

ADEQ DRAFT OPERATING AIR PERMIT

Pursuant to the Regulations of the Arkansas Operating Air Permit Program, Regulation 26:

Permit No. : 0456-AOP-R10

IS ISSUED TO:

Anthony Timberlands, Inc.
111 South Plum Street
Bearden, AR 71720
Ouachita County
AFIN: 52-00035

THIS PERMIT AUTHORIZES THE ABOVE REFERENCED PERMITTEE TO INSTALL, OPERATE, AND MAINTAIN THE EQUIPMENT AND EMISSION UNITS DESCRIBED IN THE PERMIT APPLICATION AND ON THE FOLLOWING PAGES. THIS PERMIT IS VALID BETWEEN:

AND

THE PERMITTEE IS SUBJECT TO ALL LIMITS AND CONDITIONS CONTAINED HEREIN.

Signed:

Stuart Spencer
Associate Director, Office of Air Quality

Date

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List of Acronyms and Abbreviations

Ark. Code Ann.	Arkansas Code Annotated
AFIN	ADEQ Facility Identification Number
C.F.R.	Code of Federal Regulations
CO	Carbon Monoxide
HAP	Hazardous Air Pollutant
lb/hr	Pound Per Hour
MVAC	Motor Vehicle Air Conditioner
No.	Number
NO _x	Nitrogen Oxide
PM	Particulate Matter
PM ₁₀	Particulate Matter Smaller Than Ten Microns
SNAP	Significant New Alternatives Program (SNAP)
SO ₂	Sulfur Dioxide
SSM	Startup, Shutdown, and Malfunction Plan
Tpy	Tons Per Year
UTM	Universal Transverse Mercator
VOC	Volatile Organic Compound

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SECTION I: FACILITY INFORMATION

PERMITTEE: Anthony Timberlands, Inc.

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PERMIT NUMBER: 0456-AOP-R10

FACILITY ADDRESS: 111 South Plum Street
Bearden, AR 71720

MAILING ADDRESS: P.O. Box 137
Bearden, AR 71720

COUNTY: Ouachita County

CONTACT NAME: Wilson Anthony

CONTACT POSITION: Director of Regulatory Compliance

TELEPHONE NUMBER: (870) 313-4114

REVIEWING ENGINEER: Elliott Marshall

UTM North South (Y): Zone 15: 3731422.24 m

UTM East West (X): Zone 15: 535562.15 m

SECTION II: INTRODUCTION

Summary of Permit Activity

Anthony Timberlands, Inc. (ATI) [(AFIN) 52-00035] owns and operates a pine sawmill physically located at Second and Plum Streets in Bearden (Ouachita County), Arkansas. This application was submitted as a renewal. In addition to renewing the current Title V permit, ATI requests the following changes:

1. Update annual CO, hydrogen chloride, and mercury emission limits at SN-01, SN-02 and SN-22. Previous calculations used EPA (AP-42) emission factors for hydrogen chloride and mercury, and old stack test results for CO; emission factors for CO, hydrogen chloride and mercury are now updated to comply with the emission limits in 40 CFR Part 63, Subpart DDDDD. This results in an emission decrease for CO and an increase for hydrogen chloride and mercury. Mercury will now be a listed HAP.
2. Update PM₁₀ emission factor at SN-02 to reflect the installation of a wet venturi scrubber. Previous calculations used an emission factor derived from an old stack test conducted while SN-02 was still equipped with multi-cyclone. This results in an annual PM₁₀ emission decrease at SN-01, SN-02 and SN-22.
3. Add PM₁₀ CAM Plan (Appendix F) for SN-01, SN-02 and SN-22.
4. Update emission factor for formaldehyde at SN-14, SN-15, SN-16 and SN-30.
5. Add “emission average” option to Specific Condition #13, as allowed by 40 CFR 63.7522, to demonstrate compliance with filterable PM limits in 40 CFR Part 63, Subpart DDDDD.
6. For sources SN-04, 05, 06, and 25 remove the requirement to submit semiannual opacity records. The submittal requirement was originally implemented as part of a Permit Appeal Resolution (PAR) because the facility was not using someone trained in EPA Reference Method 9 to conduct opacity observations. With this revision, the facility has opted to change opacity conditions at sources SN-04, 05, 06, 23, 24, 25, and 29 to be consistent with current department language and require someone trained in EPA Reference Method 9 to conduct opacity observations.
7. Add applicable requirements of 40 CFR Part 63, Subpart DDDD for lumber drying kilns SN-14, SN-15, SN-16 and SN-30 (specific condition #31).
8. Correct a rounding error at SN-27 resulting in a decrease of PM/PM₁₀

Permitted emission rates are increasing/decreasing by 1.5 tpy Hydrogen Chloride, 0.006 tpy Acetone, -0.1 tpy PM, -28.7 tpy PM₁₀, and -6.7 tpy CO. Acetone is now rounded instead of being listed in scientific notation resulting in a slight emission increase.

Process Description

Log Processing

Pine logs are transported by truck from the forest to the ATI sawmill facility. Rubber tired mobile equipment unloads the logs which are transferred to one of the following areas: the infeed

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system for immediate processing; dry storage for near future processing; or the wet storage area for long-term future demands.

The wet storage system is self-contained consisting of a storage area, a water storage pond, and a wet circulation system. Pumps are used to spray water from the pond onto logs in the storage area. The runoff from the spraying operations is gravity fed back into the water storage pond for reuse.

Infeed systems convey the logs one at a time to the Debarkers (SN-23) where bark is removed. The bark is collected in hoppers and conveyed to a green fuel storage area. From this point the collected bark and sawdust is conveyed to one of the following waste fuel fired boilers:

SN-01 Hurst Hybrid Boiler:	Boiler #1 (Formerly Boiler #2) 28.7 MMBtu/hr, 20,700 lb/hr steam, with a Zurn Multi-cyclone
SN-02 Babcock/Wilcox Boiler:	Boiler #3 55.5 MMBtu/hr, 40,000 lb/hr steam, with a turbo venturi scrubber system
SN-22 Hurst Hybrid Boiler:	Boiler #2 (Formerly Boiler #5) 28.7 MMBtu/hr, 20,700 lb/hr steam, with a Zurn Multi-cyclone
SN-27 Natural Gas Fire Boiler:	Boiler #4 (Formerly Boiler #6) 48.988 MMBtu/hr

These boilers are used to provide steam to steam heated lumber drying kilns.

Sawmill

The debarked logs proceed to the sawmill or to the small log mill depending on their size where they are cut by deck saws (SN-24) into different lengths (i.e., 8 to 20 feet in multiples of two) and manufactured into rough dimension lumber. The lumber is trimmed and edged to dimensions that can be dried and converted to a sellable product while minimizing the amount of waste generated. Chutes and hoppers gather the wood waste before being conveyed to chippers (total of three present). The chippers use screens to reduce the wood chips into 7/8 inches to 1 inch in length, 2 to 1 inch in width, and 1/8 to 3/16 inches in thickness. The sized chips are conveyed into cyclones (SN-04, SN-05, and SN-06) before being discharged into storage/loadout bins. SN-04 is a cyclone that controls particulate matter from the small log mill chipper. SN-05 is a cyclone on top of the 3 bay chip bin. These cyclones (SN-04 and SN-05) are conservatively estimated to be 95.0% efficient in collecting conveyed material.

The dust generated from sawing operations is transferred to the bark and sawdust conveyors to be utilized as boiler fuel or loaded out as a sellable material when sold to outside markets. The sawdust is blown through the small log bin (2 bays) cyclone (SN-06) before loaded into a truck. When sawdust is burned as boiler fuel, SN-06 can be used to control chips produced at the sawmill chipper.

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Drying Kilns

Three steam heated drying kilns (SN-14, SN-15, and SN-16) and one steam heated continuous drying kiln (SN-30) are employed to reduce the moisture content of the lumber from approximately 55 to 19 percent on a dry basis.

The dried lumber is cooled before being sent through the finishing process. In this operation the lumber is dressed to convert the texture from a rough sawn to a smooth finish. Wood shavings are generated from this finishing process. The majority of these wood shavings are sold for use in the manufacturing of particleboard; however, a small portion can be pulverized, or burned for fuel.

New Planer Mill #2

The mill consists of a trim saw, a dry trim hog, and a planer machine, which create wood shavings. These shavings are gathered by vacuum hoods and pans on branch lines, conveyed to a common system, routed to a blower, and air conveyed to a centrifugal cyclone collector (Planer Mill #2 (SN-25)). The shavings pass through the cyclone before being dumped by a manned system into trucks.

Petroleum Storage Tanks

The following tanks, which are used to store fuel for facility equipment and vehicles, exist at ATI's softwood sawmill:

- Underground 10,000 gallon gasoline tank (A-13 Insignificant Source);
- Underground 14,000 gallon diesel tank (A-13 Insignificant Source);
- Underground 10,000 gallon diesel fuel tanks (A-3 Insignificant Source); and
- Aboveground 250 gallon kerosene tank (A-3 Insignificant Source).

Air Curtain Destructor (SN-28&29)

Excess wood wastes are incinerated by an Air Curtain Destructor to reduce volume for wood waste management. Wood wastes will be introduced into an Air Curtain Destructor S-327 manufactured by Air Burners Inc at an average rate of 6 - 10 tons per hour. The combustion chamber consists of 4-inch-thick refractory panels filled with proprietary thermal ceramic material. The unit is equipped with a diesel engine to drive a fan to create a curtain of air. This curtain of air acts as a trap over the top of a fire box. The wood waste is dumped into the firebox and is then ignited with a small amount of diesel. Once the fire has gained strength the air curtain is turned on. The air curtain traps most of the smoke particles and causes them to re-burn under the air curtain where the temperatures exceed 1,800 °F.

Regulations

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The following table contains the regulations applicable to this permit.

Regulations
Arkansas Air Pollution Control Code, Regulation 18, effective March 14, 2016
Regulations of the Arkansas Plan of Implementation for Air Pollution Control, Regulation 19, effective March 14, 2016
Regulations of the Arkansas Operating Air Permit Program, Regulation 26, effective March 14, 2016
40 CFR Part §52.21 <i>Prevention of Significant Deterioration of Air Quality</i>
40 CFR Part 60, Subpart Dc – <i>Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units*</i>
40 CFR Part 63, Subpart DDDDD – <i>National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters.</i>
40 CFR Part 60, Subpart CCCC – <i>Standards of Performance for Commercial and Industrial Solid Waste Incineration Units</i>
40 CFR Part 60, Subpart IIII – <i>Standards of Performance for Stationary Compression Ignition Internal Combustion Engines</i>
40 CFR Part 63, Subpart DDDD – <i>National Emission Standards for Hazardous Air Pollutants: Plywood and Composite Wood Products</i>
40 CFR Part 64 – <i>Compliance Assurance Monitoring</i>

* SN-01 and SN-22 are subject to NSPS Dc. SN-02 was constructed before June 9, 1989 and has not been reported as modified or reconstructed since.

Emission Summary

The following table is a summary of emissions from the facility. This table, in itself, is not an enforceable condition of the permit.

EMISSION SUMMARY				
Source Number	Description	Pollutant	Emission Rates	
			lb/hr	tpy
Total Allowable Emissions		PM	57.9	181.4
		PM ₁₀	44.8	173.4
		PM _{2.5}	See Note*	
		SO ₂	5.5	16.2
		VOC	187.8	391.8
		CO	160.1	638.1

EMISSION SUMMARY				
Source Number	Description	Pollutant	Emission Rates	
			lb/hr	tpy
		NO _x	56.2	170.2
		Lead	1.48E-02	3.65E-02
	HAPs (Included in VOC or PM total unless noted otherwise: Chlorine, Hydrogen Chloride, 1,1,1-Trichloroethane, Chloromethane, Tetrachloroethene)	1,1,1-Trichloroethane	3.50E-03	1.55E-02
		Chlorine	8.92E-02	0.40
		Chloromethane	2.60E-03	1.15E-02
		Hydrogen Chloride	2.51	11.00
		Methanol	12.26	26.50
		Mercury	6.45E-04	2.85E-03
		Tetrachloroethene	4.29E-03	1.90E-02
	Total HAP (Plantwide)	N/A	64.17	
	Air Contaminants ***	Acetone	0.08	0.15
01	Hurst Hybrid Boiler (Boiler #1) 28.7 MMBtu/hr	PM	8.1	140.0 ^A
		PM ₁₀	9.2	160.0 ^A
		SO ₂	0.8	12.5 ^A
		VOC	0.5	8.5 ^A
		CO	31.7	591.5 ^A
		NO _x	6.4	110.0 ^A
		Lead	1.40E-03	2.4E-02 ^A
		1,1,1-Trichloroethane	8.90E-04	1.55E-02 ^A
		Chlorine	2.27E-02	0.40 ^A
		Chloromethane	6.60E-04	1.15E-02 ^A
		Hydrogen Chloride ¹	0.64	11.00 ^A
		Mercury ¹	1.64E-04	2.85E-03 ^A
		Tetrachloroethene	1.09E-03	1.90E-02 ^A
		Single Other Comb. HAP	0.13	2.20 ^A
Total Other Comb. HAPs	0.57	9.89 ^A		
	Acetone**	0.01	0.10 ^A	
02	Babcock/Wilcox Boiler (Boiler #3) 55.5 MMBtu/hr	PM	15.6	140.0 ^A
		PM ₁₀	17.8	160.0 ^A
		SO ₂	1.4	12.5 ^A
		VOC	1.0	8.5 ^A
		CO	71.8	591.5 ^A
		NO _x	12.3	110.0 ^A
		Lead	2.70E-03	2.40E-02 ^A
		1,1,1-Trichloroethane	1.72E-03	1.55E-02 ^A
		Chlorine	4.38E-02	0.40 ^A
		Chloromethane	1.28E-03	1.15E-02 ^A
		Hydrogen Chloride ¹	1.23	11.00 ^A
Mercury ¹	3.17E-04	2.85E-03 ^A		

EMISSION SUMMARY				
Source Number	Description	Pollutant	Emission Rates	
			lb/hr	tpy
		Tetrachloroethene	2.11E-03	1.90E-02 ^A
		Single Other Comb. HAP	0.25	2.20 ^A
		Total Other Comb. HAPs	1.1	9.89 ^A
		Acetone**	0.02	0.10 ^A
22	Hurst Hybrid Boiler (Boiler #2) 28.7 MMBtu/hr	PM	8.1	140.0 ^A
		PM ₁₀	9.2	160.0 ^A
		SO ₂	0.8	12.5 ^A
		VOC	0.5	8.5 ^A
		CO	31.7	591.5 ^A
		NO _x	6.4	110.0 ^A
		Lead	1.40E-03	2.40E-02 ^A
		1,1,1-Trichloroethane	8.90E-04	1.55E-02 ^A
		Chlorine	2.27E-02	0.40 ^A
		Chloromethane	6.60E-04	1.15E-02 ^A
		Hydrogen Chloride ¹	0.64	11.00 ^A
		Mercury ¹	1.64E-04	2.85E-03 ^A
		Tetrachloroethene	1.09E-03	1.90E-02 ^A
		Single Other Comb. HAP	0.13	2.20 ^A
Total Other Comb. HAPs	0.57	9.89 ^A		
		Acetone**	0.01	0.10 ^A
04	Small Log Mill Chipper (cyclone)	PM	0.1	0.1
		PM ₁₀	0.1	0.1
05	Chip Bin (cyclone)	PM	0.1	0.4
		PM ₁₀	0.1	0.1
06	Sawdust Bin (cyclone)	PM	0.6	1.9
		PM ₁₀	0.1	0.1
14	Drying Kiln #3 Irving-Moore	VOC	36.8	350.0 ^B
		Methanol	2.79	26.50 ^B
		Total Kiln HAPs	N/A	32.90 ^B
15	Drying Kiln #4 Irving-Moore	VOC	36.8	350.0 ^B
		Methanol	2.79	26.50 ^B
		Total Kiln HAPs	N/A	32.90 ^B
16	Drying Kiln #5 Irving-Moore	VOC	36.8	350.0 ^B
		Methanol	2.79	26.50 ^B
		Total Kiln HAPs	N/A	32.90 ^B
23	Log Debarking	PM	4.0	6.5
		PM ₁₀	2.2	3.6
24	Log Sawing	PM	9.3	16.9
		PM ₁₀	1.0	1.7

EMISSION SUMMARY				
Source Number	Description	Pollutant	Emission Rates	
			lb/hr	tpy
25	Planer Mill #2 (cyclone)	PM	0.3	0.5
		PM ₁₀	0.2	0.3
26	Paved Road	PM	8.5	9.5
		PM ₁₀	1.7	1.9
27	Natural Gas Boiler (Boiler #4) 48.9 MMBtu/hr	PM	0.4	1.6
		PM ₁₀	0.4	1.6
		SO ₂	0.1	0.2
		VOC	0.3	1.2
		CO	4.1	17.7
		NO _x	4.9	21.1
		Lead	2.40E-05	1.05E-04
		Single Other Comb. HAP Total Other Comb. HAPs	0.09 0.10	0.38 0.40
28A	85 hp Engine for ACD	PM	0.2	0.6
		PM ₁₀	0.2	0.6
		SO ₂	0.2	0.6
		VOC	0.3	0.7
		CO	0.7	2.1
		NO _x	2.7	7.7
		Single Other Comb. HAP Total Other Comb. HAPs	0.01 0.01	0.01 0.02
		28B	Air Curtain Destructor (ACD)	PM
PM ₁₀	2.4			3.2
SO ₂	2.2			2.9
VOC	23.5			31.4
CO	20.1			26.8
NO _x	23.5			31.4
Lead	9.20E-03			1.24E-02
Single Other Comb. HAP Total Other Comb. HAPs	3.64 7.43			4.88 9.95
Acetone**	0.04			0.05
29	ACD Loadout	PM	0.2	0.2
		PM ₁₀	0.2	0.2
30	Continuous Drying Kiln KDS Windsor	VOC	51.3	350.0 ^B
		Methanol	3.89	26.50 ^B
		Total Kiln HAPs	N/A	32.90 ^B

[†]HAPs not included in Total Other Combustion HAPs.

