

Delegation to Planning and Development Committee June 28th, 2021

Dioxin/Furan AMESA Monitoring Reporting

CRITICAL INFORMATION WITHHELD/MISSING:

- AMESA Monitoring Plan
- Ministry Approval
- Data Validation Criteria
- Independent Qualified Expert Approval
- AMESA Data Withheld for Years from 2015 to 2019
- Underlying Reports Withheld for ALL Years 2015 to PRESENT

Recent History on AMESA Concerns (Concerns have been raised since 2015)

- **Clarington's April 14 Letter to Durham**
- **Durham's Failure to Response (Durham Report #2019-WR-10)**
- **Critical Information WITHHELD/MISSING**
 - **AMESA Monitoring Plan (defining sampling procedures, data validation, etc)**
 - **Ministry Approval (See Gasser, Bracken, Meydam June 11th Correspondence to MECP)**
 - **Data Validation Criteria**
 - **Independent Qualified Expert Approval On AMESA Monitoring Plan**
 - **Independent Qualified Expert Approval Of Monthly Sampling Results**
 - **AMESA Data for Years from 2015 to 2019**
 - **Underlying Reports Withheld for ALL Years 2015 to PRESENT**

Clarington April 21st Letter to Region

AMESA Reporting Requests

The long-term partnership outlined in the HCA is for the operational lifespan of the DYEC. It has taken some five years for the calibration between the stack tests and AMESA cartridge to render reliable monthly data regarding dioxins and furans. As such, Clarington is formally requesting that the AMESA data, which we understand is housed at the DYEC, be made available to the public and send to Clarington Planning staff.

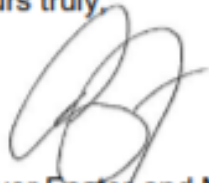
This would include, at no cost to the requestor or Clarington, release of:

- all AMESA data from installation to present and include underlying lab reports including all documentation regarding the calibration of the Amesa and stack test results;
- In future, all AMESA results and underlying report, as they become available (typically on a 28-day basis);
- The validation checklist referred to in #2021-WR-5; and
- In future, data recovery rates and reason for any data that has been invalidated.

And further that all of the above be posted on the DYEC website.

This letter was endorsed by Resolution #C-147-21. Durham Regional Council's Disposition

Yours truly,



Mayor Foster and Members of Council
Municipality of Clarington

Durham Regional Council's Disposition

Rejected/Ignored.

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Durham Regional Council approved recommendations in Report #2021-WR-10 despite information/concerns raised by Clarington, numerous public delegations, and correspondence including formal June 11th letter to MECF.

Furthermore, they EVEN rejected a motion by Clarington Councillor Joe Neal to refer delegation and correspondence concerns back to Durham staff for a written response.

AMESA Reporting Omissions are SERIOUS AND MUST BE ADDRESSED

Clarington Council Must Act

Durham Regional Council Approval of WR-10 is potentially harmful in that it:

- is NOT TRACEABLE (no AMESA Monitoring Plan provided to date);
- appears NOT to be supported by independent qualified experts -no signed documentation provided and no evidence of Ministry approval was provided
- sets up a **loose framework** where **abuse** that could thwart AMESA dioxin/furan monitoring objectives **is possible**.

This is monitoring for extremely toxic pollutants – dioxins and furans – that bioaccumulate in our land, water, and bodies (fetuses and children at highest risk).

Durham Region is Withholding 4+ Years Dioxin/Furan Data, All Underlying Reports, Data Validation Protocol. WHY?

- **We only have Durham staff opinion (no expert or Ministry opinion)** that *“As a result of poor correlation testing there is no confidence in the AMESA data prior to 2020, therefore release of that information will not be useful and may lead to inaccurate conclusions”*;
- **Focus on correlation is misleading and a red herring. Lack of correlation cannot be used as an excuse not to provide monitoring results. AMESA primary purpose was to measure dioxin/furan concentrations, not to correlate to stack test.**
- **Dangerous as it makes the AMESA monitoring untraceable. Changes have been made, including to sampling protocols, and it is impossible to determine what changes have been made (no formal plan/documentation of changes/correspondence provided), how they affected results (no data provided during time changes were made) and whether they are appropriate (no signed expert documentation).**
- **Durham’s “Investigation Checklist” ≠ “Validation Checklist”** requested by Clarington; what is provided in Attachment of WR-10 completely inadequate and does not define criteria for invalidation

THIS IS CRITICAL – you can do all the monitoring in the world, but **if data is invalidated improperly and for the wrong reasons it is not only worthless but dangerous.** Could set stage for the AMESA purpose to be thwarted; Will AMESA data only be validated for “stable” operations and not over all actual operations?

