



Stantec Consulting Ltd.
401 Wellington Street West, Suite 100
Toronto ON M5V 1E7
Tel: (416) 596-6686
Fax: (416) 596-6680

July 13, 2015
File: 160950528

Attention: Mr. Greg Borchuk, P.Eng.
Project Manager, EFW
Waste Management Services

The Region of Durham
605 Rossland Rd.,
Whitby, ON L1N 6A3

Dear Mr. Borchuk,

Reference: Q1 2015 Ambient Air Quality Monitoring Report for the Durham York Energy Centre – Crago Road Station

Please find attached with this letter the Q1 2015 quarterly report for the Durham York Energy Centre (DYEC) Crago Road Station.

This quarterly report provides a summary of the measurements collected at this station during January to March 2015 (calendar Quarter 1 of 2015). All equipment operated well during this measurement period with the exception of the continuous SO₂ and PM_{2.5} monitors.

As previously communicated to the Region, a significant operational issue first encountered with the Thermo Sharpe 5030 PM_{2.5} monitor in December 2014, was resolved in January 2015. The monitor had to be removed and shipped back to the supplier for repair and replacement of the main board under warranty. Another issue was encountered with the Thermo Sharpe 5030 PM_{2.5} monitor in March 2015 which required the beta detector to be cleaned and recalibrated. These issues resulted in a PM_{2.5} data recovery rate of about 60% during the January to March 2015 period.

An operational issue was encountered with the Teledyne Monitor Labs Analyzer Model T100 SO₂ monitor that required the motherboard to be replaced under warranty by the manufacturer. The issue resulted in SO₂ measurements between January 1 and January 29, 2015 being invalidated due to the unreliability of the instrument output from a faulty analog output on the motherboard. After replacement of the malfunctioning part, no further remedial action is expected to be required for this issue.

Regional Council has requested that 98th percentile PM_{2.5} data also be provided along with the quarterly reports, which is provided in Table 1 below. A comparison to the Canadian Ambient Air Quality Standard (CAAQS) for PM_{2.5} requires averaging the 98th percentile daily average levels in each of three consecutive years. The value presented in Table 1 corresponds to the 98th



July 13, 2015
Mr. Greg Borchuk, P.Eng.
Project Manager, EFW
Waste Management Services

Page 2 of 2

Reference: Q1 2015 Ambient Air Quality Monitoring Report for the Durham York Energy Centre – Crago Road Station

percentile over the 5 month monitoring period. Two years and 7-months of additional data will be required in order to provide an explicit comparison to the current CAAQS criteria of 28 $\mu\text{g}/\text{m}^3$.

Table 1 Summary of the 98th Percentile Daily Average PM_{2.5} Concentrations Measured to Date ($\mu\text{g}/\text{m}^3$)

Period	Crago Road Monitoring Station
November 2014 – March 2015	22.7

Regards,

STANTEC CONSULTING LTD.

Original Signed by G. Crooks

Gregory Crooks, M.Eng., P.Eng.
Principal, Environmental Services
Phone: (416) 598-7687
Fax: (416) 596-6680
gregory.crooks@stantec.com

c. Gio Anello, Region of Durham
Lindsay Waller, Region of Durham
Luis Carvalho, Region of York
Seth Dittman, Region of York
C. Lim, T. Hung, Stantec

ic v:\01609\active\160950528\planning\report\final\2015\2015 q1 crago report\q1_2015_crago_rd_cover_final.docx