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**BETTER PRACTICES
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SUSTAINABLE PRODUCTS FOR A SUSTAINABLE FUTURE

***CIBO Spring Meeting:
What's up with Boiler MACT and why is taking so long?***

May 10, 2022
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American Forest & Paper Association

Background

- Coalition: CIBO, AF&PA, AWC, ACC, AISI, CRWI, USTMA, ACCCI
- Rulemaking started in 1996 with several proposals, and repropoals and final actions in 2004, 2010, 2011, and 2013
- Past coalition successful in get a reasonable and achievable rule!
- Significant investment in controls \$ (billions) have been made – big reductions in HAPs that have mitigated risks
- 2016 Court remand on CO and MACT floor setting
- Proposal August 2020 – coalition commented October 2020
- Draft final submitted to OIRA on March 8 – 90-day interagency review

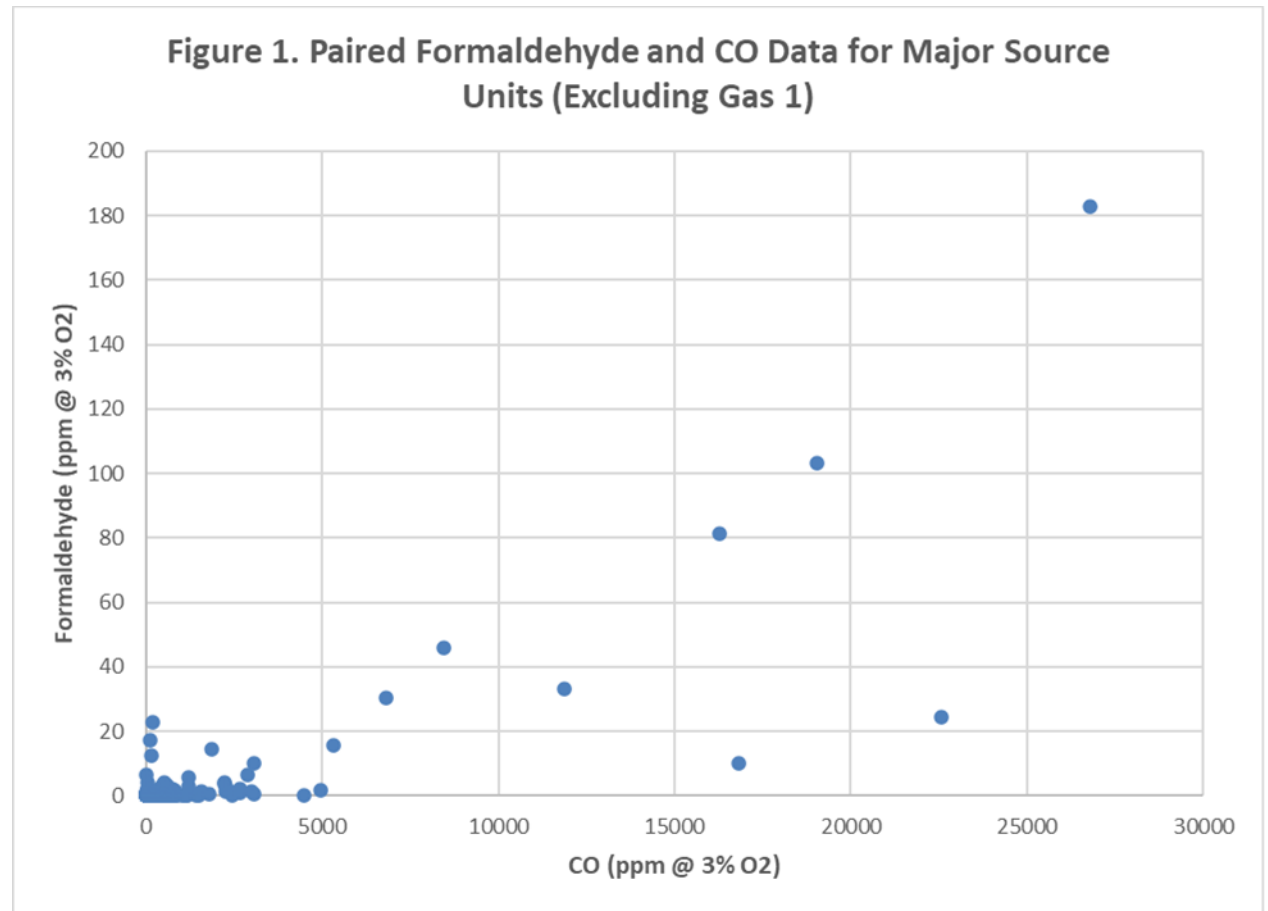
Recommendations to EPA and OMB

- Important to complete rulemaking – certainty for industry and EPA
- Keep rulemaking focused on remand issues – not reopen MACT; MACT on MACT on MACT
- Recalculate a couple of HCl and PM limits
- Fairness for “new boilers” built between 2010 and 2020 - not retroactively apply limits