Essential Information Not Provided To Decision Makers (YOU) and the Public

- WHY this AMESA monitoring is needed – d/f monitoring limitations – stack tests less than 0.2% of operating time; ambient air about 4% of time, soil tests only once every three years
- WHERE are the consultants' and MECP reports?
- WHO did/does what? Independent, external expert oversight essential.
- WHAT actions/modifications taken on AMESA sampling, operation procedures document, identification of parties?
- HOW was “correlation” achieved?
- WHAT do experts say about “correlation”? Focus on correlation may be wrong.
- WHAT did MECP sign off on?

From FOI Request

Table 4 November 2018 Workplan

Table 4: Summary of Monthly AMESA Data Collected Post 2017 Validation Testing

Date Range (Start – Stop)	Unit 1		Unit 2	
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30 Jun 2017- 28 Jul 2017	504.0	0.063	483.3	8.0
28 Jul 2017 – 07 Sep 2017	383.3	0.080	371.7	521
07 Sep 2017 - 05 Oct 2017	514.9	0.049	500.9	35.5
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02 Nov 2017 – 01 Dec 2017	481.9	0.021	467.5	8.8
01 Dec 2017 – 29 Dec 2017	515.5	0.025	505.8	6.9
29 Dec 2017 – 26 Jan 2018	477.6	0.039	462.9	7.0
27 Jan 2018 – 01 Mar 2018 ⁽³⁾	531.5	0.037		
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22 May 2018 – 3 Jul 2018 ⁽³⁾	558.1	29.9		
3 Jul 2018 – 31 Jul 2018	473.4	22.9	476.2	9.3
31 Jul 2018 – 28 Aug 2018	474.0	12.8	478.2	4.7
Long Term Average	499.1	4.9	489.8 ⁽⁴⁾	14.5 ⁽⁴⁾

Notes:

- (1) Sample volume presented as cubic meters corrected to 25°C and 1 atmosphere.
- (2) All results presented as pg TEQ/Rm³ corrected to 25°C and 1 atmosphere, adjusted to 11% O₂, using NATO/CCMS (1989) toxicity equivalency factors with full detection limit.
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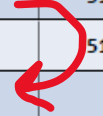
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**Ambient Air Exceedance
(May 26 2018)**



**AMESA Dioxin Concentrations
Increased by 834%**



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Greatly Exceeds Stack Limit of 60

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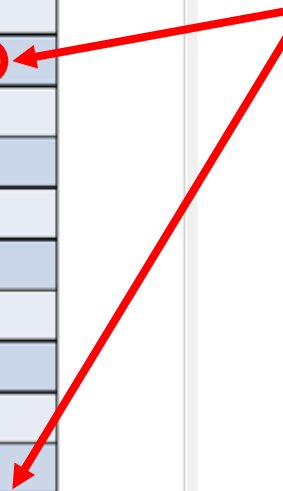
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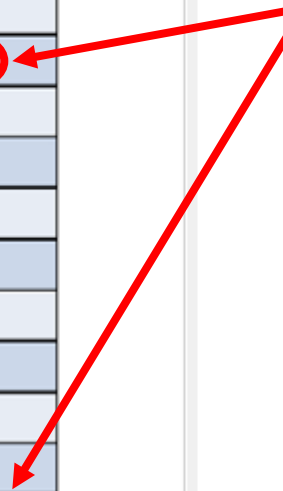
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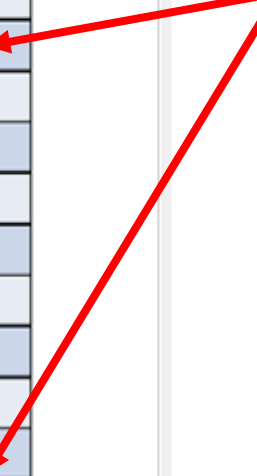
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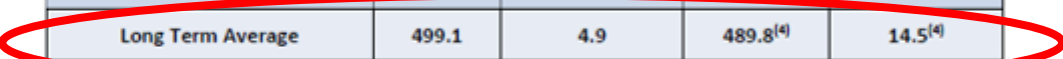


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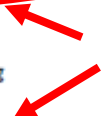


