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 JJJJJJ

Updated October 2016

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
https://www.epa.gov/stationary-sources-air-pollution/compliance-area-sources-industrial-commercial-and-institutional

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 by the Boilers Area Source NESHAP.

How do I use this guide?

This guide is organized into four major sections:

- **SECTION 1: INTRODUCTION** presents three final rules that affect owners and operators of boilers, process heaters, and incinerators that burn solid waste at industrial and commercial facilities. The three final rules were published on March 21, 2011. Specific elements of the rules were reconsidered and, on December 20, 2012, EPA's actions on reconsideration of those specific elements were finalized. 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 AREA 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 reduce emissions of air pollutants from:

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

Under the Clean Air Act (CAA), 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 or more tons per year 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" (https://www.epa.gov/sites/production/files/2015-08/documents/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 and/or hot water, which is then used for energy or heat.

Area source boilers may be used for industrial applications, such as manufacturing and processing facilities. The majority of area source boilers, however, are located at commercial facilities, such as laundries and apartments, and institutional facilities, such as educational and religious facilities and 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. However, they may also 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 or operators must first determine whether the combustion unit is subject to one of the boiler standards or to the incinerator standards.

Boilers that combust solid waste at commercial and industrial facilities are most likely subject to air emission standards for CISWI. The CISWI rule does not differentiate between major and area sources. More information on this rule can be found at https://www.epa.gov/stationary-sources-air-pollution/commercial-and-industrial-solid-waste-incineration-units-ciswi-new.

1.2 Rule Reconsideration

On March 21, 2011, EPA announced that it would reconsider the area and major source boiler rules, as well as the CISWI rule, because the public did not have sufficient opportunity to comment on some of the provisions of the final rules. As a result, further public review and feedback was required to meet the legal obligations under the CAA. While EPA conducted a reconsideration of the area source boiler rule, affected sources subject to those standards were required to comply with all requirements of the rule as published in the Federal Register on March 21, 2011. On December 23, 2011, EPA proposed specific parts of the standards for reconsideration. EPA published its final action on reconsideration of those specific elements on January 31, 2013 (Boilers Major Source NESHAP), February 1, 2013 (Boilers Area Source NESHAP), and February 7, 2013 (CISWI Rule) in the Federal Register. As part of that final action for area source boilers, EPA made technical corrections to the final rule to clarify definitions, references, applicability, and compliance issues raised by stakeholders affected by the rule. Following the February 1, 2013 final action for area source boilers, EPA received three petitions for reconsideration that identified certain issues that petitioners claimed warranted further opportunity for public comment. In response to the petitions, on January 21, 2015, EPA published a proposed notice of reconsideration that requested comment on five provisions of the February 1, 2013 final amendments to the Boilers Area Source NESHAP. EPA published its final decisions on the reconsidered provisions on September 14, 2016. The final action also addressed a limited number of technical corrections and clarifications on the rule, including removal of the affirmative defense for malfunction.

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), and municipal buildings (courthouses, prisons). Industrial boilers are found in manufacturing, processing, mining, 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 or more tons per year 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 Chapters 4 and 5 of the EPA Emission Inventory Improvement Program document, "Preferred and Alternative Methods for Estimating Air Emissions from Boilers," for information on how to estimate emissions from your source (https://www.epa.gov/sites/production/files/2015-08/documents/ii02.pdf).

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:

- Gas-fired boilers.[1]
- Hot water heaters with a capacity of no more than 120 U.S. gallons burning gaseous, liquid, or biomass fuel and hot water boilers (i.e., not generating steam) with a heat input capacity of less than 1.6 million British thermal units (Btu) per hour (MMBtu/hr) burning gaseous, liquid, or biomass fuel.
- Temporary boilers (gaseous or liquid fuel units used in place of another boiler while that unit is being replaced or repaired, usually for less than 12 months, unless an extension is approved).
- Residential boilers (provide hot water, heat or power for a residential unit of up to four families, or a single unit residence that has been converted or subdivided into apartments or condos).
- Electric boilers.
- 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 standards, where at least 50 percent of the average annual heat input to the boiler during any 3 consecutive years is provided by the other regulated gas streams.
- Research and development boilers.
- Boilers subject to other NESHAP standards, Section 129 standards, or hazardous waste boilers.

[1] *Gas-fired boiler* includes any boiler that burns gaseous fuels not combined with any solid fuels. A gas-fired boiler that fires liquid fuels only during periods of gas curtailment, gas supply interruption, startups, or for periodic (not to exceed 48 hours per year) testing, maintenance, or operator training is still considered a gas-fired boiler. *Gaseous fuels* include, but are not limited to: natural gas, process gas, landfill gas, coal-derived gas, refinery gas, hydrogen, and biogas.

- Electric utility steam generating units (EGUs)[2].

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 distinction between boilers based on size is:

- Large area source boilers have a heat input capacity greater than or equal to 10 MMBtu/hr.
- Small area source boilers have a heat input capacity less than 10 MMBtu/hr.

Also, separate requirements are set for certain boilers:

- Seasonally-operated boilers [biomass- or oil-fired units that are shutdown for at least 7 consecutive months (or 210 consecutive days) each 12-month period due to seasonal conditions, except for periodic testing (not to exceed a combined total of 15 days during the shutdown)].
- Limited-use boilers (units that burn any amount of solid or liquid fuels and have a federally enforceable annual capacity factor of no more than 10 percent).
- Oil-fired boilers with heat input capacity equal to or less than 5 MMBtu/hr.
- Boilers with an oxygen trim system that maintains an optimum air-to-fuel ratio.

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

Subcategory			Summary of Requirement
Existing large area source boilers[1]	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)	• No requirements (not covered by the rule)
		Coal (excluding limited-use boilers)	• Numeric emission limits for mercury (Hg) and carbon monoxide (CO) • One-time energy assessment
		Biomass and Oil	• Tune-up every other year or every 5 years • One-time energy assessment • No numeric emission limits
		Limited-use coal	• Tune-up every 5 years • No energy assessment • No numeric emission limits
Existing small area source boilers[1]	i.e., commenced construction or reconstruction of the boiler on or before June 4, 2010; less than 10 MMBtu/hr	Gas (all types)	• No requirements (not covered by the rule)
		Coal, Biomass and Oil	• Tune-up every other year or every 5 years • No numeric emission limits

[2] EGU means a fossil fuel-fired combustion unit of more than 25 megawatts that serves a generator that produces electricity for sale. A fossil fuel-fired unit that cogenerates steam and electricity and supplies more than one-third of its potential electric output capacity and more than 25 megawatts electrical output to any utility power distribution system for sale is considered an EGU.

New large area source boilers[2]	i.e., commenced construction or reconstruction of the boiler after June 4, 2010; greater than or equal to 10 MMBtu/hr	Gas (all types)	• No requirements (not covered by rule)
		Coal (excluding limited-use boilers)	• Numeric emission limits for Hg, CO, and particulate matter (PM)
		Biomass and Oil (excluding limited-use and seasonal boilers)	• Numeric emission limit for PM[3] • Tune-up every other year or every 5 years
		Limited-use coal	• Tune-up every 5 years • No numeric emission limits
		Limited-use and seasonal biomass and oil	• Tune-up every 5 years • No numeric emission limits
New small area source boilers[2]	i.e., commenced construction or reconstruction of the boiler after June 4, 2010; less than 10 MMBtu/hr	Gas (all types)	• No requirements (not covered by the rule)
		Coal, Biomass and Oil	• Tune-up every other year or every 5 years • No numeric emission limits

[1] An existing dual-fuel fired boiler meeting the definition of gas-fired boiler that meets the applicability requirements of subpart JJJJJJ after June 4, 2010 due to a fuel switch from gaseous fuel to solid fossil fuel, biomass, or liquid fuel is considered to be an existing source under this subpart as long as the boiler was designed to accommodate the alternate fuel.

[2] A new or reconstructed dual-fuel fired boiler meeting the definition of gas-fired boiler that meets the applicability criteria of subpart JJJJJJ after June 4, 2010 due to a fuel switch from gaseous fuel to solid fossil fuel, biomass, or liquid fuel is considered to be a new source under this subpart.

[3] New oil-fired boilers that combust only ultra-low-sulfur liquid fuel (i.e., distillate oil that has less than or equal to 15 ppm sulfur) are not subject to the PM emission limit. This provision finalized on September 14, 2016 replaced the February 2013 final rule's alternative PM standard for new oil-fired boilers that combust low-sulfur oil (i.e., containing less than or equal to 0.50 weight percent sulfur). New or reconstructed oil-fired boilers that commenced construction or reconstruction on or before September 14, 2016 and that are currently meeting the alternative PM standard for low-sulfur oil burning boilers are provided 3 years (i.e., September 14, 2019) before becoming subject to the PM emission limit, providing them time to decide how to comply (i.e., combust only ultra-low-sulfur liquid fuel or conduct a performance test demonstrating compliance).

Table 2: Required Emission Limits for Area Source Boilers

Subcategory	Hg, lb/MMBtu	CO, ppm @3% O2	PM, lb/MMBtu
New large coal (excluding limited-use boilers)	0.000022	420	0.03 (≥30 MMBtu/hr) 0.42 (≥10 to <30 MMBtu/hr
New large biomass (excluding seasonal boilers and limited-use boilers)	--	--	0.03 (≥30 MMBtu/hr) 0.07 (≥10 to <30 MMBtu/hr

New large oil[1] (excluding seasonal boilers and limited-use boilers)	--	--	0.03
Existing large coal (excluding limited-use boilers)	0.000022	420	--

[1]See footnote 3 to Table 1 of this guide.

