

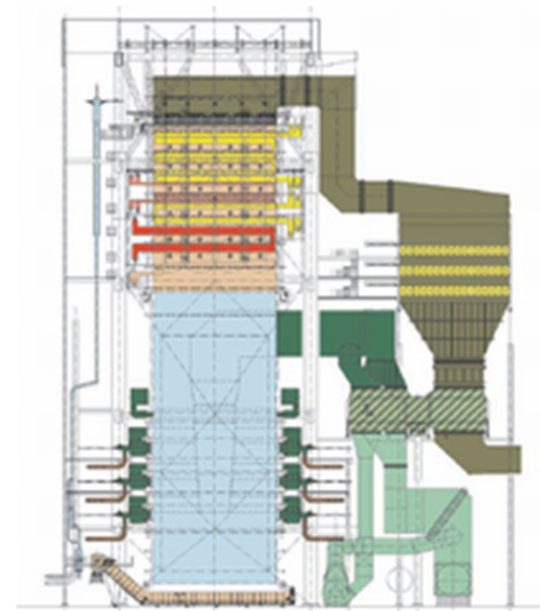
Boiler and CISWI Rules Update

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December 6, 2016



Agenda

- Boiler MACT
- Boiler GACT
- CISWI
- NHSM



<https://www.epa.gov/boilers>

<https://www.epa.gov/rcra/identification-non-hazardous-secondary-materials-are-solid-waste>

Boiler MACT Update and Schedule

- 2nd final reconsideration rule in Nov. 20, 2015 FR
- Updated QnA posted to TTN in January 2016
- Still waiting on package of technical corrections
- Jan. 31, 2016 – initial compliance date, unless 1 year extension. 180 days to demonstrate compliance with limits, 60 days to submit NOCS after all compliance activities complete or 60 days after compliance date for Gas 1 (note – **NOCS for BMACT is NOT in CEDRI**)
- **Jan. 31, 2017** – 1st compliance report in CEDRI for units with 1/31/16 compliance date

July 29, 2016 Court Decision on Boiler MACT Recon #1

- Environmentalists challenged, and court agreed, that EPA improperly determined MACT floors by excluding top performers with fuel mixtures that met the subcategory definition (using units burning 90% of subcategory fuel rather than 10% of the fuel/all units in subcategory).
- They want the units that are burning significant amounts of clean fuel to be included in the floor determinations.
- Environmentalists included a few examples in their brief, but those are not the only subcategories affected. The court did not spell out which ones are affected in the decision but EPA has done a preliminary analysis.
- Court decision vacated floors, but both industry, ENV, and EPA support remand instead of vacatur – waiting....

What existing unit floors are affected?

Subcategory	Pollutant	Subcategory	Pollutant
Existing Solid fuel	HCl	Existing Biomass Suspension burners	PM
Existing Solid fuel	Hg		
Existing Coal Stokers	CO	Existing Liquid fuel	HCl
Existing Wet biomass Stokers	CO	Existing Liquid fuel	Mercury
Existing Wet biomass Stokers	PM	Existing Heavy liquid	PM
Existing Biomass Fluidized bed	CO		
Existing Biomass Fluidized bed	PM		

– Based on P. Tsirigotis declaration submitted to the court – EPA’s preliminary analysis, which matches up with AFPA/CIBO/NCASI/AECOM analyses.

What new unit floors are affected?

New Solid fuel	Hg
New Pulverized coal boilers	CO
New Coal Stokers	CO
New Biomass Fluidized bed	CO
New Biomass Fluidized bed	PM
New Biomass Suspension burners	PM
New Biomass Hybrid suspension grate	CO
New Liquid fuel	HCl
New Heavy liquid	PM

How is EPA proposing to do the analysis?

If the court remands instead of vacates the limits:

- Using the 2012 Boiler MACT database as-is.
- Pulling in units that meet the subcategory definition.
- Not using units that have <3 test runs.
- Not using data marked as “ignore for floor” or “burning waste” in the 2012 database
- Checking survey responses/test reports to confirm fuels burned are marked correctly in the database (e.g., one boiler marked as coal was burning 100% gas).
- For liquid units – using data for units burning any liquid fuel that is not waste. Previous analysis used a lot of fuel analysis data for uncontrolled units, so a little complicated.

What do we think happens to the limits?

