

***SMALL ENTITY COMPLIANCE GUIDE  
FOR  
AREA SOURCE BOILERS***

National Emission Standards for Hazardous Air  
Pollutants for Area Sources:  
**Industrial, Commercial, and Institutional Boilers**

**40 CFR Part 63, Subpart JJJJJ**

## NOTICE

*This guide was prepared pursuant to section 212 of the Small Business Regulatory Enforcement Fairness Act of 1996 (SBREFA), Pub. L. 104-121 as amended by Pub. L. Number 110-28. THIS DOCUMENT IS NOT INTENDED, NOR CAN IT BE RELIED UPON, TO CREATE ANY RIGHTS ENFORCEABLE BY ANY PARTY IN LITIGATION WITH THE UNITED STATES. The statements in this document are intended solely as guidance to aid you in complying with NESHAP) for Area Sources: Industrial, Commercial, and Institutional Boilers, 40 CFR Part 63, Subpart JJJJJJ.*

**The full text of the rule and additional information are available online at**  
**<http://www.epa.gov/ttn/atw/boiler/boilerpg.html>**

## ABOUT THIS GUIDE

The U.S. Environmental Protection Agency (EPA) published this document as a compliance guide for small entities, as required by the Small Business Regulatory Enforcement Fairness Act. The guide is designed to help small businesses determine if and how they are affected by the National Emission Standards for Hazardous Air Pollutants (NESHAP) for Area Sources: Industrial, Commercial, and Industrial Boilers.

### ***Who should use this guide?***

If you own or operate a boiler, then you should use this guide. This guide will help you determine if and how your boiler is affected the Boilers Area Source NESHAP.

### ***How do I use this guide?***

This guide is organized into four major sections:

- **SECTION 1: INTRODUCTION** presents three rules that were published on March 21, 2011 that affect owners and operators of boilers, process heaters, and incinerators that burn solid waste at industrial and commercial facilities. The section presents an overview of the rules, identifies the types of affected sources, and presents the current status of the rules.
- **SECTION 2: SUMMARY OF THE BOILERS AREAS SOURCE RULE** summarizes the requirements of the Boilers Area Source NESHAP.
- **SECTION 3: HOW TO COMPLY** helps you determine your subcategory, which is based on your boiler's fuel, size, and date of construction. The section also describes five overall tasks that you have to complete, depending on your subcategory.
- **SECTION 4: OTHER INFORMATION** presents the estimated benefits and costs of the Boilers Area Source NESHAP, provides compliance assistance resources, and tells you where to obtain additional information on the rule.

This guide is intended to summarize rule requirements and provide some examples and clarifications where EPA anticipates that small entities will have questions about rule requirements. Throughout this guide, citations to the actual regulatory text are referenced for both the area source boiler rule and the applicable overarching requirements from the General Provisions. You can use the Electronic Code of Federal Regulations (e-CFR) to find the appropriate sections regulatory language cited in this guide.

- [Go here](#) to access the e-CFR regulatory text for the Boilers Area Source NESHAP.
- [Go here](#) to access the e-CFR regulatory text for the General Provisions.

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## 1.0 INTRODUCTION

### 1.1 Background on Boilers and CISWI Rules

This section will help you determine what regulations cover different types of boilers.

EPA published three final air emissions standards in the [Federal Register](#) on March 21, 2011. They will reduce emissions of air pollutants from:

- Boilers and process heaters at large sources of air toxics (“major sources”)
- Boilers at small sources of air toxics (“area sources”)
- Commercial and Industrial Solid Waste Incinerators (CISWI)

Under the Clean Air Act, EPA classifies sources by the amount of toxic pollution they emit. A “major source” facility emits 10 or more tons per year of any single air toxic or 25 tons per year or more of any combination of air toxics. Any facilities that are not major sources are classified as area sources.

For more information on how to estimate the amount of emissions from your source, see the EPA Emission Inventory Improvement Program document, “Preferred and Alternative Methods for Estimating Air Emissions from Boilers” (<http://www.epa.gov/ttn/chief/eiip/techreport/volume02/ii02.pdf>). Chapters 4 and 5 show emissions calculation methods.

**Boilers** burn coal and other substances such as oil or biomass (e.g., wood) to produce steam or hot water, which is then used for energy or heat.

**Area source boilers** are used in manufacturing, processing, mining, refining, or any other industry. The majority of area source boilers, however, are located at commercial and institutional facilities, such as medical centers, schools, or municipal buildings.

In contrast, the majority of **major source boilers and process heaters** are located at industrial facilities such as refineries, chemical and manufacturing plants, and paper mills. They may also stand alone to provide heat for commercial facilities, such as warehouses, or institutional facilities, such as universities.

**Boilers or process heaters that combust any material identified as a non-hazardous solid waste** are subject to air emission standards for incinerators rather than for boilers, with limited exceptions. This means that owners/ operators must first determine whether the combustion unit is subject to one of the boiler standards or incinerator standards.

Boilers at commercial and industrial facilities that combust solid waste are most likely subject to air emission standards for Commercial and Industrial Solid Waste Incinerators (CISWI). The CISWI rule does not differentiate between major and area sources. More information on this rule can be found at <http://www.epa.gov/ttn/atw/129/ciwi/ciwipg.html>.

## **1.2 Rule Reconsideration**

On March 21, 2011, EPA announced that it planned to reconsider the area and major boiler rules, as well as the CISWI rule. This allows time to seek and review additional public input on the final standards for boilers and certain solid waste incinerators also published on March 21, 2011. The agency is reconsidering the standards because the public did not have sufficient opportunity to comment on some of the provisions of the final rule. As a result, further public review and feedback is required to meet the legal obligations under the Clean Air Act. While EPA is conducting a reconsideration of the area source boiler rule, affected sources subject to this standard must comply with all requirements of the rule as currently published in the Federal Register.

## **2.0 SUMMARY OF THE BOILERS AREA SOURCE NESHAP**

### **2.1 Who is affected by this rule?**

Most boilers covered by the Boilers Area Source NESHAP are located at commercial and institutional facilities, with a smaller amount in the industrial sector. This rule covers boilers located at area source facilities that burn coal, oil, biomass, or other solid and liquid non-waste materials.

This rule does **NOT** apply to boilers that burn only gaseous fuels or any solid waste.

Commercial boilers include those found in stores/malls, laundries, apartments, restaurants, and hotels/motels. Institutional boilers are found in many locations, including medical centers (hospitals, clinics, nursing homes), educational and religious facilities (schools, universities, churches), amusement parks, and municipal buildings (courthouses, prisons). Industrial boilers are found in manufacturing, processing, mining, and refining or any other industry.

### **2.2 Am I subject to this rule?**

You are subject to the Boilers Area Source NESHAP if you own or operate an industrial, commercial, or institutional boiler that is located at, or is part of, a facility that is classified as an area source of hazardous air pollutants (HAP).

A “major source” HAP facility emits 10 or more tons per year of any single air toxic or 25 tons per year or more of any combination of air toxics. The list of air toxics is available on the [EPA website](#). Any facilities that are not major sources of HAP are classified as area sources. See the EPA Emission Inventory Improvement Program document, “[Preferred and Alternative Methods for Estimating Air Emissions from Boilers](#),” Chapters 4 and 5 for information on how to estimate emissions from your source.

**Reminder:** Although this guidance document provides sample calculations for estimating emissions from boilers, you must estimate the emissions from all HAP-emitting combustion equipment and processes at your facility to determine whether your source is major or area.



**The following area source units are NOT subject to the Boilers Area Source NESHAP:**

- Any gas-fired boiler<sup>1</sup>
- Hot water heaters with a capacity of no more than 120 U.S. gallons and pressures not exceeding 160 pound-force per square inch gauge (psig), and all controls necessary not to exceed a temperature of 210°F (90°C)
- Waste heat boilers, also known as heat recovery steam generators (these boilers recover traditionally unused energy and convert it to usable heat)
- Boilers that are used as control devices for other NESHAP standards, where at least 50 percent of the heat input to the boiler is provided by the NESHAP regulated gas stream
- Research and development boilers
- Boilers subject to other NESHAP standards, Section 129 standards, or hazardous waste boilers

### **2.3 Summary of Requirements**

EPA is regulating area source boilers based on three components: the type of fuel burned in the boiler, whether the boiler is new or existing, and the size of the boiler. Boilers are designed differently depending on what kind of fuel they burn- coal, oil, or biomass. The final rule sets different requirements for boilers based on their size, which is defined as follows:

- Large area source boilers have a heat input capacity equal to or greater than 10 million British thermal units (Btu) per hour (MMBtu/hr).
- Small area source boilers have a heat input capacity less than 10 MMBtu/hr.

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<sup>1</sup> *Gaseous fuels* include, but are not limited to: natural gas, process gas, landfill gas, coal-derived gas, refinery gas, hydrogen, and biogas. *Gas-fired boiler* includes any boiler firing gaseous fuels not combined with any solid fuels. A gas-fired boiler that periodically fires liquid fuels during gas curtailment and supply emergencies or for periodic (not to exceed 48 hours per year) testing is still considered a gas-fired boiler.

**Table 1. Summary of Boiler Area Source NESHAP Emission Limit and Work Practice Requirements**

Subcategory		Summary of Requirement	
<b>Existing large</b> area source boilers	i.e., commenced construction or reconstruction of the boiler on or before June 4, 2010; greater than or equal to 10 MMBtu/hr	Gas (all types)	<ul style="list-style-type: none"> <li>No requirements (not covered by the rule)</li> </ul>
		Coal	<ul style="list-style-type: none"> <li>Numeric emission limits for mercury (Hg) and carbon monoxide (CO)</li> <li>One-time energy assessment</li> </ul>
		Biomass and Oil	<ul style="list-style-type: none"> <li>Tune-up every other year</li> <li>One-time energy assessment</li> <li>No numeric emission limits</li> </ul>
<b>Existing small</b> area source boilers	i.e., commenced construction or reconstruction of the boiler on or before June 4, 2010; less than 10 MMBtu/hr	Gas (all types)	<ul style="list-style-type: none"> <li>No requirements (not covered by the rule)</li> </ul>
		Coal, Biomass and Oil	<ul style="list-style-type: none"> <li>Tune-up every other year</li> <li>No numeric emission limits</li> </ul>
<b>New large</b> area source boilers	i.e., commenced construction/reconstruction or switched from natural gas fuel to solid fossil fuel, biomass or liquid fuel after June 4, 2010; greater than or equal to 10 MMBtu/hr	Gas (all types)	<ul style="list-style-type: none"> <li>No requirements (not covered by rule)</li> </ul>
		Coal	<ul style="list-style-type: none"> <li>Numeric emission limits for mercury (Hg), carbon monoxide (CO), and particulate matter (PM)</li> </ul>
		Biomass and Oil	<ul style="list-style-type: none"> <li>Numeric emission limit for particulate matter (PM)</li> <li>Tune-up every other year</li> </ul>
<b>New small</b> area source boilers	i.e., commenced construction/reconstruction or switched from natural gas fuel to solid fossil fuel, biomass or liquid fuel after June 4, 2010; less than 10 MMBtu/hr	Gas (all types)	<ul style="list-style-type: none"> <li>No requirements (not covered by the rule)</li> </ul>
		Coal, Biomass and Oil	<ul style="list-style-type: none"> <li>Tune-up every other year</li> <li>No numeric emission limits</li> </ul>

**Table 2: Required Emission Limits and Work Practices for Area Source Boilers**

Subcategory	Hg, lb/TBtu	CO, ppm @ 7% O <sub>2</sub>	PM lb/MMbtu	Conduct Biennial Tune-up	Conduct One-time Energy Assessment
All small Boilers (<10 MMBtu/hr)	--	--	--	Yes	No
New Large Coal	4.8	400	0.03 (≥30 MMBtu/hr) 0.42 (≥10 to <30 MMBtu/hr)	No	No
New Large Biomass	--	--	0.03 (≥30 MMBtu/hr) 0.07 (≥10 to <30 MMBtu/hr)	Yes	No
New Large Oil	--	--	0.03	Yes	No
Existing Large Coal	4.8	400	--	No	Yes
Existing Large Biomass	--	--	--	Yes	Yes
Existing Large Oil	--	--	--	Yes	Yes

Appendix A of this guide also provides a detailed summary of the area source requirements by boiler subcategory and tasks to complement the requirements outlined in Section 3 of this compliance guide.