Table 3: Required Work/Management Practices for Area Source Boilers[1]

Subcategory	Biennial Tune-up	5-year Tune-up	One-time Energy Assessment[2]
Small coal-fired boilers (excluding limited-use boilers and boilers with an oxygen trim system)	Yes; No initial tune-up for new boilers	--	No
Oil-fired boilers with heat input capacity > 5 MMBtu/hr (excluding seasonal boilers, limited-use boilers, and boilers with an oxygen trim system)	Yes; No initial tune-up for new boilers	--	No – new boilers No – existing boilers with heat input capacity < 10 MMBtu/hr Yes – existing boilers with heat input capacity ≥ 10 MMBtu/hr
Biomass-fired boilers (excluding seasonal boilers, limited-use boilers, and boilers with an oxygen trim system)	Yes; No initial tune-up for new boilers	--	No – new boilers No – existing boilers with heat input capacity < 10 MMBtu/hr Yes – existing boilers with heat input capacity ≥ 10 MMBtu/hr
Seasonal boilers	--	Yes; No initial tune-up for new boilers	No – new boilers No – existing boilers with heat input capacity < 10 MMBtu/hr Yes – existing boilers with heat input capacity ≥ 10 MMBtu/hr
Limited-use boilers	--	Yes; No initial tune-up for new boilers	No
Oil-fired boilers with heat input capacity ≤ 5 MMBtu/hr	--	Yes; No initial tune-up for new boilers	No
Boilers with an oxygen trim system that maintains an optimum air-to-fuel ratio that would otherwise be subject to a biennial tune-up	--	Yes; No initial tune-up for new boilers	No – new boilers No – existing boilers with heat input capacity < 10 MMBtu/hr Yes – existing boilers with heat input capacity ≥ 10 MMBtu/hr

[1] For existing and new large coal-fired boilers, new large biomass-fired boilers, and new large oil-fired boilers: startup and shutdown periods must be minimized and conducted according to the manufacturer's recommended procedures. If manufacturer's recommended procedures are not available, recommended procedures for a unit of similar design, for which manufacturer's recommended procedures are available, must be followed.
[2] An energy assessment completed on or after January 1, 2008, that meets or is amended to meet the energy assessment requirements of the rule satisfies the energy assessment requirement. A facility that operated under an energy management program developed according to the ENERGY STAR guidelines for energy management or compatible with ISO 50001 for at least 1 year between January 1, 2008 and March 21, 2014 that includes the affected units also satisfies the energy assessment requirement.

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 at https://www.epa.gov/stationary-sources-air-pollution/compliance-industrial-commercial-and-institutional-area-source, and include compliance assistance contacts.

Initial Notification of Applicability: (§63.11225(a))

- January 20, 2014 or within 120 days after source startup
- Initial Notification is not required to be submitted electronically

Notification of Compliance Status: (§63.11225(a))

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

- Existing sources subject to tune-up work/management practices: July 19, 2014
- Existing sources subject to an energy assessment: July 19, 2014
- Existing sources subject to emission limits: Within 60 days of completing the performance stack test
- New sources: Within 120 days after startup unless you must conduct a performance stack test or you are subject only to a requirement to conduct a biennial or 5-year tune-up
    - If your source must conduct a performance stack test, the notification must be submitted within 60 days of test completion
    - If your source is subject to a requirement to conduct a tune-up, you are not required to prepare and submit a notification for the tune-up
- Notification of Compliance Status must be submitted electronically

Compliance Dates (§63.11196)

- New Sources (constructed or reconstructed after June 4, 2010): May 20, 2011 or upon startup
- Existing sources (constructed or reconstructed on or before June 4, 2010): 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 4: Summary of Compliance Dates

Subcategory	Submit Initial Notification of Applicability by…	Submit 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					
Existing Small (< 10 MMBtu/hr)						
All (other than gas)	1/20/2014	7/19/2014	3/21/2014	--	--	1st report by 3/1/2015, subsequent reports by March 1 of the year after a tune-up is completed
Existing Large (≥ 10 MMBtu/hr)						
Biomass (excluding limited-use boilers)	1/20/2014	7/19/2014 for tune-up and energy assessment	3/21/2014	3/21/2014	--	1st report by 3/1/2015, subsequent reports by March 1 of the year after a tune-up is completed
Oil (excluding limited-use boilers)	1/20/2014	7/19/2014 for tune-up and energy assessment	3/21/2014	3/21/2014	--	1st report by 3/1/2015, subsequent reports by March 1 of the year after a tune-up is completed
Coal (excluding limited-use boilers)	1/20/2014	Within 60 days of the performance test for Hg and CO. Submit by 7/19/2014 for energy assessment.	--	3/21/2014	9/17/2014	1st report by 3/1/2015, subsequent reports prepared by March 1 of each year

Limited-use	1/20/2014	7/19/2014	3/21/2014	--	--	1st report 3/1/2015, subsequent reports by March 1 of the year after a tune-up is completed
New Small (< 10 MMBtu/hr)						
All (other than gas)	Within 120 days of startup	--	--	--	--	March 1 of the year after a tune-up is completed
New Large (≥ 10 MMBtu/hr)[3]						
Biomass (excluding seasonal boilers and limited-use boilers)	Within 120 days of startup	Within 60 days of conducting performance test for PM	--	--	No later than 180 days from startup of the boiler	1st report by March 1 of the year after start-up, subsequent reports by March 1 of each calendar year.
Oil (excluding seasonal boilers and limited-use boilers)	Within 120 days of startup	Within 60 days of conducting performance test for PM	--	--	No later than 180 days from startup of the boiler	1st report by March 1 of the year after start-up, subsequent reports by March 1 of each calendar year.
Coal (excluding limited-use boilers)	Within 120 days of startup	Within 60 days of conducting performance tests for Hg, PM, and CO	--	--	No later than 180 days from startup of the boiler	1st report by March 1 of the year after start-up, subsequent reports by March 1 of each calendar year.
Seasonal boilers and limited-use boilers	Within 120 days of startup	--	--	--	--	March 1 of the year following the calendar year during which

[3] Boilers that meet the definition of seasonal boiler or limited-use boiler are not subject to emission limits.

						a tune-up is completed

3.0 HOW TO COMPLY

Your requirements depend on the subcategory of your boiler. To determine your requirements identify your subcategory, and then see which tasks you must complete. Appendix A of this guide gives a more complete summary of what you must do to comply.

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 means the heat input for fuels combusted during the 12 months before the tune-up or compliance test.

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

Biomass subcategory: Includes any boiler that burns any biomass and is not in the coal subcategory.

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

Gas-fired boiler (not covered by this rule): Includes any boiler that burns gaseous fuels[4] not combined with any solid fuels and burns liquid fuel only during periods of gas curtailment, gas supply interruption, startups, or for periodic testing, maintenance, or operator training (not to exceed a combined total of 48 hours during any calendar year).

[4] *Gaseous fuels* include, but are not limited to: natural gas, process gas, landfill gas, coal-derived gas, refinery gas, hydrogen, and biogas.

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. See the example calculation below for annual heat input and a list of methods to determine your boiler's fuel subcategory.

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 12 months before 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

	Bituminous Coal (tons)	Wood and Wood Residuals (tons)	No. 2 Fuel Oil (gallons)	Natural Gas (cubic feet)
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
Total	**3,950**	**22,260**	**779,740**	**201,943,520**

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_2 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	-

Step 1 total x HHV	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, or

- You own or operate an existing dual-fuel fired boiler (i.e., commenced construction or reconstruction on or before June 4, 2010) meeting the definition of gas-fired boiler, as defined in 40 CFR 63.11237, that meets the applicability requirements of subpart JJJJJJ after June 4, 2010 due to a fuel switch from gaseous fuel to solid fossil fuel, biomass, or liquid fuel and the boiler was designed to accommodate the alternate fuel.

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 reconstruction, or

- You own or operate a new or reconstructed dual-fuel fired boiler (i.e., commenced construction or reconstruction after June 4, 2010) meeting the definition of gas-fired boiler, as defined in 40 CFR 63.11237, that meets the applicability requirements of subpart JJJJJJ after June 4, 2010 due to a fuel switch from gaseous fuel to solid fossil fuel, biomass, or liquid fuel.

3.1.3 Size

To determine the size of your boiler, check the nameplate on the boiler. The nameplate often lists the rated design 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. Boiler size is measured in million British thermal units per hour, or MMBtu/hr.

3.1.4 Reduced Requirements for Certain Boilers

Certain boilers are subject to separate work practice or management practice requirements tailored to their schedule of operation and types of fuel.

- Seasonal boilers. You have a seasonal boiler if your boiler undergoes a shutdown for a period of at least 7 consecutive months (or 210 consecutive days) each 12-month period due to seasonal conditions (except for periodic testing that does not exceed a combined total of 15 days during the shutdown) and your boiler would otherwise be in the biomass or oil subcategory.
    - Seasonal boilers are required to complete a tune-up every 5 years.
    - Seasonal boilers are not subject to the emission limits in Table 1 to subpart JJJJJJ or the operating limits in Table 4 to subpart JJJJJJ.

- Limited-use boilers. You have a limited-use boiler if your boiler burns any amount of solid or liquid fuels and has a federally enforceable annual capacity factor of no more than 10 percent.
    - Limited-use boilers are required to complete a tune-up every 5 years.
    - Limited-use boilers are not subject to the emission limits in Table 1, the energy assessment requirements in Table 2, or the operating limits in Table 4 of subpart JJJJJJ.

- Oil-fired boilers with heat input capacity equal to or less than 5 MMBtu/hr are required to complete a tune-up every 5 years. (Such boilers are not subject to emission limits or energy assessments.)

- Boilers with an oxygen trim system that maintains an optimum air-to-fuel ratio that would otherwise be subject to a biennial tune-up are required to complete a tune-up every 5 years. (Such boilers may be subject to the emission limits in Table 1, the energy assessment requirements in Table 2, and the operating limits in Table 4 of subpart JJJJJJ.)

3.2 Which Tasks Must I Complete?

Based on your subcategory, use Appendix A of this guide to determine which of the following five tasks you must complete.

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

- **Task 5**: Submit notifications and reports

3.3 Task 1: Submit Initial Notifications

All owners and operators of a boiler must submit an Initial Notification of Applicability. Owners and operators of a boiler, with the exception of owners and operators of a new boiler subject only to tune-up requirements (i.e., new boilers with heat input capacity of less than 10 MMBtu/hr, new seasonal boilers, new limited-use boilers**)**, must submit a Notification of Compliance Status.

See example forms at https://www.epa.gov/stationary-sources-air-pollution/compliance-industrial-commercial-and-institutional-area-source.

Notification of Applicability. Submit an Initial Notification of Applicability for:

- ***Existing Sources:*** No later than January 20, 2014
- ***New Sources:*** Within 120 days after startup

The Initial 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 JJJJJJ) 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 certifying your compliance with the rule requirements is required. The notification must be submitted electronically using the Compliance and Emissions Data Reporting Interface (CEDRI) on EPA's Central Data Exchange (CDX) (www.epa.gov/cdx). However, if the reporting form specific to this subpart is not available in CEDRI at the time that the report is due, a written Notification of Compliance Status must be submitted to the Administrator at the appropriate address listed in §63.13. Submit the Notification of Compliance Status for:

- ***Existing Sources:*** Subject to tune-ups: No later than July 19, 2014

  Subject to energy assessment: No later than July 19, 2014

  Subject to emission limits: Within 60 days of completing the performance stack test
- ***New Sources:*** If your source must conduct a performance stack test, the notification must be submitted within 60 days of completing the performance stack test. Owners and operators of a new boiler subject only to tune-up requirements (i.e., new boilers with heat input capacity of less than 10

MMBtu/hr, new seasonal boilers, new limited-use boilers) are not subject to the Notification of Compliance Status requirement because they are not required to conduct an initial tune-up.

