



Memorandum

To: Committee of the Whole

From: Erin Mahoney
Commissioner, Environmental Services

Date: November 23, 2016

Re: **Durham York Energy Centre Update**

The purpose of this memo is to update Committee of the Whole on Phase 2 of the Durham York Energy Centre Abatement Plan. Phase 1 Abatement Plan results were previously outlined in a memo to Committee from the Commissioner of Environmental Services dated [September 8, 2016](#).

Abatement Plan sets framework for responding to May 2016 stack test results

In May 2016, independent stack tests were conducted on each of the Durham York Energy Centre's two boiler units (Boiler #1 and Boiler #2) by the operations contractor, Covanta. Results of the May stack test for Boiler #1 exceeded the in-stack limit for dioxins and furans. All other test results were compliant with applicable regulatory and contractual limits.

Upon receiving confirmation of the dioxin and furan results on May 26, Covanta shut down Boiler #1 to conduct a root-cause analysis and submit an Abatement Plan to the Ministry of the Environment and Climate Change ("the Ministry"). Boiler #2 continued to operate.

Phase 1 of the Abatement Plan included a comprehensive inspection and data review with Boiler #1 offline. On August 5, 2016 the Ministry concluded its review of Phase 1 and authorized Covanta to restart Boiler #1.

Stack test results indicate that both boilers compliant with all conditions of the Environmental Compliance Approval

Upon receiving approval from the Ministry to restart Boiler #1, Covanta proceeded with Phase 2 of the Abatement Plan. During Phase 2, Covanta conducted a series of online diagnostic tests to evaluate dioxin and furan generation rates and removal efficiencies under different operating conditions. Phase 2 concluded with full compliance stack tests on both boilers, which were completed between October 24 and November 3, 2016. The stack tests were observed by Ministry representatives and by independent experts retained by the Regions to ensure that proper testing procedures were followed.

Results for key parameters are summarized in Table 1. The full test report is available to the public on the project website (www.durhamyorkwaste.ca). All test results were well within the applicable regulatory compliance limits.

Table 1
Summary of Durham York Energy Centre
Stack Test Results (October 24 – November 3, 2016)

Emissions Parameter	Unit	Concentration ^{1,2}		
		Boiler #1	Boiler #2	Compliance Limit
Dioxins and Furans	pg/Rm ³	9.44	6.4	60
Total Suspended Particulate Matter (filterable)	mg/Rm ³	0.95	1.04	9
Mercury	µg/Rm ³	0.051	0.032	15
Lead	µg/Rm ³	0.39	0.28	50
Cadmium	µg/Rm ³	0.074	0.12	7

1. All concentrations represent the average of three test runs and are stated on a dry basis in reference cubic meters (Rm³) at 25 C and 1 atmosphere and corrected to 11% oxygen.

2. Dioxin and furan concentrations are calculated using NATO/CCME (1989) toxic equivalency factors.

Covanta installs leak detection system to provide early warning of issues with particulate filter bags

During Phase 1 of the Abatement Plan, Covanta discovered a small leak in one of the particulate filter bags in the air pollution control system and committed to installing a bag leak detection system. The bag leak detection system was installed on October 20, 2016 and was in operation during the Phase 2 compliance stack test. Bag leak detection systems of this type are not intended to measure particulate concentrations,

but rather, to detect small changes to baseline conditions as an early indicator of potential leaks or other malfunctions in the baghouse.

Regions issue Acceptance Certificate to formally close construction phase of the project

The Durham York Energy Centre formally entered the operations phase of the contract in January 2016 when facility construction was deemed to be substantially complete. Since that time, Covanta has been working to secure release of the money held by the Regions under the *Construction Lien Act*, which amounts to ten per cent of the contract price. Work completed during this construction close-out period included clearing liens, correcting deficiencies, finalizing as-built drawings, and removing construction materials and equipment.

On November 23, 2016, Durham Region and York Region jointly issued the Acceptance Certificate marking the formal close-out of construction and triggering the release of \$12,774,466, which represents half of the *Construction Lien Act* withholdings. In accordance with the contract, the other half of the withholdings will continue to be held for an additional two years as a performance security to remedy any construction deficiencies identified in the future.

Staff will provide a comprehensive summary report on facility operations to Council in Q2 2017 after the facility completes its first full year of commercial operation.

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