 26, with measurements of 0.052 ng/m³ and 0.14 ng/m³ respectively. These elevated levels are potentially due to the construction in the area, vehicle exhaust emissions and agriculture activities.

In addition, there were four total suspended particulate (TSP) daily exceedances of the 24-hour AAQC of 120 µg/m³ at Rundle station on May 2 (204 µg/m³), May 14 (135 µg/m³), June 1 (137 µg/m³) and June 19 (163 µg/m³). During this time ongoing construction activities were occurring at the Highway 401-418 interchange, and road surfacing construction at Rundle Road and Baseline Road which are in close proximity to the Rundle station. These activities are typically comprised of regrading surfaces and heavy duty diesel equipment, and associated emissions likely contributed to the daily TSP and BAP measurements.

Furthermore, there was one daily Dioxin/Furan exceedance at Courtice Station on May 26. The light wind speeds observed resulted in low mixing and dispersion conditions. Wind Rose analysis and 48-hour backward trajectory was conducted in an attempt to determine the potential source (s) for this occurrence. However, since the wind speeds on that day were very low, the ministry cannot confirm the source of this exceedance.

A review of the data by ministry toxicologists indicated that no adverse effects would be expected if an exceedance of the air standard occurred infrequently to the level of the maximum concentration measured. Therefore based on the reported concentrations, no adverse effect is expected.

Below are our comments and recommendations for your consideration.

Continuous Parameters

1. Based on the supporting documentation provided, the continuous parameters (NO₂, PM_{2.5}, and SO₂) are deemed to be valid for the second quarter 2018.

Non Continuous Parameters

2. Please provide field sample log sheets for April 2 and April 8 sampling events. The log sheets were not included in the electronic submission.
3. In Table 4-6 the wind direction on May 26 is reported as east, however in Table 4-8 the wind direction on May 26 is reported as southwesterly. Please re-visit this table and correct the discrepancy.
4. Based on the supporting documentation provided to date, TSP/metals, PAHs and Dioxins and Furans appear to be valid with the exception of the missing information noted in comment 2.

Thank you for the opportunity to comment. If there are any technical questions or concerns regarding these comments, please contact Marinha Antunes, Air Quality Analyst, MECP Central Region, at (416) 326-3526.

Sincerely,



Emilee O'Leary
Regional Environmental Assessment Coordinator
Central Region, Technical Support Section

cc: Lubna Hussain, Manager, Technical Support Section, Central Region, MECP
Paul Martin, APEP Supervisor, Technical Support Section, Central Region, MECP
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