CO surrogacy

- EPA got it right in the proposal
- CO is a good **surrogate** for non-dioxin organic HAPs
 - CO is a reliable indicator of good combustion conditions
 - Has been used as a surrogate since the 1980's
 - Supported by combustion chemistry
 - Data are sound

CO Surrogacy for Organic HAP is Valid



CO 130 ppm threshold

- EPA got it right in the proposal
- 130 ppm **cutoff** is justified by the data and EPA's record
 - Many precedents support
 - Unreliability and measurement error associated with very low organic HAP emissions data when CO is less than 130 ppm (see Figure 2 in comments)
 - Relationship between CO and formaldehyde above 130 ppm BUT no relationship below 130 ppm

New Source Limit: HCl Solid Fuel Boilers

- The 99UPL calculated using the best-performer (Potlatch-Deltic Warren AR Wellons Boiler at 6.7E-02 lb/MMBtu) is higher than the proposed existing source floor (2.0E-02 lb/MMBtu) due to variability, so **need alternative**.
- EPA proposed new source floor (3.0E-04 lb/MMBtu) based on *second* best-performing source (GP, Diboll, TX boiler), using 3xRDL (representative detection limit)
 - the UPL based on the #2 boiler is 2.85E-05 lb/MMBtu which is below the 3xRDL value, **need an alternative**.
- Instead, use additional available data to justify use of Potlatch boiler as the top performer and set the limit at 3.7E-03 lb/MMBtu (or **7.0E-03** if fuel variability factor is applied).
- Variability of emissions is due to fuel chloride, not boiler or control performance – no HCl controls installed.

New Source: PM Fluidized Bed Biomass

- UPL calculated using the best-performer, GP Wauna OR Fluidized Bed Boiler is 3.8E-02 lb/MMBtu, which is higher than the proposed existing source floor (2.1E-02 lb/MMBtu), **need alternative**.
- EPA's proposed new source floor, 4.1E-03 lb/MMBtu, is based on the second best-performing source, GP, Green Bay WI Wastepaper Sludge-Fired Boiler, 4.1E-03 lb/MMBtu.
- Stay with Wauna as best performer but discard 2004 test as outlier and calculate 99 UPL from remaining test runs: **8.5E-03 lb/MMBtu**.

New Boilers

- New source effective date currently is June 2010 – original proposal
- Unfair to retroactively apply any limits that get more stringent - reset to the remand's proposal date, August 24, 2020
 - The term "new source" means a stationary source the construction or reconstruction of which is commenced after the Administrator ***first proposes regulations*** under this section ***establishing an emission standard applicable to such source***
- “Relevant standard” – reasonably provided notice
- Consistent with past practice
- Legally supported – *US Sugar*
- Necessary to provide full statutory period for compliance when upgrading controls

Wrap-Up on Boiler MACT

- Keep rulemaking focused on remand issues – not reopen MACT
- Recalculate HCl and PM limits
- Fairness for “new boilers” built between 2010 and 2020 - not retroactively apply limits

- Important to complete rulemaking – early summer?
- Litigation issues?
 - Dissatisfied with keeping CO?
 - Seeking broader changes?

- Questions?

SSM Policy Update

- SSM Coalition – CIBO, AF&PA, ACC, AF&PM, AISI, API, PCA, etc.
- McCabe Sept 30 memo – return to 2015 policies
- Litigation on 2015 proceeding – DC Circuit oral argument in March; could go either way; SSM Coalition and states opposed
- Consent decree in No District CA
 - sets short deadlines for implementing 2015 SIP call in 35 states
 - wait for court decision - comments by May 11
- Affirmative Defense re-proposal (from 2016) to remove from Title V – due May 16
- Pulling back favorable NC, TX, and IO Regional Office decisions – Director discretion, affirmative defense