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:

January 20, 2014 → Submit an *initial notification of applicab*ility covering all (3) affected sources.

April 1, 2014 → Submit a *notification of compliance status* to document the methods used to demonstrate compliance with emission limits for 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 a *notification of compliance status* to indicate that an energy assessment has been conducted on Boilers B and C and their respective energy use systems.

July 19, 2014 → Submit a *notification of compliance status* to indicate that the facility complied with the requirements to conduct initial tune-ups of Boilers A and B.

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

Table 5 of this guide outlines the certifications and other requirements included in the Notification of Compliance Status which must be signed by a responsible official to certify its accuracy.

Table 5. Notification of Compliance Status: Certifications and Other Requirements

If…	…then you must include the following in the Notification of Compliance Status…
You must conduct an initial tune-up	"This facility complies with the requirements in §63.11214 to conduct an initial tune-up of the 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 complies with the requirements in §63.11224(f)."
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 to subpart JJJJJJ.	• Statement 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.
	• The methods that were used to determine compliance.
	• The methods that will be used for determining continuing compliance, including a description of monitoring and reporting requirements and test methods.
	• A statement by the owner or operator that the source has complied with the relevant standard and other requirements.
	• If using data from a previously conducted emission test, include the date of the test and a summary of the results, not a complete test report, relative to this subpart.
	• Performance tests or CMS performance evaluations data must be submitted as described in Section 3.7.5 of this guide.

3.4 Task 2: Comply with Work/Management Practice Requirements

3.4.1 Minimize Startup/Shutdown per Manufacturer Procedures

If your boiler has emission limits, you must minimize the boiler's startup and shutdown periods and conduct them according to the manufacturer's recommended procedures. If manufacturer's recommended procedures are not available, use available recommended procedures for a unit of similar design.

3.4.2 Conduct Tune-ups

If your boiler is subject to tune-ups, you must have it tuned-up every 2 or 5 years, as applicable. You must conduct the tune-up while burning the type of fuel (or fuels for boilers that routinely burn two fuels at the same time) that provided the majority of the heat input to the boiler for the 12 months before the tune-up.

Boilers that are required to have a tune-up every 2 years include:

- New and existing coal-fired boilers having a heat input capacity of less than 10 MMBtu/hr that do not meet the definition of limited-use boiler or do not use an oxygen trim system that maintains an optimum air-to-fuel ratio
- New and existing biomass-fired boilers that do not meet the definition of seasonal boiler or limited-use boiler, or use an oxygen trim system that maintains an optimum air-to-fuel ratio
- New and existing oil-fired boilers having a heat input capacity greater than 5 MMBtu/hr that do not meet the definition of seasonal boiler or limited-use boiler, or do not use an oxygen trim system that maintains an optimum air-to-fuel ratio

Boilers that are required to have a tune-up every 5 years include:

- New and existing seasonal boilers
- New and existing limited-use boilers
- New and existing oil-fired boilers having a heat input capacity equal to or less than 5 MMBtu/hr
- New and existing boilers with an oxygen trim system that maintains an optimum air-to-fuel ratio that would otherwise be subject to a biennial tune-up

Table 6: Tune-up Requirements

Requirement	Description	Notes
Inspect the burner, as applicable	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 for boilers subject to biennial tune-ups and at least once every 72 months for boilers subject to 5-year tune-ups.
Inspect the flame pattern, as applicable	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, as applicable	Ensure that it is correctly calibrated and functioning properly	The inspection can be delayed until the next scheduled unit shutdown, but you must inspect each burner at least once every 36 months for boilers subject to biennial tune-ups and at least once every 72 months for boilers subject to 5-year tune-ups.
Optimize total emissions of CO	Optimization should be consistent with the manufacturer's specifications, if available, and with any nitrogen oxide requirement to which the unit is subject	--
Measure CO and oxygen levels in the effluent stream before and after the tune-up adjustments are made	Report CO in parts per million, by volume, and oxygen in volume percent	Measurements may be either on a dry or wet bases as long as the same basis is used before and after the adjustments; Measurements may be taken using a portable CO analyzer

Maintain a report on site and submit if requested by the Administrator	Report must include: (i) The concentrations of CO in and oxygen, measured at high fire or typical operating load, before and after the tune-up (ii) A description of any corrective actions taken as a part of the tune-up (iii) The type and amount of fuel used over the 12 months prior to the tune-up, but only if the unit was physically and legally capable of using more than one type of fuel during that period	Units sharing a fuel meter may estimate the fuel use by each unit

You must complete the initial tune-up:

***Existing Sources*:** No later than March 21, 2014

***New Sources*:** Not required to perform an initial tune-up

Each biennial tune-up must be conducted no more than 25 months after the previous tune-up. For a new or reconstructed boiler subject to a biennial tune-up, the first biennial tune-up must be no later than 25 months after the initial startup of the new or reconstructed boiler.

Each 5-year tune-up must be conducted no more than 61 months after the previous tune-up. For a new or reconstructed boiler subject to a 5-year tune-up, the first 5-year tune-up must be no later than 61 months after the initial startup.

If the unit is not operating on the required date for a tune-up, the tune-up must be conducted within 30 days of startup.

See the Tune-up Guidance and Example Recordkeeping Form at https://www.epa.gov/stationary-sources-air-pollution/compliance-industrial-commercial-and-institutional-area-source.

3.4.3 Conduct an Energy Assessment

All existing boilers with a heat input capacity of 10 MMBtu/hr or greater, excluding limited-use boilers, must conduct a one-time energy assessment performed by a qualified energy assessor. An energy assessment completed on or after January 1, 2008, that meets or is amended to meet the energy assessment requirements of the rule satisfies the energy assessment requirement. Energy assessor approval and qualification requirements are waived in instances where past or amended energy assessments are used. A facility that operates under an energy management program developed according to the ENERGY STAR guidelines for energy management or compatible with ISO 50001 for at least 1 year between January 1, 2008 and March 21, 2014 that includes the affected units also satisfies the energy assessment requirement.

NOTE: The U.S. Department of Energy website provides additional guidance on assessments.

The energy assessment includes:

1. A visual inspection of the boiler system (e.g. cracks, corrosion, leaks).
2. An evaluation of operating characteristics of the affected boiler systems, specifications of energy use systems, operating and maintenance procedures, and unusual operating constraints.
3. An inventory of major energy use systems consuming energy from affected boiler(s) and which are under control of the boiler owner or operator.
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 that are within the facility's control.
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.

The energy assessment requirement applies to existing area source boilers with heat input capacity equal to or greater than 10MMBtu/hr, their associated components, and their energy use systems that meet the energy production thresholds in Table 7 below.

Associated components of the boiler include: the feedwater systems, combustion air systems, fuel systems (including burners), blowdown systems, combustion control systems, steam systems, and condensate return systems, directly connected to and serving the energy use systems.

Energy use systems are located on the site of the affected boiler and use energy provided by the boiler. These systems include: (i) process heating; compressed air systems; machine drive (motors, pumps, fans); process cooling; facility heating, ventilation, and air-conditioning systems; hot heater systems;, building envelop; and lighting; or (ii) other systems that use steam, hot water**,** process heat, or electricity, provided by the boiler.

Table 7: Energy Assessment Duration Requirements

If your facility has affected boilers with annual heat input capacity, as measured in Trillion Btu/yr (TBtu/yr), of …	**Then the length of the energy assessment, in on-site technical labor hours, should not exceed[1]…**	**And should include any on-site energy use systems that account for this percent of the energy production from these affected boilers[2]…**
Less than 0.3	8 hours	At least 50%
0.3 to 1	24 hours	At least 33%
Greater than 1.0	24 hours for the first TBtu/yr plus 8 hours for every additional TBtu/yr, not to exceed 160 hours	At least 20%

[1]Assessments may be longer at the discretion of the owner/operator of the affected source.
[2]The scope of the assessment is based on energy use by discrete segments of a facility and not by a total aggregation of all individual energy using segments of a facility. Thus, the on-site energy use

system(s) serving as the basis for the percent of affected boiler(s) energy production may be segmented by production area or energy use area (e.g., production area or building) as most logical and applicable to the specific facility being assessed.

"Qualified energy assessor" is defined in §63.11237 of subpart JJJJJJ. The qualified energy assessor should have the background, experience, and expertise to evaluate energy savings opportunities for the types of boiler/energy use systems located at a particular facility. The energy assessor may either be a company employee or an outside specialist. For more complicated boiler or energy use systems or facilities with multiple boilers, a group, such as a consulting firm or a company's engineering staff, with the needed expertise could perform the required engineering assessment.

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: Hg, CO, and PM. See Section 3.5.5 of this guide for exceptions to testing requirements.
5. Establish operating limits during the performance test.
6. Conduct initial and quarterly, as applicable, fuel analysis for each type of fuel. See Section 3.5.6 of this guide for exceptions to fuel analysis requirements.
7. Monitor and collect data to demonstrate compliance with the operating limits.
8. Conduct performance evaluations of your CMS.

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.

Four types of area source boilers have emission limits:

- Existing Large Coal (excluding limited-use boilers): Hg, CO
- New Large Coal (excluding limited-use boilers): Hg, CO, PM
- New Large Biomass (excluding seasonal boilers and limited-use boilers): PM
- New Large Oil (excluding seasonal boilers and limited-use boilers): PM

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

You must demonstrate initial compliance with the emission limits by:

Existing units: March 21, 2014 + 180 days = September 17, 2014

New units: March 21, 2011 + 180 days = September 17, 2011 or 180 days after startup

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 and conduct startups and shutdowns according to the boiler manufacturer's procedures. If the manufacturer's recommended procedures are not available, you must follow available recommended procedures for a unit of similar design.

Include a signed certification in the annual Compliance Certification report that you have complied with the requirement in §63.11214(d) and §63.11223(g) to minimize the boiler's time spent during startup and shutdown and to conduct 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 your 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. If requested, the site-specific monitoring plan must be submitted at least 60 days before your performance stack test. You must keep a copy of the site-specific test plan as a record.