^ATotal Annual Emissions for SN-01, SN-02, and SN-22 based on 1,000,000 MMBtu/yr.

^BTotal Annual Emissions for SN-14, SN-15, SN-16 and SN-30.

*PM_{2.5} limits are source specific, if required. Not all sources have PM_{2.5} limits.

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**Acetone is neither a VOC nor a HAP.

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SECTION III: PERMIT HISTORY

Air permit 456-A was the initial State Implementation Plan (SIP) permit for Bearden Lumber Company. The permit was issued on March 24, 1978 for the permitting of two wood waste fired boilers to be used in the sawmill operations. These new boilers were replacing an existing wood waste fired boiler which would only be used for standby. The only permitted emission rate was particulate at 40 pounds per hour per boiler.

Air permit 456-AR-1 was issued to Bearden Lumber Company on 1993. This permit was issued to allow the operation of all three boilers, to quantify emissions using more up to date information, and to address emission sources and pollutants not previously addressed. Emissions were estimated using USEPA AP-42 emission factors. Other emissions of particulate matter from existing sources were quantified using process knowledge and manufacturer's quoted efficiencies for the respective control equipment.

An administrative amendment to air permit 456-AR-1 was issued on September 1, 1995. This permit was issued to address two changes: the elimination of SN-10, the Rip Saw Rework Station Cyclone and the installation of a new, more efficient cyclone at SN-07, the Planer Shavings Cyclone (although permitted emissions did not change).

Arkansas operating permit #456-AOP-R0 was issued June 8, 1999. It was the first operating permit issued to Bearden Lumber Company under Regulation 26. The facility modified the previous air permit by increasing the total lumber production for the facility, removing the wood flour operation, permitting five steam heated lumber drying kilns, permitting of a lumber dip tank, permitting of three underground fuel tanks, and permitting of one above ground kerosene tank. The facility also removed one old 20,000 lb/hr of steam Struthers Wells boiler and replaced it with two 20,700 lb/hr of steam Hurst boilers. These boilers were more efficient than the old boilers, and therefore, there was a decrease in total permitted emissions.

During the Department's initial review of the Title V permit application, it was determined that Drying Kiln #4 (SN-15) which had been installed in 1989 had emissions greater than 40 tpy of VOCs, and therefore, should have previously been subject to PSD review. A retroactive PSD analysis was performed for this permit.

Permit 456-AOP-R1 was issued on January 23, 2001. This permit authorized the installation of three new lumber drying kilns (SN-14, SN-15, and SN-16) to replace the three old lumber drying kilns that burned down in April 2000. The increase from the installation of the kilns was 236.3 tpy VOC.

Permit 456-AOP-R2 was issued on June 24, 2004. This Title V air permit quantified emissions from two existing emission sources, log debarking (SN-23) and log sawing (SN-24), and also allowed an annual emissions bubble for the four boilers (SN-01, SN-02, SN-03, and SN-22). Compliance Assurance Monitoring (CAM) Rule requirements were specified for the four boilers, as well as stack testing provisions for SN-02 and SN-03. Finally, this permit incorporated the most up-to-date emission factors in the emission rate calculations.

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Permit 456-AOP-R3 was issued on September 23, 2005. Bearden Lumber Company installed a planer mill (SN-25) and associated control equipment. This modification loosened the facility's production bottleneck, and it allowed the facility to increase production from 135 to 200 million board feet per year. The VOC emissions increased from 232.2 tpy (actual) to 361.3 tpy (permitted), an increase of 129.1 tpy. The expansion also increased CO emissions from 170.0 tpy (actual) to 337.5 tpy (permitted), an increase of 167.5 tpy.

Permit 456-AOP-R4 was issued on September 15, 2009. Anthony Timberlands, Inc. submitted a Title V renewal application that included modifications to permitted emission limits for existing equipment. Particulate emissions from the haul roads were quantified, and two previous permit modifications were subjected to retroactive PSD review. Anthony did not request permission to install any new equipment. Overall, permitted PM, PM₁₀, SO₂, VOC, CO and NO_x increased by 104.5 tpy, 70.6 tpy, 1.2 tpy, 0.6 tpy, 416.0 tpy, and 11.0 tpy respectively.

Permit 456-AOP-R5 was issued on July 13, 2010. Specific Conditions # 4, #17, #21, #25, #29, #33, #37, and #55 were revised pursuant to the Permit Appeal Resolution (PAR) LIS-10-005. Pursuant to the PAR visible emissions observation requirements changed.

Permit 456-AOP-R6 was issued on November 19, 2014. The Title V permit was renewed with modifications. The wood-fired boiler (SN-03) was replaced with a 48,988 MMBtu/hr natural gas-fired boiler and the applicable requirements for each boiler located at the facility were incorporated. Overall, permitted emissions increased by 0.3 tpy SO₂ and 33.2 tpy NO_x, and decreased by 37.8 tpy PM, 32.8 tpy PM₁₀, 4.9 tpy VOC, and 171.8 tpy CO.

Permit 456-AOP-R7 was issued on April 27, 2017. Anthony submitted a permit application to change the Boiler MACT subcategory for the two Hurst boilers (SN-01 and SN-22), revise permit limits for PM and CO corresponding with the different emission standards resulting from reclassification, add a turbo venturi scrubber system on Babcock/Wilcox boiler (SN-02) for controlling particulate emissions, and revise the PM limit for SN-02 consistent with the Boiler MACT PM filterable emission standard applicable to SN-02. Overall, permitted emissions increased by 44.2 tpy of CO and decreased by 67.0 tpy PM.

Permit 456-AOP-R8 was issued on December 15, 2017. Anthony submitted a permit application to add an Air Curtain Destructor (ACD) SN-28B with an attached 85 hp Engine (SN-28A) for wood waste management. The wood waste for the ACD consists mainly of short logs (unsuitable for manufacturing), broken kiln sticks, and broken boards. The wood waste will be stored in small piles until it is loaded into the ACD by a log loader or front end loader (SN-29). This operation will produce approximately 1.5 truckloads per month of ash, which will be collected and hauled offsite (SN-29). This modification results in an emission increase of 4.0 tpy PM/PM₁₀, 3.5 tpy SO₂, 32.1 tpy VOC, 28.9 tpy CO, 39.1 tpy NO_x, 1.24E-02 tpy Lead, 4.88E-02 Acetone, and 9.97 tpy Total HAP.

Permit 456-AOP-R9 was issued on August 2, 2018. ATI submitted a permit application to:

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- Remove two (2) existing Hemco kilns (SN-12 & 13) and replace them with one (1) KDS Windsor continuous drying kiln (CDK, SN-30). ATI did not increase the plantwide annual production limit of 200 million board feet.
- Increase the permitted hourly emission rate at SN-16 (Irving-Moore Kiln #5). SN-16 was incorrectly permitted as a Scotch kiln in 0456-AOP-R2 and R3. In 0456-AOP-R4, the brand name was corrected from Scotch to Irving-Moore (per EPA Comment #6), but the capacity remained incorrectly permitted at 3,500 BF/hr. SN-16 has the same capacity of 10,500 BF/hr as the two other Irving Moore kilns at the facility (SN-14 & SN-15), and was permitted as such in this revision.

There were no changes to annual permitted emissions as a result of these changes.

SECTION IV: SPECIFIC CONDITIONS

SN-01, SN-02, SN-22, and SN-27

Hurst Hybrid Boilers (Boiler #2 and #5), Babcock/Wilcox Boiler (Boiler #2), and Natural Gas-Fired Boiler (Boiler #6)

Source Description

Sources SN-01 and SN-22 are Hurst Hybrid boilers each with a maximum steam rating of 20,700 lb/hr of steam (28.7 MMBtu/hr). The boilers were installed in 1997. Due to their heat input capacity and date of installation, these boilers are subject to 40 CFR Part 60, Subpart Dc – *Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units*. They are equipped with a Zurn Multi-cyclone to control particulate matter emissions.

Source SN-02 is a Babcock/Wilcox boiler with a maximum steam rating of 40,000 lb/hr of steam (55.5 MM Btu/hr). The boiler was installed in 1978. This boiler is not subject to Subpart Dc because it was installed before the effective date of the subpart. It is equipped with a turbo venturi scrubber system to control particulate matter emissions.

The wood-fired boilers are only used to supply steam to the five steam heated lumber drying kilns. The boilers use wood waste as fuel to generate heat energy and to alleviate potential solid waste disposal problems. The wood waste is generated on-site and includes all green material (i.e., bark and sawdust). If the need presents itself, especially during the winter months, planer shavings may be utilized as dry fuel, or fuel can be imported from outside sources. Fuel may also be exported during the warm weather months when the facility steam demand is lower than normal.

Source SN-27 is a 48.988 MMBtu/hr natural gas-fired boiler. There are no control devices associated with this boiler. The boiler is only used to supply steam to the five steam heated lumber drying kilns.

The uncontrolled emissions from SN-01, 02, and 22 fulfill the applicability criteria of the Compliance Assurance Monitoring (CAM) Rule (40 CFR Part 64). Accordingly, the CAM Plan for the facility is provided in Appendix F. Per 40 CFR § 64.2(a), the aforementioned sources are regulated under the CAM Rule because they meet the following criteria:

- (1) The units are subject to emission limitations for PM₁₀,
- (2) The sources are equipped with a control device, and
- (3) The units have potential pre-control emissions of PM₁₀ that exceed the applicable major source threshold.

In accordance with 40 CFR § 64.3, Anthony Timberlands, Inc. has developed a CAM Plan for the affected sources. The CAM Plan establishes the operating parameters that will be monitored in order to demonstrate compliance with the PM₁₀ emission limits at these sources.

Specific Conditions

- The permittee shall not exceed the emission rates set forth in the following table. The hourly pollutant emission rates are based on the heat input capacity and AP-42 emission factors except where required to test. Compliance with the annual limits shall be demonstrated through compliance with Specific Condition #7. For CO compliance with the annual limit shall be demonstrated through compliance with Specific Conditions #7 and #9. [Reg.19.501 *et seq.* and 40 C.F.R. § 52 Subpart E]

SN	Description	Pollutant	lb/hr	tpy
01	Hurst Hybrid Boiler (Boiler #1) 28.7 MMBtu/hr	PM ₁₀	9.2	160.0 ^A
		SO ₂	0.8	12.5 ^A
		VOC	0.5	8.5 ^A
		CO	31.7	591.5 ^A
		NO _x	6.4	110.0 ^A
		Lead	1.40E-03	2.40E-02 ^A
02	Babcock/Wilcox Boiler (Boiler #3) 55.5 MMBtu/hr	PM ₁₀	17.8	160.0 ^A
		SO ₂	1.4	12.5 ^A
		VOC	1.0	8.5 ^A
		CO	71.8	591.5 ^A
		NO _x	12.3	110.0 ^A
		Lead	2.70E-03	2.40E-02 ^A
22	Hurst Hybrid Boiler (Boiler #2) 28.7 MMBtu/hr	PM ₁₀	9.2	160.0 ^A
		SO ₂	0.8	12.5 ^A
		VOC	0.5	8.5 ^A
		CO	31.7	591.5 ^A
		NO _x	6.4	110.0 ^A
		Lead	1.40E-03	2.40E-02 ^A
27	Natural Gas Boiler (Boiler #4) 48.988 MMBtu/hr	PM ₁₀	0.4	1.6
		SO ₂	0.1	0.2
		VOC	0.3	1.2
		CO	4.1	17.7
		NO _x	4.9	21.1
		Lead	2.40E-05	1.05E-04

^ATotal Annual Emissions for SN-01, SN-02, and SN-22 based on 1,000,000 MMBtu/yr.

- The permittee shall not exceed the emission rates set forth in the following table. The hourly pollutant emission rates are based on the heat input capacity and AP-42 emission factors except where required to test. Compliance with the annual limits shall be demonstrated through compliance with Specific Condition #7. [Reg.18.801 and Ark. Code Ann. § 8-4-203 as referenced by Ark. Code Ann. §§ 8-4-304 and 8-4-311]

SN	Description	Pollutant	lb/hr	tpy
01	Hurst Hybrid Boiler (Boiler #1)	PM	8.1	140 ^A
		1,1,1-Trichloroethane	8.90E-04	1.55E-02 ^A

SN	Description	Pollutant	lb/hr	tpy
	28.7 MMBtu/hr	Chlorine	2.27E-02	0.40 ^A
		Chloromethane	6.60E-04	1.15E-02 ^A
		Hydrogen Chloride ¹	0.64	11.00 ^A
		Mercury ¹	1.64E-04	2.85E-03 ^A
		Tetrachloroethene	1.09E-03	1.90E-02 ^A
		Single Other Comb. HAP	0.13	2.2 ^A
		Total Other Comb. HAPs	0.57	9.89 ^A
		Acetone**	0.01	0.10 ^A
02	Babcock/Wilcox Boiler (Boiler #3) 55.5 MMBtu/hr	PM	15.6	140 ^A
		1,1,1-Trichloroethane	1.72E-03	1.55E-02 ^A
		Chlorine	4.38E-02	0.40 ^A
		Chloromethane	1.28E-03	1.15E-02 ^A
		Hydrogen Chloride ¹	1.23	11.00 ^A
		Mercury ¹	3.17E-04	2.85E-03 ^A
		Tetrachloroethene	2.11E-03	1.90E-02 ^A
		Single Other Comb. HAP	0.25	2.2 ^A
		Total Other Comb. HAPs	1.1	9.89 ^A
		Acetone**	0.02	0.10 ^A
22	Hurst Hybrid Boiler (Boiler #2) 28.7 MMBtu/hr	PM	8.1	140 ^A
		1,1,1-Trichloroethane	8.90E-04	1.55E-02 ^A
		Chlorine	2.27E-02	0.40 ^A
		Chloromethane	6.60E-04	1.15E-02 ^A
		Hydrogen Chloride ¹	0.64	11.00 ^A
		Mercury ¹	1.64E-04	2.85E-03 ^A
		Tetrachloroethene	1.09E-03	1.90E-02 ^A
		Single Other Comb. HAP	0.13	2.2 ^A
		Total Other Comb. HAPs	0.57	9.89 ^A
		Acetone**	0.01	0.10 ^A
27	Natural Gas Boiler (Boiler #4) 48.988 MMBtu/hr	PM	0.4	1.6
		Single Other Comb. HAP	0.09	0.38
		Total Other Comb. HAPs	0.10	0.40

¹HAPs not included in Total Other Combustion HAPs.

