



## Clean Air Engineering Boiler MACT Summary

The National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial and Institutional Boiler and Process Heaters (Boiler MACT) was finalized on September 13, 2004 (69 FR 55218). This rule affects many industrial owners of boilers and process heaters. The rule sets limits on four classes of pollutants: mercury and mercury compounds, metallic HAPs (non-mercury), inorganic HAPs, and organic HAPs.

If this rule applies to you, you may have requirements for periodic performance tests, on-going monitoring and work practices to demonstrate continuous compliance, and/or fuel sampling and analysis. Affected units starting up after 11/12/04 must be in compliance now. All other units must submit their initial notification by 03/12/05 and comply by 09/13/07.

### Does This Rule Apply to Me?

While this rule does affect many owners and operators of commercial boilers and heaters, there are some exemptions. We have prepared an applicability flowchart (see below) to assist you in determining whether this rule affects you.

### If I'm In, What Do I Need To Do?

First, for each affected unit, determine its classification based on age (existing or new), size (large, small or limited use), and fuel (solid, liquid, gaseous). Based on that classification, you can check the table below to determine what emission limits apply to you.

Source	Fuel	Size	PM or Metals lb/MMBtu	HCl lb/MMBtu	Hg lb/MMBtu	CO ppm
<b>New</b>	Solid	Large	0.025 or 0.0003	0.02	0.000003	400 @ 7% O <sub>2</sub> <sup>a</sup>
		Small	0.025 or 0.0003	0.02	0.000003	--
		Ltd use	0.025 or 0.0003	0.02	0.000003	400 @ 7% O <sub>2</sub> <sup>b</sup>
	Liquid	Large	0.03 (PM only)	0.0005	---	400 @ 3% O <sub>2</sub> <sup>a</sup>
		Small	0.03 (PM only)	0.0009	---	--
		Ltd use	0.03 (PM only)	0.0009	---	400 @ 3% O <sub>2</sub> <sup>b</sup>
	Gaseous	Large	---	---	---	400 @ 3% O <sub>2</sub> <sup>a</sup>
		Small	---	---	---	---
		Ltd use	---	---	---	400 @ 3% O <sub>2</sub> <sup>b</sup>
<b>Existing</b>	Solid	Large	0.07 or 0.001	0.09	0.000009	---
		Small	---	---	---	---
		Ltd use	0.21 or 0.004	---	---	---
	Liquid	All sizes	---	---	---	---
		Gaseous	All sizes	---	---	---

Notes: Large units are those with heat capacity greater than 10 MMBtu/hr  
 Limited use units have an enforceable utilization rate of 10% or less.  
 Multi-fuel units – solid w/anything = solid; liquid w/gas = liquid

<sup>a</sup> 30 day rolling avg. if ≥100 MMBtu/hr  
 3 run avg. if < 100 MMBtu/hr  
<sup>b</sup> 3 run avg. for all units

Once you know the emissions standards for your unit, you will need to evaluate any potential compliance issues that may arise once these standards take effect. Some preliminary testing and/or fuel analysis provides this valuable information.

### Compliance and Monitoring Options

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The next step is to evaluate the various compliance and monitoring options available under the rule. Some of these options include

- Performance testing vs. fuel analysis
- Particulate/opacity correlations for PM compliance
- Emission averaging for large, existing, solid-fuel units
- Health-based compliance alternatives
- Retirement, replacement, retrofitting, re-powering
- Outsourcing boiler/process heater ownership and operation

### How CleanAir Can Help

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Clean Air Engineering's experienced air quality professionals can assist you in devising and implementing a cost-effective compliance strategy that maintains your maximum operating flexibility. We pride ourselves on being a "one stop shop" for air quality compliance issues. Our expertise includes development of defensible compliance strategies, regulatory affairs and permitting, emissions testing, monitoring equipment and systems, and data acquisition and reporting.

The services we provide include:

- Performance Testing (including real-time particulate monitoring)
- Evaluation of compliance options
- Establishment of reasonable operating parameter ranges
- Air permit revisions
- Regulatory agency negotiations
- Temporary CEM rental
- Monitoring equipment and supplies
- Data collection and reporting systems
- Design and specification of monitoring systems
- Monitoring system operation and maintenance
- Ongoing quality assurance for monitoring systems

### **Clean Air Engineering**

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