

**Ministry of the Environment and
Climate Change**

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**Ministère de l'Environnement et de l'Action
en matière de changement climatique**

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Mirka Januszkiewicz, P. Eng
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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
DYEC Ambient Air Monitoring - 2017 First and Second Quarterly Reports
Notice of Approval, Condition 11**

Dear Ms. Januszkiewicz and Ms. McDowell,

A data validation review was conducted for the 2017 First and Second Quarterly Reports prepared by Stantec on behalf of Durham and York Regions for the continuous and periodic parameters measured at 45201 (Courtice), 45200 (Rundle) and Fenceline Stations.

The first quarter of 2017, there were three daily PM_{2.5} concentrations at Rundle station above the Canadian Ambient Air Quality Standard (CAAQS) reference level. There were no daily PM_{2.5} concentrations above the CAAQs reference level at Courtice Station during first quarter. The CAAQS for PM_{2.5} is based on a 98th percentile level over 3 years. Since, the operational monitoring commenced February 13, 2015, there is insufficient data collected to determine with any certainty if the elevated concentrations are in fact above the CAAQS.

During the second quarter, there was one daily Total Suspended Particulate (TSP) Ambient Air Quality Criteria (AAQC) exceedance of 126 µg/m³ at Rundle station which is slightly above the daily TSP AAQC of 120 µg/m³. There were no PM_{2.5} daily concentrations reported above the CAAQS reference level for the second quarter.

The elevated particulate levels observed at Rundle correspond to winds blowing from West-Southwest, West, and North quadrants. Based on the ministry's field staff observations and pollution rose assessment, the ministry concurs that these elevated PM_{2.5} levels are a contribution of multiple sources, such as Highway 407 construction, transportation and industrial sources.

Below are our comments and recommendations for your consideration.

Continuous Parameters

1. In the month of May, 65.5 % valid data was measured for PM_{2.5} at the Courtice Station. As per the *Operations Manual for Air Quality Monitoring in Ontario* (MOECC, March 2008), the monthly average for May does not meet the 75% valid data requirement and therefore should be reported as “INS = insufficient data” in the Annual Report.
2. On June 20, 2017 an obstruction on the PM_{2.5} nozzle at Courtice station due to a fly was noticed during the MOECC Audit. Although, the data appears to be generally consistent with nearby stations as noted in the Stantec letter dated July 31, 2017 and on Table 3-4 of the Quarterly Report. These PM_{2.5} hourly levels were considered valid by Stantec for this short period. It is the ministry’s opinion that a partial obstruction of the flow may lead to the monitor capturing lower PM_{2.5} levels. For this reason, the PM_{2.5} measurements from June 17 to June 22 should be considered as invalid.
3. Based on the supporting documentation provided, the SO₂ and NO₂ data for Q1 and Q2 2017 is deemed to be valid.
4. Since there is no AAQC for nitrogen oxides (NO_x), NO_x ambient measurements should not be compared with the NO₂ AAQC. Although this is noted in the Quarterly reports, in future reporting the NO_x data should be presented in the results table with no comparison to the NO₂ AAQC.

Non Continuous Parameters

1. Based on the supporting documentation provided, the PAHs, Dioxins/Furans, TSP and metals are deemed to be valid for the First and Second Quarter of 2017.

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, MOECC Central Region, at (416) 326-3526.

Sincerely,



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

cc: Tina Dufresne, Manager (A), Technical Support Section, MOECC
Paul Martin, APEP Supervisor, Technical Support Section, MOECC
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