



Memorandum

TO: Regional Council
FROM: Erin Mahoney, Commissioner of Environmental Services
DATE: February 16, 2017
RE: **Durham York Energy Centre Update**

Boiler corrosion causes maintenance shutdown at Durham York Energy Centre

On January 27, 2017, Covanta shut-down Boiler #2 at the Durham York Energy Centre to repair a damaged boiler tube. Covanta continued to operate Boiler #1 until February 6, before shutting down the boiler as a precaution. There is currently no waste processing and no electricity generation as a result of the boiler outages.

Inspection of both boilers revealed extensive corrosion resulting in tube wall thicknesses that are below minimum requirements. Accordingly, Covanta advised that the facility will remain offline to allow for full replacement of the corroded tubes. Covanta currently estimates that Boiler #2 will remain offline until early March and Boiler #1 until mid-March. Staff have activated contingency capacity at the Emerald Energy from Waste facility to ensure continuity of service and maximize diversion from landfill.

Covanta to increase level of corrosion protection in rebuilt sections of the boiler

Energy-from-waste boiler tubes are constructed of steel and coated with an alloy of nickel and chrome known as Inconel that is resistant to corrosion at high temperatures. Due to cost considerations, the Inconel coating typically does not cover the entire length of the boiler tubes. Beyond the end of the Inconel the steel tubes are left uncoated because the environment is expected to be less corrosive.

After shutting down, Covanta conducted extensive testing of the boiler tubes. While the Inconel-coated tubes were found to be in good condition, there was significant corrosion damage to the uncoated tubes beyond the Inconel line. To prevent a reoccurrence of the current situation, Covanta will extend the area treated with Inconel when they replace the damaged tube sections.

Contract contains annual allowance for maintenance time and remedies if Covanta exceeds time specified in contract

Under the operating contract, Covanta is responsible for the cost of all repairs and maintenance, including the current work to repair the boiler tubes. The contract also includes performance guarantees related to processing capacity, electricity production, and scheduled and unscheduled maintenance time. If Covanta does not meet these performance guarantees over the course of the calendar year, the contract provides liquidated damages to compensate the owners for lost processing capacity and electricity production.

Covanta was previously scheduled to shut down Boiler #1 from February 12 to 25 and Boiler #2 from March 12 to 25 to perform regularly scheduled boiler maintenance. While the extent of repair work is more extensive than originally expected, some of the outage time resulting from recent events was already included in Covanta's annual maintenance budget. Covanta will have an opportunity to make up for lost production time over the remainder of the year.

York Region continues to maximize diversion from landfill through Emerald Energy from Waste contract

During the outage, waste shipments must be redirected to alternate locations. York Region is shipping all waste destined for the Energy Centre to the Emerald Energy from Waste facility in Brampton helping the Region continue to maximize diversion from landfill.

Durham York Energy Centre processed 128,512 tonnes of residual waste in 2016

In 2016, the Durham York Energy Centre processed a total of 128,512 tonnes of residual waste including 32,251 tonnes from York Region. The facility continues to be a key part of York Region's overall residual waste management strategy and contributed significantly to our achievement of over 90 per cent diversion from landfill in 2016.

Staff continue to monitor progress of boiler repairs and update Council

Staff continue to monitor progress of the boiler repairs and provide updates if required. In addition, staff will provide a comprehensive summary report to Council in Q2 2017 covering the first full year of commercial operation of the Durham York Energy Centre.

Erin Mahoney, M.Eng.

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Copy to: Laura McDowell, Director, Environmental Promotion and Protection

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