The site-specific test plan must include:

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

3.5.4 Develop and Follow a Site-specific Monitoring Plan

If you choose 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). These three types of continuous monitors are all 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.

NOTE: A site-specific monitoring plan is not required if you have an existing CEMS or COMS operated according to the performance specifications under Appendix B to part 60 and that meet the requirements of §63.11224 (monitoring, installation, operation, and maintenance requirements).

- Submit, if requested, the site-specific monitoring plan at least 60 days before your initial performance evaluation of your CMS.
- In the site-specific monitoring plan, address §63.11205(c)(1)(i) through (vi), which includes installation location, performance and equipment specifications, performance evaluation procedures and acceptance criteria, ongoing operation and maintenance procedures, ongoing data quality assurance procedures, and ongoing recordkeeping and reporting procedures.

- Conduct a performance evaluation of each CMS per 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. There are a couple of exceptions to this requirement, including:

- For PM, new oil-fired boilers that combust only ultra-low-sulfur liquid fuel (i.e., distillate oil that has less than or equal to 15 ppm sulfur) (see footnote 3 to Table 1 of this guide,)

- For CO, boilers that use a CEMS for CO/oxygen (see Section 3.5.7 of this guide).

Conduct subsequent performance tests every third year (at least every 37 months). However, for PM, if your boiler's initial performance test results show that your emissions are less than or equal to half of the limit, you may choose to conduct performance tests for PM every fifth year but must comply with all operating limits and monitoring requirements. Boilers that burn a new type of fuel, other than ultra-low-sulfur liquid fuel or gaseous fuels, are required to conduct a new performance test within 60 days of burning the new fuel type.[5]

You must conduct all performance tests according to Table 4 to subpart JJJJJJ, which specifies test methods for selecting sampling ports, determining stack gas velocity and flow rate, determining O_2 and CO content, measuring moisture content, and measuring emissions.

Do your performance stack tests at 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, if you are subject to the Hg emission limit. Boilers that burn a single fuel are exempt from the fuel analysis. (See Section 3.5.6 of this guide.)

You may need to conduct more than one performance stack test if your boiler subcategory has more than one emission limit because the test must be done at the operating load conditions and while burning the fuel(s) that have the highest emissions potential, for each regulated pollutant. You must follow the requirements in the General Provisions, which include:

- Completing a test method performance audit during the performance test (using blind audit samples, supplied by an accredited audit sample provider and analyzed during the performance test, to provide a measure of test data bias)

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[5] The provision that requires further PM performance testing every 5 years for boilers with initial compliance tests showing that their PM emissions are equal to or less than half of the PM emission limit replaced the February 2013 final rule's provision that eliminated further PM performance testing for such boilers. New or reconstructed boilers that commenced construction or reconstruction on or before September 14, 2016 and that previously demonstrated that their PM emissions were equal to or less than half of the PM emission limit are provided 5 years (i.e., September 14, 2021) before they are required to conduct a performance test.

- 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:

- 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 PM and Hg concentrations measured in 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

If you choose to demonstrate compliance with the Hg emission limit through stack testing, you 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 rate of Hg, using the procedures in Table 5 to subpart JJJJJJ 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 Hg emission rate according to §63.11211(c) and Equation 1 of subpart JJJJJJ.

The Hg emission rate for the new type of fuel or fuel mixture must be less than the emission limit. If the Hg concentration for the new fuel or mixture is higher than the Hg fuel input during the previous performance test, then you must conduct a new performance test within 60 days of burning the new fuel or mixture.

- Boilers that burn a single type of fuel are exempt from conducting a fuel analysis.
- Boilers that use a supplemental fuel only for startup, shutdown, and transient flame stability still qualify as units that burn a single fuel type, and are exempt from conducting a fuel analysis.

As an alternative to stack testing for Hg, you can demonstrate compliance using fuel analysis by:

- Calculating the emission rate using §63.11211(c) and Equation 1 of subpart JJJJJJ and showing it is less than your boiler's Hg emission limit.
- Conducting a quarterly fuel analysis for each type of fuel burned if your initial compliance demonstration shows that the Hg constituents in the fuel or fuel mixture are greater than half of your boiler's Hg emission limit. However, if your boiler's initial compliance demonstration shows that the Hg constituents in the fuel or fuel mixture are less than or equal to half of the limit, you may choose to conduct fuel analysis sampling for Hg every 12 months but must comply with all operating limits and monitoring requirements.[6]

[6] The provision that requires further fuel analysis sampling for Hg every 12 months for coal-fired boilers with initial compliance demonstrations showing that the Hg constituents in their fuel or fuel mixture are equal to or less than half of the Hg emission limit replaced the February 2013 final rule's provision that eliminated further fuel analysis sampling for Hg for such boilers. New or reconstructed boilers that commenced construction or reconstruction on or before September 14, 2016 and that previously demonstrated that the Hg constituents in their fuel or fuel mixture were

- Conducting a fuel analysis before burning a new type of fuel or mixture. You must recalculate the Hg emission rate using §63.11211(c) and Equation 1 of subpart JJJJJJ. The Hg emission rate for the new type of fuel or fuel mixture must be less than your boiler's emission limit.

To complete each fuel analysis, you must follow §63.11213 and Table 5 in subpart JJJJJJ, including:

- Taking a minimum of three composite fuel samples for each fuel type per Table 5 in subpart JJJJJJ. Each composite sample must consist of at least three samples collected at approximately equal intervals during a two-hour period.
- Determining the concentration of Hg in the fuel in units of pounds per million Btu of each composite sample for each fuel type per Table 5 in subpart JJJJJJ.

3.5.7 Establish Operating Limits during the Performance Test

During the three-run performance stack test(s), you must establish operating limits for your air pollution control device(s). Table 6 of subpart JJJJJJ specifies how to establish operating parameters.

Wet Scrubber:

- Establish operating limits for minimum scrubber pressure drop and minimum scrubber liquid flow rate. If you use a wet scrubber and do separate stack tests for PM and Hg, you must establish one set of operating limits. If you conduct multiple stack tests, you must set the operating limits at the highest minimum values established during the multiple tests.

Electrostatic Precipitator (ESP):

- Establish operating limits for the minimum total secondary electric power (secondary voltage and secondary current).

Dry Sorbent or Activated Carbon Injection:

- Establish operating limits for the minimum dry sorbent or activated carbon injection rate.

Fabric Filter Bag Leak Detection System:

- Install, maintain, calibrate and operate the bag leak detection system as specified in §63.11224(f).
- Operate the fabric filter without the bag leak detection system alarm sounding more than 5 percent of the operating time during a 6-month period.

Oxygen:

- Operating limits are not required for boilers with CO/oxygen CEMS.
- All other boilers must establish an operating limit for the minimum oxygen level.

Operating Load:

- Establish the operating load operating limit specified in Table 3 to subpart JJJJJJ.

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equal to or less than half of the Hg emission limit are provided 12 months (i.e., September 14, 2017) before they are required to conduct fuel analysis sampling for Hg.

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 to subpart JJJJJJ.

Opacity (operating limit option for boilers with fabric filters or ESP):

- Collect opacity monitoring system data according to §63.11224(e) and §63.11221.
- 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 according to §63.11224(f) and §63.11222(a)(4).
- Operate the fabric filter so the bag leak detection system alarm sounds less than 5 percent of the operating time during a 6-month period.
- Initiate corrective action within one 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 30-day rolling averages.
- Maintain 30-day rolling averages at or above the operating limits established during the performance test.

Dry Scrubber Sorbent or Activated Carbon Injection Rate:

- Collect injection rate CMS data.
- Calculate 30-day rolling average.
- Maintain 30-day rolling average at or above the operating limit established during the performance test.

ESP Total Secondary Electric Power:

- Collect total secondary electric power CMS data.
- Calculate 30-day rolling average.
- Maintain 30-day rolling average at or above the operating limit established during the performance test.

Fuel Pollutant Content:

- Only burn the fuel types and fuel mixtures used to demonstrate compliance.
- Keep monthly records of fuel use according to §63.11222(a)(2) and §63.11225(b)(4).

Oxygen Content:

- Requirement doesn't apply to boilers with CO/oxygen CEMS.

- Requirement doesn't apply to boilers with oxygen trim systems since trim system will be set to the level specified in §63.11224(a)(7).
- Continuously monitor the oxygen content of flue gas according to §63.11224.
- Calculate 30-day rolling average.
- Maintain 30-day rolling average at or above the operating limit established during the performance test.

CO Emissions (compliance option using CO/oxygen CEMS):

- Continuously monitor the CO concentration in the combustion exhaust according to §63.11224 and §63.11221.
- Correct the data to 3 percent oxygen and calculate 1-hour averages.
- Calculate 10-day rolling average.
- Maintain the 10-day rolling average at or below the CO emission limit in Table 1 to subpart JJJJJJ.

Operating Load:

- Collect operating load data (fuel feed rate or steam generation data) every 15 minutes.
- Calculate 30-day rolling average.
- Maintain 30-day rolling average at or below the operating limit established during the 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*** collected during the following periods to demonstrate compliance:

- Periods of startup and shutdown
- 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, as applicable, calibration checks, required zero and span adjustments, and scheduled CMS maintenance as defined in your site-specific monitoring plan.

Any such periods must be reported per §63.11225.

You must complete monitoring system repairs due to monitoring system malfunctions or out-of-control periods and return the monitoring system to operation as quickly as possible. Failure to collect required data is a deviation of the monitoring requirements (see definition of deviation in §63.11237).

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.

3.5.9 CMS Installation, Operation, and Maintenance Requirements

You must comply with the CMS requirements in §63.11224 including:

CO limit:

- If your boiler has a CO limit, you must install, operate, and maintain an oxygen analyzer system to monitor oxygen in the boiler flue gas, boiler firebox, or other appropriate intermediate location, or
- You must install, operate, and maintain a CEMS for CO and oxygen to monitor the CO level at the outlet of the boiler, after any add-on controls or flue gas recirculation system and before release to the atmosphere.

Opacity limit:

- If you choose to comply with an opacity limit instead 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 choose to use an opacity limit.

All other CMS:

- If you have an operating limit that requires a CMS, you must install, operate, and maintain the CMS.

3.6 Task 4: Keep Records

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

3.6.1 General Requirements for Records and Certifications

You must keep a copy of each notification and report prepared to comply with this rule. You must also keep all documentation supporting any submitted documents. See sections 3.6.2 and 3.6.3 of this guide for details on the records required for your boiler, based on if work management practices or emissions limits apply.