## 2.4 When Do I Need to Comply?

Example notification forms can be found under “Implementation Tools” at <http://www.epa.gov/ttn/atw/boiler/boilerpg.html>, and include information on compliance assistance contacts. Notification forms are not required to be submitted electronically.

### Initial Notification of Applicability: (§63.9(b)(2))

- September 17, 2011, if startup before May 20, 2011
- September 17, 2011 or within 120 days after startup of a new source, whichever is later

**Initial Notification of Compliance Status: (§63.11225(a)(4))**

You may be required to submit more than one of the below initial notification of compliance forms. See Section 3.3 for more details.

- Existing sources subject to tune-up work practices: July 19, 2012
- Existing sources subject to emission limits: July 19, 2014 or within 60 days of completing the performance stack test
- Existing sources subject to an energy assessment: July 19, 2014
- New sources: September 17, 2011 or 120 days after startup, whichever is later. If your source must conduct a performance stack test, the notification must be submitted within 60 days of test completion.

**Compliance Dates (§63.11196)**

- New Sources (constructed or reconstructed after June 4, 2010): May 20, 2011 or upon startup
- Existing sources subject to tune-ups: March 21, 2012
- Existing sources with emissions limits and/or energy assessment requirements: March 21, 2014

**What if I miss the notification deadline? Will I be penalized for submitting a late notification?**

Please note that it is beyond the scope of this document to discuss any specific enforcement response. However, we encourage you to send your notices in a timely fashion. If for some reason you miss the notification deadline, please send in your forms as soon as possible.

**Table 3: Summary of Compliance Dates**

Subcategory	Submit Initial Notification of Applicability by...	Submit Initial Notification of Compliance Status by...	Complete Initial Tune-ups by...	Complete Energy Assessment by...	Demonstrate Compliance with Emission Limits by...	Prepare Compliance Certification Report by...
All New and Existing Gas	No requirements not subject to rule					
<b>Existing Small (&lt; 10 MMBtu/hr)</b>						
Existing Small (< 10 MMBtu/hr) Units other than gas	9/17/2011	7/19/2012	3/21/2012	--	--	1 <sup>st</sup> report should be prepared by 3/1/2015, subsequent reports by March 1 of every second year

**Table 3: Summary of Compliance Dates**

Subcategory	Submit Initial Notification of Applicability by...	Submit Initial Notification of Compliance Status by...	Complete Initial Tune-ups by...	Complete Energy Assessment by...	Demonstrate Compliance with Emission Limits by...	Prepare Compliance Certification Report by...
<b>Existing Large (<math>\geq 10</math> MMBtu/hr)</b>						
Biomass	9/17/2011	7/19/2012 for tune-up, re-submit by 7/19/2014 for energy assessment	3/21/2012	3/21/2014	--	1 <sup>st</sup> report should be prepared by 3/1/2015, subsequent reports by March 1 of every second year
Oil	9/17/2011	7/19/2012 for tune-up, re-submit by 7/19/2014 for energy assessment	3/21/2012	3/21/2014	--	1 <sup>st</sup> report should be prepared by 3/1/2015, subsequent reports by March 1 of every second year
Coal	9/17/2011	Within 60 days of conducting performance test for mercury and CO, or no later than 7/19/2014, whichever is earlier. Submit by 7/19/2014 for energy assessment.	--	3/21/2014	3/21/2014	1 <sup>st</sup> report should be prepared by 3/1/2015, subsequent reports prepared by March 1 of each calendar year.

**Table 3: Summary of Compliance Dates**

Subcategory	Submit Initial Notification of Applicability by...	Submit Initial Notification of Compliance Status by...	Complete Initial Tune-ups by...	Complete Energy Assessment by...	Demonstrate Compliance with Emission Limits by...	Prepare Compliance Certification Report by...
<b>New Small (&lt; 10 MMBtu/hr)</b>						
New Small Units other than gas	9/17/2011 or within 120 days of startup	9/17/2011 or within 120 days of startup	5/20/2011 or upon start-up of the boiler, whichever is later.	--	--	3/1/2012 or on March 1 of the calendar year immediately following start-up of the boiler, subsequent reports prepared by March 1 of every second calendar year.
<b>New Large (≥ 10 MMBtu/hr)</b>						
Biomass	9/17/2011 or within 120 days of startup	Within 60 days of conducting performance test for PM, or no later than 7/19/2014, whichever is earlier. Submit by 7/19/2014 for energy assessment.	5/20/2011 or upon start-up of the boiler, whichever is later.	--	5/20/2011 or upon startup of the boiler	3/1/2012 or on March 1 of the calendar year immediately following start-up of the boiler, subsequent reports prepared by March 1 of each calendar year.
Oil	9/17/2011 or within 120 days of startup	Within 60 days of conducting performance test for PM, or no later than 7/19/2014, whichever is earlier. Submit by 7/19/2014 for energy assessment.	5/20/2011 or upon start-up of the boiler, whichever is later.	--	5/20/2011 or upon startup of the boiler	3/1/2012 or on March 1 of the calendar year immediately following start-up of the boiler, subsequent reports prepared by March 1 of each calendar year.

**Table 3: Summary of Compliance Dates**

Subcategory	Submit Initial Notification of Applicability by...	Submit Initial Notification of Compliance Status by...	Complete Initial Tune-ups by...	Complete Energy Assessment by...	Demonstrate Compliance with Emission Limits by...	Prepare Compliance Certification Report by...
Coal	9/17/2011 or within 120 days of startup	Within 60 days of conducting performance test for mercury, PM, or CO, or no later than 7/19/2014, whichever is earlier. Submit by 7/19/2014 for energy assessment.	--	--	5/20/2011 or upon startup of the boiler	3/1/2012 or on March 1 of the calendar year immediately following start-up of the boiler, subsequent reports prepared by March 1 of each calendar year.

### 3.0 HOW TO COMPLY

Appendix A of this guide summarizes what you must do to comply. Your requirements depend on the subcategory of your boiler. To determine your requirements, take the following steps:

1. Determine your subcategory as indicated in the next section.
2. Based on your subcategory, determine which tasks you must complete.

#### 3.1 How Do I Determine my Subcategory?

To determine your subcategory, you must answer three questions:

- What fuels are combusted in my boiler?
- Is my boiler a new source or an existing source?
- What size is my boiler?

##### 3.1.1 Fuel Subcategory

**Annual heat input basis** means the actual heat input for fuels combusted during the 12 months preceding the tune-up or compliance test.

**Biomass subcategory:** Includes any boiler that burns at least 15 percent biomass on an annual heat input basis.

**Coal subcategory:** Includes any boiler that burns any solid fossil fuel and no more than 15 percent biomass on an annual heat input basis.

**Oil subcategory:** Includes any boiler that burns any liquid fuel and is not in either the biomass or coal subcategories.

**Gas-fired boilers (not covered by this rule):** Includes any boiler firing gaseous fuels<sup>2</sup> not combined with any solid fuels. A gas-fired boiler that periodically fires liquid fuels during gas curtailment and supply emergencies or for periodic (not to exceed a total of 48 hours during any calendar year) testing is still considered a gas-fired boiler.

You must determine your subcategory on an *annual heat input basis*, or the actual heat input for all the fuels combusted during the 12 months preceding the tune-up or compliance test. The following steps provide an example calculation for an annual heat input basis, as well as a list of suitable methods for determining the appropriate fuel subcategory for your boiler.

***How do I determine my boiler's fuel subcategory on an annual heat input basis?***

A boiler's fuel subcategory is determined on an annual heat input basis using the fuel consumed over the past 12 months preceding the compliance demonstration. The calculation requires you to estimate a high heat value (HHV) for each fuel. This rule provides several options to estimate HHV. You may obtain the data from your fuel supplier, use calculation methodologies described in the EPA GHG reporting program (40 CFR part 98, subpart C), or conduct site-specific testing.

The following example illustrates the four-step process to determine the fuel category for a boiler with a designed heat input capacity of 100 MMBtu per hour, operated 84,000 hours per year, at a load of 90%.

**Step 1: Calculate an Annual Consumption Total**

	<b>Bituminous Coal (tons)</b>	<b>Wood and Wood Residuals (tons)</b>	<b>No. 2 Fuel Oil (gallons)</b>	<b>Natural Gas (cubic feet)</b>
January	0	0	89,930	49,259,010
February	0	0	329,610	17,053,550
March	680	2,990	0	0
April	780	2,830	0	0
May	470	3,330	0	0
June	490	3,310	0	0
July	0	0	1,830	61,098,340
August	190	3,780	0	0
September	720	2,940	0	0
October	620	3,080	0	0
November	0	0	322,300	18,035,050
December	0	0	36,070	56,497,570
<b>Total</b>	<b>3,950</b>	<b>22,260</b>	<b>779,740</b>	<b>201,943,520</b>



**Step 2: Multiply the Total Annual Consumption by the Heating Value of Each Fuel**

The table below is an excerpt from the GHG reporting program [40 CFR Part 98 Subpart C, Table C-1 Default CO<sub>2</sub> Emission Factors and High Heat Values for Various Types of Fuel]. Other published sources of HHV may also be used.

	Default High Heat Value (HHV)		
	(MMBtu/short ton)	(MMBtu/scf)	(MMBtu/gallon)
Bituminous Coal	24.93	-	-
Wood and Wood	15.38	-	-
Distillate Fuel Oil No. 2	-	-	0.138
Natural Gasoline	-	1.03E-03	-

<i>Step 1 total x HHV</i>	Bituminous Coal	Wood and Wood Residuals	Distillate Fuel Oil No. 2	Natural Gas
Fuel Usage	98,641	342,359	107,604	207,396

**Step 3: Calculate an Annual Consumption Total for All Fuels.**

All Fuels	
Grand Total (mmBtu)	755,999

**Step 4: Calculate an Annual Consumption Total.**

	Bituminous Coal	Wood and Wood	No. 2 Fuel Oil	Natural Gas
% of Total	13%	45%	14%	27%

This boiler is in the biomass subcategory because it burns at least 15% biomass on an annual heat input basis. You should repeat these calculations before every compliance demonstration (e.g. tune-up or performance test).

