

Boiler MACT STANDARDS



As of February 28, 2004 the National Emissions Standards for Hazardous Air Pollutants (NESHAP) for industrial commercial and institutional boilers and process heaters apply to all existing and new boilers and process heaters that are a major source of Hazardous Air Pollutants (HAPs). Major sources are those with the potential to emit more than 10 tons per year of any one of the 188 pollutants regulated as HAPs per Section 112 (b) of the Clean Air Act, or more than 25 tons per year of combined HAPs.

The rule sets Maximum Achievable Control Technology (MACT) standards which, according to the EPA, affect approximately 42,000 boilers and 15,000 process heaters throughout the United States. Subject to the new MACT standards are boilers that fire coal, including those providing steam to a large physical plant such as a hospital, college campus, municipality, and correctional facilities. Facilities that burn other solid and liquid fuels, including textile and furniture manufacturers, wood products and papermaking facilities with individual boilers or process heaters are also subject to the new standards. MACT standards apply to old, reconstructed units (those which the fixed capital cost of new components exceeds 50

percent of the fixed capital cost that would be required to construct a comparable new unit), and to entirely new units constructed after January 13, 2003.

Requirements

Reconstructed and new units must have performance testing completed by September 2007. They must also be retested every 12 months for the first three years. If test data during three consecutive years demonstrates compliance, testing may be scaled back to once every three years. Types of tests required include:

Regulated HAP	EPA Test Method
Oxygen	Method 3A
HCl <i>with wet Scrubber</i>	Method 26A
HCl <i>without wet Scrubber</i>	Method 26
Carbon Monoxide	Method 10
Sulfur Dioxide	Method 6C
VOCs	Method 25A
Nitrogen Oxides	Method 7e
Ammonia	Conditional

Scott has all the calibration gases needed to test for these hazardous air pollutants.



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Depending on the size of the boiler, continuous monitoring may be required using a Continuous Emissions Monitoring System (CEMS). The new established limits are below:

New and Reconstructed Units	HCl Limit (1 lb/MMMBtu)	Hg Limit	CO Daily Limit (ppmvd at 3% O ₂)
Large	.02	.000003	400
Limited Use	.02	.000003	400
Small	.02	.000003	400

Regulatory Overlap

Concurrent to the 2007 compliance timeline for the boiler MACT regulations, large boilers (greater than 250MMBtu/hr) are already subject to nitrogen oxide trading programs, Regional Haze rules and the recently signed EPA Interstate Air Quality Rule (IAQR) that impacts 29 eastern states and mandates reduction of

SO₂ and NO_x emissions. In addition, the newly announced nonattainment designation for 8-hour ozone standards will increase the requirements of boilers to reduce their pollutants even further in those 500+ counties that are out of compliance with the new clean air standards.

Not Sure What You Need?

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