

**Ministry of the Environment and
Climate Change**

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The Regional Municipality of York
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**Re: Durham/York Energy from Waste Project
Ambient Air Monitoring 2014 1st and 2nd Quarterly Reports
Environmental Assessment Condition 11**

Dear Ms. Januszkiewicz and Ms. McDowell,

Thank you for the above-noted submission. A data validation review was conducted by the Ministry of the Environment and Climate Change (MOECC) Central Region staff for the 1st and 2nd Quarterly Ambient Air Monitoring Reports for 2014, prepared by Stantec Consulting Ltd., covering the period from January 2014 to June 2014.

This memorandum pertains to the continuous parameters, which are sulphur dioxide (SO₂), nitrogen oxides (NO_x), particulate matter smaller than 2.5 microns (PM_{2.5}). As well, this memorandum includes the review of the non-continuous parameters which comprise of total suspended particulate (TSP), metals, Polycyclic Aromatic Hydrocarbons (PAHs) and dioxins and furans (D/F).

1. Continuous Parameters (January to June 2014)

Based on the review of the continuous parameters, SO₂ is deemed to be valid for the 1st and 2nd Quarterly Report submissions from January to June 2014. Further clarification is required for PM_{2.5} and NO₂ on the following dates:

- At Courtice Station, an elevated hourly PM_{2.5} reading of 115 µg/m³ was observed on January 10, 2014 at 8 am as shown in Figure 1. This measurement appears not to be valid when compared to nearby stations. Please revisit the hourly PM_{2.5} data on January 10, 2014 and clarify the validity of this measurement.

- At Rundle Station, elevated PM_{2.5} hourly readings of 99 µg/m³ at 1pm on January 17 and of 71 µg/m³ at 9am on January 26 were reported as shown in Figures 2 and 3. Please revisit the PM_{2.5} data and ensure these hourly measurements are valid.
- On May 8, 2014, the NO₂ trend at Rundle Station does not follow typical trends observed previously at this station. In addition, it is very different from the pattern observed at Courtice and Oshawa AQI on May 8, 2014 as illustrated in Figure 4. On May 27, 2014, the logs noted a sample pressure warning message. Please clarify the validity of the hourly NO₂ measurements during the month of May at Rundle Station.

Figure 1: Ambient Hourly PM_{2.5} measurements at Courtice Station on January 10, 2014

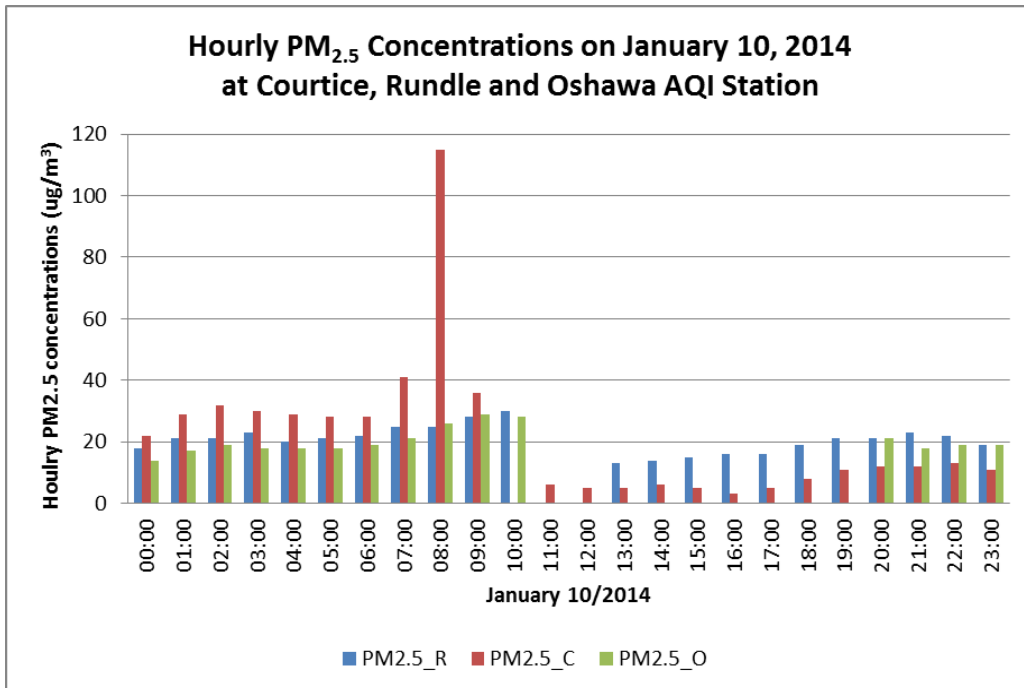


Figure 2: Ambient Hourly PM_{2.5} measurements at Rundle Station on January 17, 2014

