



**Durham York Energy Centre**  
**Long-Term Sampling System**  
**Quarterly (Q2) Report**  
**April 2021 to July 2021**

Prepared by

The Regional Municipality of Durham

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## 1. Introduction

This report provides additional details with respect to the reporting of data related to the Long-Term Sampling System (LTSS) at the Durham York Energy Centre (DYEC).

This report covers the second quarter of 2021 and includes AMESA data collected from April 14, 2021 until July 21, 2021.

## 2. Background

To meet the requirements of Environmental Compliance Approval (ECA) Condition 7(3), a continuous sampling system (the Adsorption Method for Sampling Dioxins and Furans (AMESA) LTSS), is installed on each of the two boilers at the DYEC to sample dioxins and furans.

The operation of the AMESA system was initiated in 2015 and has been maintained in accordance with current guidance from the AMESA manufacturer, Environment S.A. Deutschland (ESAD), the European manufacturer of the AMESA system, the North American vendor ENVEA and the AMESA Technical Manual.

The AMESA system is used only for the purpose stated in ECA Condition 7(3), which relates to Dioxins and Furans emissions trend analysis and evaluation of Air Pollution Control equipment performance. The AMESA results themselves do not constitute a compliance point for the facility operations.

ECA Condition 7(3). Testing, Monitoring and Auditing Long-Term Sampling for Dioxins and Furans states:

(a) The Owner shall develop, install, maintain, and update as necessary a long-term sampling system, with a minimum monthly sampling frequency, to measure the concentration of Dioxins and Furans in the Undiluted Gases leaving the Air Pollution Control (APC) Equipment associated with each Boiler. The performance of this sampling system will be evaluated during the annual Source Testing programs in accordance with the principles outlined by 40 CFR 60, Appendix B, Specification 4.<sup>1</sup>

(b) The Owner shall evaluate the performance of the long-term sampling system in determining Dioxins and Furans emission trends and/or fluctuations as well as demonstrating the ongoing performance of the APC Equipment associated with the Boilers.

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<sup>1</sup> 40 CFR Part 60 refers to the Code of Federal Regulations – Standards of Performance for New Stationary Sources

AMESA results are available at the site when requested by the Ministry of Environment, Conservation and Parks (MECP) and reported to the MECP as part of the Annual Report required by ECA Approval Condition 15 and posted to the DYEC website.

### 3. Cartridge Replacement Schedule

Boiler #	Run #	Start Date	End Date	Duration (days/hours)
1	60	14-Apr-21	17-May-21	29
2	60	14-Apr-21	17-May-21	26
1	61	17-May-21	17-Jun-21	26
2	61	17-May-21	17-Jun-21	26
1	63	18-Jun-21	21-July-21	31
2	63	18-Jun-21	21-July-21	26

Note 1: The cartridge duration times may differ even though the start and end dates are the same for both boilers.

Note 2: Run 62 not shown, run coincided with source testing program

### 4. Laboratory Analysis

There were no issues identified with the sample cartridges or the analysis at the laboratory.

### 5. Durham and York Regions and Covanta Monthly Data and Operations Review

Staff from Durham and York Regions meet with Covanta both weekly and monthly on an established scheduled to discuss facility operations, and review environmental monitoring results, trends and calculations where required for all monitoring programs and the available AMESA results.

There was no result during this reported time of April through July 21, 2021 which triggered the AMESA Investigation Checklist.

