



Summary of Regulations for Area Sources: Industrial, Commercial, and Institutional Boilers

National Emissions Standards for Hazardous Air Pollutants (40 CFR, Part 63, Subpart JJJJJ)

What is a boiler?

- A boiler uses controlled flame combustion to burn coal and other substances such as oil or biomass to produce steam or hot water, which is then used for energy or heat.

What is an area source?

- Any source that is not a major source.
- Major sources emit or have potential to emit ≥ 10 TPY of any single air toxic or ≥ 25 TPY of combined air toxics.

Which boilers are affected?

- Boilers that burn coal, oil, biomass, or other solid and liquid non-waste materials AND located at area source commercial (e.g., laundries, apartments, hotels), institutional (e.g., schools, churches, medical centers, municipal buildings), or industrial (e.g., manufacturing, refining, processing, mining) facilities.

Which boilers are not affected?

- Any gas-fired boiler.
- Hot water heaters with capacity ≤ 120 U.S. gallons and hot water boilers (i.e., not generating steam) with heat input capacity < 1.6 MMBtu/hr burning gas, oil, or biomass.
- Waste heat boilers.
- Boilers used as control devices for other standards.
- Boilers subject to other NESHAP, section 129 standards, or hazardous waste boilers.
- Research and development boilers.
- Temporary boilers.
- Residential boilers.
- Electric boilers.

What are the compliance dates?

EXISTING SOURCES (commenced construction or reconstruction on or before June 4, 2010): Comply by March 21, 2014.

NEW SOURCES (commenced construction or reconstruction after June 4, 2010): Comply by May 20, 2011 or upon start-up.

How do I comply?

Rule requirements vary depending on boiler (1) fuel type, (2) construction date, and (3) size (see "Fast Facts" tables).

Conduct a Boiler Tune-up (see "Fast Facts" Table 1)

- Conduct a tune-up every 2 years or 5 years, as applicable.
- Tune-up frequency is reduced for limited-use boilers, seasonal boilers, oil-fired boilers with heat input capacity ≤ 5 MMBtu/hr, and boilers with an oxygen trim system that would otherwise be subject to a biennial tune-up.

Conduct a One-Time Energy Assessment (see "Fast Facts" Table 2)

- Assess the boiler and its energy use systems to identify cost-effective energy conservation measures.
- The rule's energy assessment requirement is also satisfied when an assessment completed on or after January 1, 2008, meets or is amended to meet the rule's requirements or a facility operates under an energy management program compatible with ISO 50001.

Meet Emission Limits (see "Fast Facts" Table 3)

- Conduct initial performance stack test and establish operating parameters.
- Repeat performance tests every 3 years. Note: For particulate matter (PM), if initial performance test shows that emissions are \leq half of the limit, further PM performance testing is not required.
- Develop and follow a site-specific testing plan and site-specific monitoring plan.
- Conduct initial and quarterly fuel analysis for each type of fuel if the mercury (Hg) constituents in the fuel are greater than half of the mercury emission limit. Further fuel analysis sampling is not required if the mercury constituents in the fuel are measured to be \leq half of the mercury emission limit.
- Minimize boiler startups and shutdowns and follow the manufacturer's recommended procedures.
- Monitor and collect data to demonstrate compliance with operating limits.
- Conduct performance evaluations of continuous monitoring systems.
- As an alternative to mercury stack testing, a fuel analysis may be conducted to demonstrate that mercury fuel pollutant input is lower than the mercury emission limit.
- As an alternative to carbon monoxide (CO) stack testing, CO/oxygen CEMS may be used to demonstrate compliance.
- New oil-fired boilers that combust only ultra-low-sulfur liquid fuel (i.e., distillate oil that has less than or equal to 15 ppm sulfur) are not subject to the PM emission limit.

What reports are required?