**3.1.2 New vs. Existing**

- You have an existing source if you commenced construction or reconstruction of the boiler on or before June 4, 2010. You have commenced construction or reconstruction if you have a contractual obligation to undertake and complete construction or have begun the act of construction on the boiler.
- You have a new source if:
  - You commenced construction or reconstruction of the boiler after June 4, 2010 and you met the applicability criteria at the time you commenced construction or,
  - You switched from firing natural gas fuel to a solid fossil fuel, biomass, or liquid fuel after June 4, 2010.

**3.1.3 Size**

Boiler size is expressed in terms of rated design heat input capacity and is measured in million British thermal units per hour, or MMBtu/hr.

To determine the size of your boiler, check the nameplate on the boiler. The nameplate often lists the rated heat input capacity on the unit. Also, this rated capacity may have also been reported to the entity insuring the boiler or to the state labor and safety inspector.

### **3.2 Which Tasks Must I Complete?**

Based on your subcategory (i.e. fuel, new/existing, size considerations), use Appendix A to determine which tasks you must complete.

- **Task 1:** Submit initial notifications
- **Task 2:** Comply with work practice standards
- **Task 3:** Meet emission limits
- **Task 4:** Keep records
- **Task 5:** Submit notifications and reports

### **3.3 Task 1: Submit Initial Notifications**

Owners and operators of a boiler must submit an initial Notification of Applicability and an initial Notification of Compliance Status.

See example forms at <http://www.epa.gov/ttn/atw/boiler/boilerpg.html> under “Implementation Tools.”

**Notification of Applicability.** Submit a Notification of Applicability according to the following schedule:

*Existing Sources:* No later than September 17, 2011

*New Sources:* September 17, 2011 or within 120 days after startup of a new source, whichever is later.

The Notification of Applicability must contain the following information:

- The name and address of the owner or operator.
- The address (i.e., physical location) of the affected source.
- An identification of the relevant standard, or other requirement, that is the basis of the notification (i.e., 40 CFR part 63 subpart JJJJJ) and the source's compliance date.
- Anticipated compliance date with the standard.
- A brief description of the nature, size, design, and method of operation of the source and an identification of the types of emission points within the affected source subject to the relevant standard and types of hazardous air pollutants emitted.
- A statement of whether the affected source is a major source or an area source.

**Notification of Compliance Status.** A notice indicating your adherence with the compliance benchmarks is required. Submit the Notification of Compliance Status according to the following schedule:

- **Existing Sources:** Subject to tune-ups: No later than July 19, 2012  
Subject to emission limits: No later than July 19, 2014 or within 60 days of completing the performance stack test, whichever is earlier  
Subject to energy assessment: No later than July 19, 2014
- **New Sources:** No later than September 17, 2011 or 120 days after startup, whichever is later. If your source must conduct a performance stack test, the notification must be submitted within 60 days of completing the performance stack test.

#### Example Timeline for Initial Notifications

An area source facility has 3 existing boilers:

-**Boiler A** (a small oil boiler)

-**Boiler B** (a large biomass boiler)

-**Boiler C** (a large coal boiler) that conducts its initial compliance test for CO and Hg on January 31st, 2014

#### Schedule:

**September 17, 2011** → Submit an *initial notification of applicability* covering all (3) affected sources.

**July 19, 2012** → Submit an *initial notification of compliance status* to indicate that the facility complies with the requirements to conduct an initial tune-up of boiler A and boiler B.

**April 1, 2014** → Submit an *initial notification of compliance status* to document the methods used to demonstrate compliance with emission limits on Boiler C. See Table 2 of this guide for a complete list of items that should be included in the notification for units subject to emission limits.

**July 19, 2014** → Submit an *initial notification of compliance status* to indicate that an energy assessment has been conducted on Boilers B and C and their respective energy use systems.

You must keep a copy of each notification and report that you submitted to comply with this rule, and all documentation supporting any Initial Notification of Applicability or Notification of Compliance Status that you submitted.

Table 4 outlines the certifications and other requirements included in the Notification of Compliance Status, as applicable, which must be signed by a responsible official to certify its accuracy.

**Table 4. Notification of Compliance Status: Certifications and Other Requirements**

If...	...then you must include the following statement in the Notification of Compliance Status...
You must conduct a tune-up	“This facility complies with the requirements in §63.11214 to conduct an initial tune-up of each boiler.”
You must conduct an energy assessment	“This facility has had an energy assessment performed according to §63.11214(c).”
You install a bag leak detection system to demonstrate compliance	“This facility has prepared a bag leak detection system monitoring plan in accordance with §63.11224 and will operate each bag leak detection system according to the plan.”
Your boilers do not qualify for a statutory exemption as provided in Section 129(g)(1) of the Clean Air Act	“No secondary materials that are solid waste were combusted in any affected unit.”
Your boiler is subject to emission limits in Table 1 of subpart JJJJJ. <sup>1</sup>	<ul style="list-style-type: none"> <li>• The certification: “This unit conducted startups and shutdowns according to the manufacturer’s recommended procedures or procedures specified for a boiler of similar design if manufacturer’s recommended procedures are not available.</li> </ul>
	<ul style="list-style-type: none"> <li>• The methods that were used to determine compliance.</li> </ul>
	<ul style="list-style-type: none"> <li>• The results of any performance tests, opacity or visible emission observations, continuous monitoring system performance evaluations, and/or other monitoring procedures or methods that were conducted.</li> </ul>
	<ul style="list-style-type: none"> <li>• The methods that will be used for determining continuing compliance, including a description of monitoring and reporting requirements and test methods.</li> </ul>
	<ul style="list-style-type: none"> <li>• The type and quantity of hazardous air pollutants emitted by the source (or surrogate pollutants if specified in the relevant standard), reported in units and averaging times and in accordance with the test methods specified in the relevant standard</li> </ul>
	<ul style="list-style-type: none"> <li>• A description of the air pollution control equipment (or method) for each emission point, including each control device (or method) for each hazardous air pollutant and the control efficiency (percent) for each control device (or method).</li> </ul>
	<ul style="list-style-type: none"> <li>• A statement by the owner or operator as to whether the source has complied with the relevant standard or other requirements.</li> </ul>

<sup>1</sup> If you are using data from a previously conducted emission test to serve as documentation of compliance with the emission standards and operating limits of this rule, then you must submit the previous test data instead of the initial performance test results with the Notification of Compliance Status.

### 3.4 Task 2: Comply with Work Practice Standards

#### 3.4.1 Minimize Startup/Shutdown per Manufacturer Procedures

Boilers that have emission limits must minimize the time spent starting up and shutting down the unit. You must follow the manufacturer’s procedures. If the manufacturer’s procedures are not available, you must follow recommended procedures for a unit of similar design for which manufacturer’s procedures are available.

#### 3.4.2 Conduct Tune-ups

Boilers subject to tune-ups must have a tune-up conducted every 2 years.

The following boilers are required to have a tune-up:

- New and existing coal-fired boilers having a heat input capacity of less than 10 MMBtu/hr
- All biomass-fired and oil-fired boilers

You must complete the initial tune-up by the following dates:

- **Existing Sources:** No later than March 21, 2012
- **New Sources:** No later than May 20, 2011 or upon start-up of the boiler, whichever is later

Each biennial tune-up must be conducted no more than 25 months after the previous tune-up. If the unit is not operating on the required date, the tune-up must be conducted within one week of startup.

See the Tune-up Guidance and Example Recordkeeping Form at <http://www.epa.gov/ttn/atw/boiler/boilerpg.html> under “Implementation Tools.”

**Table 5: Tune-up Requirements**

Requirement	Description	Notes
Inspect the burner	Clean or replace any burner components as necessary	The inspection can be delayed until the next scheduled unit shutdown, but you must inspect each burner at least once every 36 months.
Inspect and adjust the flame pattern as necessary to optimize it	Adjustments should be consistent with the manufacturer’s specifications, if available	--
Inspect the system controlling the air-to-fuel ratio	Ensure that it is correctly calibrated and functioning properly	As applicable

**Table 5: Tune-up Requirements**

Requirement	Description	Notes
Optimize total emissions of CO	Optimization should be consistent with the manufacturer’s specifications	As applicable
Measure CO and oxygen levels before and after the tune-up adjustments are made	Report units in parts per million, by volume	Measurements may be either on a dry or wet bases as long as the same basis is used before and after the adjustments
Document actions and fuel use	Maintain records of any improvements or actions taken as part of the boiler tune-up.  Maintain monthly fuel records, beginning on May 20, 2011 for fuel used over the 12 months preceding each tune-up.	

**3.4.3 Conduct an Energy Assessment**

All existing boilers with a design heat input capacity of 10 MMBtu/hr or greater must conduct a one-time energy assessment.

The energy assessment includes the following:

1. A visual inspection of the boiler system (e.g. cracks, corrosion, leaks).
2. An evaluation of operating characteristics of the facility, specifications of energy using systems, operating and maintenance procedures, and unusual operating constraints.
3. Inventory of major systems consuming energy from affected boiler(s).
4. A review of available architectural and engineering plans, facility operation and maintenance procedures and logs, and fuel usage.
5. A list of major energy conservation measures.
6. A list of the energy savings potential of the energy conservation measures identified.
7. A comprehensive report detailing the ways to improve efficiency, the cost of specific improvements, benefits, and the time frame for recouping those investments.

**NOTE:** An energy assessment completed on or after January 1, 2008, that meets (or is amended to meet) the energy assessment requirements of the rule may be used in lieu of conducting a completely new assessment.

The [U.S. Department of Energy website](#) provides additional guidance on assessments.

The energy assessment applies to only existing area source boilers greater than 10MMBtu/hr and their energy use systems. An energy use system includes process heating; compressed air systems; machine drive (motors, pumps, fans); process cooling; facility heating, ventilation, and air conditioning (HVAC) systems; hot heater systems; the building envelope, and lighting.

The boiler and energy use systems must be evaluated to identify energy savings opportunities, as identified in Table 6.

**Table 6: Energy Assessment Duration Requirements**

<b>If your facility has Boiler Annual Heat Input, as measured in Trillion Btu/yr (Tbtu/yr), of ...</b>	<b>And the energy use system accounts for this percent of the energy output from these units...</b>	<b>Then the length of the energy assessment should not exceed<sup>1</sup>...</b>
Less than 0.3	At least 50%	1 Day
0.3 to 1	At least 33%	3 Days
Greater than 1.0	At least 20%	No limit

<sup>1</sup>Longer assessments may be warranted under the discretion of the affected facility.

