

**Delegation to Clarington Planning & Development Ctee**  
**April 6, 2021**

**Regarding Correspondence Documenting  
Concerns with AMESA LTSS Data Reporting**

# Correspondence Provides Details

- Why AMESA sampling is essential
- Why having the monthly results in a timely manner matters
- Why Durham Report #2021-WR-5 is inadequate and concerning

# Requested Action

Send a formal request to Durham Region to:

- release all AMESA data from when it was installed to the present, including the underlying reports;
- Post AMESA results as they become available on a monthly (every 28-day period)

**AMESA Sampling is Essential;  
AMESA Data Should Be Public and Posted Monthly**

- Dioxins/furans are well known extremely toxic pollutant of concern with incinerators
- History of dioxin/furan exceedances at the incinerator (stack tests, ambient air)
- Continuous monitoring in control room not capable of detecting dioxin/furan exceedances
- Ambient air only 24-h every 21 days and not done at stack

# **Five Years of AMESA Monthly Data Withheld We Have Been Asking for It Since 2015**

- Long Term Sampling Systems are used in many places and results are provided to the public as they come available AMESA sampling and analysis funded by the public; we should have access to the data
- FOI request made in May 2019; process ongoing with no resolution yet
- Various, changing reasons given by Durham for not releasing AMESA data
- modifications to the sampling equipment and to sampling procedures have been made to “correlate” the AMESA to the stack test results, but concerns remain whether that was the correct line of action (trend analysis more important) and whether changes made were appropriate and given proper oversight
- Expert comments raise concerns and questions

## **BOTTOM LINE:**

**For transparency, accountability and ability to address issues, the Municipality of Clarington, Regional Council and the public must be informed in a timely and all AMESA data must be made public as it is available.**

## **Durham Staff Previously Indicated They Were NOT Reviewing the Monthly AMESA Results**

- At the September 24, 2019 EFW-WMAC meeting Mr. Anello advised that the AMESA monthly cartridge lab results go to Covanta and Durham does not review them as the results are “meaningless”

# Durham WR-5 is Grossly Inadequate

Does not Commit to Reporting Critical Data in Timely Manner

- Durham only commits to a “**summary**” of “*validated*” **monthly** data once a year in Annual Report
- Renders AMESA
- Would fail Statistics 101; commits to report only a single data point – a rolling mean **average** of monthly data, but fails to provide commitment to report other essential statistics to understand data (median, standard deviation, high/lows);
- Missing the “checklist” of validation criteria;
- No commitment to provide underlying data reports, as is common practice for other monitoring

# New Reports Raise Concerns and Questions

- HDR Memo released March 16, 2021
- Annual Report just released



# Dr. Jahnke Document Received Through FOI on Continuous Sampling for Dioxins and Furans



## CONTINUOUS SAMPLING AND MONITORING SYSTEMS For POLYCHLORINATED DIBENZODIOXINS And POLYCHLORINATED DIBENZOFURANS

2014 UPDATE

This report updates Source Technology Associates Report #STA:COVANTA:8926 Submitted 18 January 2012. It incorporates corrections to the original report and assesses the current status of dioxin/furan emission sampling and monitoring systems through December 2014.

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## Jahnke Document (page 11) on AMESA

- Continuous dioxin monitors first required in Belgium in 2000
- since then France, Italy have followed
- a number of AMESA devices are installed in Belgium and  
“Data taken over 14 or 28 days are required to be made available to the public over the internet.”
- AMESA was developed by German companies and is now a subsidiary of Environnement SA of France; AMESA received a TUV type approval in 1997 and a UK MCERTS certification in 2005

## Jahnke Document (pages 25,26) on Common Problem of Correlation Issues

- “Differences in sampling methods, sampling times, and recovery can lead to differences in results obtained between the short-term reference methods and long-term continuous systems. ” (page 25)
- “The problem is that there are no standard procedures for conducting such a comparison, either in Europe or the U.S.”
- cautions “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.**”

## **Jahnke Document (page 26) on Success in Europe for Monitoring Trends**

- **“The European experience has shown that long term DF monitors can be used to monitor relative DF emission levels.”**
- “If an agency requires continuous dioxin monitors for compliance purposes, it can be debated whether the data will be credible, since there are no specifications that tie the continuous method to the reference test method.”
- AMESA data is not used for compliance in Durham but could/should be used to monitor relative DF emission levels

## **DYEC has had MAJOR DIOXIN/FURAN STACK EXCEEDANCES**

- **Oct. 1-2, 2015 Stack Tests for Dioxins/Furans:**  
Boiler 1 Tests average **229.3 pg TEQ** per cubic metre  
Boiler 1 Tests average **103.8 pg TEQ per cubic metre**
- **May 2 – May 11, 2016 Stack Test**  
Boiler 1 Tests average **818 pg-TEQ** per cubic metre

### Dioxin/Furan Legal Limit

**60 pg-TEQ** per reference cubic metre

**Yet operational parameters on Continuous Emissions Monitors (CEMs) showed no indication there was a problem- no one knew**