Your records must be readily available for review. You must keep each record for 5 years after the date of the recorded action. You must keep each record on site or accessible from a central location by computer or other means of instant access at the 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:

- Each notification and report, and all their supporting documentation.
- Records to document conformance with the work practices, emission reduction measures, and management practices.
- 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.
- For each boiler that meets the definition of seasonal boiler, you must keep records of days of operation per year.
- For each boiler that meets the definition of limited-use boiler, you must keep a copy of the federally enforceable permit that limits the annual capacity factor to less than or equal to 10 percent and records of fuel use for the days the boiler is operating.

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 requested by the delegated authority.

For boilers that are subject only to the energy assessment requirement and/or a requirement to conduct a biennial or 5-year tune-up and are not subject to emission or operating limits, you may prepare only a biennial or 5-year Compliance Certification Report that includes only the information specified in items 1

and 2 below. Reports should be prepared by March 1 of the year after the calendar year during which a tune-up is completed.

The report must contain:

1. The company name and address.
2. A statement by a responsible official certifying the truth, accuracy, completeness of the certification, and a statement of if the source has complied with all the relevant standards and requirements of the rule. The statement needs to include the official's name, title, phone number, e-mail address, and signature. Your notification must also include the following certification(s) of compliance, as applicable, and signed by a responsible official:
   i. "This facility complies with the requirements in §63.11223 to conduct a biennial or 5-year tune-up, as applicable, of each boiler."
   ii. For units that do not qualify for the statutory exemption in section 129(g)(1) of the Clean Air Act: "No secondary materials that are solid waste were combusted in any affected unit."
   iii. "This facility complies with the requirement in §63.11214(d) and §63.11223(g) to minimize the boiler's time spent during startup and shutdown and to conduct 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. 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 of this guide for a summary of these limits, respectively). Include a description of deviations, the time periods during which the deviations occurred, and any corrective actions taken.
4. If subject to an emission limit, provide for each calendar month within the reporting period:
   - The total fuel use by each boiler, including a description of the fuel, if the fuel has received a non-waste determination by you or EPA through a petition process to be a non-waste, if 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/Management Practices Recordkeeping

Startups and Shutdowns

You need to keep a copy of the Notification of Compliance Status report in your records for each boiler subject to an emission limit(s). This report certifies that you conducted startups and shutdowns according to the manufacturer's recommended procedures. You will also need to keep records of each subsequent annual, biennial, or 5-year Compliance Certification Report, which certifies that you continued to conduct startups and shutdowns according to the manufacturer's recommended procedures.

Tune-up

- ***Initial Tune-up for Existing Affected Boilers***: You must conduct an initial performance tune-up for each existing boiler with tune-up requirements and you must include a signed statement in the Notification of Compliance Status report certifying that you conducted a tune-up of the boiler.
- ***Subsequent Tune-ups for Existing Affected Boilers*****:** You must conduct a performance tune-up and prepare a biennial (every two years) or 5-year, as applicable, Compliance Certification Report that certifies 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.

- ***Tune-ups for New Affected Boilers*:** You must conduct a performance tune-up and prepare a biennial (every two years) or 5-year, as applicable, Compliance Certification Report that certifies 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. An initial tune-up is not required for new boilers (see Section 3.4.2 of this guide).
- For all tune-ups, you must keep records of the date of the tune-up, the procedures followed, and the manufacturer's specifications to which the boiler was tuned. You must keep records of the type and amount of fuel used over the 12 months prior to each tune-up, but only if the unit was physically and legally capable of using more than one type of fuel during that period. The records 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 tune-up record forms can be found at https://www.epa.gov/stationary-sources-air-pollution/compliance-industrial-commercial-and-institutional-area-source.

Energy Assessment

Include a signed certification in the Notification of Compliance Status report that an energy assessment of the boiler and its energy use systems was done. You must keep a copy of 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, fabric filters and fuel type/amount.

Fuel Analysis

- Keep a copy of all calculations and supporting documentation that were done to demonstrate compliance with the Hg emission limit. This should include results of any fuel analyses. You can use the results from one fuel analysis for multiple boilers if they are all burning the same fuel.
- Maintain records of the type and amount of all fuels burned in each boiler during the reporting period to show that all fuel types and mixtures of fuels would result in lower emissions of Hg than the applicable emission limit (if you demonstrate compliance through fuel analysis).

Site-specific Test Plan

- Prepare the site-specific test plan at least 60 days before conducting a required performance test (see specific plan requirements in Section 3.5.3 of this guide).
- 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 3.5.4 of this guide).

Inspection and Monitoring Data

Keep records of all inspection and monitoring data for each required event, including:

- Date, place, and time of the event.

- Person conducting the event.
- Technique or method used.
- Operating conditions during the event.
- 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, include:

- Records of the bag leak detection system output.
- Records of bag leak detection system adjustments, including the date and time of the adjustment, the initial bag leak detection system settings, and the final bag leak detection system settings.
- 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 sounded.

Fuel Type and Amount

All boilers subject to an emission limit should keep records documenting the fuel type(s) used monthly by each boiler including:

- The total fuel use amount with units of measure.
- A description of the fuel, including if the fuel has received a non-waste determination by you or EPA. For boilers that burn non-hazardous secondary materials that have been determined not to be solid waste under §241.3(b)(1), you must keep a record of how the secondary material meets each of the legitimacy criteria in §241.3(d)(1). If you burn a fuel that has been processed from a discarded non-hazardous secondary material under §241.3(b)(4), you must keep records of how the operations that produced the fuel satisfies the definition of processing in §241.2 and each of the legitimacy criteria in §241.3(d)(1). If the fuel received a non-waste determination through the petition process submitted under §241.3(c), you must keep a record of how the fuel satisfies the requirements of the petition process. For boilers that burn non-hazardous secondary materials per §241.4, you must keep records that the material is a listed non-waste under §241.4(a).

For boilers that demonstrate compliance with a Hg emission limit through stack testing, you must keep records of the type and amount of all fuels burned in each boiler during the reporting period. These records must demonstrate that all fuel types and mixtures of fuels burned would result in lower fuel input of Hg 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 the 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' notice before you start combustion of solid waste. The notification must identify:

- 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 subpart JJJJJJ
- The date that you became subject to any currently applicable emission limits
- The date upon which you will start combusting solid waste

3.7.2 Switching Fuels/Making Physical Changes/Taking Permit Limits

If you switch fuels or make a physical change to your boiler and it puts your boiler in a different subcategory within subpart JJJJJJ, in the boiler becoming subject to subpart JJJJJJ, or in the boiler switching out of subpart JJJJJJ, or you take a permit limit that results in you becoming subject to subpart JJJJJJ or no longer being subject to subpart JJJJJJ, you must provide notice of the date upon which you switched fuels, made the physical change, or took a permit limit within 30 days of the change. The notification must identify:

- The name of the owner or operator of the boiler, the location of the source, the boiler(s) that have switched fuels, were physically changed, or took a permit limit, and the date of the notice.
- The date upon which the fuel switch, physical change, or permit limit occurred.

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 stop combusting solid waste, then you must be in compliance with this subpart on the effective date of the waste to fuel switch as specified in §60.2145(a)(2) and (3) of subpart CCCC or §60.2710(a)(2) and (3) of subpart DDDD.

3.7.3 Notification of Affirmative Defense

The September 14, 2016 final action for area source boilers removed the affirmative defense to civil penalties for violations caused by malfunctions. Thus, the final rule does not include a regulatory affirmative defense provision.

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. Section 3.6.2 of this guide summarizes the records that must be kept for work practice standards or management practices.

3.7.5 Stack Test Performance Data Reporting:

If your boiler is subject to stack testing, you must:

- Submit the results of performance tests, including any fuel analyses, within 60 days after the date of completing each performance test, to the EPA via CEDRI (accessed through EPA's CDX (www.epa.gov/cdx)). Submit the data in a file format generated through the use of EPA's Electronic Reporting Tool (ERT) or an alternate electronic file format consistent with the extensible markup language (XML) schema listed on the EPA's ERT web site (see https://www3.epa.gov/ttn/chief/ert/ert_info.html). Only data collected using test methods on the ERT website must be submitted electronically. You must also submit these reports to the delegated authority if requested. For any performance test using test methods not on the ERT website, you must submit the results on paper to the Administrator at the appropriate address listed in §63.13.
- If you are using data from a previously conducted emission test to document compliance with emission standards and operating limits, you must include the information in Table 5 of this guide in the Notification of Compliance Status.
- Within 60 days after the date of completing each CEMS performance evaluation as defined in §63.2, you must submit relative accuracy test audit (RATA) data to the EPA via CEDRI (accessed through EPA's CDX). Submit the data in a file format generated through the use of the EPA's ERT or an alternate file format consistent with the XML schema listed on the EPA's ERT web site. Only RATA pollutants that can be documented with the ERT (as listed on the ERT website) are subject to this requirement. For any performance evaluations with no corresponding RATA pollutants listed on the ERT website, you must submit the results of the evaluation on paper to the Administrator at the appropriate address listed in §63.13.
- If you conduct any opacity or visible emission observations, or other monitoring procedures, you must submit that data to the Administrator at the appropriate address listed in §63.13.
- You must submit an Annual Compliance Report if your boiler experiences any deviations. See Section 3.6.1 of this guide for details.

4.0 OTHER INFORMATION

4.1 Benefits and Costs

At publication of final air emissions standards in the Federal Register on March 21, 2011, the EPA estimates that there are approximately 183,000 existing area source boilers at 92,000 facilities in the United States and that approximately 6,800 new area source boilers will be installed over the next 3 years. EPA also estimates that the value of the benefits for reduced exposure to fine particles are $210 million to $520 million in the year 2015. 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.

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 any 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).

The final rule will reduce emissions of a number of toxic air pollutants including Hg, 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, Hg 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 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 assessment 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 assessment. The Department of Energy plans to provide information to affected 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 assessment (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: https://www.epa.gov/compliance/resources-and-guidance-documents-compliance-assistance

EPA National Compliance Assistance Centers: https://www.epa.gov/compliance/compliance-assistance-centers

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

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

EPA Small Business Gateway: https://www.epa.gov/smallbusiness/

EPA Environmental Regulations and Laws: https://www.epa.gov/laws-regulations/regulations

EPA Pollutants and Sources: https://www3.epa.gov/airtoxics/pollsour.html

EPA Air Toxics Website: https://www3.epa.gov/ttn/atw/

Emissions Standards for Boilers and Process Heaters and Commercial / Industrial Solid Waste Incinerators https://www.epa.gov/boilers

Preferred and Alternative Methods for Estimating Air Emissions from Boilers: https://www.epa.gov/sites/production/files/2015-08/documents/ii02.pdf

EPA Asbestos and Small Business Ombudsman: https://www.epa.gov/resources-small-businesses/asbestos-small-business-ombudsman

EPA Small Business Compliance and Enforcement: https://www.epa.gov/compliance/small-business-compliance https://www.epa.gov/enforcement/small-businesses-and-enforcement

EPA Compliance Incentives and Auditing: https://www.epa.gov/compliance/epas-audit-policy

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 have 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. Initial information is available at http://www.energy.gov/eere/amo/chp-technical-assistance-partnerships-chp-taps.