### **3.5 Task 3: Meet Emission Limits**

#### **3.5.1 What, When, and How Must I Monitor or Test?**

To demonstrate compliance with the emission limits, you must:

1. Minimize the boiler’s startup and shutdown periods.
2. Develop and follow a site-specific testing plan.
3. Develop and follow a site-specific monitoring plan.
4. Conduct initial and triennial (every three years) performance tests for up to three pollutants: mercury (Hg), carbon monoxide (CO), and particulate matter (PM).
5. Establish operating limits during the performance test.
6. Conduct initial and monthly fuel analysis for each type of fuel.
7. Monitor and collect data to demonstrate compliance with the operating limits.
8. Conduct performance evaluations of your continuous monitoring system(s).

As an alternative to Hg stack testing, you may conduct a fuel analysis to demonstrate that your fuel pollutant input is lower than the applicable emission limit. See Section 3.5.6 of this guide for more detail.

Three types of area source boilers have emission limits:

- Existing Large Coal: Hg, CO
- New Large Coal: Hg, CO, PM
- New Large Biomass: PM

The specific emission limits depend on the size and type of fuel that you burn in your boiler (see Table 1 of this guide). Section 3.1 discusses how to determine what subcategory applies to your boiler.

You must demonstrate compliance with the emission limits according to the following schedule.

***Initial compliance:***

- Existing units: March 21, 2014 + 180 days = September 17, 2014 (§63.11210(b))
- New units: March 21, 2011 + 180 days = September 17, 2011 or 180 days after startup (§63.11210(d))

***Continuous compliance:***

You must conduct a stack test every 3 years. Each subsequent test should be no more than 37 months after the previous test.

**3.5.2 *Minimize Boiler Startup and Shutdown Periods***

If your boiler is subject to an emission limit, then you must minimize startup and shutdown periods per the boiler manufacturer's procedures.

- If manufacturer's recommended procedures are not available, you must follow recommended procedures for a unit of similar design for which manufacturer's recommended procedures are available.
- Submit a signed statement in the Notification of Compliance Status report that indicates that you conducted startups and shutdowns according to the manufacturer's recommended procedures or procedures specified for a boiler of similar design if manufacturer's recommended procedures are not available.

**3.5.3 *Develop and Follow a Site-specific Testing Plan***

You must develop a site-specific test plan before conducting a required performance test. You do not have to submit the site-specific test plan to the EPA Administrator or delegated authority unless it is requested. You must keep a copy of the site-specific test plan as a record.

**Can I Use an Existing Monitoring Plan?**

A site-specific monitoring plan is not required if you have existing monitoring plans that apply to CEMS and COMS prepared under Appendix B to part 60 and that meet the requirements of the monitoring, installation, operation, and maintenance requirements of the boilers area source rule.



The site-specific test plan must include the following:

- Test program summary
- Test schedule
- Data quality objectives (pretest expectations of precisions, accuracy, and completeness)
- Internal and external quality assurance program.

### **3.5.4 Develop and Follow a Site-specific Monitoring Plan**

If you chose to demonstrate compliance through performance stack testing and subsequent compliance with operating limits, then you must develop a site-specific monitoring plan. The monitoring plan is required for any continuous emissions monitoring system (CEMS), continuous opacity monitoring system (COMS), or continuous parameter monitoring system (CPMS). Collectively, these three types of continuous monitors are referred to as continuous monitoring systems (CMS) in the remainder of this section. A monitoring plan is also required if you petition the EPA Administrator for alternative monitoring parameters under §63.8(f) of the General Provisions.

- Submit this site-specific monitoring plan at least 60 days before your initial performance evaluation of your CMS, and submit if requested.
- Address §63.11205(c)(1)(i) through (vi), which includes installation location, ongoing operation and maintenance procedures, ongoing data quality assurance procedures, and ongoing data quality assurance procedures.
- Conduct a performance evaluation of each CMS in accordance with your site-specific monitoring plan.
- Operate and maintain the CMS according to the site-specific monitoring plan.

### **3.5.5 Conduct Initial and Triennial (every three years) Performance Tests for Hg, CO, PM**

You must conduct an initial performance test to demonstrate initial compliance and to establish operating parameters that you will follow until the next performance test. Conduct subsequent performance tests every third year (at least every 37 months).

Conduct all performance tests according to the requirements and methods in Table 4 of subpart JJJJJ, which specifies test methods for selecting sampling ports, determining stack gas velocity and flow rate, determining O<sub>2</sub> and CO content, measuring moisture content, and measuring emissions. You must demonstrate initial compliance and establish your operating limits based on these performance stack tests.

Conduct performance stack tests at the typical operating conditions, while burning the type of fuel or mixture of fuels that have the highest emissions potential for each regulated pollutant. You must conduct a fuel analysis for each type of fuel burned in your boiler to determine the highest emissions potential for each regulated pollutant. (See Section 3.5.6 of this guide.)

Subcategories with more than one emission limit may need to conduct more than one performance stack test. This is because the requirement is to test at the representative operating load conditions while

burning the type of fuel or mixture of fuels that have the highest emissions potential, for each regulated pollutant. Follow the requirements in the General Provisions, which include:

- Completing a test method performance audit during the performance test. (The performance audits consist of blind audit samples, supplied by an accredited audit sample provider and analyzed during the performance test, in order to provide a measure of test data bias.)
- Providing testing facilities that are adequate and safe to conduct stack testing.
- Conducting tests under representative conditions.
- Requesting to use an alternative test method, if desired.

In addition, you must follow these requirements:

- Conduct a minimum of three separate test runs for each performance stack test.
- Use EPA Method 19 ([Appendix A-7 of part 60](#)) to convert the measured particulate matter and mercury concentrations that result from the initial performance test into pounds per million Btu heat input emission rates.

### **3.5.6 Conduct Initial and Subsequent Fuel Analysis for Each Type of Fuel**

Units demonstrating compliance with the Hg emission limit through stack testing must conduct an initial fuel analysis for each type of fuel burned in your boiler.

- If you burn more than one fuel type, you must conduct a fuel analysis to determine the fuel type, or mixture, you could burn in your boiler that would result in the maximum emission rates of Hg, using the procedures in Table 5 of subpart JJJJJ and §63.11213.
- If you plan to burn a new type of fuel or fuel mixture, you must conduct a fuel analysis before burning the new fuel or mixture in your boiler. Recalculate the mercury emission rate according to §63.11211(c) and Equation 1 of subpart JJJJJ.
  - The resulting mercury emission rate for the new type of fuel or fuel mixture must be less than the applicable emission limit.
  - If the mercury concentration is higher than the mercury fuel input during the previous performance test, then you must conduct a new performance test within 60 days of burning the new fuel type or fuel mixture.
    - Boilers that burn a single type of fuel are exempted from the requirement to conduct a fuel analysis.
    - Boilers that use a supplemental fuel only for startup, unit shutdown, and transient flame stability purposes still qualify as affected boilers that burn a single fuel type, and the supplemental fuel is not subject to the fuel analysis requirements.

As an alternative to stack testing for Hg, you can demonstrate compliance with the applicable mercury emission limit using fuel analysis.

- For units demonstrating compliance with the Hg emission limit through fuel analysis, you must demonstrate the calculated emission rate according to §63.11211(c) and Equation 1 of subpart JJJJJ is less than the Hg emission limit.
- Each month, you must conduct a fuel analysis for each type of fuel burned.
- If you plan to burn a new type of fuel or fuel mixture, you must conduct a fuel analysis before burning the new type of fuel or mixture in your boiler. Recalculate the mercury emission rate according to §63.11211(c) and Equation 1 of subpart JJJJJ. The resulting mercury emission rate for the new type of fuel or fuel mixture must be less than the applicable emission limit.

To complete each fuel analysis, follow the procedures in §63.11213 and Table 5 of subpart JJJJJ.

- At a minimum, you must obtain three composite fuel samples for each fuel type according to the procedures in Table 5 to this subpart. Each composite sample must consist of a minimum of three samples collected at approximately equal intervals during a two-hour period.
- Determine the concentration of mercury in the fuel in units of pounds per million Btu of each composite sample for each fuel type according to the procedures in Table 5 to this subpart.

### **3.5.7 Establish Operating Limits during the Performance Test**

During the performance test, you must establish operating limits for your air pollution control device. Table 6 of subpart JJJJJ specifies how to establish operating parameters.

#### ***Wet Scrubber:***

- Establish the minimum liquid flowrate and pressure drop as your operating limits during the three-run performance stack test. If you use a wet scrubber and you conduct separate performance stack tests for particulate matter and mercury emissions, you must establish one set of minimum scrubber liquid flowrate and pressure drop operating limits. If you conduct multiple performance stack tests, you must set the minimum liquid flowrate and pressure drop operating limits at the highest minimum values established during the performance stack test.

#### ***Electrostatic Precipitator Operated with a Wet Scrubber:***

- Establish the minimum voltage and secondary amperage (or total electric power input).
- Activated Carbon Injection: establish the minimum activated carbon injection rate.

#### ***Boilers with Fabric Filters That Demonstrate Continuous Compliance through Bag Leak Detection:***

- Install, maintain, calibrate and operate the bag leak detection system.
- Operate the fabric filter such that the bag leak detection system alarm does not sound more than 5 percent of the operating time during a 6-month period.
- Bag leak detection continuous compliance (corrective action, alarm not to exceed 5% of operating time, keep records of corrective action).

**Oxygen:**

- Establish a minimum oxygen level.

Following each performance stack test and until the next performance stack test, you must comply with the operating limit for operating load conditions specified in Table 3.

**3.5.8 Monitor and Collect Data to Demonstrate Continuous Compliance with the Emission Limits**

Demonstrate continuous compliance with the emission limits and operating limits by continuously monitoring your operating parameters according to the methods in Table 7 of subpart JJJJJ.

**Opacity:**

- Collect opacity data .
- Calculate 6-minute averages.
- Maintain opacity at 10 percent or less on a daily block average basis.

**Fabric Filter Bag Leak Detection:**

- Install, maintain, calibrate and operate the bag leak detection system.
- Operate the fabric filter such that the bag leak detection system alarm does not sound more than 5 percent of the operating time during a 6-month period.
- Initiate corrective action within 1 hour of alarm sounding. Keep records of corrective action.

**Wet Scrubber Pressure Drop and Liquid Flow Rate:**

- Collect pressure drop and liquid flow rate CMS data.
- Calculate 12-hour block averages.
- Maintain 12-hour average at or above the operating limits established during performance test.

**Dry Scrubber Sorbent or Carbon Injection Rate:**

- Collect injection rate CMS data.
- Calculate 12-hour block averages.
- Maintain 12-hour average at or above the operating limits established during performance test.

**Out of Control Periods**

A CMS is out of control if—

(A) The zero (low-level), mid-level (if applicable), or high-level calibration drift (CD) exceeds two times the applicable CD specification in the applicable performance specification or in the relevant standard; or

(B) The CMS fails a performance test audit (e.g., cylinder gas audit), relative accuracy audit, relative accuracy test audit, or linearity test audit; or

(C) The COMS CD exceeds two times the limit in the applicable performance specification in the relevant standard.

**Malfunction**

A monitoring system malfunction is any sudden, infrequent, not reasonably preventable failure of the monitoring system to provide valid data. Monitoring system failures that are caused in part by poor maintenance or careless operation are not malfunctions.

