

Delegation to Works Committee re Report
2024-WR-5 “Analysis of Ambient Air &
Emissions Monitoring to Identify Local
Airshed Impacts” Adams July 17.2023

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May 8, 2024

2024 WR-5 incl. Dr. Adams' July 17, 2023 "analysis"

- From page 1 of staff report, Sec. 2:

"Dr. Matthew Adams was retained by the Regions (Regional Municipality of Durham and York Region) to conduct a Study of the local airshed in the vicinity of the Durham York Energy Centre (DYEC). The Study included an analysis of ambient air monitoring data, wind direction, air pollution, and National Pollution Release Inventory (NPRI) data in an effort to improve the community understanding of how the DYEC contributes to the local ambient air conditions."

- WHO commissioned the July 2023 Adams "analysis"?
- HOW much did this cost and WHO paid?

Short notice: REQUIRES detailed review of hypotheses, methodology & data

- Getting this report last Friday with a requirement to provide my presentation to you by Tuesday doesn't allow for a detailed review of the underlying data referenced, the validity of the hypotheses and methodology.
- This “analysis” doesn't provide a complete picture of the impacts of DYEC Air Emissions nor of potential impacts to human health and the natural environment.
- Should have included an assessment of total mass loadings per annum by pollutant so that you know what the DYEC is dumping into the local air shed.
- Attempts to minimize DYEC's emissions by comparing them to forest fires and non-point sources such as from traffic on Highway 401 is meaningless.
- Embarrassingly similar to futile attempts by the incineration industry and supporters to distract from the well documented impacts of burning garbage.
- DYEC is an AVOIDABLE point source of emissions. You don't have to burn garbage, which creates harmful pollutants like ultrafine particulate, dioxins and furans. There are LESS harmful disposal options.

DYEC Monitoring – Note the Limitations

Continuous Emissions Monitoring (CEMS) for a few parameters.

nitrogen oxides (NO_x)

sulphur dioxide (SO₂),

hydrochloric acid (HCl)

hydrogen fluoride (HF)

ammonia (NH₃)

Opacity, temperature, moisture

At economizer (before pollution control) continuously measures oxygen (O₂), carbon monoxide (CO), organic matter (THC)

- In October 2013, Durham council voted against CEMS for Particulate Matter & Mercury. W. Bracken provided detailed PPT to Council Oct. 2013 – technology available and successfully used elsewhere.
- IF moving forward with Capacity Increase, will Durham improve/upgrade monitoring?

Ambient Air Monitoring

- Ambient Air monitoring results should always be considered in conjunction with all other monitoring results.
- Statement on page 2 “*No difference was observed for PCDDs/PCDFs*” is meaningless absent a review of full AMESA data for Dioxins & Furans.

Only TWO Ambient Air monitoring stations remain:

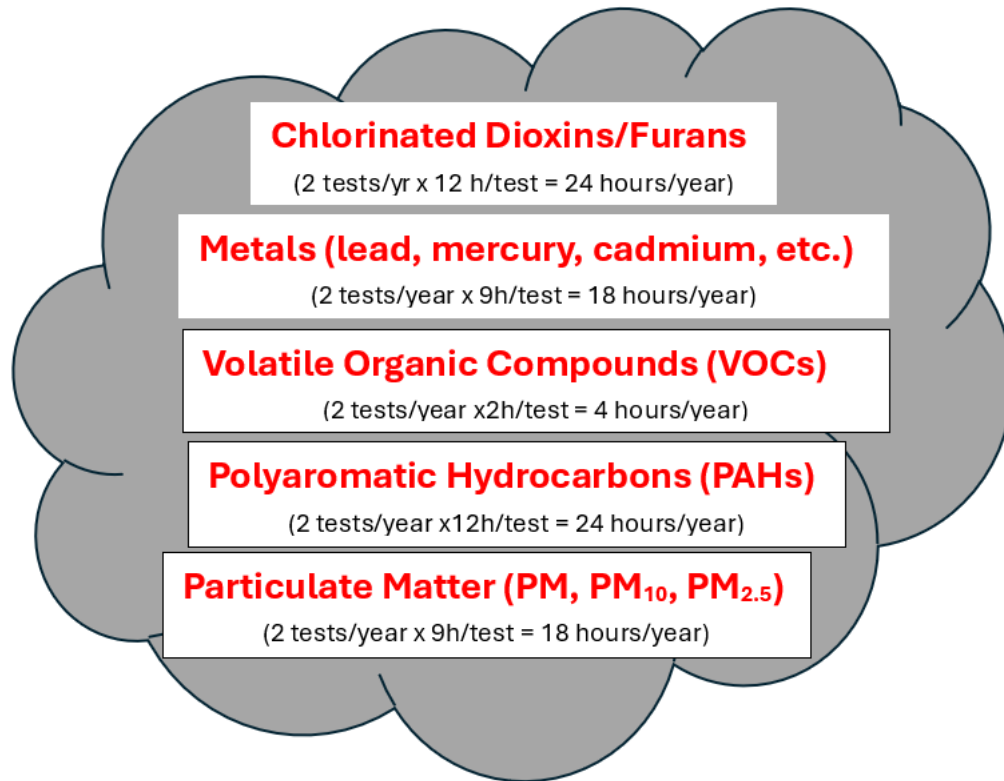
Monitored continuously: SO₂, NO₂, PM 2.5