^ATotal Annual Emissions for SN-01, SN-02, and SN-22 based on 1,000,000 MMBtu/yr.

**Acetone is neither a VOC nor a HAP.

3. Visible emissions may not exceed the limits specified in the following table of this permit as measured by EPA Reference Method 9. [Reg.18.501 and Ark. Code Ann. § 8-4-203 as referenced by Ark. Code Ann. §§ 8-4-304 and 8-4-31, Reg.19.503, 40 C.F.R. § 52 Subpart E and 40 C.F.R. Part § 64]

SN	Limit	Regulatory Citation
01	20%	§19.503
02	20%	§19.503

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SN	Limit	Regulatory Citation
22	20%	§19.503
27	5%	§18.501

4. SN-01, SN-02, and SN-22 are subject to the Compliance Assurance Monitoring (CAM) Rule. Anthony Timberlands, Inc. developed a CAM Plan for PM₁₀ at these sources and a copy is included in Appendix F of this permit. Compliance with this condition shall be demonstrated by compliance with Specific Conditions #5, 13.k, 13.l and 13.o. [19.304 and 40 C.F.R. § 64.2(a)]
5. Daily observations of the opacity from each source shall be conducted by personnel familiar with the permittee's visible emissions. The permittee shall accept such observations for demonstration of compliance. The permittee shall maintain personnel trained in EPA Reference Method 9. If visible emissions which appear to be in excess of the permitted opacity are detected, the permittee shall immediately take action to identify the cause of the visible emissions, implement corrective action, and document that visible emissions did not appear to be in excess of the permitted opacity following the corrective action. The permittee shall maintain records which contain the following items in order to demonstrate compliance with this specific condition. These records shall be updated daily, kept on site, and made available to Department personnel upon request.
 - a. The date and time of the observation
 - b. If visible emissions which appeared to be above the permitted limit were detected
 - c. If visible emissions which appeared to be above the permitted limit were detected, the cause of the exceedance of the opacity limit, the corrective action taken, and if the visible emissions appeared to be below the permitted limit after the corrective action was taken.
 - d. The name of the person conducting the opacity observations

[Reg.18.501 and Ark. Code Ann. § 8-4-203 as referenced by Ark. Code Ann. §§ 8-4-304 and 8-4-31, Reg.19.503, 40 C.F.R. § 52 Subpart E and 40 C.F.R. Part § 64]

6. Wood residue shall be the only fuel combusted at SN-01, SN-02, and SN-22. Wood residue is hogged wood, bark, sawdust, shavings, chips, mill rejects, sander dust, or wood trim. Natural gas shall be the only fuel combusted at SN-27. [Reg.19.705, Ark. Code Ann. § 8-4-203 as referenced by Ark. Code Ann. §§ 8-4-304 and 8-4-311, and 40 C.F.R. § 70.6]
7. The permittee shall comply with the following steam production limits. Compliance with this condition shall be demonstrated through compliance with Specific Condition #8. [Reg.19.705, Ark. Code Ann. § 8-4-203 as referenced by Ark. Code Ann. §§ 8-4-304 and 8-4-311, and 40 C.F.R. § 70.6]

Source	Daily Steam Production limit (lb/day)	Annual Steam Production Limit (lb/year)
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Source	Daily Steam Production limit (lb/day)	Annual Steam Production Limit (lb/year)
SN-01	496,800	1.813 X 10 ⁸
SN-02	960,000	3.504 X 10 ⁸
SN-22	496,800	1.813 X 10 ⁸
SN-27	960,000	3.504 X 10 ⁸

8. The facility shall maintain daily records that demonstrate compliance with the limits set in Specific Condition #7 which may be used by the Department for enforcement purposes. These records shall be updated by the fifteenth day of the month following the month to which the records pertain. These records shall be kept on site, and shall be made available to Department personnel upon request. An annual total and each individual month's steam production data shall be submitted to the Department in accordance with General Provision #7. [Reg.19.705 and 40 C.F.R. § 52 Subpart E]
9. The permittee shall test SN-01, SN-02, and SN-22 as specified below. The initial tests shall be conducted in accordance with Plantwide Condition #3. Each subsequent test shall be conducted within 60 months of the previous test. Failure to demonstrate compliance with the hourly emission limits in Specific Condition #1 will require annual testing until two consecutive tests demonstrate compliance. [Reg.19.702 and 40 C.F.R. § 52 Subpart E]

Source	Pollutant	Test Method	Notes
SN-01, SN-02, SN-22	PM ₁₀	201A followed by 202*	Test one boiler of each size once every five years. SN-01 and SN-22 are 28.7 MMBTU/hr, and SN-02 is 55.5 MMBTU/hr.
SN-01, SN-02, SN-22	NO _x	7E	Test one boiler of each size once every five years. SN-01 and SN-22 are 28.7 MMBTU/hr, and SN-02 is 55.5 MMBTU/hr.

* Method 5 followed by 202 is an acceptable alternative to Method 201A followed by 202.

NSPS Dc Conditions

10. SN-01, SN-22, and SN-27 are subject to 40 CFR Part 60 Subpart Dc, *Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units*. The applicable requirements include, but are not limited to Specific Conditions #11 and #12. [Reg.19.304 and 40 C.F.R. § 60.48c]
11. The permittee shall record and maintain records of the amount of fuel combusted during each day for each boiler. For SN-27, the permittee may elect to record and maintain

records of the amount of natural gas combusted during each calendar month.
 [Reg.19.304 and 40 C.F.R. § 60.48c (g)]

12. The permittee shall maintain all records required by Specific Condition #11 for a period of two years following the date of such record. [Reg.19.304 and 40 C.F.R. § 60.48c (i)]

Note: The General Provisions and other monitoring requirements contained within this permit require these records be kept for at least five years.

NESHAP DDDDD (Boiler MACT) Requirements

13. SN-01, SN-02, SN-22, and SN-27 are affected sources of 40 CFR Part 63, Subpart DDDDD – *National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters*, and shall comply with all applicable requirements including, but not limited to the following: [Reg.19.304 and 40 C.F.R. § 63.7480]

- a. The permittee shall conduct annual tune-ups for SN-01, SN-02, SN-22, and SN-27 according to the procedures described in §63.7540(a)(10)(i) through (vi). [Reg.19.304 and 40 C.F.R. § 63.7540 (a)(10)]
- b. The permittee shall comply with the with emission standards in the tables below. Compliance shall be demonstrated through fuel analysis, emissions averaging, performance testing, or a combination thereof, as provided by the subpart. There are no applicable emission standards for SN-27. [Reg.19.304 and 40 C.F.R. § 63.7500 (a)]

Source No.	§63.7499 Subcategory(s)	HCl (lb/MMBtu)	Hg (lb/MMBtu)	CO (ppmvd)	Filterable PM [or TSM] (lb/MMBtu)
01	j, p	2.2E-02	5.7E-06	770	0.28 [2.0E-03]
02	j, p	2.2E-02	5.7E-06	770	0.28 [2.0E-03]
22	j, p	2.2E-02	5.7E-06	770	0.28 [2.0E-03]

- c. The permittee must, if demonstrating compliance through fuel analysis for mercury, hydrogen chloride, or TSM, conduct a monthly fuel analysis and maintain a 12-month rolling average at or below the applicable limit for each pollutant. The permittee shall use the fuel analysis procedures described in Subpart DDDDD, Table 6, Items # 1, #2, or #4 for mercury, hydrogen chloride, or TSM, respectively. [Reg.19.304 and 40 C.F.R. § 63.7515 (e)]

- d. The permittee shall develop a site-specific fuel monitoring plan for each pollutant where fuel analysis is used to demonstrate compliance with an emission limit. [Reg.19.304 and 40 C.F.R. § 63.7521 (b)]
- e. The permittee must, if demonstrating compliance through emission averaging for filterable PM, meet the following requirements: [Reg.19.304 and 40 C.F.R. § 63.7522]:
 1. The permittee shall average filterable PM emissions among existing units (SN-01, SN-02 and SN-22) which are in the same boiler subcategories (dutch ovens/pile burners designed to burn biomass/bio-based solid) using a CPMS for demonstrating compliance with the limits in Specific Condition #13.b. [Reg.19.304 and 40 C.F.R. § 63.7522 (b)(1)&(3)]
 2. The averaged filterable PM emission rate from the existing boilers must not exceed 90 percent of the limits specified in Specific Condition #13.b, at all times. [Reg.19.304 and 40 C.F.R. § 63.7522 (d)]
 3. The permittee must demonstrate initial compliance according to paragraph (e)(1) of this section using the maximum rated heat input capacity of each unit and the results of the initial performance tests or fuel analysis. [Reg.19.304 and 40 C.F.R. § 63.7522 (e)]
- i. You must use Equation 1a of this section to demonstrate that the PM emissions from all existing units participating in the emissions averaging option do not exceed the emission limits in Specific Condition #13.b:

$$\text{AveWeightedEmissions} = 1.1 \times \sum_{i=1}^n (Er \times Hm) \div \sum_{i=1}^n Hm$$

(Eq.1a)

Where:

AveWeightedEmissions = Average weighted emissions for PM in units of pounds per million Btu of heat input.

Er = Emission rate (as determined during the initial compliance demonstration) of PM (or TSM), HCl, or mercury from unit, i, in units of pounds per million Btu of heat input. Determine the emission rate for PM (or TSM), HCl, or mercury by performance testing according to Table 5 to this subpart, or by fuel analysis for HCl or mercury or TSM using the applicable equation in §63.7530(c).

Hm = Maximum rated heat input capacity of unit, i, in units of million Btu per hour

n = Number of units participating in the emission averaging option.

1.1 = Required discount factor

[Reg. 19.304 and 40 C.F.R. § 63.7522 (e)(1)]

4. After the initial compliance demonstration described in paragraph (e) of this section, you must demonstrate compliance on a monthly basis determined at the end of every month (12 times per year) according to paragraphs (f)(1) through (3) of this section. The first monthly period begins on the compliance date specified in §63.7495. If the affected source elects to collect monthly data for up the 11 months preceding the first monthly period, these additional data points can be used to compute the 12-month rolling average in paragraph (f)(3) of this section. [Reg. 19.304 and 40 C.F.R. § 63.7522 (f)]
5. The permittee shall develop, and submit upon request to the applicable Administrator for review and approval, an implementation plan for emission averaging. [Reg. 19.304 and 40 C.F.R. 63.7522(g)]
- f. The permittee shall conduct subsequent performance tests annually, no more than 13 months after the previous test. Each performance test shall be conducted using EPA Reference Method 5 or 17 and the procedures described in Subpart DDDDD, Table 5, Item #1. This condition is not applicable if the permittee elects to demonstrate compliance with the alternative TSM limit. [Reg.19.304 and 40 C.F.R. § 63.7515]
- g. The permittee shall conduct subsequent performance tests annually, no more than 13 months after the previous test. Each performance test shall be conducted using EPA Reference Method 10 and the procedures described in Subpart DDDDD, Table 5, Item #5. [Reg.19.304 and 40 C.F.R. § 63.7515]
- h. The permittee shall, if the permittee is unable to or elects not to demonstrate compliance with that pollutant through fuel analysis, conduct an initial performance test for mercury, hydrogen chloride, and TSM, no later than 180 days after the compliance date. The permittee shall conduct subsequent performance tests annually, no more than 13 months after the previous test. Each performance test shall be conducted using the test methods and the procedures described for that pollutant in Subpart DDDDD, Table 5. [Reg.19.304 and 40 C.F.R. § 63.7515]
- i. For SN-01 and SN-22, the permittee shall establish a site-specific operating limit for the PM CPMS according to § 63.7530(b). [Reg.19.304 and 40 C.F.R. § 63.7520]
- j. For SN-01 and SN-22, the permittee shall maintain the 30-day rolling average PM CPMS output data to less than the operating limit established during the performance test according to § 63.7530(b)(4) and Table 8 to Subpart DDDDD. [Reg.19.304 and 40 C.F.R. § 63.7500]

- k. For SN-02, the permittee shall establish a site-specific minimum scrubber pressure drop and minimum flow rate operating limit according to § 63.7530(b). [Reg.19.304, 40 C.F.R. § 63.7520 and 40 C.F.R. Part § 64]
 - l. For SN-02 the permittee shall maintain the 30-day rolling average pressure drop and the 30-day rolling average liquid flow rate at or above the lowest one-hour average pressure drop and the lowest one-hour average liquid flow rate, respectively, measured during the performance test demonstrating compliance with the PM emission limitation according to § 63.7530(b) and Table 7 to Subpart DDDDD. [Reg.19.304, 40 C.F.R. § 63.7500 and 40 C.F.R. Part § 64]
 - m. The permittee shall submit all notifications required by Subpart DDDDD. [Reg.19.304 and 40 C.F.R. § 63.7545]
 - n. The permittee shall submit a compliance report which includes all the information required by § 63.7550 (c). The permittee shall submit the compliance report according to the procedures in § 63.7550 (h). The permittee shall submit an annual, biennial, or 5-year compliance report, as applicable, as required by Subpart DDDDD. [Reg.19.304 and 40 C.F.R. § 63.7550 (a)]
 - o. The permittee shall keep all records as required by Subpart DDDDD. These records include but are not limited to: required notifications and supporting information, performance tests, fuel analysis, or other performance evaluations, monitoring data, monthly fuel use (by type and amount), copies of calculations and supporting information used to determine maximum pollutant fuel input, startup and shutdown (date, time, duration, amount of fuel used during event), malfunctions, deviations, and corrective actions. These records shall be kept in a form suitable and readily available for expeditious review. The records shall be kept for a period of 5 years following each occurrence, measurement, maintenance, corrective action, report, or record. For the first two years the records shall be kept onsite and may be kept offsite for the remaining three years. [Reg.19.304, 40 C.F.R. § 63.7555, 40 C.F.R. § 63.7560 and 40 C.F.R. Part § 64]
14. In order to achieve compliance with the PM emission standards in Subpart DDDDD, the permittee shall operate, and maintain the wet scrubber at SN-02 including equipment necessary to continuously measure and record scrubber liquid flow rate and pressure drop. [Reg.§26.703 and 40 C.F.R. § 52 Subpart E]

SN-04
 Small Log Mill Chipper

Source Description

Debarked logs are conveyed to the sawmill or small log mill where deck saws cut the logs into different lengths in multiples of two feet. The logs are then converted to lumber which is trimmed and edged to dimensions that can be dried to a final product. Chutes and hoppers collect the wood waste before it is conveyed to the chippers. The chippers employ screens to reduce the wood chips into pieces of specified length, width, and thickness. The small log mill chipper employs a cyclone to control particulate matter emissions. The cyclone is assumed to have a control efficiency of 95%.