**ESP Secondary Amperage and Voltage or Total Power Input:**

- Collect secondary amperage and voltage, or total power input CMS data.
- Calculate 12-hour block averages.
- Maintain 12-hour average at or above the operating limits established during performance test.
- Collect the exhaust oxygen content CMS data.
- Maintain 12-hour average at or above the operating limits established during performance test.

Operate the monitoring system and collect data *at all times* while the boiler is operating. Use all the data collected in assessing the operation of the control device and associated control system. However, *you may not use data* recorded during the following periods to demonstrate compliance:

- Monitoring system malfunctions or out-of-control periods (see definitions at right)
- Repairs associated with monitoring system malfunctions or out-of-control periods
- Required monitoring system quality assurance or quality control activities, including calibration checks and required zero and span adjustments

You must effect monitoring system repairs in response to monitoring system malfunctions or out-of-control periods and return the monitoring system to operation as expeditiously as practicable. Failure to collect required data is a deviation of the monitoring requirements. (See definition of Deviation at §63.11237.)

**3.5.9 Conduct Performance Evaluations of Your Continuous Monitoring System(s)**

- **CO limit:**
  - If your boiler has a CO limit, you must install, operate, and maintain a continuous oxygen monitor at the outlet of the boiler.
- **Opacity limit:**
  - If you elect to comply with an opacity limit in lieu of operating parameters for an ESP or fabric filter, you must install, operate, certify, and maintain the COMS.
- **Fabric filter:**
  - If you use a fabric filter to comply with an emission limit, then you must install, calibrate, maintain, and continuously operate the bag leak detection system, unless you elect to comply with an opacity limit.
- **All other CMS:**
  - If you have an operating limit that requires a continuous monitoring system (CMS), you must install, operate, and maintain the CMS.

## **3.6 Task 4: Keep Records**

### ***What Records Must I Keep and for How Long?***

See Task 1 for information on the initial Notification of Applicability and an initial Notification of Compliance Status. This section addresses the remaining recordkeeping requirements.

#### **3.6.1 General Recordkeeping**

You must keep a copy of each notification and report submitted to comply with this rule. You must also keep all documentation supporting any submitted Initial Notification or Notification of Compliance Status

Your records must be in a form suitable and readily available for expeditious review. You must keep each record for 5 years following the date of each recorded action. You must keep each record on site for at least 2 years after the date of each recorded action. For the remaining 3 of the 5 years, the records may be kept off site.

In summary, you must keep copies of the following:

- Each notification and report, and all their supporting documentation
- Records of the occurrence and duration of each malfunction of the boiler, or of the associated air pollution control and monitoring equipment
- Records of actions taken during periods of malfunction to minimize emissions, including corrective actions to restore the malfunctioning boiler, air pollution control, or monitoring equipment to its normal or usual manner of operation

#### **Compliance Certification Report**

If your boiler is subject to emission limits you must prepare, by March 1 of each year, an annual Compliance Certification Report for the previous calendar year. If your boiler had any deviations from the applicable emission or operating parameter requirements, then the annual Compliance Certification Report for the boilers must be submitted by March 15. If there were no deviations, you do not need to submit this report unless it is specifically requested by the delegated authority.

The report must contain the following information:

1. Company name and address.
2. Statement by a responsible official certifying the truth, accuracy, completeness of the certification, and a statement of whether the source has complied with all the relevant standards and requirements of the rule. The statement needs to also supply the official's name, title, phone number, e-mail address, and signature.
3. For any deviations from the applicable requirements during the reporting period, include each instance in which you did not meet an emission limit and operating limit (see Tables 1 and 3 for a summary of these limits, respectively). Include a description of deviations, the time periods during which the deviations occurred, and the corrective actions taken.
4. If subject to an emission limit, then provide the following for each calendar month within the reporting period:

- The total fuel use by each affected boiler, including a description of the fuel, whether the fuel has received a non-waste determination by you or EPA through a petition process to be a nonwaste, whether the fuel(s) was processed from discarded non-hazardous secondary materials, and the total fuel usage amount with units of measure.

### 3.6.2 Work Practice Standards Recordkeeping

#### Startups and Shutdowns

In your records, you need to keep a copy of the Initial Notification of Compliance Status report, which indicates that you conducted startups and shutdowns according to the manufacturer's recommended procedures. You will also need to keep records of each subsequent annual or biennial compliance certification report, which indicates that you conducted startups and shutdowns according to the manufacturer's recommended procedures.

#### Tune-up

- **For Initial Tune-up:** You must conduct a performance tune-up and you must submit a signed statement in the Notification of Compliance Status report that indicates that you conducted a tune-up of the boiler.
- **For Subsequent Tune-ups:** You must conduct a performance tune-up and you must prepare a biennial (every two years) compliance certification that indicates you complied with all the relevant standards and requirements of this subpart. You do not need to submit this report unless it is requested by your delegated authority.
- For all tune-ups, you must keep records of the dates and procedures of each boiler tune-up, and the fuel used by the boiler. You should begin keeping fuel records on May 20, 2011. The record must be maintained on site and submitted to the delegated authority if requested. You may use the example form to document the tune-up, keep records, and meet the reporting requirement.

Example forms can be found at <http://www.epa.gov/ttn/atw/boiler/boilerpg.html> under "Implementation Information."

#### Energy Assessment

- Submit a signed certification in the Notification of Compliance Status report that an energy assessment of the boiler and its energy use systems was completed and submit, upon request, the Energy Assessment Report.

### 3.6.3 Emission Limits Recordkeeping

You will need to keep records related to emission limits, test plans, monitoring plans/data, filters and fuel type/amount.

#### Fuel Analysis

- Keep a copy of all calculations and supporting documentation that were done to demonstrate compliance with the mercury emission limits. Supporting documentation should include results of any fuel analyses. You can use the results from one fuel analysis for multiple burners, provided they are all burning the same fuel type.

**NOTE:** A site-specific monitoring plan is not required if you have existing monitoring plans that apply to CEMS and COMS prepared under Appendix B to Part 60 that meet the requirements of the monitoring, installation, operation, and maintenance.

- Maintain records of the type and amount of all fuels burned in each boiler during the annual reporting period to demonstrate that all fuel types and mixtures of fuels burned would result in lower emissions of mercury than the applicable emission limit (if you demonstrate compliance through fuel analysis).

#### **Site-specific Test Plan**

- Prepare the site-specific test plan before conducting a required performance test (see specific plan requirements in Section 3.5.3).
- Keep a copy of the site-specific test plan as a record.
- Submit the site-specific test plan if requested by the EPA or a delegated authority.

#### **Site-specific Monitoring Plan**

- Prepare the site-specific monitoring plan at least 60 days before your initial performance evaluation of your CMS (see specific plan requirements in Section 0).

#### **Inspection and Monitoring Data**

- Keep records of all inspection and monitoring data, and the following information for each required inspection or monitoring events: date, place, and time of the monitoring event
- Person conducting the monitoring
- Technique or method used
- Operating conditions during the activity
- Results, including the date, time, and duration of the period from the time the monitoring indicated a problem to the time that monitoring indicated proper operation
- Maintenance or corrective action taken (if applicable)

#### **Fabric Filter**

For boilers that demonstrate compliance with a fabric filter and bag leak detection system, please include the following:

- Records of the bag leak detection system output
- Records of bag leak detection system adjustments
- The date and time of all bag leak detection system alarms, date and time you initiated and completed corrective action, brief description of corrective action taken
- The percent of the operating time during each 6-month period that the alarm sounds

#### **Fuel Type and Amount**

All boilers should keep records documenting the fuel type(s) used monthly by each boiler, including, but not limited to the following:

- The total fuel usage amount with units of measure
- A description of the fuel, including whether the fuel has received a non-waste determination by you or EPA, and all records that show how the legitimacy criteria are met for that determination



For boilers that demonstrate compliance with a mercury emission limit through stack testing, please keep:

- Records of the type and amount of all fuels burned in each boiler during the reporting period to demonstrate that all fuel types and mixtures of fuels burned would result in lower fuel input of mercury than the maximum values calculated during the last performance stack test.

### **3.7 Task 5: Submit Other Notifications and Reports**

See Task 1 for information on the initial Notification of Applicability and an initial Notification of Compliance Status. This section addresses the remaining reporting and notification requirements.

#### **3.7.1 Commencing or Recommencing Combustion of Solid Waste**

If you intend to commence or recommence combustion of solid waste, you must provide 30 days prior notice of the date upon which you will commence or recommence combustion of solid waste. The notification must identify the following:

- The name of the owner or operator of the affected source, the location of the source, the boiler(s) that will commence burning solid waste, and the date of the notice
- The currently applicable subcategory under this subpart
- The date on which you became subject to the currently applicable emission limits
- The date upon which you will commence combusting solid waste

#### **3.7.2 Switching Fuels**

If you intend to switch fuels, and this fuel switch may result in the applicability of a different subcategory or exemption from subpart JJJJJ due to a switch to 100 percent natural gas, you must provide 30 days prior notice of the date upon which you will switch fuels. The notification must identify the following:

- The name of the owner or operator of the affected source, the location of the source, the boiler(s) that will switch fuels, and the date of the notice
- The currently applicable subcategory under this subpart
- The date on which you became subject to the currently applicable standards
- The date upon which you will commence the fuel switch

If you own or operate an industrial, commercial, or institutional boiler and would be subject to this subpart except for the exemption for commercial and industrial solid waste incineration units covered by 40 CFR part 60, subpart CCCC or subpart DDDD, and you cease combusting solid waste, then you must be in compliance with this subpart on the effective date of the waste to fuel switch.

#### **3.7.3 Notification of Affirmative Defense**

The owner or operator of the facility experiencing an exceedance of its emission limit(s) during a malfunction shall perform the following

- Notify the EPA Administrator or delegated authority by telephone or facsimile (FAX) transmission as soon as possible, but no later than two business days after the initial occurrence of the malfunction, if you wish to avail yourself of an affirmative defense to civil penalties for that malfunction
- Submit a root cause analysis report of the malfunction within 45 days of the exceedance

### **3.7.4 Tune-up and Energy Assessment Reporting:**

You do not need to submit the results of your energy assessment or tune-up. These items will be kept as records and only submitted if requested by your delegated authority. Section 3.6.2 summarizes the records that must be kept for work practice standards.

### **3.7.5 Stack Test Performance Data Reporting:**

The owner or operator of a boiler subject to stack testing must:

- As of January 1, 2012 and within 60 days after the date of completing each performance test, submit stack test performance data, relative accuracy test audit data electronically to EPA's Central Data Exchange (CDX) by using the Electronic Reporting Tool (ERT) (see [http://www.epa.gov/ttn/chief/ert/ert\\_tool.html/](http://www.epa.gov/ttn/chief/ert/ert_tool.html/)) or other compatible electronic spreadsheet.
- An Annual Compliance Report must be submitted if your boiler experiences any deviations. See Section 3.6.1 for details of the annual compliance report.