Missing Data June 22nd 2018 to July 3rd 2018

AMESA Dioxin Concentrations Increased by 834%

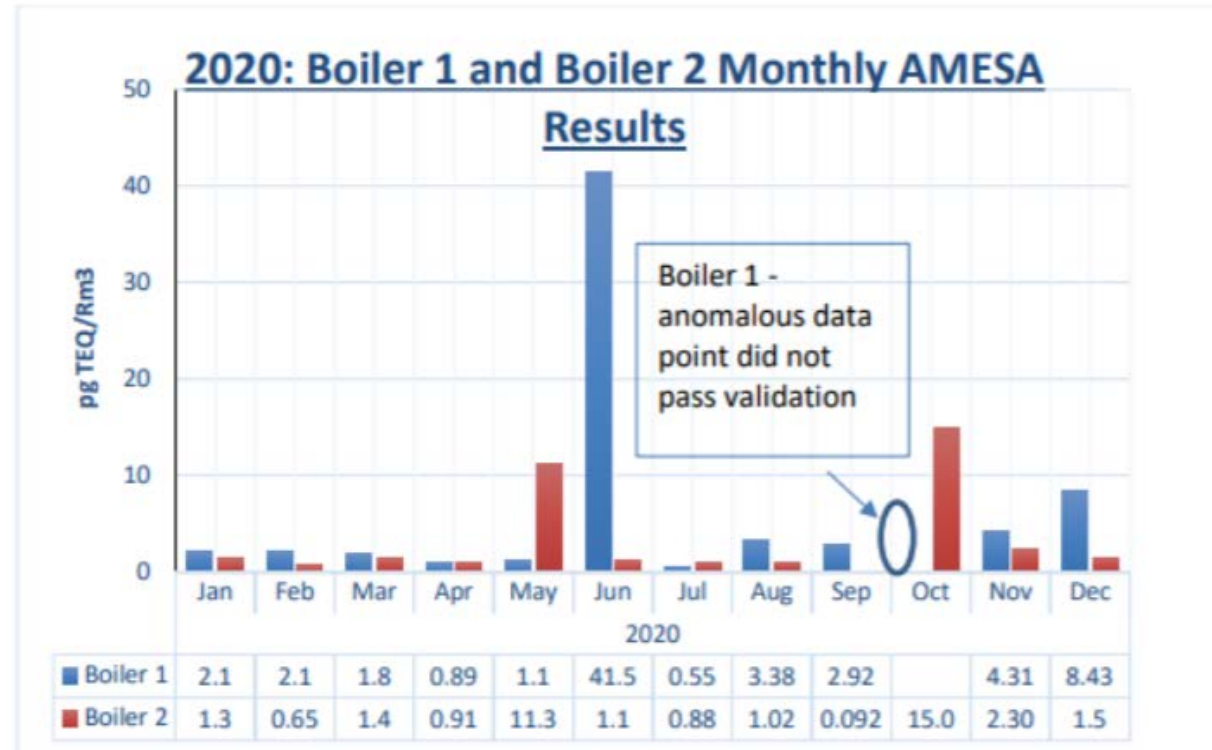


Long-Term Averages Do NOT Include Suspected "Outliers"



https://www.durhamyorkwaste.ca/en/operations-documents/resources/2020/20210330_RPT_2020_DYEC_ECA_Annual_ACC.pdf

Twelve (12) month rolling averages will be presented in future annual reports to better identify and evaluate trends in facility performance.



Expert Comments Obtained Through FOI Raise Further **Red Flags**

- **Dr. Jahnke** on comparing source test to AMESA results (page 25, 26 of Jahnke report):
“Because many of the reports found in the literature are written by the instrument manufacturers themselves or researchers serving professional objectives and not regulatory agencies, the method which best presents or best obfuscates the results is used.”
- **MECP Sandra Thomas (May 2 2017 email)** raises concern about toxicity factors used by Covanta in calculation of dioxin/furan concentrations, inclusion of dioxin-like PCBs
- Region consultant **John Chandler** cautioned that Fall 2016 d/f source test results are so low the uncertainty is very high, also cautioned about an apples-to-oranges comparison where **AMESA sampling method “ignores the material trapped in the probe and nozzle”** while **RM23 stack source testing method “includes all the materials caught in the sampling train”** (see Mar 24 2017 email to L Brasowski of Covanta, G Anello copied)
- Very concerning as other document obtained in FOI request give testing results that show 90+% of the dioxins/furans reported were caught in the probe and nozzle
- **AMESA representative Jurgen Reinmann** cautioned **the data is the data** – the dioxins/furans collected and measured were from the incinerator

Act Today and Use the Tools at Your Disposal

- Our June 11th letter includes the conditions and sections of the EA and ECA relevant to the public reporting of AMESA data.
- Review attachments provided with the June 11th letter which were received through my FOI request (ongoing) to understand the concerns and background on AMESA, including work plans.
- **Write to the MECP** and express your concerns and failure of Durham to respond to your requests for AMESA data, validation criteria, underlying data and to request the MECP for a written response as to **whether the AMESA Monitoring Plan exists** (detailing sampling protocols, analysis and reporting), **whether it has been approved by them**, and to provide all correspondence related to approvals and/or work plan sign off;
- Further, **request the MECP** to enforce all EA and ECA Conditions around AMESA monitoring and reporting and **direct Durham, York and Covanta not to destroy any AMESA data**
- Review the Host Community Agreement and pursue all relevant options **so that you can take all possible steps to protect Clarington residents.**