Specific Conditions

15. The permittee shall not exceed the emission rates set forth in the following table for source SN-04. The pound per hour and the ton per year pollutant emission rates are based on the maximum capacity of the equipment and are effectively limited by Specific Condition #29. [Reg.19.501 *et seq.* and 40 C.F.R. § 52 Subpart E]

SN	Description	Pollutant	lb/hr	tpy
04	Small Log Mill Chipper (cyclone)	PM ₁₀	0.1	0.1

16. The permittee shall not exceed the emission rates set forth in the following table for source SN-04. The pound per hour and the ton per year pollutant emission rates are based on the maximum capacity of the equipment and are effectively limited by Specific Condition #29. [Reg.18.801 and Ark. Code Ann. § 8-4-203 as referenced by Ark. Code Ann. §§ 8-4-304 and 8-4-311]

SN	Description	Pollutant	lb/hr	tpy
04	Small Log Mill Chipper (cyclone)	PM	0.1	0.1

17. Visible emissions may not exceed the limits specified in the following table of this permit as measured by EPA Reference Method 9. [Reg.19.503 and 40 C.F.R. § 52 Subpart E]

SN	Limit	Regulatory Citation
04	20%	§19.503

18. The permittee shall perform daily observations of the opacity from source SN-04, which shall be conducted by a person trained in EPA Reference Method 9. If visible emissions appear to be in excess of 20%, the permittee shall immediately take action to identify the cause of the excess visible emissions, implement corrective action, and document that

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visible emissions do not appear to be in excess of the permitted opacity following the corrective action. The permittee shall maintain records of any visible emissions which appeared to be in excess of the permitted opacity, the corrective action taken, and if visible emissions were present following the corrective action. These records shall be kept on site and made available to Department personnel upon request. [Reg.19.503 and 40 C.F.R. § 52 Subpart E]

SN-05
 Chip Bin

Source Description

Source SN-05 is the sawmill's chip bin. The sized chips produced by the small log mill chipper (SN-04) are conveyed through a cyclone before being loaded out onto trucks. The chip bin employs a cyclone to control particulate matter emissions. The cyclone is assumed to have a control efficiency of 95%

Specific Conditions

19. The permittee shall not exceed the emission rates set forth in the following table for source SN-05. The pound per hour and the ton per year pollutant emission rates are based on the maximum capacity of the equipment and are effectively limited by Specific Condition #29. [Reg.19.501 *et seq.* and 40 C.F.R. § 52 Subpart E]

SN	Description	Pollutant	lb/hr	tpy
05	Chip Bin (cyclone)	PM ₁₀	0.1	0.1

20. The permittee shall not exceed the emission rates set forth in the following table for source SN-04. The pound per hour and the ton per year pollutant emission rates are based on the maximum capacity of the equipment and are effectively limited by Specific Condition #29. [Reg.18.801 and Ark. Code Ann. § 8-4-203 as referenced by Ark. Code Ann. §§ 8-4-304 and 8-4-311]

SN	Description	Pollutant	lb/hr	tpy
05	Chip Bin (cyclone)	PM	0.1	0.4

21. Visible emissions may not exceed the limits specified in the following table of this permit as measured by EPA Reference Method 9. [Reg.19.503 and 40 C.F.R. § 52 Subpart E]

SN	Limit	Regulatory Citation
05	20%	§19.503

22. The permittee shall perform daily observations of the opacity from source SN-05, which shall be conducted by a person trained in EPA Reference Method 9. If visible emissions appear to be in excess of 20%, the permittee shall immediately take action to identify the cause of the excess visible emissions, implement corrective action, and document that visible emissions do not appear to be in excess of the permitted opacity following the corrective action. The permittee shall maintain records of any visible emissions which appeared to be in excess of the permitted opacity, the corrective action taken, and if

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visible emissions were present following the corrective action. These records shall be kept on site and made available to Department personnel upon request. [Reg.19.503 and 40 C.F.R. § 52 Subpart E]

SN-06
 Sawdust Bin

Source Description

Source SN-06 is the sawmill's sawdust bin. Green sawdust generated from sawing operations is transferred to the bark and sawdust conveyors to be utilized as a boiler fuel or loaded out to be sold. The sawdust is blown through a two bay bin cyclone before being loaded onto a truck. The cyclone is assumed to have a control efficiency of 95%.

Specific Conditions

23. The permittee shall not exceed the emission rates set forth in the following table for source SN-06. The pound per hour and the ton per year pollutant emission rates are based on the maximum capacity of the equipment and are effectively limited by Specific Condition #29. [Reg.19.501 *et seq.* and 40 C.F.R. § 52 Subpart E]

SN	Description	Pollutant	lb/hr	tpy
06	Sawdust Bin (cyclone)	PM ₁₀	0.1	0.1

24. The permittee shall not exceed the emission rates set forth in the following table for source SN-06. The pound per hour and the ton per year pollutant emission rates are based on the maximum capacity of the equipment and are effectively limited by Specific Condition #29. [Reg.18.801 and Ark. Code Ann. § 8-4-203 as referenced by Ark. Code Ann. §§ 8-4-304 and 8-4-311]

SN	Description	Pollutant	lb/hr	tpy
06	Sawdust Bin (cyclone)	PM	0.6	1.9

25. Visible emissions may not exceed the limits specified in the following table of this permit as measured by EPA Reference Method 9. [Reg.19.503 and 40 C.F.R. § 52 Subpart E]

SN	Limit	Regulatory Citation
06	20%	§19.503

26. The permittee shall perform daily observations of the opacity from source SN-06, which shall be conducted by a person trained in EPA Reference Method 9. If visible emissions appear to be in excess of 20%, the permittee shall immediately take action to identify the cause of the excess visible emissions, implement corrective action, and document that visible emissions do not appear to be in excess of the permitted opacity following the corrective action. The permittee shall maintain records of any visible emissions which appeared to be in excess of the permitted opacity, the corrective action taken, and if

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visible emissions were present following the corrective action. These records shall be kept on site and made available to Department personnel upon request. [Reg.19.503 and 40 C.F.R. § 52 Subpart E]

SN-14, SN-15, SN-16, and SN-30
 Drying Kilns #3, #4, #5, and Continuous Drying Kiln

Source Description

SN-14, SN-15, and SN-16 are Irving Moore drying kilns that were installed in 2001. SN-30 is a KDS Windsor continuous drying kiln that was installed in 2018. The lumber kilns at the facility are used to reduce the moisture content in the green lumber produced in the sawmill from 55% to 19%. Each kiln contains vents that allow the water vapor driven off from the wood to escape. Naturally occurring VOCs in the wood are also driven off and escape out the kiln vents with the water vapor.

Specific Conditions

27. The permittee shall not exceed the emission rates set forth in the following. The lb/hr pollutant emission rates are based on the maximum capacity of the equipment and a BACT limit 3.5 lb VOC/MBF. Compliance with the tpy limit shall be demonstrated by the throughput limit in Specific Condition #29 and a BACT limit of 3.5 lb VOC/MBF. Compliance with the BACT limit shall be demonstrated by proper kiln design and maintenance. [Reg.19.501 *et seq.* and 40 C.F.R. § 52 Subpart E]

SN	Description	Pollutant	lb/hr	tpy
14	Drying Kiln #3 Irving-Moore	VOC	36.8	350.0 ^B
15	Drying Kiln #4 Irving-Moore	VOC	36.8	350.0 ^B
16	Drying Kiln #5 Irving-Moore	VOC	36.8	350.0 ^B
30	Continuous Drying Kiln KDS Windsor	VOC	51.3	350.0 ^B

^BTotal Annual Emissions for SN-14, SN-15, SN-16 and SN-30.

28. The permittee shall not exceed the emission rates set forth in the following table. The lb/hr pollutant emission rates are based on the maximum capacity of the equipment. Compliance with the tpy limit shall be demonstrated by the throughput limit in Specific Condition #29. [Reg.18.801 and Ark. Code Ann. § 8-4-203 as referenced by Ark. Code Ann. §§ 8-4-304 and 8-4-311]

SN	Description	Pollutant	lb/hr	tpy
14	Drying Kiln #3 Irving-Moore	Methanol Total Kiln HAPs	2.79 N/A	26.50 ^B 32.90 ^B
15	Drying Kiln #4 Irving-Moore	Methanol Total Kiln HAPs	2.79 N/A	26.50 ^B 32.90 ^B

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SN	Description	Pollutant	lb/hr	tpy
16	Drying Kiln #5 Irving-Moore	Methanol	2.79	26.50 ^B
		Total Kiln HAPs	N/A	32.90 ^B
30	Continuous Drying Kiln KDS Windsor	Methanol	3.89	26.50 ^B
		Total Kiln HAPs	N/A	32.90 ^B

^BTotal Annual Emissions for SN-14, SN-15, SN-16 and SN-30.

29. The permittee shall not dry more than 200 million board feet of lumber at the facility during any consecutive twelve month period. [Reg.19.705, Ark. Code Ann. § 8-4-203 as referenced by Ark. Code Ann. §§ 8-4-304 and 8-4-311, and 40 C.F.R. § 70.6]
30. The permittee shall maintain records which demonstrate compliance with the limit set in Specific Condition #29 and may be used by the Department for enforcement purposes. Compliance shall be determined on a monthly basis by totaling the amount of board feet of lumber dried for the previous 12 months. Each 12 month total shall be available for inspection by the last day of the month after the reported 12 months. These records shall be maintained on site, made available to Department personnel upon request, submitted every six months in accordance with the requirement of General Provision #7. [Reg.19.705 and 40 C.F.R. § 52 Subpart E]
31. The drying kilns (SN-14, SN-15, SN-16 and SN-30) are considered affected sources under 40 CFR Part 63, Subpart DDDD, *National Emission Standards for Hazardous Air Pollutants: Plywood and Composite Wood Products*. The drying kilns are only subject to initial notification requirements in the subpart. SN-14, SN-15 and SN-16 have satisfied the initial notification requirements. [Reg.19.304 and 40 C.F.R. §63.2252 and §63.9(b)]
 - a. The permittee must submit an Initial Notification for SN-30 no later than 120 calendar days after initial startup as specified in 63.9(b)(2). [Reg.19.304 and 40 C.F.R. §63.2280 and §63.9(b)(2)]

SN-23 and SN-24
 Log Debarking and Sawing

Source Description

Infeed systems convey the log at a time to the one of the two (2) debarkers where bark is removed. The Bandmill Debarker is for large logs, and the Sharp Chain Debarker is for smaller logs. The debarked logs are then delivered to the sawmill, where the logs are ripped into green dimensional lumber. The bark is collected in hoppers, mixed with sawdust, and conveyed by a chain conveyor to the boilers to be used as fuel.

Specific Conditions

32. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by Specific Condition #29. [Reg.19.501 *et seq.* and 40 C.F.R. § 52 Subpart E]

SN	Description	Pollutant	lb/hr	tpy
23	Log Debarking	PM ₁₀	2.2	3.6
24	Log Sawing	PM ₁₀	1.0	1.7

33. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by Specific Condition #29. [Reg.18.801 and Ark. Code Ann. § 8-4-203 as referenced by Ark. Code Ann. §§ 8-4-304 and 8-4-311]

SN	Description	Pollutant	lb/hr	tpy
23	Log Debarking	PM	4.0	6.5
24	Log Sawing	PM	9.3	16.9

34. Visible emissions may not exceed the limits specified in the following table of this permit as measured by EPA Reference Method 9. [Reg.19.503 and 40 C.F.R. § 52 Subpart E]

SN	Limit	Regulatory Citation
23 24	20%	§19.503

35. The permittee shall perform daily observations of the opacity from sources SN-23 and SN-24, which shall be conducted by a person trained in EPA Reference Method 9. If visible emissions appear to be in excess of 20%, the permittee shall immediately take action to identify the cause of the excess visible emissions, implement corrective action, and document that visible emissions do not appear to be in excess of the permitted opacity following the corrective action. The permittee shall maintain records of any visible emissions which appeared to be in excess of the permitted opacity, the corrective

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action taken, and if visible emissions were present following the corrective action. These records shall be kept on site and made available to Department personnel upon request.
[Reg. 19.503 and 40 C.F.R. § 52 Subpart E]

SN-25
 Planer Mill #2

Source Description

This planer mill consists of a trim saw, a dry trim hog, and a planer machine. The shavings generated are collected by vacuum hoods and pans on branch lines, conveyed to a common system, routed to a blower, and conveyed by air to a centrifugal cyclone collector.

Specific Conditions

36. The permittee shall not exceed the emission rates set forth in the following table for source SN-25. The pound per hour and the ton per year pollutant emission rates are based on the maximum capacity of the equipment and are effectively limited by a production limit of 0.01 lb PM₁₀ per ton wood waste throughput and proper maintenance of the planer mill and cyclone. [Reg.19.501 *et seq.* and 40 C.F.R. § 52 Subpart E]

SN	Description	Pollutant	lb/hr	tpy
25	Planer Mill #2 (cyclone)	PM ₁₀	0.2	0.3

37. The permittee shall not exceed the emission rates set forth in the following table for source SN-25. The pound per hour and the ton per year pollutant emission rates are based on the maximum capacity of the equipment and are effectively limited by Specific Condition #29. [Reg.18.801 and Ark. Code Ann. § 8-4-203 as referenced by Ark. Code Ann. §§ 8-4-304 and 8-4-311]

SN	Description	Pollutant	lb/hr	tpy
25	Planer Mill #2 (cyclone)	PM	0.3	0.5

38. Visible emissions may not exceed the limits specified in the following table of this permit as measured by EPA Reference Method 9. [Reg.19.503 and 40 C.F.R. § 52 Subpart E]

SN	Limit	Regulatory Citation
25	20%	§19.503

39. The permittee shall perform daily observations of the opacity from source SN-25, which shall be conducted by a person trained in EPA Reference Method 9. If visible emissions appear to be in excess of 20%, the permittee shall immediately take action to identify the cause of the excess visible emissions, implement corrective action, and document that visible emissions do not appear to be in excess of the permitted opacity following the corrective action. The permittee shall maintain records of any visible emissions which appeared to be in excess of the permitted opacity, the corrective action taken, and if

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visible emissions were present following the corrective action. These records shall be kept on site and made available to Department personnel upon request. [Reg.19.503 and 40 C.F.R. § 52 Subpart E]

SN-26
Paved Road

Source Description

Particulate emissions result from commercial traffic on facility controlled paved roads.

Specific Conditions

40. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition through compliance with Specific Condition #29. [Reg.19.501 *et seq.* and 40 C.F.R. § 52 Subpart E]

SN	Description	Pollutant	lb/hr	tpy
26	Paved Road	PM ₁₀	1.7	1.9

41. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition through compliance with Specific Condition #29. [Reg.18.801 and Ark. Code Ann. § 8-4-203 as referenced by Ark. Code Ann. §§ 8-4-304 and 8-4-311]

SN	Description	Pollutant	lb/hr	tpy
26	Paved Road	PM	8.5	9.5

42. The permittee shall not operate in a manner such that emissions from the paved roads would cause a nuisance off-site or allow visible emissions from extending beyond the property boundary. Under normal conditions, off-site opacity less than or equal to 5% shall not be considered a nuisance provided that there are no complaints received by the Department regarding dust from the facility. [Reg.18.501 and Ark. Code Ann. § 8-4-203 as referenced by Ark. Code Ann. §§ 8-4-304 and 8-4-311]
43. The permittee shall sweep the paved roads as necessary to control emissions from extending beyond the property boundary. The permittee shall mechanically sweep the paved roads once per month or more frequently as determined by weekly observations. The permittee shall maintain records of such weekly observations and shall update these records following each observation or sweeping. These records shall be kept onsite and be made available to Department personnel upon request. [Reg.18.1004 and Ark. Code Ann. § 8-4-203 as referenced by Ark. Code Ann. §§ 8-4-304 and 8-4-311]

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SN-28A and SN-28B
 Air Curtain Destructor (ACD)

The Air Curtain Destructor (ACD) S-327, manufactured by Air Burners Inc, is powered by a Tier 3 certified engine (85 hp), and is used to reduce volume for wood waste management. The wood waste for the ACD consists mainly of short logs (unsuitable for manufacturing), broken kiln sticks, and broken boards.