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Ozone NOx Transport FIP

May 10, 2022

Why EPA Included Paper Boilers in NOx FIP and which ones

- “Impactful industry” – significant contributor to ozone; 0.7 ppb or more
- Assessed NOx emissions – 2019 data forecasting to 2026
- Upwind states (WI, MI, OH, NY, IN, AR, OK, LA, VA) linked to **eleven** downwind receptors in TX, WI, PA, CT, and IL
 - Tier II: > 0.01 ppb contribution from paper mills to 70 ppb limit
- “Potential controls” – selective catalytic reduction & ultra low NOx burners
- Adjustments – controls not as effective as what is in place, smaller reduction (<5 tons) or incremental improvement less than 10%

Broad AF&PA Concerns

- States should be given lead
 - Unprecedented to simultaneously disapprove SIP and propose FIP – many comments on disapprovals (April 25) from WI, AR, OK and even NJ and MD
 - EPA using data states did not get to review in advance
 - CAA foundation of “cooperative Federalism” – EPA only if state fails
- Rulemaking process very rushed
 - 60-day comment period – June 6 if comment extension request denied
 - Extensive docket materials to review including data provided in late April
 - Driven by court deadlines – accelerates process, quality lacking in proposal
- Legal authority questionable
 - changing many established precedents – thresholds, C/E, existing guidance
- Fails to consider mobile and local sources of NOx
 - Sources near non-attainment areas have bigger impact
 - EPA Heavy Duty Truck NOx rule will result in NOx reductions

Why EPA inappropriately included paper mill boilers?

- Controls Infeasible
 - SCR never used on solid fuel boilers – temperature and configuration challenges; heating exhaust would make no sense (GHGs)
- Small NOx emission
 - Industry reduced NOx emissions by 48% since 2000
 - Only 2.5% of total emissions as EPA estimates are covered in FIP
- Not meet criteria for inclusion as “impactful industry”
 - Less than 10 receptors impacted (seven) when actual data used – closures, lower emissions, units below EPA cutoffs
 - EPA didn’t conduct usual air quality modeling that looks at emissions over time and space

Excluding Paper Mills – con't

- Costly and Cost Ineffective – EPA estimates ~\$400 M in capital, ~\$30M in annual
 - Assumptions on SCR costs for solid fuel boilers and reductions wrong – not 90% reduction; optimistically \$15,000
 - Most gas boilers already have some NOx controls – fewer tons available to reduce
 - High cost even if EPA excludes recovery furnaces, lime kilns and most biomass boilers – ambiguity in fossil fuel definitions could double/triple costs
 - Many biomass boilers start up on gas so might be fossil fuel fired
- Unprecedented
 - When NOx controls assessed in other CAA programs further controls not cost effective
 - If inadvertently include biomass boilers, then might trigger switching to natural gas increasing GHG and contrary to net zero climate goals
- Thus, paper mill boilers should not be included - literally the last of the nine non-EGUs included in the proposed rule

Work underway by AF&PA

- Reviewing NOx emissions
- Conducting “shadow analysis” of Air Quality Assessment Tool (AQAT)
- Looking at detailed modeling of emissions – not meet “step 1” test
- Review control feasibility and cost scenarios
- Developing comments for member review – file by June 6

Other Advocacy Opportunities

- Working with coalition partners – advance common positions and stay aligned
 - Midwest Ozone Group
 - NAAQS coalition
- Work with key states – WI, MI, LA, AR, and MN
- Hill education and engagement

Summary

- Many technical and legal reasons to exclude paper mill boilers
 - poor return on investment – costs far exceed any benefits
 - small gain with significant pain!
- Broad scope and rationale for rule also questionable
- Concerns how approach, assumptions, and precedents effect future rulemakings
- If Ozone NAAQS gets lowered, expect even greater scrutiny of NOx emissions from smaller and smaller sources

Contact Information

- Thank you!
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Key Aspects of NOx Ozone Transport FIP Proposal

- Sets NOx limits (precursor to ozone formation) for EGUs and non-EGUs
- Non-EGUs includes boilers at Paper Mills in “Tier II”
- Other Non-EGUs:
 - Tier I: glass, pipeline engines, cement kilns, and steel
 - Tier II: lime, metal ore mining, and boilers at chemical and refining
- 23 States: **AR**, CA, **IL**, **IN**, KY, **LA**, MD, **MI**, **MN**, **MS**, MO, NV, NJ, **NY**, **OH**, **OK**, **PA**, **TX**, UT, **VA**, WV, **WI**, WY; 14 states with paper mills (**red**)
- Controls by 2026 ozone season – EGUs comply 2023-2026
- Limits: coal @ 0.20 lbs. NOx/MMBtu; gas @ 0.08 lbs. NOx/MMBtu