## **4.0 OTHER INFORMATION**

### **4.1 Benefits and Costs**

EPA estimates that there are approximately 187,000 existing area source boilers at 92,000 facilities in the United States and that approximately 2,400 new area source boilers will be installed over the next 3 years. EPA estimates that the value of the benefits associated with reduced exposure to fine particles are \$210 million to \$520 million in the year 2014. EPA did not provide a monetary estimate the benefits associated with reducing exposure to air toxics or other air pollutants, ecosystem effects, or visibility impairment.

The final rule will reduce emissions of a number of toxic air pollutants including mercury, metals, and organic air toxics, including dioxins. Toxic air pollutants, also known as hazardous air pollutants (HAPs) or air toxics, include emissions of pollutants that are of particular concern for children. For example, mercury and lead can adversely affect developing brains – including effects on IQ, learning, and memory. Cadmium, dioxin, furans, formaldehyde and hydrochloric acid, also reduced by this rule, can

#### ***Estimated Compliance Costs***

Based on data collected to support the regulatory impact analysis, EPA estimates the following costs:

- Tune-up: \$200 to \$8,000 per boiler, per tune-up, depending on size of boiler and necessary adjustments.
- Energy Assessment: \$3,500 to \$75,000 depending on the size and number of energy use systems at the facility
- For a 50 MMBtu/hr coal boiler:
  - Fabric Filter: \$2.1 million total capital expenditures and \$563,000 in annual operating and maintenance costs
  - Testing for CO and Hg: \$11,000 (testing required every 3 years)

cause cancer or other adverse health effects in adults and children. Mercury, lead, dioxin, and furans can also build up in the environment, causing serious environmental effects and harm to the food chain.

Furthermore, the boiler tune-up portion of the regulation can save facilities energy-related costs, and the energy audit portion of the regulation will identify additional energy and cost savings.

Additional efficiencies can be achieved if a facility chooses to comply through the installation of more advanced energy saving measures identified in the energy audit. The Department of Energy will provide information to effected sources on financial incentives available at the local, state, utility and federal level to assist them in undertaking a boiler tune-up and/or energy audit (see link in “Other Governmental Support” below).

## **4.2 Compliance Assistance Resources**

EPA believes that through awareness, education and reasonable options, both public and private members of the regulated community will choose to be proactive in voluntary efforts to comply with pollution control regulations. Compliance assistance providers help regulated communities and businesses understand and comply with environmental laws through one-to-one counseling, online resource centers, fact sheets, guides, and training. Assistance providers include EPA regional office staff; state, local and tribal governments; federal and state small business and pollution prevention technical assistance extension agents, consultants, and trade associations.

Find out what laws apply to you, what you need to do to comply, and tools and resources that can help you and your constituents comply with environmental regulations by visiting the following websites:

EPA Compliance Assistance: <http://www.epa.gov/compliance/assistance/business.html>

EPA National Compliance Assistance Centers: <http://www.assistancecenters.net/>

State-by-state Resource Locator: <http://www.envcap.org/statetools/>

EPA Small Business Environmental Assistance: <http://www.smallbiz-enviroweb.org/>

EPA Small Business Gateway: <http://www.epa.gov/smallbusiness/>

EPA Environmental Regulations and Laws: <http://www.epa.gov/smallbusiness/regs.htm>

EPA Pollutants and Sources: <http://www.epa.gov/airtoxics/pollsour.html>

EPA Air Toxics Website: <http://www.epa.gov/ttn/atw/>

Emissions Standards for Boilers and Process Heaters and Commercial / Industrial Solid Waste Incinerators <http://www.epa.gov/airquality/combustion/actions.html>

Preferred and Alternative Methods for Estimating Air Emissions from Boilers:  
<http://www.epa.gov/ttn/chief/eiip/techreport/volume02/ii02.pdf>

EPA Asbestos and Small Business Ombudsman: <http://www.epa.gov/sbo/>

EPA Small Business Compliance and Enforcement:  
<http://www.epa.gov/compliance/incentives/smallbusiness/>

EPA Compliance Incentives and Auditing:  
<http://www.epa.gov/oecaerth/incentives/auditing/auditpolicy.html>

### **4.3 Other Governmental Support**

EPA is working with the U.S. Department of Energy (DOE) and the U.S. Department of Agriculture (USDA) to provide technical assistance that will help boilers burn cleaner and more efficiently.

DOE will provide support to large sources that burn coal and oil through their regional Clean Energy Application Centers. Along with information on financial incentives, funding, and financing opportunities, they will supply site-specific information on clean energy compliance strategies, including cost and payback information. These large sources may also have the opportunity to develop energy efficient compliance strategies, such as combined heat and power. The assistance effort will begin after the area source boiler rule reconsideration is complete, although in the interim, DOE does have some resources that can provide help to facilities that need it. Initial information is available at <http://www1.eere.energy.gov/industry/states/>.

USDA will reach out to small sources that burn biomass through a variety of networks, to help owners and operators understand the standards and what is required to be in compliance. The outreach will outline the benefits of implementing the rule for owners and their neighbors, and provide information on work practice standards.

### **4.4 What Other Resources are Available?**

State and local contacts can be found at the National Association of Clean Air Agencies web site at <http://www.4cleanair.org/> or under the EPA State, Local, Tribal and Federal Partnerships at <http://www.epa.gov/ttn/atw/stprogs.html>. State Small Business Assistance Program contacts can be found at <http://www.smallbiz-enviroweb.org/>.

### **4.5 For More Information**

The full text of the Federal Register containing the rule and additional information are available online at: <http://www.epa.gov/ttn/atw/boiler/boilerpg.html>.

A link to the current [boiler area source rule text](#) and [General Provisions](#) in the Electronic Code of Federal Regulations (e-CFR) is available online.

Other background information is also available at <http://www.epa.gov/airquality/combustion/actions.html> and in the rulemaking docket (Docket ID: EPA-HQ-OAR-2006-0790) either electronically at <http://www.regulations.gov>, EPA's electronic public docket and comment system, or in hardcopy at the EPA Docket Center's Public Reading Room.

**Appendix A**  
**Summary of Requirements for 40 CFR Part 63, Subpart JJJJJJ**

Summary of Requirements for 40 CFR Part 63 Subpart JJJJJ:  
 NESHAP for Area Sources: Industrial, Commercial, and Institutional Boilers

Row	Subcategory	Task 1 Submit Initial Notifications		Task 2 Comply with Work Practice Standards (§63.11201,		
		Submit Initial Notification of Applicability <sup>1</sup>	Submit Initial Notification of Compliance Status <sup>2</sup>	Minimize Startup/Shutdown per Mfg. Procedures	Conduct Performance Tune-up <sup>2,3</sup>	Conduct Energy Assessment
<b>ALL Gas-Fired Boilers (ALL sizes, new or existing)</b>						
1	Gas	No	No	No	No	No
<b>Existing - Small (&lt; 10MMBtu/hr)</b>						
2	All fuel types other than gas (biomass, coal, oil)	Yes, submit by 9/17/2011. §63.11225(a)(2)	Yes, submit by 7/19/2012. 63.11225(a)(4)	No	Yes, Biennial. First tune-up completed by 3/21/2012. Subsequent tune-ups should be completed no later than 25 months after the previous tune-up. §63.11223(b)	No

**Summary of Requirements for 40 CFR Part 63 Subpart JJJJJ:  
NESHAP for Area Sources: Industrial, Commercial, and Institutional Boilers**

Row	For this pollutant	Task 3 Meet Emission Limits		Task 4	Task 5
		Initial Compliance	Continuous Compliance	Record	Submit Other Notifications and Reports
<b>ALL Gas-Fired Boilers (ALL sizes, new or existing)</b>					
1		None		None	None
<b>Existing - Small (&lt; 10MMBtu/hr)</b>					
2		None	Biennial compliance certification report (§63.11225(b)). Prepare first report by 3/1/2015. Subsequent reports prepared by March 1 of every other year.		Notification to combust solid waste (§63.11225(f)). Submit 30 days prior to combusting solid waste.
			Records of dates and procedures for each boiler tune up (§63.11225(c)(2)(i) and §63.11223(b)(6))		
			Records of fuel use and non-waste determinations (§63.11225(c)(2)(ii)). You should begin keeping fuel records on 5/20/2011.		Notification of fuel or subcategory switching (§63.11225(g)). Submit 30 days prior to switching fuels.
			Records of all submitted notifications (§63.11225(c)(1))		

Summary of Requirements for 40 CFR Part 63 Subpart JJJJJ:  
 NESHAP for Area Sources: Industrial, Commercial, and Institutional Boilers

Row	Subcategory	Task 1 Submit Initial Notifications		Task 2 Comply with Work Practice Standards (§63.11201,		
		Submit Initial Notification of Applicability <sup>1</sup>	Submit Initial Notification of Compliance Status <sup>2</sup>	Minimize Startup/Shutdown per Mfg. Procedures	Conduct Performance Tune-up <sup>2,3</sup>	Conduct Energy Assessment
<b>Existing - Large (≥ 10MMBtu/hr)</b>						
3	Biomass	Yes, submit by 9/17/2011. §63.11225(a)(2)	Yes, submit by 7/19/2012 for tune-up. Re-submit by 7/19/2014 for energy assessment. 63.11225(a)(4)	No	Yes, Biennial. First tune-up completed by 3/21/2012. Subsequent tune-ups should be completed no later than 25 months after the previous tune-up. §63.11223(b)	Yes, by 3/21/2014. (Table 2)
4	Oil	Yes, submit by 9/17/2011. §63.11225(a)(2)	Yes, submit by 7/19/2012 for tune-up. Re-submit by 7/19/2014 for energy assessment. 63.11225(a)(4)	No	Yes, Biennial. First tune-up completed by 3/21/2012. Subsequent tune-ups should be completed no later than 25 months after the previous tune-up. §63.11223(b)	Yes, by 3/21/2014. (Table 2)



Summary of Requirements for 40 CFR Part 63 Subpart JJJJJ:  
 NESHAP for Area Sources: Industrial, Commercial, and Institutional Boilers

Row	For this pollutant	Task 3 Meet Emission Limits		Task 4	Task 5
		Initial Compliance	Continuous Compliance	Record	Submit Other Notifications and Reports
<b>Existing - Large (<math>\geq 10</math>MMBtu/hr)</b>					
3		None		Biennial compliance certification report (§63.11225(b)). Prepare first report by 3/1/2015. Subsequent reports prepared by March 1 of every other year.	Notification to combust solid waste (§63.11225(f)). Submit 30 days prior to combusting solid waste.
				Records of dates and procedures for each boiler tune up (§63.11225(c)(2)(i) and §63.11223(b)(6)).	
				Records of fuel use and non-waste determinations (§63.11225(c)(2)(ii)). You should begin keeping fuel records on 5/20/2011.	Notification of fuel or subcategory switching (§63.11225(g)). Submit 30 days prior to switching fuels.
				Records of all submitted notifications (§63.11225(c)(1))	
				Energy Assessment Report (§63.11214(c)) should be completed by 3/21/2014.	
4		None		Biennial compliance certification report (§63.11225(b)). Prepare first report by 3/1/2015. Subsequent reports prepared by March 1 of every other year.	Notification to combust solid waste (§63.11225(f)). Submit 30 days prior to combusting solid waste.
				Records of dates and procedures for each boiler tune up (§63.11225(c)(2)(i) and §63.11223(b)(6))	
				Records of fuel use and non-waste determinations (§63.11225(c)(2)(ii)). You should begin keeping fuel records on 5/20/2011.	Notification of fuel or subcategory switching (§63.11225(g)). Submit 30 days prior to switching fuels.
				Records of all submitted notifications (§63.11225(c)(1))	
				Energy Assessment Report (§63.11214(c)) should be completed by 3/21/2014.	