Specific Conditions

44. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by Specific Condition #47 and 48. [Reg.19.501 *et seq.* and 40 C.F.R. § 52 Subpart E]

SN	Description	Pollutant	lb/hr	tpy
28A	85 hp Engine for ACD	PM ₁₀	0.2	0.6
		SO ₂	0.2	0.6
		VOC	0.3	0.7
		CO	0.7	2.1
		NO _x	2.7	7.7
28B	Air Curtain Destructor (ACD)	PM ₁₀	2.4	3.2
		SO ₂	2.2	2.9
		VOC	23.5	31.4
		CO	20.1	26.8
		NO _x	23.5	31.4
		Lead	9.20E-03	1.24E-02

45. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by Specific Condition #47 and 48. [Reg.18.801 and Ark. Code Ann. § 8-4-203 as referenced by Ark. Code Ann. §§ 8-4-304 and 8-4-311]

SN	Description	Pollutant	lb/hr	tpy
28A	85 hp Engine for ACD	PM	0.2	0.6
		Single Other Comb. HAP	0.01	0.01
		Total Other Comb. HAPs	0.01	0.02
28B	Air Curtain Destructor (ACD)	PM	2.4	3.2
		Single Other Comb. HAP	3.64	4.88
		Total Other Comb. HAPs	7.43	9.95
		Acetone**	0.04	0.05

**Acetone is neither a VOC nor a HAP.

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46. Visible emissions may not exceed the limits specified in the following table of this permit as measured by EPA Reference Method 9. [Ark. Code Ann. § 8-4-203 as referenced by Ark. Code Ann. §§ 8-4-304 and 8-4-311]

SN	Operational Status	Limit	Regulatory Citation
28A 28B	Air Curtain Incinerator*	10%	Reg.19.304 and 40 C.F.R. § 60.1445(a)(1), 40 C.F.R. § 60.2250 (a), or 40 C.F.R. § 60.3066(a)(1)
28A 28B	Air Curtain Incinerator During Startup*	35%	Reg.19.304 and 40 C.F.R. § 60.1445(a)(2), 40 C.F.R. § 60.2250 (b), or 40 C.F.R. § 60.3066(a)(2)

*See Specific Condition #51

47. The permittee shall not exceed 5,840 operating hours, per rolling 12 month period for the Tier 3 certified diesel engine associated with source SN-28B. [Reg.19.705 and Ark. Code Ann. § 8-4-203 as referenced by Ark. Code Ann. §§ 8-4-304 and 8-4-311]
48. The permittee shall not exceed 57,000 tons per rolling 12 month of combusted wood waste through source SN-28B. [Reg.19.705 and Ark. Code Ann. § 8-4-203 as referenced by Ark. Code Ann. §§ 8-4-304 and 8-4-311]
49. The permittee shall maintain monthly records to demonstrate compliance with Specific Condition #47 and 48. The permittee shall update these records by the fifteenth day of the month following the month to which the records pertain. The twelve month rolling totals and each individual month's data shall be maintained on-site, made available to Department personnel upon request, and submitted in accordance with General Provision #7. [§18.1004 of Regulation #18, §18.801 of Regulation #18, and/or A.C.A. §8-4-203 as referenced by §8-4- 304 and §8-4-311]

40 CFR Part 60 Subpart CCCC conditions

50. The permittee may only burn either 100 percent wood waste, 100 percent clean lumber, or 100 percent mixture of only wood waste, clean lumber, and/or yard waste. Clean lumber means wood or wood products that have been cut or shaped and include wet, air dried, and kiln-dried wood products. Wood waste means untreated wood and untreated wood products, including tree stumps (whole or chipped), trees, tree limbs (whole or chipped), bark, sawdust, chips, scraps, slabs, millings, and shavings. Wood waste does not include (1) Grass, grass clippings, bushes, shrubs, and clippings from bushes and shrubs from residential, commercial/retail, institutional, or industrial sources as part of maintaining yards or other private or public land or (2) construction, renovation, or demolition wastes or clean lumber. Clean lumber does not include wood products that

have been painted, pigment-stained, or pressure-treated by compounds such as chromate copper arsenate, pentachlorophenol, and creosote. Yard waste is grass, grass clippings, bushes, shrubs, and clippings from bushes and shrubs from residential, commercial/retail, institutional, or industrial sources as part of maintaining yards or other private or public lands. Yard waste does not include construction, renovation, or demolition wastes and clean wood. [Reg.19.501 and 40 C.F.R. § 60.2245 (b)]

51. Within 60 days after the air curtain incinerator reaches the charge rate at which it will operate, but no later than 180 days after its initial startup, the permittee must meet the two limitations as follows:
 - a. The permittee must maintain opacity to less than or equal to 10 percent opacity (as determined by the average of three 1-hour blocks consisting of ten 6-minute average opacity values)
 - b. The permittee must maintain opacity to less than or equal to 35 percent opacity (as determined by the average of three 1-hour blocks consisting of ten 6-minute average opacity values) during the startup period that is within the first 30 minutes of operation. [Reg.19.501 and 40 C.F.R. § 60.2250]
 - b. The permittee must maintain opacity to less than or equal to 35 percent opacity (as determined by the average of three 1-hour blocks consisting of ten 6-minute average opacity values) during the startup period that is within the first 30 minutes of operation.
[Reg.19.501 and 40 C.F.R. § 60.2250]
52. After the initial test for opacity, the permittee must conduct annual tests no more than 12 calendar months following the date of the previous test. The permittee must use Method 9 of Appendix A to Part 60 to determine compliance with the opacity limitation.
[Reg.19.501 and 40 C.F.R. § 60.2255]
53. The permittee must keep records of results of all initial and annual opacity tests onsite in either paper copy or electronic format for at least five years. The permittee must make all records available for submittal to the Department or for an inspector's onsite review.
[Reg.19.501 and 40 C.F.R. §§ 60.2260 (b) and (c)]
54. The permittee must submit the results (as determined by the average of three 1-hour blocks consisting of ten 6-minute average opacity values) of the initial opacity tests no later than 60 days following the initial test. The permittee must submit annual opacity test results within 12 months following the previous report. The permittee must submit initial and annual opacity test reports as electronic or paper copy on or before the applicable submittal date and keep a copy of the initial and annual reports onsite for a period of 5 years. [Reg.19.501 and 40 C.F.R. §§ 60.2260 (d), (e), and (f)]

40 CFR Part 60 Subpart IIII Conditions

55. SN-28 (SN-28A/SN-28B) is considered an affected source under 40 CFR Part 60, Subpart IIII, *Standards of Performance for Stationary Compression Ignition Internal*

Combustion Engines, and is subject, but not limited to, Specific Conditions #56 through #61. [Regulation 19, §19.304 and 40 CFR Part 60, Subpart III]

56. Owners and operators of 2007 model year and later non-emergency stationary CI ICE with a displacement of less than 30 liters per cylinder must comply with the emission standards for new CI engines in §60.4201 for their 2007 model year and later stationary CI ICE, as applicable. [Reg. 19.304 and 40 CFR §60.4204(b)]
 - a. Stationary CI internal combustion engine manufacturers must certify their 2007 model year and later non-emergency stationary CI ICE with a maximum engine power less than or equal to 2,237 kilowatt (KW) (3,000 horsepower (HP)) and a displacement of less than 10 liters per cylinder to the certification emission standards for new nonroad CI engines in 40 CFR 89.112, 40 CFR 89.113, 40 CFR 1039.101, 40 CFR 1039.102, 40 CFR 1039.104, 40 CFR 1039.105, 40 CFR 1039.107, and 40 CFR 1039.115, as applicable, for all pollutants, for the same model year and maximum engine power. [Reg. 19.304 and 40 CFR §60.4201(a)]
57. Beginning October 1, 2010, owners and operators of stationary CI ICE subject to this subpart with a displacement of less than 30 liters per cylinder that use diesel fuel must use diesel fuel that meets the requirements of 40 CFR 80.510(b) for nonroad diesel fuel, except that any existing diesel fuel purchased (or otherwise obtained) prior to October 1, 2010, may be used until depleted. [Reg. 19.304 and 40 CFR §60.4207 (b)]
58. If you are an owner or operator and must comply with the emission standards specified in this subpart, you must do all of the following, except as permitted under paragraph (g) of this section: [Reg. 19.304 and 40 CFR §60.4211(a)]
 - a. Operate and maintain the stationary CI internal combustion engine and control device according to the manufacturer's emission-related written instructions;
 - b. Change only those emission-related settings that are permitted by the manufacturer; and
 - c. Meet the requirements of 40 CFR parts 89, 94 and/or 1068, as they apply to you.
59. If you are an owner or operator of a 2007 model year and later stationary CI internal combustion engine and must comply with the emission standards specified in §60.4204(b), you must comply by purchasing an engine certified to the emission standards in §60.4204(b), as applicable, for the same model year and maximum (or in the case of fire pumps, NFPA nameplate) engine power. The engine must be installed and configured according to the manufacturer's emission-related specifications, except as permitted in paragraph (g) of this section. [Reg. 19.304 and 40 CFR §60.4211(c)]

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60. If you do not install, configure, operate, and maintain your engine and control device according to the manufacturer's emission-related written instructions, or you change emission-related settings in a way that is not permitted by the manufacturer, you must keep a maintenance plan and records of conducted maintenance and must, to the extent practicable, maintain and operate the engine in a manner consistent with good air pollution control practice for minimizing emissions. In addition, you must conduct an initial performance test to demonstrate compliance with the applicable emission standards within 1 year of startup, or within 1 year after an engine and control device is no longer installed, configured, operated, and maintained in accordance with the manufacturer's emission-related written instructions, or within 1 year after you change emission-related settings in a way that is not permitted by the manufacturer. You must conduct subsequent performance testing every 8,760 hours of engine operation or 3 years, whichever comes first, thereafter to demonstrate compliance with the applicable emission standards. [Reg. 19.304 and 40 CFR §60.4211(g)(3)]

61. If the stationary CI internal combustion engine is equipped with a diesel particulate filter, the owner or operator must keep records of any corrective action taken after the backpressure monitor has notified the owner or operator that the high backpressure limit of the engine is approached. [Reg. 19.304 and 40 CFR §60.4214 (c)]

SN-29
 ACD Loadout

The wood waste is stored in small piles until it is loaded into the ACD by a log loader or front end loader. This operation will produce approximately 1.5 truckloads of ash per month, which will be collected and hauled offsite.

Specific Conditions

62. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by Specific Condition #48. [Reg.19.501 *et seq.* and 40 C.F.R. § 52 Subpart E]

SN	Description	Pollutant	lb/hr	tpy
29	ACD Loadout	PM ₁₀	0.2	0.2

63. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by Specific Condition #48. [Reg.18.801 and Ark. Code Ann. § 8-4-203 as referenced by Ark. Code Ann. §§ 8-4-304 and 8-4-311]

SN	Description	Pollutant	lb/hr	tpy
29	ACD Loadout	PM	0.2	0.2

64. Visible emissions may not exceed the limits specified in the following table of this permit as measured by EPA Reference Method 9. [Reg.19.503 and 40 C.F.R. § 52 Subpart E]

SN	Limit	Regulatory Citation
29	20%	Reg.19.503

65. The permittee shall perform daily observations of the opacity from source SN-29, which shall be conducted by a person trained in EPA Reference Method 9. If visible emissions appear to be in excess of 20%, the permittee shall immediately take action to identify the cause of the excess visible emissions, implement corrective action, and document that visible emissions do not appear to be in excess of the permitted opacity following the corrective action. The permittee shall maintain records of any visible emissions which appeared to be in excess of the permitted opacity, the corrective action taken, and if visible emissions were present following the corrective action. These records shall be kept on site and made available to Department personnel upon request. [Reg.19.503 and 40 C.F.R. § 52 Subpart E]

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SECTION V: COMPLIANCE PLAN AND SCHEDULE

Anthony Timberlands, Inc. will continue to operate in compliance with those identified regulatory provisions. The facility will examine and analyze future regulations that may apply and determine their applicability with any necessary action taken on a timely basis.

SECTION VI: PLANTWIDE CONDITIONS

1. The permittee shall notify the Director in writing within thirty (30) days after commencing construction, completing construction, first placing the equipment and/or facility in operation, and reaching the equipment and/or facility target production rate. [Reg.19.704, 40 C.F.R. § 52 Subpart E, and Ark. Code Ann. § 8-4-203 as referenced by Ark. Code Ann. §§ 8-4-304 and 8-4-311]
2. If the permittee fails to start construction within eighteen months or suspends construction for eighteen months or more, the Director may cancel all or part of this permit. [Reg.19.410(B) and 40 C.F.R. § 52 Subpart E]
3. The permittee must test any equipment scheduled for testing, unless otherwise stated in the Specific Conditions of this permit or by any federally regulated requirements, within the following time frames: (1) new equipment or newly modified equipment within sixty (60) days of achieving the maximum production rate, but no later than 180 days after initial start up of the permitted source or (2) operating equipment according to the time frames set forth by the Department or within 180 days of permit issuance if no date is specified. The permittee must notify the Department of the scheduled date of compliance testing at least fifteen (15) business days in advance of such test. The permittee shall submit the compliance test results to the Department within sixty (60) calendar days after completing the testing. [Reg.19.702 and/or Reg.18.1002 and Ark. Code Ann. § 8-4-203 as referenced by Ark. Code Ann. §§ 8-4-304 and 8-4-311]
4. The permittee must provide:
 - a. Sampling ports adequate for applicable test methods;
 - b. Safe sampling platforms;
 - c. Safe access to sampling platforms; and
 - d. Utilities for sampling and testing equipment.

[Reg.19.702 and/or Reg.18.1002 and Ark. Code Ann. § 8-4-203 as referenced by Ark. Code Ann. §§ 8-4-304 and 8-4-311]
5. The permittee must operate the equipment, control apparatus and emission monitoring equipment within the design limitations. The permittee shall maintain the equipment in good condition at all times. [Reg.19.303 and Ark. Code Ann. § 8-4-203 as referenced by Ark. Code Ann. §§ 8-4-304 and 8-4-311]
6. This permit subsumes and incorporates all previously issued air permits for this facility. [Reg. 26 and Ark. Code Ann. § 8-4-203 as referenced by Ark. Code Ann. §§ 8-4-304 and 8-4-311]

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SECTION VII: INSIGNIFICANT ACTIVITIES

The Department deems the following types of activities or emissions as insignificant on the basis of size, emission rate, production rate, or activity in accordance with Group A of the Insignificant Activities list found in Regulation 18 and Regulation 19 Appendix A. Group B insignificant activities may be listed but are not required to be listed in permits. Insignificant activity emission determinations rely upon the information submitted by the permittee in an application dated March 7, 2019. [Reg.26.304 and Ark. Code Ann. § 8-4-203 as referenced by Ark. Code Ann. §§ 8-4-304 and 8-4-311]

Description	Category
Underground Diesel Fuel Storage Tank (10,000 gallons)	A-3
Aboveground Kerosene Storage Tank (250 gallons)	A-3
Underground Gasoline Storage Tank (10,000 gallons)	A-13
Underground Diesel Fuel Storage Tank (14,000 gallons)	A-13

SECTION VIII: GENERAL PROVISIONS

1. Any terms or conditions included in this permit which specify and reference Arkansas Pollution Control & Ecology Commission Regulation 18 or the Arkansas Water and Air Pollution Control Act (Ark. Code Ann. § 8-4-101 *et seq.*) as the sole origin of and authority for the terms or conditions are not required under the Clean Air Act or any of its applicable requirements, and are not federally enforceable under the Clean Air Act. Arkansas Pollution Control & Ecology Commission Regulation 18 was adopted pursuant to the Arkansas Water and Air Pollution Control Act (Ark. Code Ann. § 8-4-101 *et seq.*). Any terms or conditions included in this permit which specify and reference Arkansas Pollution Control & Ecology Commission Regulation 18 or the Arkansas Water and Air Pollution Control Act (Ark. Code Ann. § 8-4-101 *et seq.*) as the origin of and authority for the terms or conditions are enforceable under this Arkansas statute. [40 C.F.R. § 70.6(b)(2)]
2. This permit shall be valid for a period of five (5) years beginning on the date this permit becomes effective and ending five (5) years later. [40 C.F.R. § 70.6(a)(2) and Reg.26.701(B)]
3. The permittee must submit a complete application for permit renewal at least six (6) months before permit expiration. Permit expiration terminates the permittee's right to operate unless the permittee submitted a complete renewal application at least six (6) months before permit expiration. If the permittee submits a complete application, the existing permit will remain in effect until the Department takes final action on the renewal application. The Department will not necessarily notify the permittee when the permit renewal application is due. [Reg.26.406]
4. Where an applicable requirement of the Clean Air Act, as amended, 42 U.S.C. 7401, *et seq.* (Act) is more stringent than an applicable requirement of regulations promulgated under Title IV of the Act, the permit incorporates both provisions into the permit, and the Director or the Administrator can enforce both provisions. [40 C.F.R. § 70.6(a)(1)(ii) and Reg.26.701(A)(2)]
5. The permittee must maintain the following records of monitoring information as required by this permit.
 - a. The date, place as defined in this permit, and time of sampling or measurements;
 - b. The date(s) analyses performed;
 - c. The company or entity performing the analyses;
 - d. The analytical techniques or methods used;
 - e. The results of such analyses; and
 - f. The operating conditions existing at the time of sampling or measurement.

