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Boiler MACT Remand: Maximum Operating Load

CIBO end of year meeting

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Background/Overview

Rule published October 6, 2022

Supported use of CO as surrogate and 130 ppm as threshold

- Earth Justice, et. Al. filed petition in court AND reconsideration with EPA on 12/5

Many limits lowered – some added costs but overall reasonable

New source applicability date remained 8/2010 (not 2020)

- US Sugar petition for review

AF&PA, AWC and CIBO filed DC Circuit Court petition 12/5 on Maximum Operating Load

- Protective action
- Met with OAQPS Nov 8 and Dec 8 – "understand" concerns
- Became effective 12/5/2022 – assume apply prospectively to upcoming tests
- Unwilling to drop language – "added for a reason"
- OAQPS drafting Q&A to provide guidance to companies – share with industry

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Issue

- Footnote b to Table 7 added: "*For maximum operating load, if you conduct multiple performance tests, you must set the maximum operating load at the **lower** of the maximum values established during the performance tests*"
- Viewed as "technical correction" and effective December 5th
- Operating load limit could be very challenging for some multi-fuel fired boilers
  - Industry Coalition comment opposed the change
  - EPA kept added sentence to footnote
  - Unclear if truly understand the significance for testing and mill operations based on Response to Comment document – add continuous monitoring

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Max Fuel Pollutant Input vs. Operating Load

- Some solid fuel boilers cannot burn solid fuel at max operating load, gas or oil is needed to reach max load
- The requirements for multifuel boilers complying using stack testing require that the fuel mixture with the highest **HCl** and **Hg** input on a lb/MMBtu input basis (NOT lb/hr) be burned during the stack test and then monitored on a monthly basis.
- Highest fuel pollutant input loading (e.g., **HCl or Hg**) is wood only for wood/oil/gas and coal only for coal/gas or coal/wood.
- Highest operating load is the combination of fuels during **PM** and **CO** testing.
- The new language in the footnote could inappropriately restrict boiler operation and could restrict production if a backup boiler is not available or in some cases cause fuel switching increasing fossil fuels and thus GHGs.

***Example*: coal and gas combination boiler**

- Limited to 249 MMBtu/hr on coal and 500 MMBtu/hr total on coal and gas (i.e., can fire 249 MMBtu/hr coal and 251 MMBtu/hr gas or no coal and 500 MMBtu/hr gas).
- Highest fuel pollutant input loading is coal only (max 249 MMBtu/hr heat input)
- Highest operating load is coal and gas at 500 MMBtu/hr heat input

Concerns:

1. Conflict between the requirement to run the Hg/HCl testing at the highest lb/MMBtu input and the requirement to set the load operating parameter at the lowest load achieved across all stack tests.
2. Operating at high load conditions during all stack test runs will restrict the available fuel mix to a low coal/high gas firing scenario.
3. While the boiler can run at full load on gas, the facility needs to maintain fuel flexibility to be able to burn coal if gas is restricted or expensive.
4. Likewise, the facility would be restricted if set its load operating parameter limit based on the lowest load during the Hg/HCl testing.
5. The facility cannot comply using fuel analysis because the coal content is too high.

Example: Bark-gas combination boiler

- Steam capacity 600 kpph (400 kpph on wood only, 600 kpph on wood + natural gas)
- Hg and HCl are fuel-based pollutants – the more Hg and Cl are in the solid fuel, the higher the emissions.
- PM and CO are design-based standards – the emissions of these pollutants depends on the design of the boiler.
- The rule requires facilities performing stack testing to track control device parameters and load.
- Highest fuel pollutant input loading is bark only (max 400 kpph steam)
- Highest load is bark and gas at 600 kpph steam

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Operating Load solutions

1. Allow for load operating parameter limit to be set using PM/CO testing, not Hg/HCl testing where load conflicts with need to run at highest lb./MMBtu input.
2. Allow a mill do a 4th run at max/high load to set operating load but demonstrate compliance with HCl and Hg using just the first three runs.
3. Allow a mill to subtract out heat input load from non-contributing fuel (oil or gas) when developing limits for HCl or mercury in other fuels (biomass, TDF, etc). Allowed for one mill through Alternative Monitoring Plan approval.
4. Allow a mill to run the Hg and HCl test at the highest lb/hr fuel pollutant input (instead of lb/MMBtu) as "representative" to achieve higher load.
5. Allow to set max operating load from two different tests at different times for different HAPs

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Impacts

- Mill might need to revise their compliance/IT systems – time and cost
- May need to adjust upcoming compliance tests
- Consider alternative approaches for multi-fueled boilers
- Avoid changes to how a mill operates – do not restrict choice of fuels or curtail production

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Next steps

- OAQPS developing Q&A – next several weeks or couple of months
- Offer suggestions for both the question and answers

Litigation broadly:

- Stay of petition on operating permit while Q&A developed
- Intervene in support of CO determinations – before 1/4/23
- Amicus on new source applicability date (move to 2020) with US Sugar

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