
STATUS OF EPA'S RULEMAKINGS FOR BOILERS

Air & Waste Management Association
South Atlantic States Section
Williamsburg, Virginia
November 20, 2008

Rulemakings

- Industrial, Commercial, and Institutional Boiler and Process Heater NESHAP
 - "Boiler MACT"
 - Subpart DDDDD of part 63
 - Promulgated – September 13, 2004
 - Vacated by Court – July 30, 2007
 - Applies to boilers at major sources of HAP

 - Area Source Rulemaking for Boilers
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Overview of Section 112

- Mandates that EPA develop standards for hazardous air pollutants (HAP) for both major and area sources listed under section 112(c)
- Definitions
 - Major source is a facility that emits or has PTE 10 tons per year of single HAP or 25 tpy of total HAP
 - Area source is a facility that is not a major source
- Standards are based on maximum achievable control technology (MACT)
- Sets minimum stringency criteria (MACT Floor)
- Allows EPA to establish work practice requirements
- Allows subcategories based on class, type, or size

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MACT Floor

- **For existing sources:**
 - “The average emission limitation achieved by the best performing 12 percent of existing sources..”
- **For new sources, the MACT floor is:**
 - “The emission control achieved in practice by the best controlled similar source...”

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Vacated Boiler MACT - Background

- Promulgated on September 13, 2004
 - Subpart DDDDD of part 63
- Proposal Date – January 13, 2003
- Compliance Date - September 13, 2007
- **Vacated on July 30, 2007**
- Source categories included:
 - Industrial Boilers
 - Institutional/Commercial Boilers
 - Process Heaters
- Boilers not covered
 - Any boiler specifically listed as an affected source in another standard under part 63 or in another standard under section 129.
 - Boilers located at an area source of HAP

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Vacated Boiler MACT Litigation

- Litigation
 - Jointly filed by NRDC and Sierra Club
 - Combined with litigation on the CISWI Definition Rule
- Issues
 - Failed to establish limits for all subcategories and HAP
 - “No emission reductions” MACT floor
 - Adopted individualized risk-based exemptions
 - Health-based compliance alternatives
 - Regulated solid waste incineration units under the Boiler MACT, instead of the CISWI rule

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LITIGATION

- March 13, 2007 - Brick Decision
 - “no emission reduction” MACT floors unlawful
 - Cannot use work practice without making finding required by 112(h)
 - Not practicable due to technical or economic limitations
- June 19, 2007 – Boiler MACT Decision
 - Vacated CISWI Definition Rule
 - Could not define “solid waste” based on type of combustion unit
 - Vacated Boiler MACT
 - Court concluded that the Boiler MACT would be substantially revised due to vacatur of CISWI Definition Rule
 - Did not rule on Boiler MACT issues

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Boiler MACT - Revision

- Schedule
 - Parallel court-ordered schedules for Boiler MACT and area source boiler rule
 - Proposal – July 15, 2009
 - Promulgation – July 15, 2010
- Revisions
 - Define solid waste
 - EPA’s Office of Solid Waste is leading the development of a definition of non-hazardous solid waste
 - Remove waste-burning units from Boiler MACT database
 - Reassess emission limits
 - In accordance with recent court decisions
 - Develop MACT floor “emission limits” for subcategories and HAP currently having no emission standards
 - Replace “no control floors”

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ICR

- ICR purpose is to address the court decisions
 - Revise population of affected units under section 112 and 129
 - Update existing emissions database
- ICR is for major source facilities with boilers and facilities with CISWI units
- ICR has two phases
 - First phase: survey
 - Questionnaire to collect info on materials combusted, controls, and emissions
 - Sent to all facilities (~3,000) that were subject to Boiler MACT
 - Sent to about 500 CISWI facilities
 - Second phase: testing
 - Up to 350 facilities

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ICR – Survey/Questionnaire

- Distribution list
 - Facilities that submitted initial notification for Boiler MACT
 - Identified by States as subject to Boiler MACT
 - Classified in title V permit as major and having a boiler
 - Known CISWI facilities
- Timing
 - Mailout August 15, 2008
 - Responses due in 45 days
- Use of Survey Responses
 - Boiler vs. incineration unit
 - 112 inventory vs. 129 inventory
 - Subcategorization
 - Best performing 12%; best performing individual unit
 - Selection of units for emission testing
 - Scope of sampling