[40 C.F.R. § 70.6(a)(3)(ii)(A) and Reg.26.701(C)(2)]

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6. The permittee must retain the records of all required monitoring data and support information for at least five (5) years from the date of the monitoring sample, measurement, report, or application. Support information includes all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, and copies of all reports required by this permit. [40 C.F.R. § 70.6(a)(3)(ii)(B) and Reg.26.701(C)(2)(b)]
7. The permittee must submit reports of all required monitoring every six (6) months. If the permit establishes no other reporting period, the reporting period shall end on the last day of the month six months after the issuance of the initial Title V permit and every six months thereafter. The report is due on the first day of the second month after the end of the reporting period. The first report due after issuance of the initial Title V permit shall contain six months of data and each report thereafter shall contain 12 months of data. The report shall contain data for all monitoring requirements in effect during the reporting period. If a monitoring requirement is not in effect for the entire reporting period, only those months of data in which the monitoring requirement was in effect are required to be reported. The report must clearly identify all instances of deviations from permit requirements. A responsible official as defined in Reg.26.2 must certify all required reports. The permittee will send the reports to the address below:

Arkansas Department of Environmental Quality
Office of Air Quality
ATTN: Compliance Inspector Supervisor
5301 Northshore Drive
North Little Rock, AR 72118-5317

[40 C.F.R. § 70.6(a)(3)(iii)(A) and Reg.26.701(C)(3)(a)]

8. The permittee shall report to the Department all deviations from permit requirements, including those attributable to upset conditions as defined in the permit.
 - a. For all upset conditions (as defined in Reg.19.601), the permittee will make an initial report to the Department by the next business day after the discovery of the occurrence. The initial report may be made by telephone and shall include:
 - i. The facility name and location;
 - ii. The process unit or emission source deviating from the permit limit;
 - iii. The permit limit, including the identification of pollutants, from which deviation occurs;
 - iv. The date and time the deviation started;
 - v. The duration of the deviation;
 - vi. The emissions during the deviation;
 - vii. The probable cause of such deviations;
 - viii. Any corrective actions or preventive measures taken or being taken to prevent such deviations in the future; and

ix. The name of the person submitting the report.

The permittee shall make a full report in writing to the Department within five (5) business days of discovery of the occurrence. The report must include, in addition to the information required by the initial report, a schedule of actions taken or planned to eliminate future occurrences and/or to minimize the amount the permit's limits were exceeded and to reduce the length of time the limits were exceeded. The permittee may submit a full report in writing (by facsimile, overnight courier, or other means) by the next business day after discovery of the occurrence, and the report will serve as both the initial report and full report.

b. For all deviations, the permittee shall report such events in semi-annual reporting and annual certifications required in this permit. This includes all upset conditions reported in 8a above. The semi-annual report must include all the information as required by the initial and full reports required in 8a.

[Reg.19.601, Reg.19.602, Reg.26.701(C)(3)(b), and 40 C.F.R. § 70.6(a)(3)(iii)(B)]

9. If any provision of the permit or the application thereof to any person or circumstance is held invalid, such invalidity will not affect other provisions or applications hereof which can be given effect without the invalid provision or application, and to this end, provisions of this Regulation are declared to be separable and severable. [40 C.F.R. § 70.6(a)(5), Reg.26.701(E), and Ark. Code Ann. § 8-4-203 as referenced by Ark. Code Ann. §§ 8-4-304 and 8-4-311]
10. The permittee must comply with all conditions of this Part 70 permit. Any permit noncompliance with applicable requirements as defined in Regulation 26 constitutes a violation of the Clean Air Act, as amended, 42 U.S.C. § 7401, *et seq.* and is grounds for enforcement action; for permit termination, revocation and reissuance, for permit modification; or for denial of a permit renewal application. [40 C.F.R. § 70.6(a)(6)(i) and Reg.26.701(F)(1)]
11. It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity to maintain compliance with the conditions of this permit. [40 C.F.R. § 70.6(a)(6)(ii) and Reg.26.701(F)(2)]
12. The Department may modify, revoke, reopen and reissue the permit or terminate the permit for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, termination, or of a notification of planned changes or anticipated noncompliance does not stay any permit condition. [40 C.F.R. § 70.6(a)(6)(iii) and Reg.26.701(F)(3)]
13. This permit does not convey any property rights of any sort, or any exclusive privilege. [40 C.F.R. § 70.6(a)(6)(iv) and Reg.26.701(F)(4)]

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14. The permittee must furnish to the Director, within the time specified by the Director, any information that the Director may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating the permit or to determine compliance with the permit. Upon request, the permittee must also furnish to the Director copies of records required by the permit. For information the permittee claims confidentiality, the Department may require the permittee to furnish such records directly to the Director along with a claim of confidentiality. [40 C.F.R. § 70.6(a)(6)(v) and Reg.26.701(F)(5)]
15. The permittee must pay all permit fees in accordance with the procedures established in Regulation 9. [40 C.F.R. § 70.6(a)(7) and Reg.26.701(G)]
16. No permit revision shall be required, under any approved economic incentives, marketable permits, emissions trading and other similar programs or processes for changes provided for elsewhere in this permit. [40 C.F.R. § 70.6(a)(8) and Reg.26.701(H)]
17. If the permit allows different operating scenarios, the permittee shall, contemporaneously with making a change from one operating scenario to another, record in a log at the permitted facility a record of the operational scenario. [40 C.F.R. § 70.6(a)(9)(i) and Reg.26.701(I)(1)]
18. The Administrator and citizens may enforce under the Act all terms and conditions in this permit, including any provisions designed to limit a source's potential to emit, unless the Department specifically designates terms and conditions of the permit as being federally unenforceable under the Act or under any of its applicable requirements. [40 C.F.R. § 70.6(b) and Reg.26.702(A) and (B)]
19. Any document (including reports) required by this permit pursuant to 40 C.F.R. § 70 must contain a certification by a responsible official as defined in Reg.26.2. [40 C.F.R. § 70.6(c)(1) and Reg.26.703(A)]
20. The permittee must allow an authorized representative of the Department, upon presentation of credentials, to perform the following: [40 C.F.R. § 70.6(c)(2) and Reg.26.703(B)]
 - a. Enter upon the permittee's premises where the permitted source is located or emissions related activity is conducted, or where records must be kept under the conditions of this permit;
 - b. Have access to and copy, at reasonable times, any records required under the conditions of this permit;
 - c. Inspect at reasonable times any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit; and
 - d. As authorized by the Act, sample or monitor at reasonable times substances or parameters for assuring compliance with this permit or applicable requirements.

21. The permittee shall submit a compliance certification with the terms and conditions contained in the permit, including emission limitations, standards, or work practices. The permittee must submit the compliance certification annually. If the permit establishes no other reporting period, the reporting period shall end on the last day of the anniversary month of the initial Title V permit. The report is due on the first day of the second month after the end of the reporting period. The permittee must also submit the compliance certification to the Administrator as well as to the Department. All compliance certifications required by this permit must include the following: [40 C.F.R. § 70.6(c)(5) and Reg.26.703(E)(3)]
 - a. The identification of each term or condition of the permit that is the basis of the certification;
 - b. The compliance status;
 - c. Whether compliance was continuous or intermittent;
 - d. The method(s) used for determining the compliance status of the source, currently and over the reporting period established by the monitoring requirements of this permit; and
 - e. Such other facts as the Department may require elsewhere in this permit or by § 114(a)(3) and § 504(b) of the Act.
22. Nothing in this permit will alter or affect the following: [Reg.26.704(C)]
 - a. The provisions of Section 303 of the Act (emergency orders), including the authority of the Administrator under that section;
 - b. The liability of the permittee for any violation of applicable requirements prior to or at the time of permit issuance;
 - c. The applicable requirements of the acid rain program, consistent with § 408(a) of the Act; or
 - d. The ability of EPA to obtain information from a source pursuant to § 114 of the Act.
23. This permit authorizes only those pollutant emitting activities addressed in this permit. [Ark. Code Ann. § 8-4-203 as referenced by Ark. Code Ann. §§ 8-4-304 and 8-4-311]
24. The permittee may request in writing and at least 15 days in advance of the deadline, an extension to any testing, compliance or other dates in this permit. No such extensions are authorized until the permittee receives written Department approval. The Department may grant such a request, at its discretion in the following circumstances:
 - a. Such an extension does not violate a federal requirement;
 - b. The permittee demonstrates the need for the extension; and
 - c. The permittee documents that all reasonable measures have been taken to meet the current deadline and documents reasons it cannot be met.

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[Reg.18.314(A), Reg.19.416(A), Reg.26.1013(A), Ark. Code Ann. § 8-4-203 as referenced by Ark. Code Ann. §§ 8-4-304 and 8-4-311, and 40 C.F.R. § 52 Subpart E]

25. The permittee may request in writing and at least 30 days in advance, temporary emissions and/or testing that would otherwise exceed an emission rate, throughput requirement, or other limit in this permit. No such activities are authorized until the permittee receives written Department approval. Any such emissions shall be included in the facility's total emissions and reported as such. The Department may grant such a request, at its discretion under the following conditions:
- a. Such a request does not violate a federal requirement;
 - b. Such a request is temporary in nature;
 - c. Such a request will not result in a condition of air pollution;
 - d. The request contains such information necessary for the Department to evaluate the request, including but not limited to, quantification of such emissions and the date/time such emission will occur;
 - e. Such a request will result in increased emissions less than five tons of any individual criteria pollutant, one ton of any single HAP and 2.5 tons of total HAPs; and
 - f. The permittee maintains records of the dates and results of such temporary emissions/testing.

[Reg.18.314(B), Reg.19.416(B), Reg.26.1013(B), Ark. Code Ann. § 8-4-203 as referenced by Ark. Code Ann. §§ 8-4-304 and 8-4-311, and 40 C.F.R. § 52 Subpart E]

26. The permittee may request in writing and at least 30 days in advance, an alternative to the specified monitoring in this permit. No such alternatives are authorized until the permittee receives written Department approval. The Department may grant such a request, at its discretion under the following conditions:
- a. The request does not violate a federal requirement;
 - b. The request provides an equivalent or greater degree of actual monitoring to the current requirements; and
 - c. Any such request, if approved, is incorporated in the next permit modification application by the permittee.

[Reg.18.314(C), Reg.19.416(C), Reg.26.1013(C), Ark. Code Ann. § 8-4-203 as referenced by Ark. Code Ann. §§ 8-4-304 and 8-4-311, and 40 C.F.R. § 52 Subpart E]

27. Any credible evidence based on sampling, monitoring, and reporting may be used to determine violations of applicable emission limitations. [Reg.18.1001, Reg.19.701, Ark. Code Ann. § 8-4-203 as referenced by Ark. Code Ann. §§ 8-4-304 and 8-4-311, and 40 C.F.R. § 52 Subpart E]

Appendix A

40 CFR Part 60, Subpart Dc – *Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units*

ELECTRONIC CODE OF FEDERAL REGULATIONS

e-CFR data is current as of April 11, 2019

Title 40 → Chapter I → Subchapter C → Part 60 → Subpart Dc

Title 40: Protection of Environment

PART 60—STANDARDS OF PERFORMANCE FOR NEW STATIONARY SOURCES

Subpart Dc—Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units

Contents

- §60.40c Applicability and delegation of authority.
 - §60.41c Definitions.
 - §60.42c Standard for sulfur dioxide (SO₂).
 - §60.43c Standard for particulate matter (PM).
 - §60.44c Compliance and performance test methods and procedures for sulfur dioxide.
 - §60.45c Compliance and performance test methods and procedures for particulate matter.
 - §60.46c Emission monitoring for sulfur dioxide.
 - §60.47c Emission monitoring for particulate matter.
 - §60.48c Reporting and recordkeeping requirements.
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SOURCE: 72 FR 32759, June 13, 2007, unless otherwise noted.

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§60.40c Applicability and delegation of authority.

(a) Except as provided in paragraphs (d), (e), (f), and (g) of this section, the affected facility to which this subpart applies is each steam generating unit for which construction, modification, or reconstruction is commenced after June 9, 1989 and that has a maximum design heat input capacity of 29 megawatts (MW) (100 million British thermal units per hour (MMBtu/h)) or less, but greater than or equal to 2.9 MW (10 MMBtu/h).

(b) In delegating implementation and enforcement authority to a State under section 111(c) of the Clean Air Act, §60.48c(a)(4) shall be retained by the Administrator and not transferred to a State.

(c) Steam generating units that meet the applicability requirements in paragraph (a) of this section are not subject to the sulfur dioxide (SO₂) or particulate matter (PM) emission limits, performance testing requirements, or monitoring requirements under this subpart (§§60.42c, 60.43c, 60.44c, 60.45c, 60.46c, or 60.47c) during periods of combustion research, as defined in §60.41c.

(d) Any temporary change to an existing steam generating unit for the purpose of conducting combustion research is not considered a modification under §60.14.

(e) Affected facilities (*i.e.* heat recovery steam generators and fuel heaters) that are associated with stationary combustion turbines and meet the applicability requirements of subpart KKKK of this part are not subject to this subpart. This subpart will continue to apply to all other heat recovery steam generators, fuel heaters, and other affected facilities that are capable of combusting more than or equal to 2.9 MW (10 MMBtu/h) heat input of fossil fuel but less than or equal to 29 MW (100 MMBtu/h) heat input of fossil fuel. If the heat recovery steam generator, fuel heater, or other affected facility is subject to this subpart, only emissions resulting from combustion of fuels in the steam generating unit are subject to this subpart. (The stationary combustion turbine emissions are subject to subpart GG or KKKK, as applicable, of this part.)

(f) Any affected facility that meets the applicability requirements of and is subject to subpart AAAA or subpart CCCC of this part is not subject to this subpart.

(g) Any facility that meets the applicability requirements and is subject to an EPA approved State or Federal section 111(d)/129 plan implementing subpart BBBB of this part is not subject to this subpart.

(h) Affected facilities that also meet the applicability requirements under subpart J or subpart Ja of this part are subject to the PM and NO_x standards under this subpart and the SO₂ standards under subpart J or subpart Ja of this part, as applicable.

(i) Temporary boilers are not subject to this subpart.

[72 FR 32759, June 13, 2007, as amended at 74 FR 5090, Jan. 28, 2009; 77 FR 9461, Feb. 16, 2012]

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§60.41c Definitions.

As used in this subpart, all terms not defined herein shall have the meaning given them in the Clean Air Act and in subpart A of this part.

Annual capacity factor means the ratio between the actual heat input to a steam generating unit from an individual fuel or combination of fuels during a period of 12 consecutive calendar months and the potential heat input to the steam generating unit from all fuels had the steam generating unit been operated for 8,760 hours during that 12-month period at the maximum design heat input capacity. In the case of steam generating units that are rented or leased, the actual heat input shall be determined based on the combined heat input from all operations of the affected facility during a period of 12 consecutive calendar months.

Coal means all solid fuels classified as anthracite, bituminous, subbituminous, or lignite by the American Society of Testing and Materials in ASTM D388 (incorporated by reference, see §60.17), coal refuse, and petroleum coke. Coal-derived synthetic fuels derived from coal for the purposes of creating useful heat, including but not limited to solvent refined coal, gasified coal not meeting the definition of natural gas, coal-oil mixtures, and coal-water mixtures, are also included in this definition for the purposes of this subpart.

Coal refuse means any by-product of coal mining or coal cleaning operations with an ash content greater than 50 percent (by weight) and a heating value less than 13,900 kilojoules per kilogram (kJ/kg) (6,000 Btu per pound (Btu/lb) on a dry basis.

Combined cycle system means a system in which a separate source (such as a stationary gas turbine, internal combustion engine, or kiln) provides exhaust gas to a steam generating unit.

Combustion research means the experimental firing of any fuel or combination of fuels in a steam generating unit for the purpose of conducting research and development of more efficient combustion or more effective prevention or control of air pollutant emissions from combustion, provided that, during these periods of research and development, the heat generated is not used for any purpose other than preheating combustion air for use by that steam generating unit (*i.e.*, the heat generated is released to the atmosphere without being used for space heating, process heating, driving pumps, preheating combustion air for other units, generating electricity, or any other purpose).