- Prepare and submit Initial Notification by January 20, 2014 (or within 120 days after the source becomes subject to the standard).
- Prepare Notification of Compliance Status. Certify completion of energy assessment and/or tune-up, as applicable. Submit electronically using the Compliance and Emissions Data Reporting Interface (CEDRI) on EPA's Central Data Exchange (CDX).
- Prepare Compliance Certification Report by March 1 of the year after the calendar year during which a tune-up is completed for boilers not subject to emission limits. Submit upon request.
- Prepare an annual Compliance Certification Report for boilers with emission limits by March 1 of each year. Submit upon request. Prepare and submit the Report by March 15 if any deviations from an emission limit or operating parameter.
- Provide notification 30 days prior to firing solid waste.
- Provide notification within 30 days of a fuel switch or physical change resulting in the boiler being in a different subcategory within subpart JJJJJ, becoming subject to subpart JJJJJ, or switching out of subpart JJJJJ.
- Submit test results to EPA's WebFIRE database using CEDRI that is accessed through EPA's CDX within 60 days of each performance test. Submit the data in the file format of EPA's Electronic Reporting Tool.

What records are required?

- Types and amount of fuel used monthly for boilers with emission limits.
- Documentation that startups and shutdowns were done according to manufacturer's recommended procedures for boilers subject to emission limits.
- All required notifications and reports, with supporting documentation.
- Demonstration of compliance with emission limits, operating limits, tune-ups, and the energy assessment, as applicable.
- Malfunction occurrences, duration, and actions taken.
- Days of operation per year for seasonal boilers.
- Copy of the federally enforceable permit and records of fuel use for limited-use boilers.

Fast Facts: Regulations for Area Sources

Industrial, Commercial, and Institutional Boilers

National Emissions Standards for Hazardous Air Pollutants (40 CFR, Part 63, Subpart JJJJJ)

Table 1: Am I Required to Do a Boiler Tune-Up Every 2 or 5 Years?

Heat Capacity (Btu/Hr)	Existing Coal Units	New Coal Units			Existing Biomass Units	New Biomass Units	Existing Seasonal or Limited Use Units	New Seasonal or Limited Use Units
≥10MM	No	No			Yes ¹	Yes ¹	Yes (every 5 yrs)	Yes (every 5 yrs)
< 10MM	Yes ¹	Yes ¹			Yes ¹	Yes ¹	Yes (every 5 yrs)	Yes (every 5 yrs)
			Existing Oil Units	New Oil Units				
> 5 MM			Yes ¹	Yes ¹				
≤ 5 MM			Yes (every 5 yrs)	Yes (every 5 yrs)				

¹ If the boiler uses an oxygen trim system that maintains an optimum air-to-fuel ratio, tuneups are required every five years. Otherwise, tuneups are required every two years.

Table 2: Am I Required to Do a One-Time Energy Assessment?

Heat Capacity (Btu/Hr)	Existing Coal Units	New Coal Units	Existing Oil Units	New Oil Units	Existing Biomass Units	New Biomass Units
≥ 10 MM	Yes ²	No	Yes ²	No	Yes ²	No
< 10 MM	No	No	No	No	No	No

Table 3: Do the Emission Limits Requirements Apply to My Boiler?

Heat Capacity (Btu/Hr)	Existing Coal Units	New Coal Units	Existing Oil Units	New Oil Units	Existing Biomass Units	New Biomass Units
≥ 10 MM	Yes ² (Hg, CO limits)	Yes ² (Hg, CO, PM limits)	No	Yes ^{2, 3, 4} (PM limits)	No	Yes ^{2, 3} (PM limits)
< 10 MM	No	No	No	No	No	No

² Provided the boiler does not meet the definition of limited-use boiler.

³ Provided the boiler does not meet the definition of seasonal boiler.

⁴ New oil-fired boilers that combust only ultra-low-sulfur liquid fuel (i.e., distillate oil that has less than or equal to 15 ppm sulfur) are not subject to the PM emission limit.