**Summary of Requirements for 40 CFR Part 63 Subpart JJJJJ:**  
**NESHAP for Area Sources: Industrial, Commercial, and Institutional Boilers**

Row	Subcategory	Task 1 Submit Initial Notifications		Task 2 Comply with Work Practice Standards (§63.11201,		
		Submit Initial Notification of Applicability <sup>1</sup>	Submit Initial Notification of Compliance Status <sup>2</sup>	Minimize Startup/Shutdown per Mfg. Procedures	Conduct Performance Tune-up <sup>2,3</sup>	Conduct Energy Assessment
<b>Existing - Large (≥ 10MMBtu/hr)</b>						
5	Coal	Yes, submit by 9/17/2011. §63.11225(a)(2)	Yes. Submit within 60 days of conducting performance test for mercury and CO, or no later than 7/19/2014, whichever is earlier. Submit by 7/19/2014 for energy assessment. (§63.11225(a)(4)). Include a statement on Startup and Shutdown according to manufacturer specifications (§63.11223(c))	Yes, beginning 3/21/2014. §63.11223(c) §63.11214(d)	No	Yes, by 3/21/2014. (Table 2)

**Summary of Requirements for 40 CFR Part 63 Subpart JJJJJ:**  
**NESHAP for Area Sources: Industrial, Commercial, and Institutional Boilers**

Row	For this pollutant	Task 3 Meet Emission Limits		Task 4	Task 5
		Initial Compliance	Continuous Compliance	Record	Submit Other Notifications and Reports
<b>Existing - Large (<math>\geq 10</math>MMBtu/hr)</b>					
5	Hg	Conduct performance (stack) test (§63.11212, Table 4, and 63.7(c), (d), (f)) by 3/21/2014.	Triennial stack test (§63.11220(a) and §63.11212), no more than 37 months after previous test.	Records of fuel use and non-waste determinations (§63.11225(c)(2)(ii)). You should begin keeping fuel records in March 2013.	Notification to combust solid waste (§63.11225(f)). Submit 30 days prior to combusting solid waste. Notification of fuel or subcategory switching (§63.11225(g)). Submit 30 days prior to switching fuels.  Deviations from emission limits and corrective actions taken during reporting period (§63.11225(b)(3)). <sup>5</sup> Submit by March 15 of each calendar year where deviations occurred.
		OR		Records of all submitted notifications (§63.11225(c)(1))	
		Conduct fuel analysis (63.11213, Table 5 and 63.11211(c)) by 3/21/2014.	If Hg limit compliance demonstrated based on fuel analysis, conduct fuel analysis for each fuel type burned monthly (§63.11213 and §63.11220(e))	Energy Assessment Report (§63.11214(c)) should be completed by 3/21/2014.	
		Establish operating limits (§63.11222, Table 6 and 63.11211(b)) by 3/21/2014.	Operate monitoring systems and collect data at all required intervals (§63.11221 and Table 7) including fuel mercury content and relevant control device monitoring systems.	For sources demonstrating compliance with fuel analysis, records of all calculation and supporting documentation to demonstrate compliance with emission limits (§63.11225(c)(3))	
		Conduct CMS performance evaluations (§63.11224) <sup>4</sup> by 3/21/2014.		Records of type and amount of all fuels burned in each boiler during reporting period (§63.11222(a))	
	CO	Conduct performance (stack) test (§63.11212 and Table 4) by 3/21/2014.	Triennial stack test (§63.11212)	Records of the each boiler or control device malfunction occurrence and duration and actions taken to minimize emissions during malfunctions (§63.11225(c)(4)-(5))	Notification of affirmative defense within two business days of malfunction (§63.11226(b))
		Establish operating limits (§63.11222, Table 6 and §63.11211(b)) by 3/21/2014.		Records of monitoring data and maintenance (§63.11225(c)(6))	
		Install oxygen monitor (§63.11224(a)) by 3/21/2014.		Site-specific test plan shall be prepared before each stack test (§63.11212(a), §63.7(c)) <sup>6</sup>	
		Establish operating limits (§63.11222 and 63.11211(b)) by 3/21/2014.	Operate monitoring systems and collect data at all required intervals (§63.11221 and Table 7).	Annual compliance certification report (§63.11225(b)) <sup>5,6</sup> Prepare first report by 3/1/2015. Thereafter, by March 1 of each calendar year.	Root cause analysis report of the malfunction within 45 days of the exceedance of the standard (§63.11226(b))
		Conduct CMS performance evaluations (§63.11224) by 3/21/2014.		Site-specific monitoring plan shall be prepared 60 days before CMS performance evaluation for each CMS (§63.11205(c)(1) through (3)) <sup>6</sup>	

**Summary of Requirements for 40 CFR Part 63 Subpart JJJJJ:  
 NESHAP for Area Sources: Industrial, Commercial, and Institutional Boilers**

Row	Subcategory	Task 1 Submit Initial Notifications		Task 2 Comply with Work Practice Standards (§63.11201,		
		Submit Initial Notification of Applicability <sup>1</sup>	Submit Initial Notification of Compliance Status <sup>2</sup>	Minimize Startup/Shutdown per Mfg. Procedures	Conduct Performance Tune-up <sup>2,3</sup>	Conduct Energy Assessment
<b>New - Small (&lt; 10MMBtu/hr)</b>						
6	All fuel types other than gas (biomass, coal, oil)	Yes, submit by 9/17/2011 or within 120 days after startup, whichever is later. §63.11225(a)(2)	Yes, submit by 9/17/2011 or within 120 days of startup, whichever is later. §63.11225(a)(4)	No	Yes, Biennial. First tune-up completed by 5/20/2011 or upon start-up of the boiler, whichever is later. Subsequent tune-ups should be completed no later than 25 months after the previous tune-up. §63.11223(b)	No

**Summary of Requirements for 40 CFR Part 63 Subpart JJJJJ:  
 NESHAP for Area Sources: Industrial, Commercial, and Institutional Boilers**

Row	Task 3 Meet Emission Limits			Task 4	Task 5
	For this pollutant	Initial Compliance	Continuous Compliance	Record	Submit Other Notifications and Reports
<b>New - Small (&lt; 10MMBtu/hr)</b>					
6		None		Biennial compliance certification report (§63.11225(b)). Prepare by 3/1/2012 or on March 1 of the year immediately following start-up of the boiler.	Notification to combust solid waste (§63.11225(f)). Submit 30 days prior to combusting solid waste.
				Records of dates and procedures for each boiler tune up (§63.11225(c)(2)(i) and §63.11223(b)(6))	
				Records of fuel use and non-waste determinations (§63.11225(c)(2)(ii)). You should begin keeping fuel records upon start-up of the boiler.	Notification of fuel or subcategory switching (§63.11225(g)). Submit 30 days prior to switching fuels.
				Records of all submitted notifications (§63.11225(c)(1))	

**Summary of Requirements for 40 CFR Part 63 Subpart JJJJJ:  
NESHAP for Area Sources: Industrial, Commercial, and Institutional Boilers**

Row	Subcategory	Task 1 Submit Initial Notifications		Task 2 Comply with Work Practice Standards (§63.11201,		
		Submit Initial Notification of Applicability <sup>1</sup>	Submit Initial Notification of Compliance Status <sup>2</sup>	Minimize Startup/Shutdown per Mfg. Procedures	Conduct Performance Tune-up <sup>2,3</sup>	Conduct Energy Assessment
<b>New - Large (≥ 10MMBtu/hr)</b>						
7	Coal	Yes, submit by 9/17/2011 or within 120 days after startup, whichever is later. §63.11225(a)(2)	Yes, submit by 9/17/2011, or within 120 days of startup, whichever is later. The notification must be submitted within 60 days of completing the performance test. (§63.11225(a)(4)). Include a statement on Startup and Shutdown according to manufacturer specifications (§63.11223(c))	Yes, beginning 5/20/2011 or upon start-up of the boiler. §63.11223(c) §63.11214(d)	No	No

**Summary of Requirements for 40 CFR Part 63 Subpart JJJJJ:**  
**NESHAP for Area Sources: Industrial, Commercial, and Institutional Boilers**

Row	Task 3 Meet Emission Limits			Task 4	Task 5
	For this pollutant	Initial Compliance	Continuous Compliance	Record	Submit Other Notifications and Reports
<b>New - Large (<math>\geq 10\text{MMBtu/hr}</math>)</b>					
7	Hg	Conduct performance (stack) test (§63.11212, Table 4, and 63.7(c), (d), (f)) by 5/20/2011 or upon startup.	Triennial stack test (§63.11220(a) and §63.11212), no more than 37 months after previous test.	Records of fuel use and non-waste determinations (§63.11225(c)(2)(ii)). You should begin keeping fuel records upon start-up of the boiler.	Notification to combust solid waste (§63.11225(f)). Submit 30 days prior to combusting solid waste.
		OR		Records of all submitted notifications (§63.11225(c)(1))	Notification of fuel or subcategory switching (§63.11225(g)). Submit 30 days prior to switching fuels.
		Conduct fuel analysis (§63.11213, Table 5 and §63.11211(c)) by 5/20/2011 or upon startup.	If Hg limit compliance demonstrated based on fuel analysis, conduct fuel analysis for each fuel type burned monthly (§63.11213 and §63.11220(e))	For sources demonstrating compliance with fuel analysis, records of all calculation and supporting documentation to demonstrate compliance with emission limits (§63.11225(c)(3))	Deviations from emission limits and corrective actions taken during reporting period (§63.11225(b)(3)). <sup>5</sup> Submit by March 15 of each calendar year where deviations occurred.
		Establish operating limits (§63.11222, Table 6 and §63.11211(b)) by 5/20/2011 or upon startup.	Operate monitoring systems and collect data at all required intervals (§63.11221 and Table 7) including fuel mercury content and relevant control device monitoring systems.	Records of type and amount of all fuels burned in each boiler during reporting period (§63.11222(a))	Notification of affirmative defense within two business days of malfunction (§63.11226(b))
		Conduct CMS performance evaluations (§63.11224) <sup>4</sup> by 5/20/2011 or upon startup.			
	CO	Conduct performance (stack) test (§63.11212 and Table 4) by 5/20/2011 or upon startup.	Triennial stack test (§63.11212), no more than 37 months after previous test.	Records of the each boiler or control device malfunction occurrence and duration and actions taken to minimize emissions during malfunctions (§63.11225(c)(4)-(5))	Root cause analysis report of the malfunction within 45 days of the exceedance of the standard (§63.11226(b))
		Establish operating limits (§63.11222, Table 6 and §63.11211(b)) by 5/20/2011 or upon startup.		Records of monitoring data and maintenance (§63.11225(c)(6))	
		Install oxygen monitor (§63.11224(a)) by 5/20/2011 or upon startup.		Annual compliance certification report (§63.11225(b)) <sup>5,6</sup> . Prepare first report by 3/1/2012 (or on March 1 of the calendar year immediately following start-up of the boiler). Subsequent reports prepared by March 1 of the next calendar year.	
		Establish operating limits (§63.11222 and 63.11211(b)) by 5/20/2011 or upon startup.	Operate monitoring systems and collect data at all required intervals (§63.11221 and Table 7).	Submit results of mercury, CO and PM test data to EPA's Central Data Exchange using the ERT < <a href="http://www.epa.gov/ttnchie1/ert/ert_tool.html">http://www.epa.gov/ttnchie1/ert/ert_tool.html</a> > (§63.11225(e)) within 60 days of completing each performance test.	
		Conduct CMS performance evaluations (§63.11224) by 5/20/2011 or upon startup.			
	PM	Conduct performance (stack) test (§63.11212 and Table 4) by 5/20/2011 or upon startup.	Triennial stack test (§63.11212), no more than 37 months after previous test.	Site-specific monitoring plan shall be prepared 60 days before CMS performance evaluation for each CMS (§63.11205(c)(1) through (3)) <sup>6</sup>	
		Establish operating limits (§63.11222 and 63.11211(b)) by 5/20/2011 or upon startup.		Site-specific test plan shall be prepared before each stack test (§63.11212(a), §63.7(c)) <sup>6</sup>	
		Conduct CMS performance evaluations (§63.11224) by 5/20/2011 or upon startup.	Monitor parameters and collect data (§63.11221)		