Conventional technology means wet flue gas desulfurization technology, dry flue gas desulfurization technology, atmospheric fluidized bed combustion technology, and oil hydrodesulfurization technology.

Distillate oil means fuel oil that complies with the specifications for fuel oil numbers 1 or 2, as defined by the American Society for Testing and Materials in ASTM D396 (incorporated by reference, see §60.17), diesel fuel oil numbers 1 or 2, as defined by the American Society for Testing and Materials in ASTM D975 (incorporated by reference, see §60.17), kerosine, as defined by the American Society of Testing and Materials in ASTM D3699 (incorporated by reference, see §60.17), biodiesel as defined by the American Society of Testing and Materials in ASTM D6751 (incorporated by reference, see §60.17), or biodiesel blends as defined by the American Society of Testing and Materials in ASTM D7467 (incorporated by reference, see §60.17).

Dry flue gas desulfurization technology means a SO₂ control system that is located between the steam generating unit and the exhaust vent or stack, and that removes sulfur oxides from the combustion gases of the steam generating unit by contacting the combustion gases with an alkaline reagent and water, whether introduced separately or as a premixed slurry or solution and forming a dry powder material. This definition includes devices where the dry powder material is subsequently converted to another form. Alkaline reagents used in dry flue gas desulfurization systems include, but are not limited to, lime and sodium compounds.

Duct burner means a device that combusts fuel and that is placed in the exhaust duct from another source (such as a stationary gas turbine, internal combustion engine, kiln, etc.) to allow the firing of additional fuel to heat the exhaust gases before the exhaust gases enter a steam generating unit.

Emerging technology means any SO₂ control system that is not defined as a conventional technology under this section, and for which the owner or operator of the affected facility has received approval from the Administrator to operate as an emerging technology under §60.48c(a)(4).

Federally enforceable means all limitations and conditions that are enforceable by the Administrator, including the requirements of 40 CFR parts 60 and 61, requirements within any applicable State implementation plan, and any permit requirements established under 40 CFR 52.21 or under 40 CFR 51.18 and 51.24.

Fluidized bed combustion technology means a device wherein fuel is distributed onto a bed (or series of beds) of limestone aggregate (or other sorbent materials) for combustion; and these materials are forced upward in the device by the flow of combustion air and the gaseous products of combustion. Fluidized bed combustion technology includes, but is not limited to, bubbling bed units and circulating bed units.

Fuel pretreatment means a process that removes a portion of the sulfur in a fuel before combustion of the fuel in a steam generating unit.

Heat input means heat derived from combustion of fuel in a steam generating unit and does not include the heat derived from preheated combustion air, recirculated flue gases, or exhaust gases from other sources (such as stationary gas turbines, internal combustion engines, and kilns).

Heat transfer medium means any material that is used to transfer heat from one point to another point.

Maximum design heat input capacity means the ability of a steam generating unit to combust a stated maximum amount of fuel (or combination of fuels) on a steady state basis as determined by the physical design and characteristics of the steam generating unit.

Natural gas means:

(1) A naturally occurring mixture of hydrocarbon and nonhydrocarbon gases found in geologic formations beneath the earth's surface, of which the principal constituent is methane; or

(2) Liquefied petroleum (LP) gas, as defined by the American Society for Testing and Materials in ASTM D1835 (incorporated by reference, see §60.17); or

(3) A mixture of hydrocarbons that maintains a gaseous state at ISO conditions. Additionally, natural gas must either be composed of at least 70 percent methane by volume or have a gross calorific value between 34 and 43 megajoules (MJ) per dry standard cubic meter (910 and 1,150 Btu per dry standard cubic foot).

Noncontinental area means the State of Hawaii, the Virgin Islands, Guam, American Samoa, the Commonwealth of Puerto Rico, or the Northern Mariana Islands.

Oil means crude oil or petroleum, or a liquid fuel derived from crude oil or petroleum, including distillate oil and residual oil.

Potential sulfur dioxide emission rate means the theoretical SO₂ emissions (nanograms per joule (ng/J) or lb/MMBtu heat input) that would result from combusting fuel in an uncleaned state and without using emission control systems.

Process heater means a device that is primarily used to heat a material to initiate or promote a chemical reaction in which the material participates as a reactant or catalyst.

Residual oil means crude oil, fuel oil that does not comply with the specifications under the definition of distillate oil, and all fuel oil numbers 4, 5, and 6, as defined by the American Society for Testing and Materials in ASTM D396 (incorporated by reference, see §60.17).

Steam generating unit means a device that combusts any fuel and produces steam or heats water or heats any heat transfer medium. This term includes any duct burner that combusts fuel and is part of a combined cycle system. This term does not include process heaters as defined in this subpart.

Steam generating unit operating day means a 24-hour period between 12:00 midnight and the following midnight during which any fuel is combusted at any time in the steam generating unit. It is not necessary for fuel to be combusted continuously for the entire 24-hour period.

Temporary boiler means a steam generating unit that combusts natural gas or distillate oil with a potential SO₂ emissions rate no greater than 26 ng/J (0.060 lb/MMBtu), and the unit is designed to, and is capable of, being carried or moved from one location to another by means of, for example, wheels, skids, carrying handles, dollies, trailers, or platforms. A steam generating unit is not a temporary boiler if any one of the following conditions exists:

(1) The equipment is attached to a foundation.

(2) The steam generating unit or a replacement remains at a location for more than 180 consecutive days. Any temporary boiler that replaces a temporary boiler at a location and performs the same or similar function will be included in calculating the consecutive time period.

(3) The equipment is located at a seasonal facility and operates during the full annual operating period of the seasonal facility, remains at the facility for at least 2 years, and operates at that facility for at least 3 months each year.

(4) The equipment is moved from one location to another in an attempt to circumvent the residence time requirements of this definition.

Wet flue gas desulfurization technology means an SO₂ control system that is located between the steam generating unit and the exhaust vent or stack, and that removes sulfur oxides from the combustion gases of the steam generating unit by contacting the combustion gases with an alkaline slurry or solution and forming a liquid material. This definition includes devices where the liquid material is subsequently converted to another form. Alkaline reagents used in wet flue gas desulfurization systems include, but are not limited to, lime, limestone, and sodium compounds.

Wet scrubber system means any emission control device that mixes an aqueous stream or slurry with the exhaust gases from a steam generating unit to control emissions of PM or SO₂.

Wood means wood, wood residue, bark, or any derivative fuel or residue thereof, in any form, including but not limited to sawdust, sanderdust, wood chips, scraps, slabs, millings, shavings, and processed pellets made from wood or other forest residues.

[72 FR 32759, June 13, 2007, as amended at 74 FR 5090, Jan. 28, 2009; 77 FR 9461, Feb. 16, 2012]

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§60.42c Standard for sulfur dioxide (SO₂).

(a) Except as provided in paragraphs (b), (c), and (e) of this section, on and after the date on which the performance test is completed or required to be completed under §60.8, whichever date comes first, the owner or operator of an affected facility that combusts only coal shall neither: cause to be discharged into the atmosphere from the affected facility any gases that contain SO₂ in excess of 87 ng/J (0.20 lb/MMBtu) heat input or 10 percent (0.10) of the potential SO₂ emission rate (90 percent reduction), nor cause to be discharged into the atmosphere from the affected facility any gases that contain SO₂ in excess of 520 ng/J (1.2 lb/MMBtu) heat input. If coal is combusted with other fuels, the affected facility shall neither: cause to be discharged into the atmosphere from the affected facility any gases that contain SO₂ in excess of 87 ng/J (0.20 lb/MMBtu) heat input or 10 percent (0.10) of the potential SO₂ emission rate (90 percent reduction), nor cause to be discharged into the atmosphere from the affected facility any gases that contain SO₂ in excess of the emission limit is determined pursuant to paragraph (e)(2) of this section.

(b) Except as provided in paragraphs (c) and (e) of this section, on and after the date on which the performance test is completed or required to be completed under §60.8, whichever date comes first, the owner or operator of an affected facility that:

(1) Combusts only coal refuse alone in a fluidized bed combustion steam generating unit shall neither:

(i) Cause to be discharged into the atmosphere from that affected facility any gases that contain SO₂ in excess of 87 ng/J (0.20 lb/MMBtu) heat input or 20 percent (0.20) of the potential SO₂ emission rate (80 percent reduction); nor

(ii) Cause to be discharged into the atmosphere from that affected facility any gases that contain SO₂ in excess of SO₂ in excess of 520 ng/J (1.2 lb/MMBtu) heat input. If coal is fired with coal refuse, the affected facility subject to paragraph (a) of this section. If oil or any other fuel (except coal) is fired with coal refuse, the affected facility is subject to the 87 ng/J (0.20 lb/MMBtu) heat input SO₂ emissions limit or the 90 percent SO₂ reduction requirement specified in paragraph (a) of this section and the emission limit is determined pursuant to paragraph (e)(2) of this section.

(2) Combusts only coal and that uses an emerging technology for the control of SO₂ emissions shall neither:

(i) Cause to be discharged into the atmosphere from that affected facility any gases that contain SO₂ in excess of 50 percent (0.50) of the potential SO₂ emission rate (50 percent reduction); nor

(ii) Cause to be discharged into the atmosphere from that affected facility any gases that contain SO₂ in excess of 260 ng/J (0.60 lb/MMBtu) heat input. If coal is combusted with other fuels, the affected facility is subject to the 50 percent SO₂ reduction requirement specified in this paragraph and the emission limit determined pursuant to paragraph (e)(2) of this section.

(c) On and after the date on which the initial performance test is completed or required to be completed under §60.8, whichever date comes first, no owner or operator of an affected facility that combusts coal, alone or in combination with any other fuel, and is listed in paragraphs (c)(1), (2), (3), or (4) of this section shall cause to be discharged into the atmosphere from that affected facility any gases that contain SO₂ in excess of the emission limit determined pursuant to paragraph (e)(2) of this section. Percent reduction requirements are not applicable to affected facilities under paragraphs (c)(1), (2), (3), or (4).

(1) Affected facilities that have a heat input capacity of 22 MW (75 MMBtu/h) or less;

(2) Affected facilities that have an annual capacity for coal of 55 percent (0.55) or less and are subject to a federally enforceable requirement limiting operation of the affected facility to an annual capacity factor for coal of 55 percent (0.55) or less.

(3) Affected facilities located in a noncontinental area; or

(4) Affected facilities that combust coal in a duct burner as part of a combined cycle system where 30 percent (0.30) or less of the heat entering the steam generating unit is from combustion of coal in the duct burner and 70 percent (0.70) or more of the heat entering the steam generating unit is from exhaust gases entering the duct burner.

(d) On and after the date on which the initial performance test is completed or required to be completed under §60.8, whichever date comes first, no owner or operator of an affected facility that combusts oil shall cause to be discharged into the atmosphere from that affected facility any gases that contain SO₂ in excess of 215 ng/J (0.50 lb/MMBtu) heat input from oil; or, as an alternative, no owner or operator of an affected facility that combusts oil shall combust oil in the affected facility that contains greater than 0.5 weight percent sulfur. The percent reduction requirements are not applicable to affected facilities under this paragraph.

(e) On and after the date on which the initial performance test is completed or required to be completed under §60.8, whichever date comes first, no owner or operator of an affected facility that combusts coal, oil, or coal and oil with any other fuel shall cause to be discharged into the atmosphere from that affected facility any gases that contain SO₂ in excess of the following:

(1) The percent of potential SO₂ emission rate or numerical SO₂ emission rate required under paragraph (a) or (b)(2) of this section, as applicable, for any affected facility that

(i) Combusts coal in combination with any other fuel;

(ii) Has a heat input capacity greater than 22 MW (75 MMBtu/h); and

(iii) Has an annual capacity factor for coal greater than 55 percent (0.55); and

(2) The emission limit determined according to the following formula for any affected facility that combusts coal, oil, or coal and oil with any other fuel:

$$E_s = \frac{(K_a H_a + K_b H_b + K_c H_c)}{(H_a + H_b + H_c)}$$

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Where:

E_s = SO₂ emission limit, expressed in ng/J or lb/MMBtu heat input;

K_a = 520 ng/J (1.2 lb/MMBtu);

K_b = 260 ng/J (0.60 lb/MMBtu);

K_c = 215 ng/J (0.50 lb/MMBtu);

H_a = Heat input from the combustion of coal, except coal combusted in an affected facility subject to paragraph (b)(2) of this section, in Joules (J) [MMBtu];

H_b = Heat input from the combustion of coal in an affected facility subject to paragraph (b)(2) of this section, in J (MMBtu); and

H_c = Heat input from the combustion of oil, in J (MMBtu).

(f) Reduction in the potential SO₂ emission rate through fuel pretreatment is not credited toward the percent reduction requirement under paragraph (b)(2) of this section unless:

(1) Fuel pretreatment results in a 50 percent (0.50) or greater reduction in the potential SO₂ emission rate; and

(2) Emissions from the pretreated fuel (without either combustion or post-combustion SO₂ control) are equal to or less than the emission limits specified under paragraph (b)(2) of this section.

(g) Except as provided in paragraph (h) of this section, compliance with the percent reduction requirements, fuel oil sulfur limits, and emission limits of this section shall be determined on a 30-day rolling average basis.

(h) For affected facilities listed under paragraphs (h)(1), (2), (3), or (4) of this section, compliance with the emission limits or fuel oil sulfur limits under this section may be determined based on a certification from the fuel supplier, as described under §60.48c(f), as applicable.

(1) Distillate oil-fired affected facilities with heat input capacities between 2.9 and 29 MW (10 and 100 MMBtu/hr).

(2) Residual oil-fired affected facilities with heat input capacities between 2.9 and 8.7 MW (10 and 30 MMBtu/hr).

(3) Coal-fired affected facilities with heat input capacities between 2.9 and 8.7 MW (10 and 30 MMBtu/hr).

(4) Other fuels-fired affected facilities with heat input capacities between 2.9 and 8.7 MW (10 and 30 MMBtu/h).

(i) The SO₂ emission limits, fuel oil sulfur limits, and percent reduction requirements under this section apply at all times, including periods of startup, shutdown, and malfunction.

(j) For affected facilities located in noncontinental areas and affected facilities complying with the percent reduction standard, only the heat input supplied to the affected facility from the combustion of coal and oil is counted under this section. No credit is provided for the heat input to the affected facility from wood or other fuels or for heat derived from exhaust gases from other sources, such as stationary gas turbines, internal combustion engines, and kilns.

[72 FR 32759, June 13, 2007, as amended at 74 FR 5090, Jan. 28, 2009; 77 FR 9462, Feb. 16, 2012]

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§60.43c Standard for particulate matter (PM).

(a) On and after the date on which the initial performance test is completed or required to be completed under §60.8, whichever date comes first, no owner or operator of an affected facility that commenced construction, reconstruction, or modification on or before February 28, 2005, that combusts coal or combusts mixtures of coal with other fuels and has a heat input capacity of 8.7 MW (30 MMBtu/h) or greater, shall cause to be discharged into the atmosphere from that affected facility any gases that contain PM in excess of the following emission limits:

(1) 22 ng/J (0.051 lb/MMBtu) heat input if the affected facility combusts only coal, or combusts coal with other fuels and has an annual capacity factor for the other fuels of 10 percent (0.10) or less.

(2) 43 ng/J (0.10 lb/MMBtu) heat input if the affected facility combusts coal with other fuels, has an annual capacity factor for the other fuels greater than 10 percent (0.10), and is subject to a federally enforceable requirement limiting operation of the affected facility to an annual capacity factor greater than 10 percent (0.10) for fuels other than coal.