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 and management practices.

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/. 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 notices containing the rule and additional information are available online at: https://www.epa.gov/stationary-sources-air-pollution/industrial-commercial-and-institutional-area-source-boilers.

A link to the March 21, 2011 boiler area source rule text and General Provisions in the Electronic Code of Federal Regulations (e-CFR) is available online. The boiler area source rule text in e-CFR has been updated to reflect the rule adjustments published on September 14, 2016.

Other background information is also available at https://www.epa.gov/stationary-sources-air-pollution/compliance-industrial-commercial-and-institutional-area-source 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 JJJJJJ:
NESHAP for Area Sources: Industrial, Commercial, and Institutional Boilers

		Task 1 Submit Initial Notifications		Task 2 Comply with Work Practice Standards			Task 3 Meet Emission Limits			Task 4	Task 5
Row	Subcategory	Submit Initial Notification of Applicability	Submit Notification of Compliance Status	Minimize Startup/ Shutdown per Mfg. Procedures	Conduct Performance Tune-up	Conduct Energy Assessment	For this pollutant	Initial Compliance	Continuous Compliance	Record	Submit Other Notifications and Reports
	ALL Gas-Fired Boilers (ALL sizes, new or existing)						**ALL Gas-Fired Boilers (ALL sizes, new or existing)**				
1	Gas	No	No	No	No	No	None			None	None
	Existing - Small (< 10MMBtu/hr)						**Existing - Small (< 10MMBtu/hr)**				
2	All fuel types other than gas (biomass, coal, oil)	Yes. Submit by 1/20/2014. (§63.11225(a)(2))	Yes. Submit by 7/19/2014. (§63.11225(a)(4))	No	Yes. Biennial or every 5 years. First tune-up completed by 3/21/2014. Subsequent tune-ups should be completed no later than 25 months or 61 months, as applicable, after the previous tune-up. (§63.11223(a)-(f))	No	None			Biennial or 5-year compliance certification report. Prepare first report by 3/1/2015. Subsequent reports prepared by March 1 of the year following the calendar year during which a biennial or 5-year tune-up, as applicable, is completed. (§63.11225(b)) 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)) For seasonal boilers, records of days of operation each year. (§63.11225(c)(2)(v)) For limited-use boilers, a copy of the federally enforceable permit and records of fuel use for the days the boiler is operating. (§63.11225(c)(2)(vi)) Records of all submitted notifications. (§63.11225(c)(1))	Notification to combust solid waste. Submit 30 days prior to combusting solid waste. (§63.11225(f)) Notification of switching fuels, making physical changes or taking permit limits. Submit within 30 days of switching fuels, making physical changes or taking permit limits. (§63.11225(g))
	Existing - Large (≥ 10MMBtu/hr)						**Existing - Large (≥ 10MMBtu/hr)**				
3	Biomass	Yes. Submit by 1/20/2014. (§63.11225(a)(2))	Yes. Submit by 7/19/2014 for tune-up and energy assessment. (§63.11225(a)(4))	No	Yes. Biennial or every 5 years. First tune-up completed by 3/21/2014. Subsequent tune-ups should be completed no later than 25 months or 61 months, as applicable, after the previous tune-up. (§63.11223(a)-(f))	Yes. By 3/21/2014. (Table 2)	None			Biennial or 5-year compliance certification report. Prepare first report by 3/1/2015. Subsequent reports prepared by March 1 of the year following the calendar year during which a biennial or 5-year tune-up, as applicable, is completed. (§63.11225(b)) 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)) Copy of the Energy Assessment Report. (§63.11225(c)(2)(iii)) For seasonal boilers, records of days of operation each year. (§63.11225(c)(2)(v)) For limited-use boilers, a copy of the federally enforceable permit and records of fuel use for the days the boiler is operating. (§63.11225(c)(2)(vi)) Records of all submitted notifications. (§63.11225(c)(1))	Notification to combust solid waste. Submit 30 days prior to combusting solid waste. (§63.11225(f)) Notification of switching fuels, making physical changes or taking permit limits. Submit within 30 days of switching fuels, making physical changes or taking permit limits. (§63.11225(g))
										Biennial or 5-year compliance certification report. Prepare first report by 3/1/2015. Subsequent reports prepared by March 1 of the year following the calendar year during which a biennial or 5-year tune-up, as applicable, is completed. (§63.11225(b))	Notification to combust solid waste. Submit 30 days prior to combusting solid waste. (§63.11225(f))

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

		Task 1 Submit Initial Notifications		Task 2 Comply with Work Practice Standards			Task 3 Meet Emission Limits			Task 4	Task 5
Row	Subcategory	Submit Initial Notification of Applicability	Submit Notification of Compliance Status	Minimize Startup/ Shutdown per Mfg. Procedures	Conduct Performance Tune-up	Conduct Energy Assessment	For this pollutant	Initial Compliance	Continuous Compliance	Record	Submit Other Notifications and Reports
4	Oil	Yes. Submit by 1/20/2014. (§63.11225(a)(2))	Yes. Submit by 7/19/2014 for tune-up and energy assessment. (§63.11225(a)(4))	No	Yes. Biennial or every 5 years. First tune-up completed by 3/21/2014. Subsequent tune-ups should be completed no later than 25 months or 61 months, as applicable, after the previous tune-up. (§63.11223(a)-(f))	Yes. By 3/21/2014. (Table 2)	None			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))	Notification of switching fuels, making physical changes or taking permit limits. Submit within 30 days of switching fuels, making physical changes or taking permit limits. (§63.11225(g))
										Copy of the Energy Assessment Report. (§63.11225(c)(2)(iii))	
										For seasonal boilers, records of days of operation each year. (§63.11225(c)(2)(v))	
										For limited-use boilers, a copy of the federally enforceable permit and records of fuel use for the days the boiler is operating. (§63.11225(c)(2)(vi))	
										Records of all submitted notifications. (§63.11225(c)(1))	
	Existing - Large (≥ 10MMBtu/hr)						**Existing - Large (≥ 10MMBtu/hr)**				
5	Coal (excluding limited-use boilers)	Yes. Submit by 1/20/2014. (§63.11225(a)(2))	Yes. Submit within 60 days of conducting performance test for mercury and CO, or no later than 11/16/2014, 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(g))	Yes. Beginning 3/21/2014. (§63.11223(g), §63.11214(d))	No	Yes. By 3/21/2014. (Table 2)	Hg	Conduct performance (stack) test (§63.11212, Table 4, and §63.7(c), (d), (f)) by 9/17/2014.	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))	Notification to combust solid waste. Submit 30 days prior to combusting solid waste. (§63.11225(f))
								OR		Records of all submitted notifications. (§63.11225(c)(1))	Notification of switching fuels, making physical changes or taking permit limits. Submit within 30 days of switching fuels, making physical changes or taking permit limits. (§63.11225(g))
								Conduct fuel analysis (§63.11213, Table 5 and §63.11211(c)) by 9/17/2014.	If Hg limit compliance demonstrated based on fuel analysis, conduct fuel analysis for each fuel type burned quarterly unless when demonstrating initial compliance, the Hg constituents in the fuel are ≤ to half of the Hg emission limit. Those boilers may choose to conduct further fuel sampling every 12 months. (§63.11213 and §63.11220(d))	Copy of the Energy Assessment Report. (§63.11225(c)(2)(iii))	Deviations from emission limits and corrective actions taken during reporting period. Submit by March 15 of each calendar year where deviations occurred. (§63.11225 (b)(3))
								Establish operating limits (§63.11222, Table 6 and §63.11211(b)) by 9/17/2014.	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) by 9/17/2014.		Records of type and amount of all fuels burned in each boiler during reporting period. (§63.11225(c)(2)(iv))	
								Conduct performance (stack) test (§63.11212, Table 4, and §63.7(c), (d), (f)) by 9/17/2014.	Triennial stack test (§63.11220(a) and §63.11212), no more than 37 months after previous test.	Records of each boiler or control device malfunction occurrence and duration and actions taken to minimize emissions during malfunctions. (§63.11225(c)(4)-(5))	Submit results of performance tests, including fuel analyses, and results of CEMS performance evaluation RATA data to the EPA via CEDRI (accessed through EPA's CDX). File format must be generated using the ERT or an alternate format consistent with XML schema (https://www3.epa.gov/ttn/chief/ert/ert_info.html). Only data collected using test methods and pollutants supported by the ERT website must be submitted electronically. For any performance
								Establish operating limits (§63.11222, Table 6 and §63.11211(b)) by 9/17/2014.		Records of monitoring data and maintenance. (§63.11225(c)(6))	
								Install oxygen analyzer system (§63.11224(a))		Site-specific test plan prepared 60 days before each stack test. (§63.11212(a), and §63.7(c))	