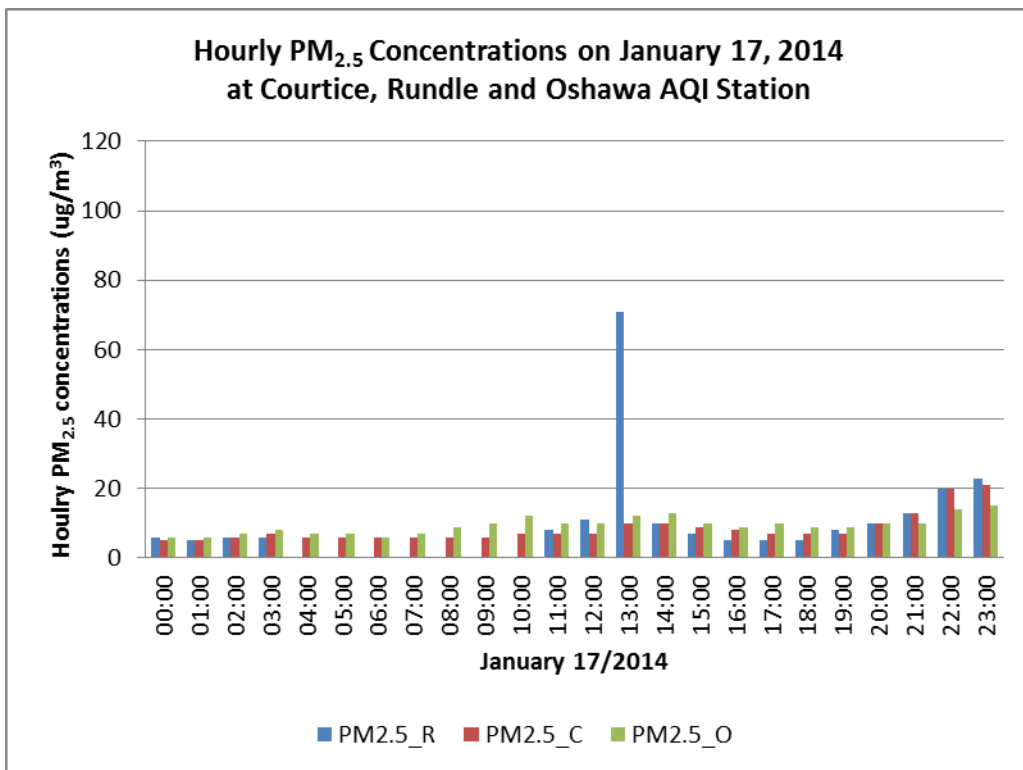


Figure 3: Ambient Hourly PM_{2.5} Measurements at Rundle Station on January 26, 2014