Summary of Requirements for 40 CFR Part 63 Subpart JJJJJ:  
 NESHAP for Area Sources: Industrial, Commercial, and Institutional Boilers

Row	Subcategory	Task 1 Submit Initial Notifications		Task 2 Comply with Work Practice Standards (§63.11201,		
		Submit Initial Notification of Applicability <sup>1</sup>	Submit Initial Notification of Compliance Status <sup>2</sup>	Minimize Startup/Shutdown per Mfg. Procedures	Conduct Performance Tune-up <sup>2,3</sup>	Conduct Energy Assessment
<b>New - Large (≥ 10MMBtu/hr)</b>						
8	Biomass	Yes, submit by 9/17/2011 or within 120 days after startup, whichever is later. §63.11225(a)(2)	The notification for compliance with the PM emission limits must be submitted within 60 days of completing the performance test and you can resubmit a notification for the tune-up (§63.11225(a)(4)). If this notification does not include the tune-up, you can re-submit a notification for the tune-up by 9/17/2011, or within 120 days of startup, whichever is later. Include a statement on Startup and Shutdown according to manufacturer specifications (§63.11223(c))	Yes, beginning 5/20/2011 or upon start-up of the boiler. §63.11223(c) §63.11214(d)	Yes, Biennial. First tune-up completed by 5/20/2011 or upon start-up of the boiler, whichever is later. Subsequent tune-ups should be completed no later than 25 months after the previous tune-up. §63.11223(b)	No



**Summary of Requirements for 40 CFR Part 63 Subpart JJJJJ:**  
**NESHAP for Area Sources: Industrial, Commercial, and Institutional Boilers**

Row	For this pollutant	Task 3 Meet Emission Limits		Task 4	Task 5
		Initial Compliance	Continuous Compliance	Record	Submit Other Notifications and Reports
<b>New - Large (<math>\geq 10\text{MMBtu/hr}</math>)</b>					
8	PM	Conduct performance (stack) test (§63.11212 and Table 4) by 5/20/2011 or upon startup.	Triennial stack test (§63.11212) no more than 37 months after previous test.	Annual compliance certification report (§63.11225(b)) <sup>5,6</sup> Prepare first report by 3/1/2012 (or on March 1 of the calendar year immediately following start-up of the boiler). Subsequent reports prepared by March 1 of the next calendar year.	Notification to combust solid waste (§63.11225(f)). Submit 30 days prior to combusting solid waste.  Notification of fuel or subcategory switching (§63.11225(g)). Submit 30 days prior to switching fuels.  Deviations from emission limits and corrective actions taken during reporting period (§63.11225(b)(3)). <sup>5</sup>  Notification of affirmative defense within two business days of malfunction (§63.11226(b))  Root cause analysis report of the malfunction within 45 days of the exceedance of the standard (§63.11226(b))  Submit results of PM test data to EPA's Central Data Exchange using the ERT < <a href="http://www.epa.gov/ttnchie1/ert/ert_tool.html">http://www.epa.gov/ttnchie1/ert/ert_tool.html</a> > (§63.11225(e)) within 60 days of completing each performance test.
		Establish operating limits (§63.11222 and 63.11211(b)) by 5/20/2011 or upon startup.		Records of dates and procedures for each boiler tune up (§63.11225(c)(2)(i) and §63.11223(b)(6))  Records of fuel use and non-waste determinations (§63.11225(c)(2)(ii)). You should begin keeping fuel records upon start-up of the boiler.	
		Conduct CMS performance evaluations (§63.11224) by 5/20/2011 or upon startup.	Monitor parameters and collect data §63.11221	Records of all submitted notifications (§63.11225(c)(1))  Records of the each boiler or control device malfunction occurrence and duration and actions taken to minimize emissions during malfunctions (§63.11225(c)(4)-(5))  Records of monitoring data and maintenance (§63.11225(c)(6))  Site-specific monitoring plan shall be prepared 60 days before CMS performance evaluation for each CMS (§63.11205(c)(1) through (3)) <sup>6</sup>  Site-specific test plan shall be prepared before each stack test (§63.11212(a), §63.7(c)) <sup>6</sup>	

**Summary of Requirements for 40 CFR Part 63 Subpart JJJJJ:  
 NESHAP for Area Sources: Industrial, Commercial, and Institutional Boilers**

Row	Subcategory	Task 1 Submit Initial Notifications		Task 2 Comply with Work Practice Standards (§63.11201,		
		Submit Initial Notification of Applicability <sup>1</sup>	Submit Initial Notification of Compliance Status <sup>2</sup>	Minimize Startup/Shutdown per Mfg. Procedures	Conduct Performance Tune-up <sup>2,3</sup>	Conduct Energy Assessment
<b>New - Large (≥ 10MMBtu/hr)</b>						
9	Oil	Yes, submit by 9/17/2011 or within 120 days after startup, whichever is later. §63.11225(a)(2)	The notification for compliance with the PM emission limits must be submitted within 60 days of completing the performance test and you can resubmit a notification for the tune-up (§63.11225(a)(4)). If this notification does not include the tune-up, you can re-submit a notification for the tune-up by 9/17/2011, or within 120 days of startup, whichever is later. Include a statement on Startup and Shutdown according to manufacturer specifications (§63.11223(c))	Yes, beginning 5/20/2011 or upon start-up of the boiler. §63.11223(c) §63.11214(d)	Yes, Biennial. First tune-up completed by 5/20/2011 or upon start-up of the boiler, whichever is later. Subsequent tune-ups should be completed no later than 25 months after the previous tune-up. §63.11223(b)	No

**Summary of Requirements for 40 CFR Part 63 Subpart JJJJJ:**  
**NESHAP for Area Sources: Industrial, Commercial, and Institutional Boilers**

Row	For this pollutant	Task 3 Meet Emission Limits		Task 4	Task 5
		Initial Compliance	Continuous Compliance	Record	Submit Other Notifications and Reports
<b>New - Large (<math>\geq 10\text{MMBtu/hr}</math>)</b>					
9	PM	Conduct performance (stack) test (§63.11212 and Table 4) by 5/20/2011 or upon startup.	Triennial stack test (§63.11212) no more than 37 months after previous test.	Annual compliance certification report (§63.11225(b)) <sup>5,6</sup> Prepare first report by 3/1/2012 (or on March 1 of the calendar year immediately following start-up of the boiler). Subsequent reports prepared by March 1 of the next calendar year.	Notification to combust solid waste (§63.11225(f)). Submit 30 days prior to combusting solid waste.  Notification of fuel or subcategory switching (§63.11225(g)). Submit 30 days prior to switching fuels.  Deviations from emission limits and corrective actions taken during reporting period (§63.11225(b)(3)). <sup>5</sup>  Notification of affirmative defense within two business days of malfunction (§63.11226(b))  Root cause analysis report of the malfunction within 45 days of the exceedance of the standard (§63.11226(b))  Submit results of PM test data to EPA's Central Data Exchange using the ERT < <a href="http://www.epa.gov/ttnchie1/ert/ert_tool.html">http://www.epa.gov/ttnchie1/ert/ert_tool.html</a> > (§63.11225(e)) within 60 days of completing each performance test.
		Establish operating limits (§63.11222 and 63.11211(b)) by 5/20/2011 or upon startup.		Records of dates and procedures for each boiler tune up (§63.11225(c)(2)(i) and §63.11223(b)(6))  Records of fuel use and non-waste determinations (§63.11225(c)(2)(ii)). You should begin keeping fuel records upon start-up of the boiler.	
		Conduct CMS performance evaluations (§63.11224) by 5/20/2011 or upon startup.	Monitor parameters and collect data §63.11221	Records of all submitted notifications (§63.11225(c)(1))  Records of the each boiler or control device malfunction occurrence and duration and actions taken to minimize emissions during malfunctions (§63.11225(c)(4)-(5))  Records of monitoring data and maintenance (§63.11225(c)(6))  Site-specific monitoring plan shall be prepared 60 days before CMS performance evaluation for each CMS (§63.11205(c)(1) through (3)) <sup>6</sup>  Site-specific test plan shall be prepared before each stack test (§63.11212(a), §63.7(c)) <sup>6</sup>	

1 Initial Notification of Applicability. National Emissions Standards for Hazardous Air Pollutants: Industrial, Commercial, and Institutional Boilers Area Sources (40 CFR Part 63 Subpart JJJJJ). March 31, 2011. Available online at: <<http://www.epa.gov/airtoxics/boiler/boilerpg.html>>

2 Initial Notification of Compliance Status for Boilers Subject to Tune-ups - Area Sources. National Emissions Standards for Hazardous Air Pollutants: Industrial, Commercial, and Institutional Boilers Area Sources (40 CFR Part 63 Subpart JJJJJ). April 21, 2011. Available online at: <<http://www.epa.gov/airtoxics/boiler/boilerpg.html>>

3 Tune-up Guidance and Example Recordkeeping Form-Area Sources. National Emissions Standards for Hazardous Air Pollutants: Industrial, Commercial, and Institutional Boilers Area Sources (40 CFR Part 63 Subpart JJJJJ). April 21, 2011. Available online at: <<http://www.epa.gov/airtoxics/boiler/boilerpg.html>>

4 Only for source that petitions for an alternative monitoring parameters under §63.8. Mercury CEMS is not required under this rule.

5 If deviations occur during the reporting period, you must submit the entire contents of the annual compliance certification report ( §63.11225(b) by March 15 of the calendar year immediately following the reporting period.

6 These items must be prepared and kept on-site unless your delegated authority requests these items to be submitted.