### 6. Oversight of AMESA Results

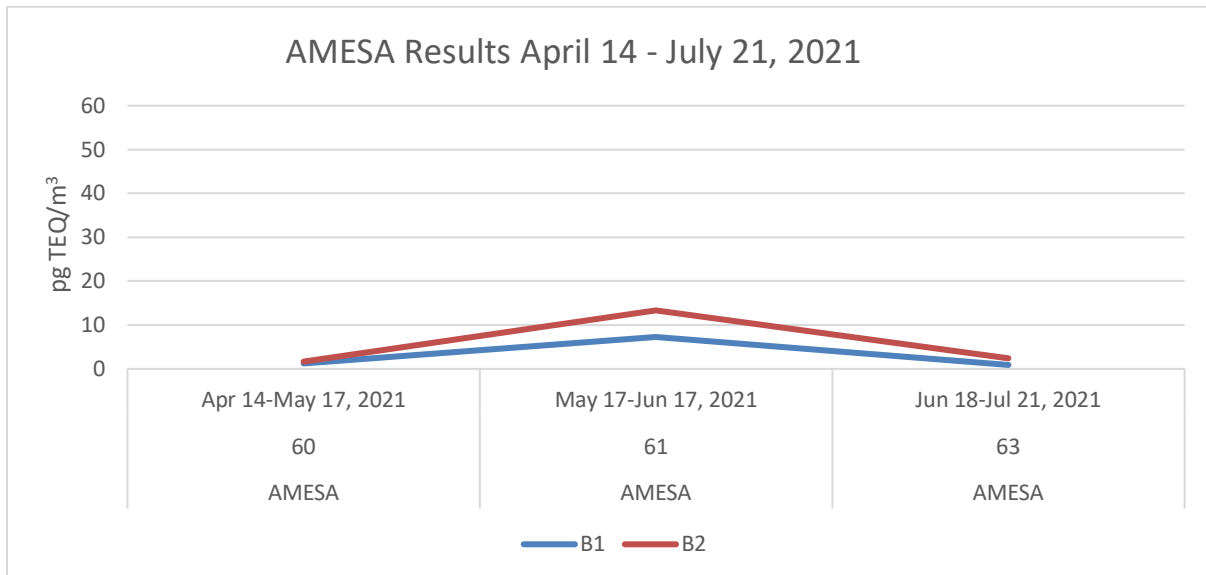
Durham and York Region staff and Covanta meet with the MECP on a quarterly basis to discuss all items pertinent to the ECA and the Environmental Monitoring Programs and facility operations. Any concerns which are not determined to be reportable incidents in accordance with the ECA may be discussed along with day-to-day operations and monitoring.

Any events, which the ECA deems reportable, are done in accordance with the appropriate ECA condition.