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

		Task 1 Submit Initial Notifications		Task 2 Comply with Work Practice Standards			Task 3 Meet Emission Limits			Task 4	Task 5
Row	Subcategory	Submit Initial Notification of Applicability	Submit Notification of Compliance Status	Minimize Startup/ Shutdown per Mfg. Procedures	Conduct Performance Tune-up	Conduct Energy Assessment	For this pollutant	Initial Compliance	Continuous Compliance	Record	Submit Other Notifications and Reports
							CO	by 9/17/2014.		Site-specific monitoring plan prepared 60 days before CMS performance evaluation for each CMS. (§63.11205(c)(1) through (3))	submitted electronically. For any performance tests or evaluations using test methods or pollutants not on the ERT website, submit the results on paper to the Administrator (§63. 13). Submittal must be within 60 days of completing each performance test or evaluation. (§63. 11225(e))
								OR			
								Install a CEMS for CO and oxygen (§63.11224(a)) by 9/17/2014.		Annual compliance certification report. Prepare first report by 3/1/2015. Thereafter, by March 1 of each calendar year. (§63.11225(b))	
								Conduct CMS performance evaluations (§63.11224) by 9/17/2014.	Operate monitoring systems and collect data at all required intervals (§63.11221 and Table 7).		
6	Limited-use coal	Yes. Submit by 1/20/2014. (§63.11225(a)(2))	Yes. Submit by 7/19/2014. (§63.11225(a)(4))	No	Yes. Every 5 years. First tune-up completed by 3/21/2014. Subsequent tune-ups should be completed no later than 61 months after the previous tune-up. (§63.11223(a)-(f))	No	None			5-year compliance certification report. Prepare first report by 3/1/2015. Subsequent reports prepared by March 1 of the year following the calendar year during which a 5-year tune-up is completed. (§63.11225(b))	Notification to combust solid waste. Submit 30 days prior to combusting solid waste. (§63.11225(f))
										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))	Notification of switching fuels, making physical changes or taking permit limits. Submit within 30 days of switching fuels, making physical changes or taking permit limits. (§63.11225(g))
										A copy of the federally enforceable permit and records of fuel use for the days the boiler is operating. (§63.11225(c)(2)(vi))	
										Records of all submitted notifications. (§63.11225(c)(1))	
	New - Small (< 10MMBtu/hr)						**New - Small (< 10MMBtu/hr)**				
7	All fuel types other than gas (biomass, coal, oil)	Yes. Submit within 120 days after startup. (§63.11225(a)(2))	No	No	Yes. Biennial or every 5 years. First tune-up completed no later than 25 months or 61 months, as applicable, after startup. Subsequent tune-ups should be completed no later than 25 months or 61 months, as applicable, after the previous tune-up. (§63.11223(a)-(f))	No	None			Biennial or 5-year compliance certification report. Prepare reports by March 1 of the year following the calendar year during which a biennial or 5-year tune-up, as applicable, is completed. (§63.11225(b))	Notification to combust solid waste. Submit 30 days prior to combusting solid waste. (§63.11225(f))
										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))	Notification of switching fuels, making physical changes or taking permit limits. Submit within 30 days of switching fuels, making physical changes or taking permit limits. (§63.11225(g))
										For seasonal boilers, records of days of operation each year. (§63.11225(c)(2)(v))	
										For limited-use boilers, a copy of the federally enforceable permit and records of fuel use for the days the boiler is operating. (§63.11225(c)(2)(vi))	
										Records of all submitted notifications. (§63.11225(c)(1))	
	New - Large (≥ 10MMBtu/hr)						**New - Large (≥ 10MMBtu/hr)**				
								Conduct performance (stack) test (§63.11212, Table 4, and 63.7(c), (d), (f)) within 180 days of 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))	Notification to combust solid waste. Submit 30 days prior to combusting solid waste. (§63.11225(f))
								OR		Records of all submitted notifications. (§63.11225(c)(1))	

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

		Task 1 Submit Initial Notifications		Task 2 Comply with Work Practice Standards			Task 3 Meet Emission Limits			Task 4	Task 5
Row	Subcategory	Submit Initial Notification of Applicability	Submit Notification of Compliance Status	Minimize Startup/ Shutdown per Mfg. Procedures	Conduct Performance Tune-up	Conduct Energy Assessment	For this pollutant	Initial Compliance	Continuous Compliance	Record	Submit Other Notifications and Reports
8	Coal (excluding limited-use boilers)	Yes. Submit within 120 days after startup. (§63.11225(a)(2))	Yes. Submit within 60 days of completing the performance tests for Hg, CO, PM. (§63.11225(a)(4)) Include a statement on Startup and Shutdown according to manufacturer specifications. (§63.11223(g))	Yes. Beginning upon startup of the boiler. (§63.11223(g), §63.11214(d))	No	No	Hg	Conduct fuel analysis (§63.11213, Table 5 and §63.11211(c)) within 180 days of startup.	If Hg limit compliance demonstrated based on fuel analysis, conduct fuel analysis for each fuel type burned quarterly unless when demonstrating initial compliance, the Hg constituents in the fuel are ≤ to half of the Hg emission limit. Those boilers may choose to conduct further fuel sampling every 12 months. (§63.11213 and §63.11220(d))	For sources demonstrating compliance with fuel analysis, records of all calculation and supporting documentation to demonstrate compliance with emission limits. (§63.11225(c)(3))	Notification of switching fuels, making physical changes or taking permit limits. Submit within 30 days of switching fuels, making physical changes or taking permit limits. (§63.11225(g))
								Establish operating limits (§63.11222, Table 6 and §63.11211(b)) within 180 days of 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. (§63.11225(c)(2)(iv))	Deviations from emission limits and corrective actions taken during reporting period. Submit by March 15 of each calendar year where deviations occurred. (§63.11225 (b)(3))
								Conduct CMS performance evaluations (§63.11224) within 180 days of startup.			
							CO	Conduct performance (stack) test (§63.11212, Table 4, and §63.7(c), (d), (f)) within 180 days of startup.	Triennial stack test (§63.11220(a) and §63.11212), no more than 37 months after previous test.	Records of each boiler or control device malfunction occurrence and duration and actions taken to minimize emissions during malfunctions. (§63.11225(c)(4)-(5))	Submit results of performance tests, including fuel analyses, and results of CEMS performance evaluation RATA data to the EPA via CEDRI (accessed through EPA's CDX). File format must be generated using the ERT or an alternate format consistent with XML schema (https://www3.epa.gov/ttn/chief/ert/ert_info.html). Only data collected using test methods and pollutants supported by the ERT website must be submitted electronically. For any performance tests or evaluations using test methods or pollutants not on the ERT website, submit the results on paper to the Administrator (§63. 13). Submittal must be within 60 days of completing each performance test or evaluation. (§63. 11225(e))
								Establish operating limits (§63.11222, Table 6 and §63.11211(b)) within 180 days of startup.			
								Install oxygen analyzer system (§63.11224(a)) within 180 days of startup.		Records of monitoring data and maintenance. (§63.11225(c)(6))	
								OR		Site-specific test plan prepared 60 days before each stack test. (§63.11212(a), and §63.7(c))	
								Install a CEMS for CO and oxygen (§63.11224(a)) within 180 days of startup.		Site-specific monitoring plan prepared 60 days before CMS performance evaluation for each CMS. (§63.11205(c)(1) through (3))	
								Conduct CMS performance evaluations (§63.11224) within 180 days of startup.	Operate monitoring systems and collect data at all required intervals. (§63.11221 and Table 7)	Annual compliance certification report. Prepare first report by March 1 of the calendar year immediately following start-up of the boiler. Subsequent reports prepared by March 1 of the next calendar year. (§63.11225(b))	
							PM	Conduct performance (stack) test (§63.11212, Table 4, and §63.7(c), (d), (f)) within 180 days of startup.	Triennial stack test (§63.11220(a) and §63.11212), no more than 37 months after previous test unless when demonstrating initial compliance, the PM emissions are ≤ to half of the PM emission limit. Those boilers may choose to conduct PM performance tests every fifth year. (§63.11220(b) and (c))		
								Establish operating limits (§63.11222, Table 6 and §63.11211(b)) within 180 days of startup.			
								Conduct CMS performance evaluations (§63.11224) within 180 days of startup.	Operate monitoring systems and collect data at all required intervals. (§63.11221 and Table 7)		
										5-year compliance certification report. Prepare reports by March 1 of the year following the calendar year during which a 5-year tune-up is completed. (§63.11225(b))	
					Yes. Every 5 years. First tune-up completed no later						Notification to combust solid waste. Submit 30 days prior to combusting solid waste. (§63.11225(f))

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

		Task 1 Submit Initial Notifications		Task 2 Comply with Work Practice Standards			Task 3 Meet Emission Limits			Task 4	Task 5
Row	Subcategory	Submit Initial Notification of Applicability	Submit Notification of Compliance Status	Minimize Startup/ Shutdown per Mfg. Procedures	Conduct Performance Tune-up	Conduct Energy Assessment	For this pollutant	Initial Compliance	Continuous Compliance	Record	Submit Other Notifications and Reports
9	Limited-use coal	Yes. Submit within 120 days after startup. (§63.11225(a)(2))	No	No	completed no later than 61 months after startup. Subsequent tune-ups should be completed no later than 61 months after the previous tune-up. (§63.11223(a)-(f))	No	None			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))	Notification of switching fuels, making physical changes or taking permit limits. Submit within 30 days of switching fuels, making physical changes or taking permit limits. (§63.11225(g))
										A copy of the federally enforceable permit and records of fuel use for the days the boiler is operating. (§63.11225(c)(2)(vi))	
										Records of all submitted notifications. (§63.11225(c)(1))	
New - Large (≥ 10MMBtu/hr)							**New - Large (≥ 10MMBtu/hr)**				
10	Biomass (excluding seasonal boilers and limited-use boilers)	Yes. Submit within 120 days after startup. (§63.11225(a)(2))	Yes. Submit within 60 days of completing the performance test for PM. (§63.11225(a)(4)) Include a statement on Startup and Shutdown according to manufacturer specifications> (§63.11223(g))	Yes. Beginning upon startup of the boiler. (§63.11223(g), §63.11214(d))	Yes. Biennial (with exception noted below). First tune-up completed no later than 25 months after start-up, Subsequent tune-ups should be completed no later than 25 months after the previous tune-up. If using an oxygen trim system, then 5-year tune-ups. First tune-up completed no later than 61 months after start-up, Subsequent tune-ups should be completed no later than 61 months after the previous tune-up. (§63.11223(a)-(f))	No	PM	Conduct performance (stack) test (§63.11212, Table 4, and §63.7(c), (d), (f)) within 180 days of startup.	Triennial stack test (§63.11220(a) and §63.11212), no more than 37 months after previous test unless when demonstrating initial compliance, the PM emissions are ≤ to half of the PM emission limit. Those boilers may choose to conduct PM performance tests every fifth year. (§63.11220(b and (c))	Annual compliance certification report. Prepare first report by March 1 of the calendar year immediately following start-up of the boiler. Subsequent reports prepared by March 1 of the next calendar year. (§63.11225(b))	Notification to combust solid waste. Submit 30 days prior to combusting solid waste. (§63.11225(f))
										Records of dates and procedures for each boiler tune up. (§63.11225(c)(2)(i) and §63.11223(b)(6))	Notification of switching fuels, making physical changes or taking permit limits. Submit within 30 days of switching fuels, making physical changes or taking permit limits. (§63.11225(g))
								Establish operating limits (§63.11222, Table 6 and §63.11211(b)) within 180 days of startup.		Records of fuel use and non-waste determinations. (§63.11225(c)(2)(ii))	
								Conduct CMS performance evaluations (§63.11224) within 180 days of startup.	Operate monitoring systems and collect data at all required intervals. (§63.11221 and Table 7)	Records of all submitted notifications. (§63.11225(c)(1))	
										Records of type and amount of all fuels burned in each boiler during reporting period. (§63.11225(c)(2)(iv))	Deviations from emission limits and corrective actions taken during reporting period. Submit by March 15 of each calendar year where deviations occurred. (§63.11225 (b)(3))
										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)	Submit results of performance tests, including fuel analyses, and results of CEMS performance evaluation RATA data to the EPA via CEDRI (accessed through EPA's CDX). File format must be generated using the ERT or an alternate format consistent with XML schema (https://www3.epa.gov/ttn/chief/ert/ert_info.html). Only data collected using test methods and pollutants supported by the ERT website must be submitted electronically. For any performance tests or evaluations using test methods or pollutants not on the ERT website, submit the results on paper to the Administrator (§63. 13). Submittal must be within 60 days of completing each performance test or evaluation. (§63. 11225(e))
										Site-specific test plan prepared 60 days before each stack test. (§63.11212(a), and §63.7(c))	
										Site-specific monitoring plan prepared 60 days before CMS performance evaluation for each CMS. (§63.11205(c)(1) through (3))	