Non-Continuous: Metals, TSP, PAH's, Dioxins & Furans)

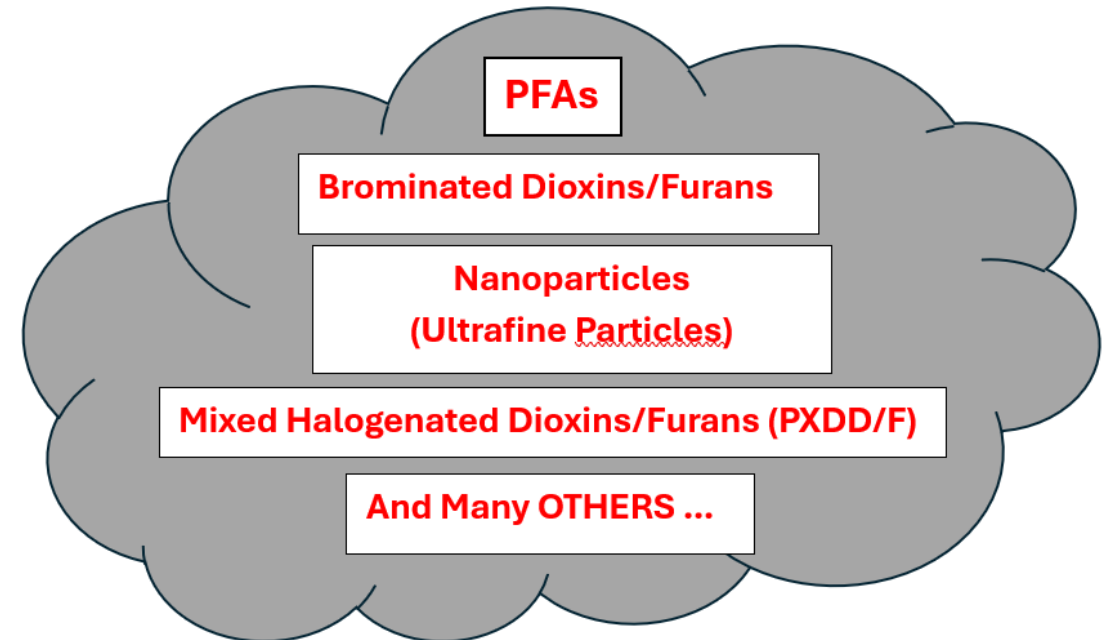
- E.g. Dioxins & Furans monitored for 24 hours every 24 days, i.e. approximately 15.2 days of the year, or 4.2% of annual operating time.
- Ambient Air data should be considered together with soil monitoring results.

MOST Pollutants are Stack Tested Less Than 0.5% of Operating Time through Pre-Arranged Stack Tests conducted under Optimal Operating Conditions, OR are Not Monitored AT ALL

LESS THAN **0.5%** of OPERATING TIME



TOXICS NOT MONITORED AT ALL



Ministry of the Environment: outdated air standards

Source page 5, Sept. 17, 2023 MECP letter to W. Bracken, copied to Durham & York staff

Contaminant	CAS #	Basis	Year
Arsenic and compounds	7440-38-2	Health-based air guideline	1981
Lead and Lead Compounds	7439-92-1	Health-based air standard	2007
Nickel and Nickel Compounds	7440-02-0	Health-based air standard	2011
Zinc	7440-66-6	Particulate-based air standard	1974
Copper	7440-50-8	Health-based air standard	1974
Mercury (Hg)	7439-97-6	Health-based air standard	1974
Lithium (other than hydrides)	7439-93-2	Health-based air standard	1974
Ozone	10028-15-6	Health-based air standard	1974
Particulate matter	N/A	Visibility; air standard	2005
Carbon monoxide	630-08-0	Health-based air standard	1974

2024-WR-5, Attach. 1, page 20: *“Overall, it is concluded that they DYEC’s Air Emissions Monitoring Plan effectively controls emissions so that it does not significantly contribute to air pollution in the local air shed”*

- That statement provides no assurances whatsoever because it’s not the **monitoring plan(s)** that control(s) emissions.
- Monitoring plans determined what would be measured and how frequently via various monitoring technologies. Durham does NOT monitor for all parameters that are technically feasible.
- One potentially useful statement found on page 20: *“Future exceedances should be individually evaluated...”* Wendy Bracken requested that for the 2018 DYEC dioxins AA exceedance. Mystifying was that AMESA data for that exceedance was not reviewed by MECP. Page 7 MECP letter Sept.17.2019 letter to W. Bracken, copied to Durham & York staff.
- NO analysis of potential emissions impacts to local air shed is complete without a review of full AMESA Dioxins/Furans data, which Durham does not release.
- Quarterly AMESA reports from provided from 2021 onwards available in timely fashion, some with some sampling periods invalidated. **Still waiting for 2023 Quarters 3 & 4 to be posted on DYEC website.**
- **REQUEST:** Report 2024-WR-5 and the Adams’ report should be referred back to staff with our delegations, requesting a review of concerns raised about the hypotheses, study methodology and conclusions.
- THANK YOU. QUESTIONS?