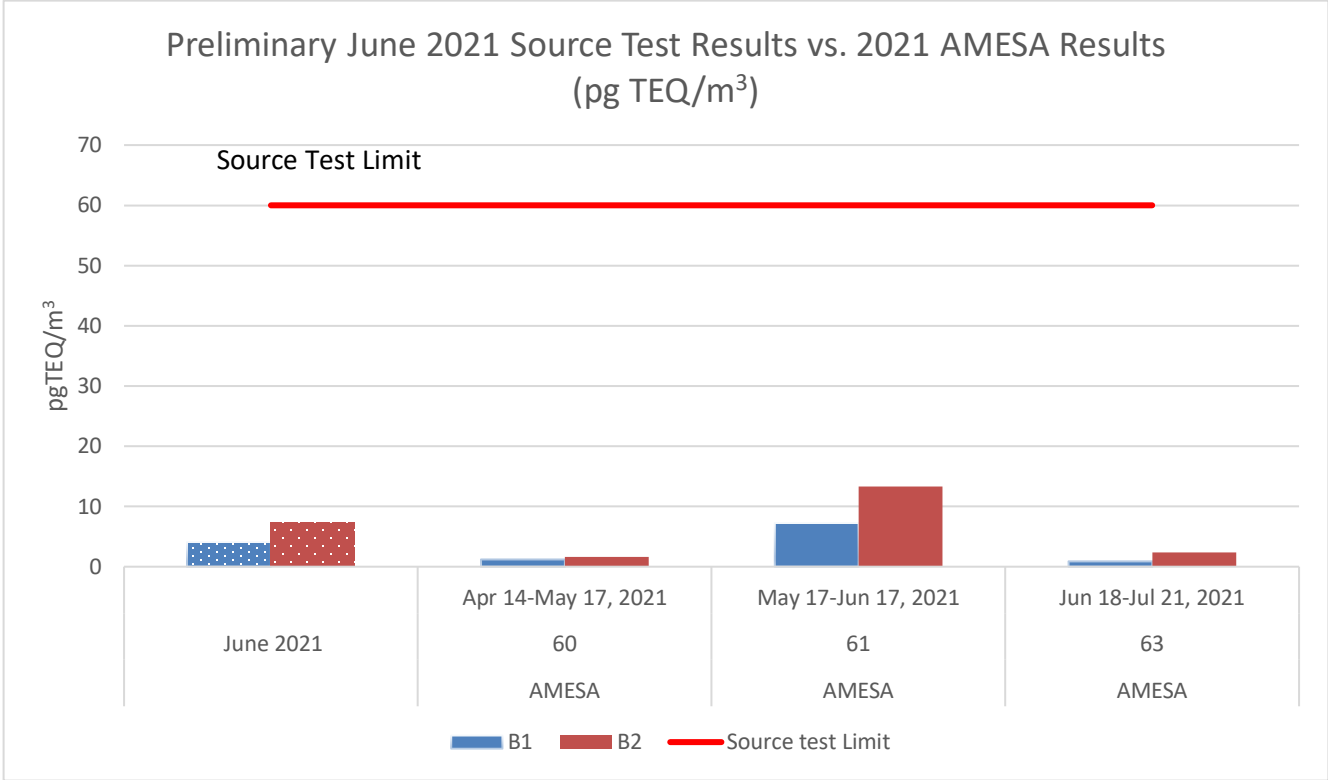
Results of the AMESA LTSS are reported to the MECP in the DYEC Annual Reports and posted to the DYEC website. AMESA trends of validated data are presented as a 12-month rolling average together with an analysis to demonstrate the ongoing performance of the APC Equipment. The MECP has no concerns with the AMESA results detailed in the 2020 Annual Report as posted via this link: [MECP Review of the DYEC 2020 Annual Report](#).

## 7. AMESA Performance

Unit #	Run #	Start Date	End Date	Calculated Result
1	60	14-Apr-21	17-May-21	1.234
2	60	14-Apr-21	17-May-21	1.665
1	61	17-May-21	17-Jun-21	7.272
2	61	17-May-21	17-Jun-21	13.334
1	63	18-Jun-21	21-Jul-21	0.899
2	63	18-Jun-21	21-Jul-21	2.385