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

		Task 1 Submit Initial Notifications		Task 2 Comply with Work Practice Standards			Task 3 Meet Emission Limits			Task 4	Task 5
Row	Subcategory	Submit Initial Notification of Applicability	Submit Notification of Compliance Status	Minimize Startup/ Shutdown per Mfg. Procedures	Conduct Performance Tune-up	Conduct Energy Assessment	For this pollutant	Initial Compliance	Continuous Compliance	Record	Submit Other Notifications and Reports
11	Oil[1] (excluding seasonal boilers and limited-use boilers)	Yes. Submit within 120 days after startup. (§63.11225(a)(2))	Yes. Submit within 60 days of completing the performance test for PM §63.11225(a)(4)). Include a statement on Startup and Shutdown according to manufacturer specifications. (§63.11223(g))	Yes. Beginning upon startup of the boiler. (§63.11223(g), §63.11214(d))	Yes. Biennial (with exception noted below). First tune-up completed no later than 25 months after start-up, Subsequent tune-ups should be completed no later than 25 months after the previous tune-up. If boiler has a heat input capacity of equal to or less than 5 MMBtu/hr or is using an oxygen trim system, then 5-year tune-ups. First tune-up completed no later than 61 months after start-up, Subsequent tune-ups should be completed no later than 61 months after the previous tune-up. (§63.11223(a)-(f))	No	PM	Conduct performance (stack) test (§63.11212, Table 4, and §63.7(c), (d), (f)) within 180 days of startup.	Triennial stack test (§63.11220(a) and §63.11212), no more than 37 months after previous test unless when demonstrating initial compliance, the PM emissions are ≤ to half of the PM emission limit. Those boilers may choose to conduct PM performance tests every fifth year. (§63.11220(b) and (c))	Annual compliance certification report. Prepare first report by March 1 of the calendar year immediately following start-up of the boiler. Subsequent reports prepared by March 1 of the next calendar year. (§63.11225(b))	Notification to combust solid waste. Submit 30 days prior to combusting solid waste. (§63.11225(f))
										Records of dates and procedures for each boiler tune up. (§63.11225(c)(2)(i) and §63.11223(b)(6))	Notification ofswitching fuels, making physical changes or taking permit limits. Submit within 30 days of switching fuels, making physical changes or taking permit limits. (§63.11225(g))
										Records of fuel use and non-waste determinations. (§63.11225(c)(2)(ii))	Deviations from emission limits and corrective actions taken during reporting period. Submit by March 15 of each calendar year where deviations occurred. (§63.11225 (b)(3))
										Records of all submitted notifications. (§63.11225(c)(1))	
								Establish operating limits (§63.11222, Table 6 and §63.11211(b)) within 180 days of startup.		Records of type and amount of all fuels burned in each boiler during reporting period. (§63.11225(c)(2)(iv))	
								Conduct CMS performance evaluations (§63.11224) within 180 days of startup.	Operate monitoring systems and collect data at all required intervals. (§63.11221 and Table 7)	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))	Submit results of performance tests, including fuel analyses, and results of CEMS performance evaluation RATA data to the EPA via CEDRI (accessed through EPA's CDX). File format must be generated using the ERT or an alternate format consistent with XML schema (https://www3.epa.gov/ttn/chief/ert/ert_info.html). Only data collected using test methods and pollutants supported by the ERT website must be submitted electronically. For any performance tests or evaluations using test methods or pollutants not on the ERT website, submit the results on paper to the Administrator (§63. 13). Submittal must be within 60 days of completing each performance test or evaluation. (§63. 11225(e))
										Records of monitoring data and maintenance. (§63.11225(c)(6))	
										Site-specific test plan prepared 60 days before each stack test. (§63.11212(a), and §63.7(c))	
										Site-specific monitoring plan prepared 60 days before CMS performance evaluation for each CMS. (§63.11205(c)(1) through (3))	
11	Seasonal and limited-use biomass and	Yes. Submit within 120 days after startup.	No	No	Yes. Every 5 years. First tune-up completed no later than 61 months after startup. Subsequent tune-ups should be	No	None			5-year compliance certification report. Prepare reports by March 1 of the year following the calendar year during which a 5-year tune-up is completed. (§63.11225(b))	Notification to combust solid waste. Submit 30 days prior to combusting solid waste. (§63.11225(f))
										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)).	

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

		Task 1 Submit Initial Notifications		Task 2 Comply with Work Practice Standards			Task 3 Meet Emission Limits			Task 4	Task 5
Row	Subcategory	Submit Initial Notification of Applicability	Submit Notification of Compliance Status	Minimize Startup/ Shutdown per Mfg. Procedures	Conduct Performance Tune-up	Conduct Energy Assessment	For this pollutant	Initial Compliance	Continuous Compliance	Record	Submit Other Notifications and Reports
	oil	(§63.11225(a)(2))			completed no later than 61 months after the previous tune-up. (§63.11223(a)-(f))					For seasonal boilers, records of days of operation each year. (§63.11225(c)(2)(v)) A copy of the federally enforceable permit and records of fuel use for the days the boiler is operating. (§63.11225(c)(2)(vi)) Records of all submitted notifications. (§63.11225(c)(1))	Notification of switching fuels, making physical changes or taking permit limits. Submit within 30 days of switching fuels, making physical changes or taking permit limits. (§63.11225(g))

1 For new or reconstructed oil-fired boilers that combust only ultra-low-sulfur liquid fuel (i.e., distillate oil that has less than or equal to 15 ppm sulfur), you are not subject to the PM emission limit in Table 1 of this subpart providing you monitor and record on a monthly basis the type of fuel combusted. If you intend to burn a fuel other than ultra-low-sulfur liquid fuel or gaseous fuels as defined in §63.11237, you must conduct a performance test within 60 days of burning the new fuel. This provision finalized on September 14, 2016 replaced the February 2013 final rule's alternative PM standard for new oil-fired boilers that combust low-sulfur oil (i.e., containing less than or equal to 0.50 weight percent sulfur). New or reconstructed oil-fired boilers that commenced construction or reconstruction on or before September 14, 2016 and that are currently meeting the alternative PM standard for low-sulfur oil burning boilers are provided 3 years (i.e., September 14, 2019) before becoming subject to the PM emission limit.

Assume this boiler isn't required to have a permit under section 3005 of the Solid Waste Disposal Act or covered by subpart EEE of this part (e.g., I

1. Own or operate a boiler to provide steam, hot water, and/or electricity (a collection of all existing boilers within a subcategory or ea
2. Located at, or is part of, an area source of HAP
    2A. Not an affected source if boilers that are subject to another standard under 40 CFR part 63 or to a standard developed
    2B. Not used specifically for R&D (does not include boilers that solely or primarily provide steam (or heat) to a process or fc
    2C. Not a hot water heater (i.e., closed vessel with a capacity less than or equal to 120 U.S. gallons in which water is heated
e heat and haz waste sl 2D. Not a control device to comply with another subpart of this part; at least 50 percent of the heat input to the boiler is pr
3. Is your boiler gaseous-fired (i.e., not combination of solid fuels and burns liquid fuel only for periodic testing not to exceede 48-hrs/y
    GO TO ROW # 1
4. Existing source if you commenced construction or reconstruction on or before June 4, 2010.
    4A.Is your boilers designed heat input capacity LESS than 10 MMBtu/hr?
        GO TO ROW # 2
    4B. If your boiler burns at least 15 percent biomass on a total fuel annual heat input basis, the unit is in the biomass subcat
        GO TO ROW # 3
    4C. If your boiler burns any solid fossil fuel and no more than 15 percent biomass on a total fuel annual heat input basis, th
        IF NO, GO TO ROW # 4 (i.e., boiler burns any liquid fuel and is not in either the coal or the biomass subcategory, th
        IF YES, GO TO ROW # 5
5. New source if you commenced construction or reconstruction OR switched from natural gas fuel to solid fossil fuel, biomass, or liqui
    5A. Is your boilers designed heat input capacity LESS than 10 MMBtu/hr?
        GO TO ROW # 6
    5B. If your boiler burns any solid fossil fuel and no more than 15 percent biomass on a total fuel annual heat input basis, th
        GO TO ROW # 8
    5C. If your boiler burns at least 15 percent biomass on a total fuel annual heat input basis, the unit is in the biomass subcat
        IF YES, GO TO ROW # 7
        IF NO, GO TO ROW # 9 (i.e., boiler burns any liquid fuel and is not in either the coal or the biomass subcategory, th

6/1/11 - ARS edits in red

hazardous waste boilers) [exempt under § 63.11195(c)]

ch new or reconstructed boiler)

under CAA section 129.
or heating at a R&D facility).
l by combustion of gaseous or liquid fuel; water shall not be withdrawn at pressures exceeding 160 psig, including the apparatus to prevent water
ovided by by a gas stream that is regulated under another subpart.
yr).

egory.

e boiler is in the coal subcategory.
e unit is in the oil subcategory, except if the unit burns oil only during periods of gas curtailment)

id fuel after June 4, 2010.

e boiler is in the coal subcategory.

egory.

e unit is in the oil subcategory, except if the unit burns oil only during periods of gas curtailment)

temperatures from exceeding 210 degrees Fahrenheit).