Industrial, Commercial and Institutional Boilers at Area Source Facilities (Boiler GACT) Rule Requirements Summary

Federal Regulation

- NESHAP 40CFR63 Subpart JJJJJJ
- Proposed rule signed April 29, 2010
- Info at http://epa.gov/airquality/combustion/actions.html

Applicability

Affected Sources: Subpart applies to each new or existing affected industrial, commercial, or institutional boiler located at an area source of HAP.

- Existing Source: Industrial, commercial or institutional boilers for which construction or reconstruction began on or before – date of publication of proposed rule in Federal Register.
  (Compliance required no later than 3 years after date of publication of the final rule in the Federal Register.)
- New Source: Industrial, commercial or institutional boilers for which construction or reconstruction began after – date of publication of proposed rule in Federal Register.
  (Compliance required upon startup or the date of publication of the final rule in the Federal Register.)
- New Affected Source: Industrial, commercial or institutional boilers for which fuel switching from natural gas to coal, biomass, or oil commenced after – date of publication of proposed rule in Federal Register.
  (Compliance required upon startup of the new affected source).
- Any industrial, commercial, or institutional boiler that was a major source on which a control device was installed after November 15, 1990, resulting in the unit becoming an area source is required to obtain a permit under 40 CFR 70 or 40 CFR 71.

Exempted Sources:
Subpart does not apply to the following.

- Any boiler specifically listed as an affected source in another standard(s) under 40 CFR 63.
- Any boiler specifically listed as an affected source in another standard(s) established under section 129 of the Clean Air Act.
- Any boiler required to have a permit under section 3005 of the Solid Waste Disposal Act or covered by 40 CFR 63 Subpart EEE.
- Any boiler used specifically for research and development. Does not include boilers that only provide steam to a process or for heating at a research and development facility.
- Any gas-fired boiler.

Standards

Work Practice Requirements:

Source	Subcategory	Requirement
Existing Source (units with heat input capacity of less than 10 MMBtu per hour)	Coal, Biomass or Oil	Conduct a tune-up of the boiler biennially as specified in §63.11222.
Existing Source (units with heat input capacity of 10 MMBtu per hour or greater)	Coal, Biomass or Oil	Have a one-time energy assessment performed by qualified personnel on the boiler and the facility to identify cost-effective energy conservation measures. Assessment must include all components listed in 40CFR63 Subpart JJJJJJ Table 2.

Emission Limits:

Emissions limits apply at all times, including periods of start-up, shutdown, and malfunction.

Source	Subcategory	Particulate Matter (PM)	Mercury	Carbon Monoxide (CO)
New Source	Coal[1]	0.03 lb per MMBtu of heat input	3E-06 lb per MMBtu of heat input	310 ppm by volume on a dry basis corrected to 7% oxygen (daily average)
	Biomass[2]	0.03 lb per MMBtu of heat input	NA	100 ppm by volume on a dry basis corrected to 7% oxygen (daily average)
	Oil[3]	0.03 lb per MMBtu of heat input	NA	1 ppm by volume on a dry basis corrected to 3% oxygen (daily average)
Existing Source with heat input capacity of 10 MMBtu per hour or greater	Coal[1]	NA	3E-06 lb per MMBtu of heat input	310 ppm by volume on a dry basis corrected to 7% oxygen (daily average)
	Biomass[2]	NA	NA	160 ppm by volume on a dry basis corrected to 7% oxygen (daily average)
	Oil[3]	NA	NA	2 ppm by volume on a dry basis corrected to 3% oxygen (daily average)

[1] Coal subcategory includes any boiler that burns any coal alone or at least 10 percent coal on an annual heat input basis in combination with biomass, liquid fuels, or gaseous fuel.
[2] Biomass subcategory includes any boiler that burns any amount of biomass but no coal, either alone or in combination with liquid fuels or gaseous fuels.
[3] Oil subcategory includes any boiler that does not burn any solid fuel and burns any liquid fuel either alone or in combination with gaseous fuels. Gas boilers that burn liquid fuel during periods of gas curtailment, gas supply emergencies, or for periodic testing are not included in this definition.

