

# Industrial Boiler MACT – Impact and Control Options

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# What is the Boiler MACT?

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Applies to industrial, commercial, or institutional boilers (and process heaters) located at major sources of hazardous air pollutants (“HAPs”)

# What is a Boiler?

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- “Boiler” is defined as an enclosed device using controlled flame combustion and having the primary purpose of recovering thermal energy in the form of steam or hot water.

# What is a Major Source?

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- Major source
  - Potential to emit 10 tpy or more of any individual HAP or 25 tpy or more of any combination of HAPs
  - Applies to the entire site, not just the boiler
- Note: Boilers located at non-major – i.e., “area” – sources of HAPs may be subject to EPA’s Area Source Boiler Rule.
  - The same size/type of boiler may be regulated very differently, depending on whether it is located at a major source or an area source.

# What are HAPs?

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## ■ HAPs

- Regulated under Clean Air Act § 112 (NESHAP)
- Known/suspected to cause cancer/other health problems and/or environmental effects
- 180+ listed HAPs, including mercury, metals, dioxins/furans, etc.
- Other boiler rules cover criteria pollutants only (e.g., PM, SO<sub>2</sub>, Pb, etc.)

# Regulatory History

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- First proposed – 2002
- First promulgated – 2004
- Vacated – 2007
- Re-proposed – 2010 (EPA received > 4,000 comments)
- Promulgated (again) – 2011 (judicial/administrative challenges filed)
- EPA issued “Delay Notice” staying rule – 2011
- Reconsideration proposed – Dec. 2011 (comments were due Feb. 21, 2012)
- Delay Notice vacated → Boiler MACT becomes effective – Jan. 2012
- Promulgation of final reconsideration – expected Spring 2012

# Legal Proceedings

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- Challenges pending in D.C. Circuit – litigation is stayed pending reconsideration
  - Promulgation of final reconsideration will likely trigger new round of challenges
- EPA issued “No Action Assurance” letter in Feb. 2012 – will not pursue enforcement action for violations of certain notification deadlines (e.g., Initial Notification)
  - Also applies to CISWI (notices related to commencing constructing)

# Related Rules

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- Area Source Boiler Rule
- Identification of Non-Hazardous Secondary Materials that are Solid Waste (NHSM rule)
- New Source Performance Standards (and Emission Guidelines) for Commercial and Industrial Solid Waste Incineration Units (CISWI)
- Similar regulatory development schedule



# Boiler MACT vs. CISWI

- Does your boiler combust fuel or solid waste (as defined under 40 C.F.R. pt. 241)?
  - If fuel → then Boiler MACT\*
  - If solid waste → then CISWI
- The same/type of boiler may be regulated very differently, depending on its “fuel” type.

\*Potential applicability of Utility MACT to EGUs

# CAA MACT – Establishing Emission Limits

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- The CAA Section 112 MACT floor setting process:
  - Limits for existing sources must be at least as stringent as the average emission limit achieved by the best performing 12 percent of existing sources (for which EPA has emission info).
  - Limits for new sources must be at least as stringent as the control level achieved in practice by the best controlled similar source.
  - EPA must also consider “beyond the floor” control options.

# Final Boiler MACT – Subcategories

- Subcategories of boilers and process heaters are based on design and fuel type:
  1. Units designed to burn pulverized coal/solid fuel
  2. Stokers designed to burn coal/solid fossil fuel
  3. Fluidized bed units designed to burn coal/solid fossil fuel
  4. Stokers designed to burn biomass/bio-based solids
  5. Fluidized bed units designed to burn biomass/bio-based solids
  6. Suspension burners/Dutch Ovens designed to burn biomass/bio-based solids

# Final Boiler MACT – Subcategories

(cont'd)

Subcategories of boilers and process heaters are based on design and fuel type:

7. Fuel cells designed to burn biomass/bio-based solids
8. Hybrid suspension/grate units designed to burn biomass/bio-based solids
9. Units designed to burn liquid fuel
10. Units designed to burn liquid fuel located in noncontinental States and territories
11. Units designed to burn gas 2 (other) gases

# Boiler MACT Reconsideration

## – Subcategories

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- The Boiler MACT Reconsideration proposal would add the following subcategories:
  - Stokers/sloped grate/others designed to burn wet biomass fuel
  - Stokers/sloped grate/others designed to burn kiln-dried biomass fuel
  - Units designed to burn heavy liquid fuel
  - Units designed to burn light liquid fuel

# Boiler MACT Emission Limits – Final Rule vs. Reconsideration

## FINAL BOILER MACT (in lb/MMBtu of heat input)

	Particulate Matter (PM)	Hydrogen Chloride (HCl)	Mercury (Hg)
Existing – Pulverized Coal	.039	.035	.0000046
Existing - Liquid	.0075	.00033	.0000035

# Boiler MACT Emission Limits – Final Rule vs. Reconsideration

## RECONSIDERATION (in lb/MMBtu of heat input)

	Filterable PM	HCl	Hg
Existing – Coal - Burning Pulverized Coal	.044	.022	.0000031
Existing – Liquid	.062 (heavy) .0034 (light)	.0012	.000026

# Industry Comments re: Proposed Reconsideration

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- Replacing numeric emission limits with work practice standards (certain units/pollutants)
- Complying with proposed CO limits
- Vacillating between Boiler MACT and CISWI
- Costs
- Timeframe for demonstrating compliance
- Insufficient time to comment



# Questions?

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