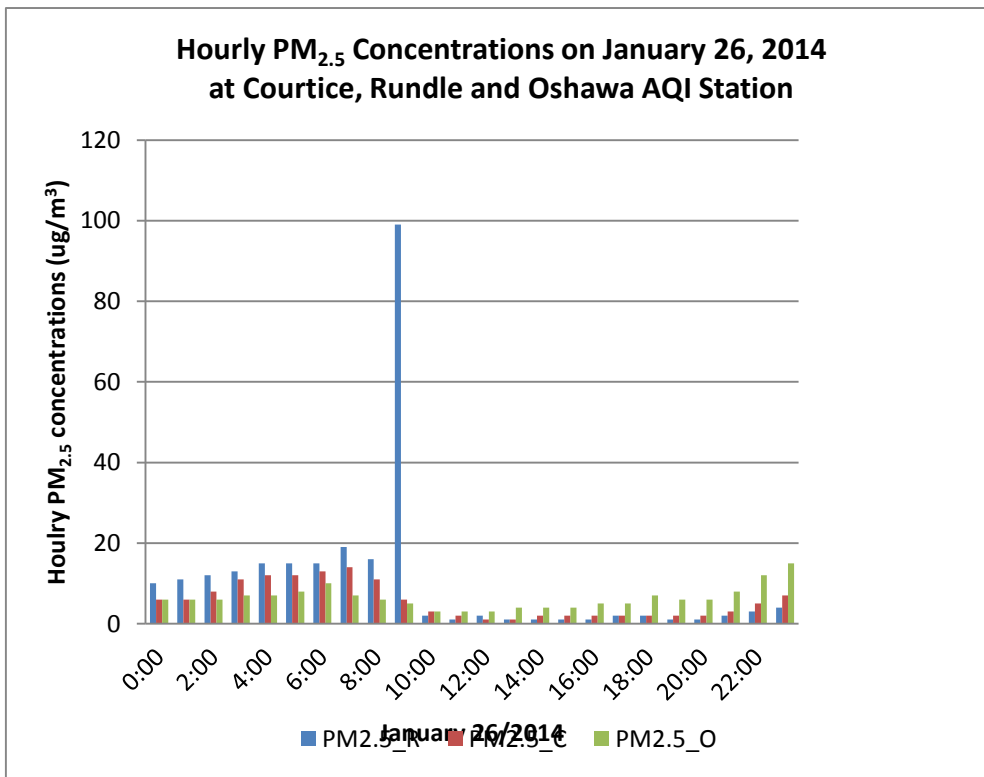
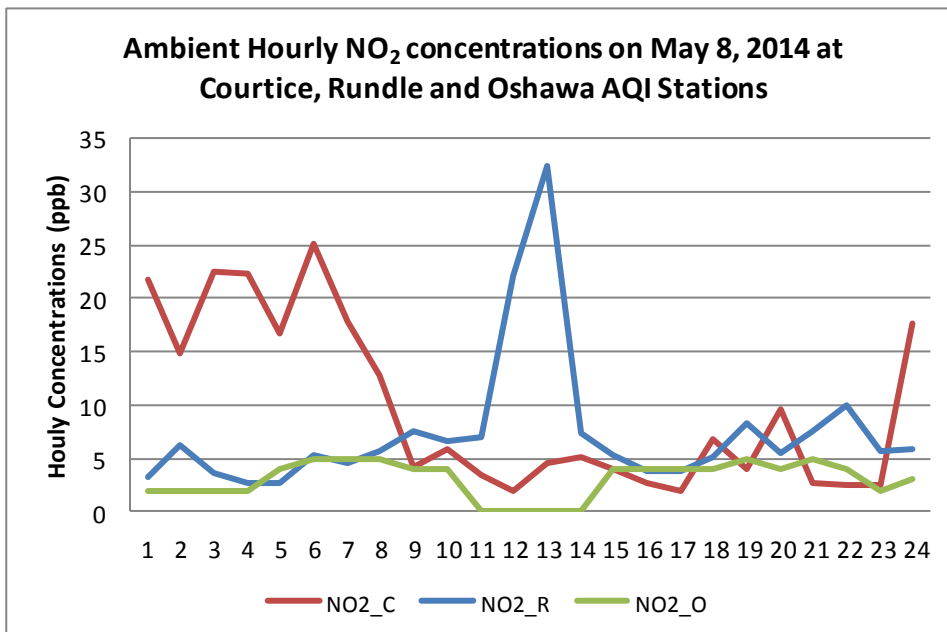


Figure 4: Ambient Hourly NO₂ measurements at Courtice and Rundle on May 8, 2014



2. Non-Continuous Parameters (January to June 2014)

The supporting documentation and reported flows for the HiVols for TSP and metals and the PUFF flow rates for the PAHs and D/F measurements generally comply with the guidelines of the MOECC Operations Manual and the approved Ambient Monitoring Plan, with the exception of some dates noted below where the recorded flow for TSP and metals samples falls outside the flow guidelines.

For the dates noted below, we recommend adding notes in the 2014 Annual Report explaining that the flows are not within the acceptable flow range of 40 cfm +/- 10% (+/- 4) as stipulated in the *Operations Manual for Air Quality Monitoring in Ontario* for HiVol Sampling.

- Courtice Station – January 5, 11, 17, 23 and 29 (55, 57, 58, 57, 57 cfm respectively)
February 10, 22 (51,51 cfm respectively)
March 6th (32 cfm)
- Rundle Station – January 5, 11, 17, 23 and 29 (57, 59, 58, 56, 58 cfm respectively)
February 4, 10, 16, 22 and 28 (60, 60 , 61, 63, 58 cfm respectively)

In the 1st Quarterly Report, there is a typo under Table 4-3, *Summary of Measured Ambient TSP/ Metals Concentrations*, where the minimum particulate concentration at Courtice is 3 µg/m³ and should be reported as 4.5 µg/m³.

Overall, since March 2014, the HiVol flow measurements meet the MOECC's recommended flow guidelines.

3. General Comments

Based on the review of the continuous parameters, SO₂ is deemed to be valid for the 1st and 2nd Quarterly Report submissions from January to June 2014. However, further clarification is required for PM_{2.5} and NO₂ hourly measurements on specific dates as noted above.

The supporting documentation for the PAH, dioxins and furans measurements follows the guidelines of the MOECC Operations Manual and the reported PUFF flow rates generally follow the recommended practices. For this reason, the PAH and dioxins and furans measurements are deemed to be valid from January to June 2014.

Lastly, based on the supporting documentation for the TSP HiVol measurements, the metal and TSP data are deemed to be valid from January to June 2014.

Thank you for the opportunity to comment on this project. If you have any questions or concerns regarding these comments please contact Marinha Antunes, Air Quality Analyst, at (416) 326-3526.

Yours sincerely,



Nisha Shirali
Environmental Resource Planner & EA Coordinator
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