Initial Compliance Requirements

Source	Subcategory	Boiler Heat Input Capacity	Emission Limit or Work Practice	Initial Compliance Demonstration		
				Compliance Dates	Compliance Demonstration Options	Subsequent Performance Testing
New Source	Coal, Biomass, or Oil	Any	PM Emission Limit	No later than 180 calendar days after date of publication of the final rule in the Federal Register or within 180 days after startup of the source	Stack Test per §63.11212 and Table 4 to Subpart JJJJJJ of Part 63	Annually[1] or Every three years if three consecutive annual tests show emissions at or below 75% of the emission limit[2].
New Source	Coal	Any	Mercury Emission Limit	No later than 180 calendar days after date of publication of the final rule in the Federal Register or within 180 days after startup of the source	Stack Test per §63.11212 and Table 4 to Subpart JJJJJJ of Part 63 or Fuel Analysis per §63.11211(b)(1-3), §63.11213 and Table 5 to Subpart JJJJJJ of Part 63	Stack Test: Annually[1] or Every three years if three consecutive annual tests show emissions at or below 75% of the emission limit[2]. Fuel Analysis: Monthly (if complying using fuel analysis) and before burning a new type of fuel or mixture.
New Source	Coal, Biomass, or Oil	< 100 MMBtu/hour	CO Emission Limit	No later than 180 calendar days after date of publication of the final rule in the Federal Register or within 180 days after startup of the source	Stack Test per §63.11212 and Table 4 to Subpart JJJJJJ of Part 63	Annually[1]
New Source	Coal, Biomass, or Oil	≥100 MMBtu/hour	CO Emission Limit	No later than 180 calendar days after date of publication of the final rule in the Federal Register or within 180 days after startup of the source	Performance Evaluation of the continuous emissions monitoring system (CEMS) for CO per §63.11223	CEMS Installation Required

Source	Subcategory	Boiler Heat Input Capacity	Emission Limit or Work Practice	Initial Compliance Demonstration		
				Compliance Dates	Compliance Demonstration Options	Subsequent Performance Testing
Existing Source	Coal	≥10 MMBtu/hour	Mercury Emission Limit	180 days after the compliance date *(3 years after date of publication of the final rule in the Federal Register)*	Stack Test per §63.11212 and Table 4 to subpart 63 or Fuel Analysis per §63.11211(b)(1-3), §63.11213 and Table 5 to Subpart JJJJJJ of Part 63	Stack Test: Annually[1] or Every three years if three consecutive annual tests show emissions at or below 75% of the emission limit[2]. Fuel Analysis: Monthly and before burning a new type of fuel or mixture.
Existing Source	Coal, Biomass, or Oil	> 10 MMBtu/hour and < 100 MMBtu/hour	CO Emission Limit	180 days after the compliance date *(3 years after date of publication of the final rule in the Federal Register)*	Stack Test per §63.11212 and Table 4 to Subpart JJJJJJ of Part 63	Annually[1]
Existing Source	Coal, Biomass, or Oil	≥100 MMBtu/hour	CO Emission Limit	180 days after the compliance date *(3 years after date of publication of the final rule in the Federal Register)*	Performance Evaluation of the continuous emissions monitoring system (CEMS) for CO per §63.11223	CEMS Installation Required
Existing Source	Coal, Biomass, or Oil	< 10 MMBtu/hour	Work Practice Standard	No later than the compliance date *(3 years after date of publication of the final rule in the Federal Register)*	Biennial boiler tune-up per §63.11222 Submit Notification of Compliance Status Report with signed statement that a tune-up was conducted.	Biennial
Existing Source	Coal, Biomass, or Oil	≥10 MMBtu/hour	Work Practice Standard	No later than the compliance date *(3 years after date of publication of the final rule in the Federal Register)*	Energy Assessment performed by qualified personnel Table 2 to Subpart JJJJJJ of Part 63 Submit Notification of Compliance Status Report with signed statement that a tune-up was conducted.	N/A

[1] Annual performance tests must be completed between 10 and 12 months after the previous performance test.

