

Proposed Changes to EPA's Air Emissions Reporting Requirements

A (very) Hypothetical Case Study

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Why Haven't We Ever Heard of "AERRs" Before?



- The federal Air Emissions Reporting Requirements (AERR) now require State, local, and some tribal agencies (agencies) to collect and report actual criteria air pollutant and precursors ("CAPs") emissions data to US EPA via the Combined Air Emissions Reporting System (CAERS)
- There is no good reason why a facility would ever need to interact with AERR – until now
- The Proposed Rule Amendment would expand the scope to include HAP emissions and require individual facilities to report their own "HAP" emissions directly to EPA
- Agencies are allowed to volunteer to alter their own Rules and Permits to conform to EPA HAPs reporting protocols and may volunteer to submit all of the data collected to EPA for us

Or not.

AERR Proposed Rule Changes



- Proposed Amendments to 40 CFR Parts 2 and 51, (2015)
- Docket EPA-HQ-OAR-2004-0489 (same docket as the original Rule)
- AERR Web Page (type EPA AERR)
 - FR August 9, 2023
 - Fact Sheets
 - Regulatory Impact Analysis
 - Technical Support Document
 - Tables 1B and 1D
 - AERR Proposal Webinars for Point Sources, States, Stakeholders
- 2-hour Public Hearing, 8/30/2023
- Public Comments Due 10/18/2023



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Proposed changes - would take effect RY 2026



- Annual HAP emissions reporting to EPA,
- Lower the annual emissions thresholds to new triennial levels for each year starting CY 2027
- Add requirements for reporting fuel data associated with peak electricity demand
- All information collected through the AERR is public (not subject to confidential treatment)
- Additional requirements for point source facilities
 - Report HAP emissions directly to the EPA through Combined Air Emissions Reporting System (CAERS) unless EPA approves the state/tribal agency's process and if that agency accepts reporting responsibility.
 - Submit all performance (stack) test reports to EPA
 - Identify all federally enforceable regulations a facility has determined apply to its units
 - Report a summed activity level for fuel use from the combustion sources.
 - Provide Location information (i.e., latitude and longitude) for stack and fugitive release points, which has previously been voluntary.

Why does EPA want that data?



- Presently, EPA does not have a good way to assess HAP concentrations in ambient air
- In the Preamble, EPA says they need HAPS emission data from all stacks to be able to model (via conservative air dispersion modeling) fence line and community air quality health risks
- EPA will require all HAP emissions data and stack test reports to be submitted as public information
- For conservatism, such Health Risk Assessments typically assume that a single individual remains at the model predicted point of maximum impact and never leaves for 72 years
- We can infer that EPA will then require facilities to mitigate (correct) any identified health risks based on an evolving set of toxics air quality standards
- “But wait – what about the last 30 years?”

EPA's Statements of Purpose



- Ensure that EPA has sufficient information to *identify* and *solve* HAP air quality and exposure *problems*
- Make publicly available the information EPA needs to protect *public health*
- *Safeguard* that *communities* have the data to understand sources of air pollution that may be impacting them, including *potent carcinogens and other highly toxic chemicals* linked with a wide range of *chronic and acute health problems*

Wait – we thought this was just about (boring) changes to EPA's States' reporting Rule?



A (very) Hypothetical Case Study



Congratulations Charlie! - But..

- The Asset Acquisition Due Diligence Team never mentioned a new EPA HAP Reporting Rule
- Air Toxics are Regulated by the Lumpaland Department of the Environment (LDE)
- We don't emit any HAPS, do we?
- Community says our emissions are turning everyone's hair **GREEN!**
- The former EHS Manger just took early retirement
- We also just learned of an issued NOV related to offsite odor impacts
- Our workforce is unionizing and now claiming "other & mixed race" EJ Minority Status

We need an outside Air Consultant!



A (very) Hypothetical Case Study - Our Energy Systems



- The Chocolate Factory is a grandfathered, non-major source; SIC 2066
- We produce steam for the cookers, steam engine-generators and space heat
- Boiler 2 is a 1940's 40 kpph coal-fired spreader stoker. Neighbors are protesting outside the gate because coal emits CO₂
- Boiler 4 is a 30 kpph "biomass"-fired vibrating grate stoker (cocoa hulls and off-spec gobstoppers)
- The newer 28 MMBtu/hr two stage drier/incinerator combusts exclusively dried blueberry skins from the squeezing room and wastewater treatment sludge
- Our stacks are too short to meet 40 CFR 60 Method 1 Testing criteria
- The previous owner has never been convicted of ever combusting any obnoxious children for purposes of beneficial heat recovery



A (very) Hypothetical Case Study - Do We Even Emit HAPS?



- There are 182 of them?
- The only one we have Best Available Emission factors for is coal (HCl, arsenic, mercury, etc.)
- A couple research papers for cocoa pod husks; “the gasification and combustion of cocoa pod husks is expected to contain compounds including ketones, carboxylic acid, aldehydes, furans and phenols
- AP-42 says WWTP sludge (from the driers) may contain arsenic, cadmium, chromium, lead, nickel and total hydrocarbons”
- How can we report emissions to EPA if we don’t know what they are?

Our outside consultant suggests we perform informational stack testing..

A (very) Hypothetical Case Study - Neighbors have been complaining to the Health Agent



- Higher than average incidence of cancer
- Children are overweight, spoiled and diabetic
- Green Hair Syndrome has become common
- The odor of chocolate is persistent and no longer welcome
- Their chocolate is enjoyed all over the world, why do we get all their pollution?
- According to the group “We Oppose NOx (where) Kids Are” (WONKA), a pro-bono attorney is being sought for a class action suit



No wonder the plant was free!

A (very) Hypothetical Case Study - Consultant's Suggested Approach



Once we characterize the HAP emissions data;

- We can model for various HAPs to determine if any exceed established health risk thresholds
- We can characterize potential health risk impacts outside the factory fence line and specific residential or sensitive receptors
- We can evaluate various emission control alternatives, model refinements and/or stack extensions
- We may need to reconsider different fuels

It would be useful to resolve any such issues before RY 2026, or EPA might solve them for us.

But isn't AEER just an Enhanced Data Collection Rule?



- Uniform HAPs Reporting to EPA
- HAP impacts are local (affected population within a few miles) and presently regulated at the State-level
- EPA states that *they* need this information to *identify* and *solve* HAP air quality and exposure *problems*



Or just a bad dream?



Thank you!

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