- Sometimes, the 99 UPL actually gets higher because the variability increases when units are moved into the floor or when a former top performing unit for a new source floor is replaced with another unit.
- EPA declaration says the existing Solid Hg and HCl limits will only be 4 and 10% lower.
- There is a new #1 unit for solid Hg but new source limit is 3XRDL.
- PM and CO limits for biomass wet stokers and fluidized bed units significantly lower.
 - CO wet stoker from 1500 to around 810 ppm
 - CO fluidized bed from 470 to around 210 ppm
 - PM wet stoker current 0.037 lb/MMBtu – small reduction
 - PM fluidized bed from 0.11 to 0.019 lb/MMBtu
- No change to Gas 1, existing biomass hybrid suspension grate
PM and CO

Boiler GACT Status

- February 3, 2013 – first reconsideration rule
- March 21, 2014 compliance date
- September 14, 2016 - 2nd final reconsideration rule in FR
 - Definitions of startup and shutdown periods
 - PM standard for units combusting low sulfur diesel
 - Limited use subcategory
 - Elimination of ongoing PM testing for certain units, based on initial performance test results
 - Elimination of ongoing Hg fuel sampling for certain units, based on initial results
 - Technical clarifications/corrections

Boiler GACT Reconsideration #2 Comments

Item	Comment	Resolution
Startup	The act of supplying heat, steam, or electricity does not represent the functional end of the startup period. The proposed 2 nd definition of startup should be clarified/simplified. Four hours form useful thermal energy may not be enough time in all cases.	EPA did not make changes, except to incorporate useful thermal energy into the 1 st startup definition.
Useful thermal energy	Flow should be incorporated into the definition.	EPA made this change.
Shutdown	Shutdown definition should be revised to accommodate periods where fuel feed is lost temporarily.	No change.
Malfunction Affirmative Defense	EPA should not eliminate the malfunction affirmative defense provisions. EPA should account for malfunctions in the standard.	EPA eliminated malfunction affirmative defense provisions. No change to account for malfunctions.

Boiler GACT Reconsideration #2 Comments

Item	Comment	Resolution
Alternate PM standard	EPA's decision to set an alternative standard for boilers burning low sulfur (0.5%) liquid fuel is appropriate.	EPA modified the standard to apply to ultra-low sulfur fuels (15 ppm sulfur).
Limited use units	We support the limited use boiler subcategory.	EPA retained the limited use boiler subcategory.
PM performance testing	We support the provision that eliminates further PM performance testing for low-emitting boilers.	EPA changed to require PM testing every 5 years.
Hg fuel sampling	We support the provision that eliminates further fuel testing for coal boilers with low-Hg fuels.	EPA changed to require fuel Hg testing every 12 months.

Boiler GACT Reconsideration #2 Comments

Item	Comment	Resolution
O2 trim	Clarify that for units that operate O2 trim systems to qualify for the 5-year tune up frequency but are not subject to emission limits, the level is set based on the tune up.	This change was made.
EGUs	We agree with EPA's revision to clarify the rule is not applicable to EGUs.	Exemption retained in final rule.
Load fraction	The proposed correction to the load fraction definition is appropriate.	Definition corrected in final rule.
Definition of coal	Disagree with EPA's proposed change to the definition of coal to exclude coal-derived liquids.	EPA agreed with comment and did not revise coal definition to exclude coal-derived liquids.

Boiler GACT Reconsideration #2 – Other Changes

- EPA removed comparable fuels from the definition of liquid fuel.
- EPA revised 63.11225(e) to include current electronic reporting procedures.
- EPA denied reconsideration for energy assessment and CO averaging period.

<https://www.epa.gov/stationary-sources-air-pollution/compliance-industrial-commercial-and-institutional-area-source>

Boiler GACT – What's next?

July 29, 2016 court decision remanded 2 items to EPA for further explanation:

- use of GACT instead of MACT for non-Hg metals
- Title V permit exemption for synthetic area boilers

CISWI Update – 2nd Reconsideration Rule

- Emission Guidelines and NSPS for Commercial and Industrial Solid Waste Incinerators – Part 60, Subparts CCCC and DDDD
- First reconsideration rule published February 7, 2013
- January 21, 2015 – EPA granted 2nd reconsideration
- 2nd Reconsideration rule was published in FR June 23, 2016
 - Definition of CEMS data during startup and shutdown
 - PM limit for waste burning kilns
 - Fuel variability factor for coal-burning ERUs
 - Definition of kiln

CISWI – What's next?

July 29, 2016 court decision remanded 2 items to EPA; rulemaking will be required:

- set emission standards for cyclonic burn barrels;
- determine whether burn-off ovens, soil treatment units, and space heaters are CISWI units and, if so, to set standards for those types of units

November 1, 2016 Proposed NHSM Rule Revisions

EPA is proposing to add three additional materials to the list of categorical non-waste fuels at 40 CFR 241.4(a):

- Creosote-borate and mixtures of creosote, copper naphthenate and copper naphthenate-borate treated railroad ties that are processed and then combusted in the following types of units. (i) Units designed to burn both biomass and fuel oil as part of normal operations and not solely as part of start-up or shut down operations, and (ii) Units at major source pulp and paper mills or power producers subject to Boiler MACT that had been designed to burn biomass and fuel oil, but are modified (e.g. oil delivery mechanisms were removed) in order to use natural gas instead of fuel oil as part of normal operations and not solely as part of start-up or shut down operations.
- Copper naphthenate treated railroad ties combusted in units designed to burn biomass or biomass and fuel oil.
- Copper naphthenate-borate ties combusted in units designed to burn biomass or biomass and fuel oil.

Questions?



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December 2016

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