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Vacated Boiler MACT – MACT Floor

- Based on surrogates
 - PM – for non-mercury metals
 - Mercury – mercury
 - HCl – for acid gases
 - CO – for organic HAP
- Based on control technology
 - Control technology = best performing
- MACT Floor Technology Basis
 - PM/metals = Fabric Filters
 - Mercury = Fabric Filters
 - HCl = Wet Scrubber
 - CO = GCP (CO limit/monitoring)

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Boiler MACT Emissions Limits – Existing Units

- Vacated Boiler MACT
 - Existing large solid fuel units
 - PM or TSM
 - HCl
 - Hg
 - No limit for CO
 - Existing limited use solid fuel units
 - PM
 - No limit for Hg, HCl, CO
 - No emissions standards (MACT floor was “**no emission reduction**”) for
 - existing small solid fuel units
 - existing liquid fuel units
 - existing gaseous fuel units

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Boiler MACT

Emission Limits - New Units

- **Vacated Boiler MACT**
 - **New solid fuel units**
 - PM or TSM, HCl, Hg
 - CO (not for small units)
 - **New liquid fuel units**
 - PM, HCl,
 - CO (not for small units)
 - No limit for Hg
 - **New gaseous fuel units**
 - CO (not for small units)
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Boiler MACT - Subcategories

- **Vacated Boiler MACT**
 - Three main subcategories based on fuel type:
 - Solid fuel units
 - Liquid fuel units
 - Gaseous fuel units
 - Further subcategorized based on size and use
 - Large (Greater than 10 MM Btu/hr heat input)
 - Small (less than 10 MM Btu/hr)
 - Limited-use (less than 10% capacity factor)
 - Total of 9 subcategories
 - **Revised Boiler MACT**
 - Maybe just 4 subcategories
 - Coal, biomass, liquid, gas
 - Maybe by sectors
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Boiler Area Source Rulemaking

- Source categories
 - Industrial boilers
 - Institutional/Commercial boilers
- Projected population = 1.3 million boilers
 - Many small businesses and nontraditional sources
 - Generally not been subjected to regulation/permitting, so little is known about them.
 - Mostly gas-fired, but many do combust wood or coal
- Schedule
 - Court-ordered promulgation date – December 15, 2007
 - Proposal – delayed due to court decisions
 - Proposal by July 15, 2009
 - Promulgation by July 15, 2010

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Area Source Provisions

- Section 112(d)(5) allows for area source standards based on GACT (Generally Available Control Technology)
 - Major source standards are based on MACT
 - Under GACT may consider costs and economic impacts
- Focus of standards is on the 30 Urban HAP
- Section 112(c)(6) requires listed categories be subject to MACT
 - Both industrial boilers and institutional/commercial boilers are on list of 112(c)(6) source categories
 - Mercury
 - POM
- Section 112(h) allows EPA to promulgate a work practice standard, if it is not feasible to enforce an emission standard
 - Not feasible means the application of measurement methodology is not practicable due to technical or economic limitations
- May exempt area sources from Title V if compliance would be impracticable, infeasible, or unnecessarily burdensome

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Boiler Area Source Options Being Considered

- Mercury & POM
 - MACT emission limits
 - Carbon monoxide (CO) limit as surrogate for POM
 - Work practice standard
 - Allowed under section 112(h)
 - Good combustion controls
 - Annual tune-up
 - Energy audits
- Other HAP (metals, organic HAP)
 - GACT emission limits
 - PM as surrogate for metals
 - CO as surrogate for organic HAP
 - GACT work practice standard
 - Good combustion controls
 - Annual tune-up
 - Energy audits
 - Installation of energy efficient boiler (New boilers)

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INFORMATION AND CONTACT

- Information on the MACT and area source rulemakings for industrial, commercial, and institutional boilers is available on EPA's web site at:
 - www.epa.gov/ttn/atw/combust/list.html
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