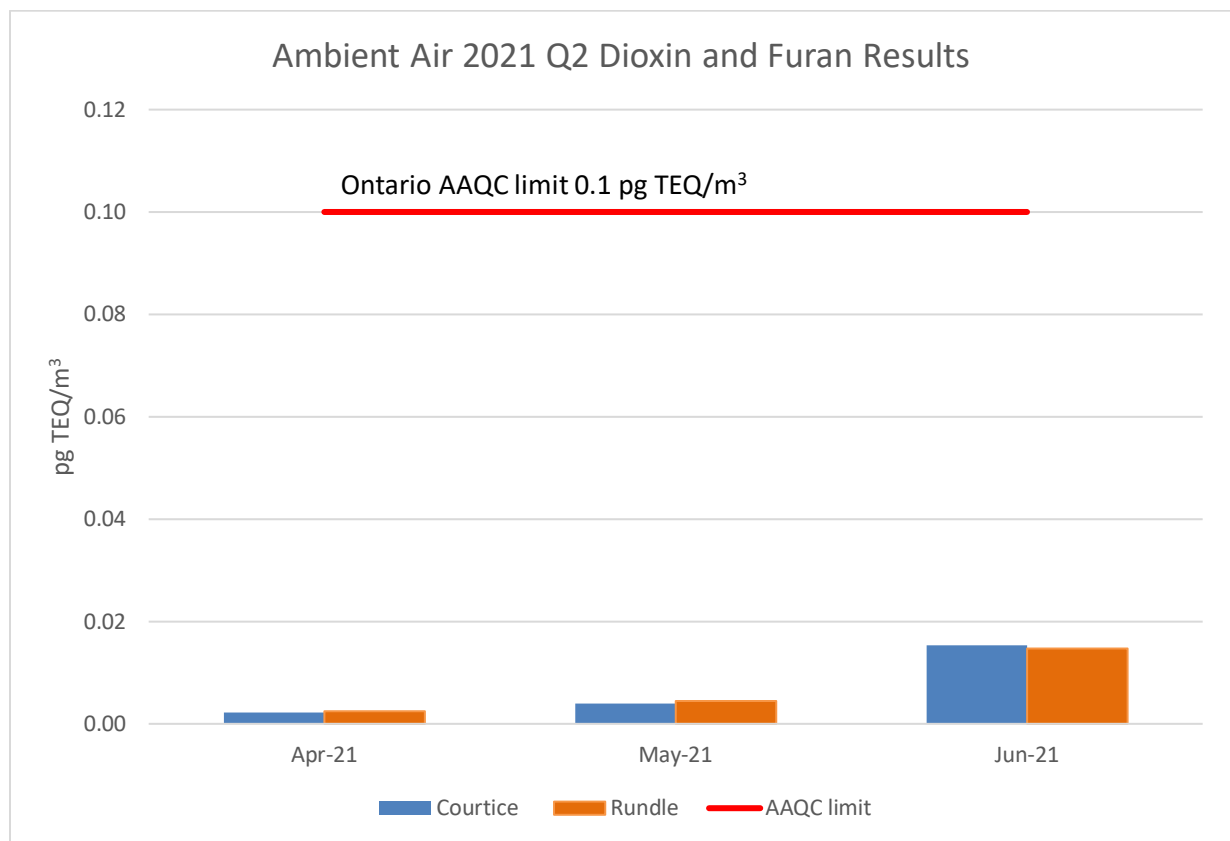
**8. AMESA relative to most current Source Testing Dioxin and Furan Preliminary Results**



## 9. Ambient Air Dioxin and Furan Results – Second Quarter (Q2)

The Ambient Air Monitoring Program samples for dioxins and furans. The units of measurement and the reporting limits are prescribed differently and cannot be compared directly. Ambient Air does not measure point source emissions. The equipment samples air capturing ambient air emissions from a variety of emissions sources in the area. The results of this monitoring advise on local air quality and may suggest contributing factors based on meteorological conditions such as wind speed and direction. As can be seen in the graph below, the dioxin and furan results measured from both ambient air stations in the program are well below the Ontario Ambient Air Quality Criteria of 0.1 picogram Toxic Equivalency per cubic metre (pgTEQ/m<sup>3</sup>) during the 2021 Q2.

Note: Ontario Ambient Air Quality Criteria is 10 times lower than the Ontario Regulation 419 Upper Risk Threshold of 1 pgTEQ/m<sup>3</sup> for dioxins and furans.



## 10. References

Region of Durham Works Report (2021-WR-10) on the Long-Term Sampling System for Dioxins and Furans

Validation Checklist Rev.0 February 3, 2021

AMESA Report to MECP, February 21, 2021

AMESA Report Submission Letter to MECP, February 21, 2021

## 11. Durham York Energy Centre Inquiries

**A letter dated June 11, 2021, addressed to Lisa Trevisan, MECP Director, Central Region and copied to Durham Region Council, from three residents with concerns around the AMESA Long-Term Sampling System was received.**

The MECP has not responded to date.

**At a meeting held on July 5, 2021, the Council of the Municipality of Clarington passed Resolution #C-266-21 in relation to the Long-Term Sampling System for the monitoring of dioxin and furan emissions (AMESA) from the DYEC. As a result of the Resolution, a letter dated July 9<sup>th</sup> was sent to the MECP York Durham District Manager.**

The MECP has not responded to date.

**End of Report**