# From Chandler Memo to Durham Staff: Fall 2016 Testing at DYEC

## November 22 2016

### Preliminary Results of Fall Regulatory Tests

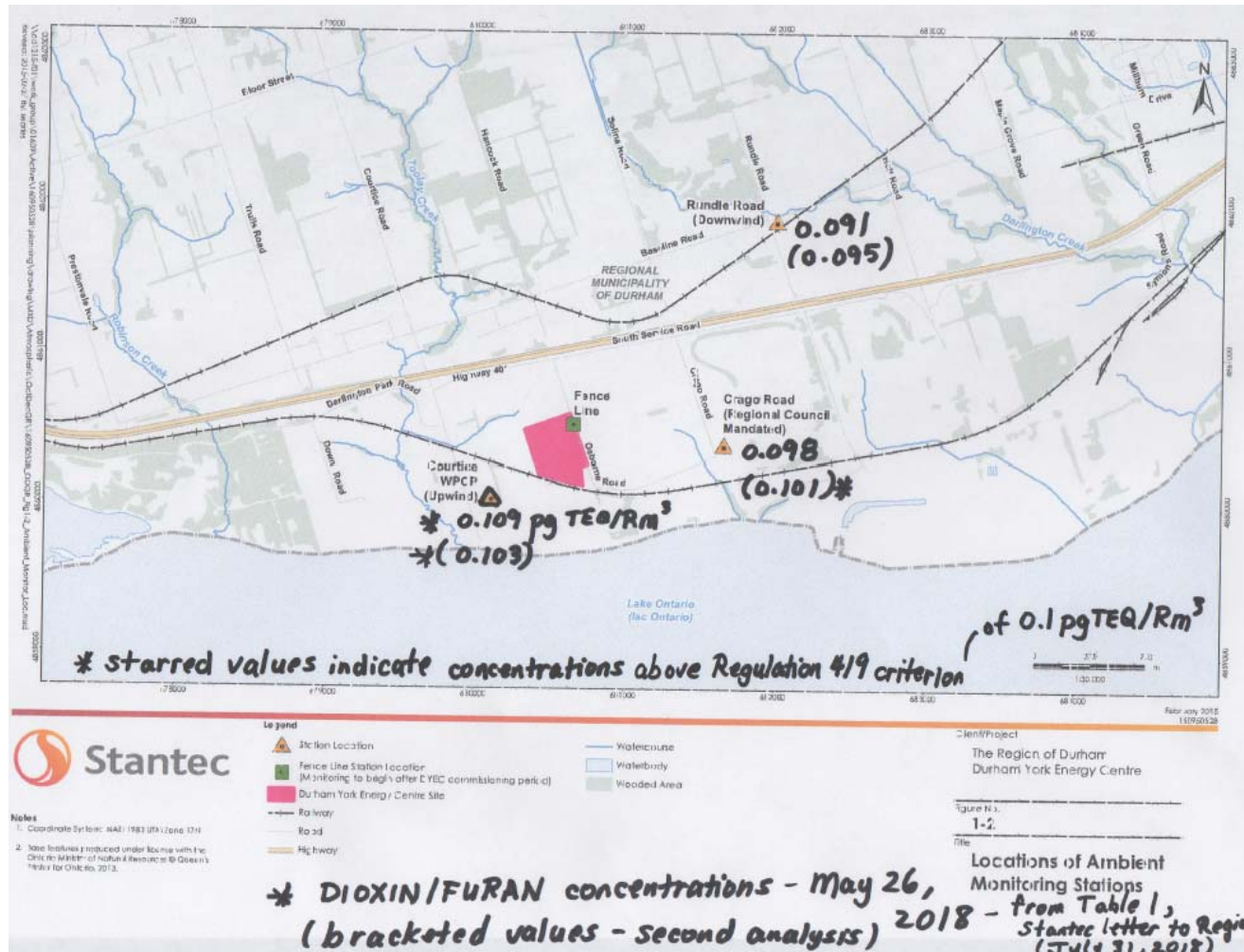
The author has reviewed the preliminary results of the test series. The numbers are well below the required levels of the Approval. It is my opinion that there should be no attempt to interpret the data either as it relates to between tests on either unit, or between the units. It needs to be stated that Environment Canada have stated that the level of quantification, 32 pg TEQ/Rm<sup>3</sup>, represents the lowest level that can reasonably be reported with conventional sampling and analytical methods. Moreover the ASME ReMAP study has suggested that there is considerable statistical variation in sample results at this level.

I await the AMESA data.

# Dioxin/Furan Ambient Air Exceedance May 26, 2018

## Questions and Concerns Still Remain; Very Calm Day

(note: handwriting in marker is my own)



# Ministry Review Was Limited

## Did Not Review AMESA Data, nor Profiles

Below are the responses I received to questions I submitted to the MECP for the June 7, 2019 MECP session at the DYEC

Did the MECP look at the dioxin/furan congener profiles and, if so, what did they show?

**No, the ministry has not reviewed the dioxin/furan congener profiles.**

Did the MECP review the AMESA cartridge results to see how the sample for that month compared and, if so, what was found?

**The AMESA data collected during the month of May 2018 was not reviewed and assessed by the ministry as part of the review of the May 26 elevated concentration.**



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