[2] There must also have been no changes in the operation of the affected source or air pollution control equipment that could increase emissions and performance tests must be completed no more than 36 months after the previous performance test. Emissions must continue to test at or below 75% of the emission limit in order to continue testing every three years. Annual performance testing must be reinstated for the pollutant if a performance test shows emissions exceed 75% of the emission limit, and annual testing must continue until all performance tests over a consecutive three-year period show emissions at or below 75% of the emission limit.

Continuous Compliance Requirements

Monitoring, Installation, Operation, and Maintenance Requirements

- For boilers ≥100 MMBtu/hr, must install a CO CEMS, daily averaging period.
- For boilers with an applicable opacity operating limit, must install and operate a COMS in accordance with §63.11223(d).
- Develop site-specific monitoring plan for any applicable emission limit for which you demonstrate compliance through stack testing. The site-specific monitoring plan must address §63.11223(b)(1-4)
- Monitor and collect data according to the site-specific monitoring plan
- Monitor continuously or collected data at all required intervals during the time that the affected source is operation except for during monitor malfunctions, associated requires and required quality assurance or control activities (i.e., calibration checks, zero and span adjustments).
- Do not include data recorded during monitoring malfunctions, associated repairs, or required quality assurance or control activities in data averages and calculations used to report emission or operating levels. All data collected during all other periods must be used in assessing the operation of the control device and associated control system.

Pollutant or Work Practice Standard	Control Device	Monitoring Requirement and/or Equipment	Operating Limits
Mercury	Fabric Filter	Opacity Bag Leak Detection System	≤ 10% Opacity (daily block average) Operate the fabric filter such that the bag leak detection system alarm does not sound more than 5% of the operating time during each 6-month period
Mercury	Electrostatic Precipitator Control	Opacity	≤ 10% Opacity (daily block average)
Mercury	Dry Scrubber or Carbon Injection Control	Sorbent or Carbon Injection Rate	Maintain the minimum injection rate at or above the operating levels established during the performance test that demonstrated compliance with the applicable emission limit for mercury.
Mercury	Fuel Analysis	Fuel Type or Fuel Mixture (annual average)	Maintain such that mercury emission rates calculated according to §63.11211(c) is less than the applicable emission limit for mercury. Fuel analysis and rate calculation required prior to burning any new fuel type. Stack test required within 60 days of burning new fuel if fuel analysis and calculation result in emissions higher than applicable limit.
Opacity	N/A	COMS	Continuous monitoring per §63.11223(a) and §63.11220 at all times.

Pollutant or Work Practice Standard	Control Device	Monitoring Requirement and/or Equipment	Operating Limits
Carbon Monoxide	N/A	CEMS required for boilers with heat input capacity of 100 MMBtu/hr or greater that have an applicable CO emission limit.	Continuous monitoring per §63.11223(a) and §63.11220 at all times.
Work Practice Standard	N /A	Biennial Boiler Tune-up	Biennial boiler tune-up per §63.11222.
All Pollutants	Control Device Not Covered by Rule	Apply to EPA for approval of alternative monitoring under §63.8(f).	Alternative Monitoring Parameters or Alternative Operating Limits

Reporting Requirements

Report	Due date
Initial Notification of Compliance	Existing Sources – not later than 120 calendar days after the effective date of the standard unless a performance test is required. New Sources – within 15 days of start up.
Notification of Performance Test	30 days prior to scheduled date of test.
Notification of Compliance Status	Within 60 days of completion of the initial compliance demonstration.
Annual Compliance Certification for Previous Calendar Year	March 1 of each year.

Recordkeeping Requirements

- Records demonstrating compliance with above requirements.
- Records documenting deviations.
- Monthly fuel type and use records.