(b) On and after the date on which the initial performance test is completed or required to be completed under §60.8, whichever date comes first, no owner or operator of an affected facility that commenced construction, reconstruction, or modification on or before February 28, 2005, that combusts wood or combusts mixtures of wood with other fuels (except coal) and has a heat input capacity of 8.7 MW (30 MMBtu/h) or greater, shall cause to be discharged into the atmosphere from that affected facility any gases that contain PM in excess of the following emissions limits:

(1) 43 ng/J (0.10 lb/MMBtu) heat input if the affected facility has an annual capacity factor for wood greater than 30 percent (0.30); or

(2) 130 ng/J (0.30 lb/MMBtu) heat input if the affected facility has an annual capacity factor for wood of 30 percent (0.30) or less and is subject to a federally enforceable requirement limiting operation of the affected facility to an annual capacity factor for wood of 30 percent (0.30) or less.

(c) On and after the date on which the initial performance test is completed or required to be completed under §60.8, whichever date comes first, no owner or operator of an affected facility that combusts coal, wood, or oil and has a heat input capacity of 8.7 MW (30 MMBtu/h) or greater shall cause to be discharged into the atmosphere from that affected facility any gases that exhibit greater than 20 percent opacity (6-minute average), except for one 6-minute period per hour of not more than 27 percent opacity. Owners and operators of an affected facility that elect to install, calibrate, maintain, and operate a continuous emissions monitoring system (CEMS) for measuring PM emissions according to the requirements of this subpart

and are subject to a federally enforceable PM limit of 0.030 lb/MMBtu or less are exempt from the opacity standard specified in this paragraph (c).

(d) The PM and opacity standards under this section apply at all times, except during periods of startup, shutdown, or malfunction.

(e)(1) On and after the date on which the initial performance test is completed or is required to be completed under §60.8, whichever date comes first, no owner or operator of an affected facility that commences construction, reconstruction, or modification after February 28, 2005, and that combusts coal, oil, wood, a mixture of these fuels, or a mixture of these fuels with any other fuels and has a heat input capacity of 8.7 MW (30 MMBtu/h) or greater shall cause to be discharged into the atmosphere from that affected facility any gases that contain PM in excess of 13 ng/J (0.030 lb/MMBtu) heat input, except as provided in paragraphs (e)(2), (e)(3), and (e)(4) of this section.

(2) As an alternative to meeting the requirements of paragraph (e)(1) of this section, the owner or operator of an affected facility for which modification commenced after February 28, 2005, may elect to meet the requirements of this paragraph. On and after the date on which the initial performance test is completed or required to be completed under §60.8, whichever date comes first, no owner or operator of an affected facility that commences modification after February 28, 2005 shall cause to be discharged into the atmosphere from that affected facility any gases that contain PM in excess of both:

(i) 22 ng/J (0.051 lb/MMBtu) heat input derived from the combustion of coal, oil, wood, a mixture of these fuels, or a mixture of these fuels with any other fuels; and

(ii) 0.2 percent of the combustion concentration (99.8 percent reduction) when combusting coal, oil, wood, a mixture of these fuels, or a mixture of these fuels with any other fuels.

(3) On and after the date on which the initial performance test is completed or is required to be completed under §60.8, whichever date comes first, no owner or operator of an affected facility that commences modification after February 28, 2005, and that combusts over 30 percent wood (by heat input) on an annual basis and has a heat input capacity of 8.7 MW (30 MMBtu/h) or greater shall cause to be discharged into the atmosphere from that affected facility any gases that contain PM in excess of 43 ng/J (0.10 lb/MMBtu) heat input.

(4) An owner or operator of an affected facility that commences construction, reconstruction, or modification after February 28, 2005, and that combusts only oil that contains no more than 0.50 weight percent sulfur or a mixture of 0.50 weight percent sulfur oil with other fuels not subject to a PM standard under §60.43c and not using a post-combustion technology (except a wet scrubber) to reduce PM or SO₂ emissions is not subject to the PM limit in this section.

[72 FR 32759, June 13, 2007, as amended at 74 FR 5091, Jan. 28, 2009; 77 FR 9462, Feb. 16, 2012]

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§60.44c Compliance and performance test methods and procedures for sulfur dioxide.

(a) Except as provided in paragraphs (g) and (h) of this section and §60.8(b), performance tests required under §60.8 shall be conducted following the procedures specified in paragraphs (b), (c), (d), (e), and (f) of this section, as applicable. Section 60.8(f) does not apply to this section. The 30-day notice required in §60.8(d) applies only to the initial performance test unless otherwise specified by the Administrator.

(b) The initial performance test required under §60.8 shall be conducted over 30 consecutive operating days of the steam generating unit. Compliance with the percent reduction requirements and SO₂ emission limits under §60.42c shall be determined using a 30-day average. The first operating day included in the initial performance test shall be scheduled within 30 days after achieving the maximum production rate at which the affected facility will be operated, but not later than 180 days after the initial startup of the facility. The steam generating unit load during the 30-day period does not have to be the maximum design heat input capacity, but must be representative of future operating conditions.

(c) After the initial performance test required under paragraph (b) of this section and §60.8, compliance with the percent reduction requirements and SO₂ emission limits under §60.42c is based on the average percent reduction and the average SO₂ emission rates for 30 consecutive steam generating unit operating days. A separate performance test is completed at the end of each steam generating unit operating day, and a new 30-day average percent reduction and SO₂ emission rate are calculated to show compliance with the standard.

(d) If only coal, only oil, or a mixture of coal and oil is combusted in an affected facility, the procedures in Method 19 of appendix A of this part are used to determine the hourly SO₂ emission rate (E_{ho}) and the 30-day average SO₂ emission rate (E_{ao}). The hourly averages used to compute the 30-day averages are obtained from the CEMS. Method 19 of appendix A of this part shall be used to calculate E_{ao} when using daily fuel sampling or Method 6B of appendix A of this part.

(e) If coal, oil, or coal and oil are combusted with other fuels:

(1) An adjusted E_{no} ($E_{\text{no}o}$) is used in Equation 19-19 of Method 19 of appendix A of this part to compute the adjusted E_{ao} ($E_{\text{ao}o}$). The $E_{\text{no}o}$ is computed using the following formula:

$$E_{\text{no}o} = \frac{E_{\text{no}} - E_w(1 - X_k)}{X_k}$$

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Where:

$E_{\text{no}o}$ = Adjusted E_{no} , ng/J (lb/MMBtu);

E_{no} = Hourly SO_2 emission rate, ng/J (lb/MMBtu);

E_w = SO_2 concentration in fuels other than coal and oil combusted in the affected facility, as determined by fuel sampling and analysis procedures in Method 9 of appendix A of this part, ng/J (lb/MMBtu). The value E_w for each fuel lot is used for each hourly average during the time that the lot is being combusted. The owner or operator does not have to measure E_w if the owner or operator elects to assume $E_w = 0$.

X_k = Fraction of the total heat input from fuel combustion derived from coal and oil, as determined by applicable procedures in Method 19 of appendix A of this part.

(2) The owner or operator of an affected facility that qualifies under the provisions of §60.42c(c) or (d) (where percent reduction is not required) does not have to measure the parameters E_w or X_k if the owner or operator of the affected facility elects to measure emission rates of the coal or oil using the fuel sampling and analysis procedures under Method 19 of appendix A of this part.

(f) Affected facilities subject to the percent reduction requirements under §60.42c(a) or (b) shall determine compliance with the SO_2 emission limits under §60.42c pursuant to paragraphs (d) or (e) of this section, and shall determine compliance with the percent reduction requirements using the following procedures:

(1) If only coal is combusted, the percent of potential SO_2 emission rate is computed using the following formula:

$$\%P_s = 100 \left(1 - \frac{\%R_g}{100} \right) \left(1 - \frac{\%R_f}{100} \right)$$

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Where:

$\%P_s$ = Potential SO_2 emission rate, in percent;

$\%R_g$ = SO_2 removal efficiency of the control device as determined by Method 19 of appendix A of this part, in percent; and

$\%R_f$ = SO_2 removal efficiency of fuel pretreatment as determined by Method 19 of appendix A of this part, in percent.

(2) If coal, oil, or coal and oil are combusted with other fuels, the same procedures required in paragraph (f)(1) of this section are used, except as provided for in the following:

(i) To compute the $\%P_s$, an adjusted $\%R_g$ ($\%R_{g}o$) is computed from $E_{\text{ao}o}$ from paragraph (e)(1) of this section and an adjusted average SO_2 inlet rate ($E_{\text{ai}o}$) using the following formula:

$$\%R_{g}o = 100 \left(1 - \frac{E_{\text{ao}o}}{E_{\text{ai}o}} \right)$$

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Where:

$\%R_{g}o$ = Adjusted $\%R_g$, in percent;

$E_{\text{ao}o}$ = Adjusted E_{ao} , ng/J (lb/MMBtu); and

$E_{\text{ai}o}$ = Adjusted average SO_2 inlet rate, ng/J (lb/MMBtu).

(ii) To compute $E_{\text{ai}o}$, an adjusted hourly SO_2 inlet rate ($E_{\text{hi}o}$) is used. The $E_{\text{hi}o}$ is computed using the following formula:

$$E_{M,O} = \frac{E_M - E_w(1 - X_k)}{X_k}$$

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Where:

$E_{M,O}$ = Adjusted E_{hi} , ng/J (lb/MMBtu);

E_{hi} = Hourly SO_2 inlet rate, ng/J (lb/MMBtu);

E_w = SO_2 concentration in fuels other than coal and oil combusted in the affected facility, as determined by fuel sampling and analysis procedures in Method 19 of appendix A of this part, ng/J (lb/MMBtu). The value E_w for each fuel lot is used for each hourly average during the time that the lot is being combusted. The owner or operator does not have to measure E_w if the owner or operator elects to assume $E_w = 0$; and

X_k = Fraction of the total heat input from fuel combustion derived from coal and oil, as determined by applicable procedures in Method 19 of appendix A of this part.

(g) For oil-fired affected facilities where the owner or operator seeks to demonstrate compliance with the fuel oil sulfur limits under §60.42c based on shipment fuel sampling, the initial performance test shall consist of sampling and analyzing the oil in the initial tank of oil to be fired in the steam generating unit to demonstrate that the oil contains 0.5 weight percent sulfur or less. Thereafter, the owner or operator of the affected facility shall sample the oil in the fuel tank after each new shipment of oil is received, as described under §60.46c(d)(2).

(h) For affected facilities subject to §60.42c(h)(1), (2), or (3) where the owner or operator seeks to demonstrate compliance with the SO_2 standards based on fuel supplier certification, the performance test shall consist of the certification from the fuel supplier, as described in §60.48c(f), as applicable.

(i) The owner or operator of an affected facility seeking to demonstrate compliance with the SO_2 standards under §60.42c(c)(2) shall demonstrate the maximum design heat input capacity of the steam generating unit by operating the steam generating unit at this capacity for 24 hours. This demonstration shall be made during the initial performance test, and a subsequent demonstration may be requested at any other time. If the demonstrated 24-hour average firing rate for the affected facility is less than the maximum design heat input capacity stated by the manufacturer of the affected facility, the demonstrated 24-hour average firing rate shall be used to determine the annual capacity factor for the affected facility; otherwise, the maximum design heat input capacity provided by the manufacturer shall be used.

(j) The owner or operator of an affected facility shall use all valid SO_2 emissions data in calculating $\%P_s$ and E_{ho} under paragraphs (d), (e), or (f) of this section, as applicable, whether or not the minimum emissions data requirements under §60.46c(f) are achieved. All valid emissions data, including valid data collected during periods of startup, shutdown, and malfunction, shall be used in calculating $\%P_s$ or E_{ho} pursuant to paragraphs (d), (e), or (f) of this section, as applicable.

[72 FR 32759, June 13, 2007, as amended at 74 FR 5091, Jan. 28, 2009]

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§60.45c Compliance and performance test methods and procedures for particulate matter.

(a) The owner or operator of an affected facility subject to the PM and/or opacity standards under §60.43c shall conduct an initial performance test as required under §60.8, and shall conduct subsequent performance tests as requested by the Administrator, to determine compliance with the standards using the following procedures and reference methods, except as specified in paragraph (c) of this section.

(1) Method 1 of appendix A of this part shall be used to select the sampling site and the number of traverse sampling points.

(2) Method 3A or 3B of appendix A-2 of this part shall be used for gas analysis when applying Method 5 or 5B of appendix A-3 of this part or 17 of appendix A-6 of this part.

(3) Method 5, 5B, or 17 of appendix A of this part shall be used to measure the concentration of PM as follows:

(i) Method 5 of appendix A of this part may be used only at affected facilities without wet scrubber systems.

(ii) Method 17 of appendix A of this part may be used at affected facilities with or without wet scrubber systems provided the stack gas temperature does not exceed a temperature of 160 °C (320 °F). The procedures of Sections 8.1 and 11.1 of Method 5B of appendix A of this part may be used in Method 17 of appendix A of this part only if Method 17 of appendix A of this part is used in conjunction with a wet scrubber system. Method 17 of appendix A of this part shall not be used in conjunction with a wet scrubber system if the effluent is saturated or laden with water droplets.

(iii) Method 5B of appendix A of this part may be used in conjunction with a wet scrubber system.

(4) The sampling time for each run shall be at least 120 minutes and the minimum sampling volume shall be 1.7 dry standard cubic meters (dscm) [60 dry standard cubic feet (dscf)] except that smaller sampling times or volumes may be approved by the Administrator when necessitated by process variables or other factors.

(5) For Method 5 or 5B of appendix A of this part, the temperature of the sample gas in the probe and filter holder shall be monitored and maintained at 160 ± 14 °C (320 ± 25 °F).

(6) For determination of PM emissions, an oxygen (O₂) or carbon dioxide (CO₂) measurement shall be obtained simultaneously with each run of Method 5, 5B, or 17 of appendix A of this part by traversing the duct at the same sampling location.

(7) For each run using Method 5, 5B, or 17 of appendix A of this part, the emission rates expressed in ng/J (lb/MMBtu) heat input shall be determined using:

(i) The O₂ or CO₂ measurements and PM measurements obtained under this section, (ii) The dry basis F factor, and

(iii) The dry basis emission rate calculation procedure contained in Method 19 of appendix A of this part.

(8) Method 9 of appendix A-4 of this part shall be used for determining the opacity of stack emissions.

(b) The owner or operator of an affected facility seeking to demonstrate compliance with the PM standards under §60.43c(b)(2) shall demonstrate the maximum design heat input capacity of the steam generating unit by operating the steam generating unit at this capacity for 24 hours. This demonstration shall be made during the initial performance test, and a subsequent demonstration may be requested at any other time. If the demonstrated 24-hour average firing rate for the affected facility is less than the maximum design heat input capacity stated by the manufacturer of the affected facility, the demonstrated 24-hour average firing rate shall be used to determine the annual capacity factor for the affected facility; otherwise, the maximum design heat input capacity provided by the manufacturer shall be used.

(c) In place of PM testing with Method 5 or 5B of appendix A-3 of this part or Method 17 of appendix A-6 of this part, an owner or operator may elect to install, calibrate, maintain, and operate a CEMS for monitoring PM emissions discharged to the atmosphere and record the output of the system. The owner or operator of an affected facility who elects to continuously monitor PM emissions instead of conducting performance testing using Method 5 or 5B of appendix A-3 of this part or Method 17 of appendix A-6 of this part shall install, calibrate, maintain, and operate a CEMS and shall comply with the requirements specified in paragraphs (c)(1) through (c)(14) of this section.

(1) Notify the Administrator 1 month before starting use of the system.

(2) Notify the Administrator 1 month before stopping use of the system.

(3) The monitor shall be installed, evaluated, and operated in accordance with §60.13 of subpart A of this part.

(4) The initial performance evaluation shall be completed no later than 180 days after the date of initial startup of the affected facility, as specified under §60.8 of subpart A of this part or within 180 days of notification to the Administrator of use of CEMS if the owner or operator was previously determining compliance by Method 5, 5B, or 17 of appendix A of this part performance tests, whichever is later.

(5) The owner or operator of an affected facility shall conduct an initial performance test for PM emissions as required under §60.8 of subpart A of this part. Compliance with the PM emission limit shall be determined by using the CEMS specified in paragraph (d) of this section to measure PM and calculating a 24-hour block arithmetic average emission concentration using EPA Reference Method 19 of appendix A of this part, section 4.1.

(6) Compliance with the PM emission limit shall be determined based on the 24-hour daily (block) average of the hourly arithmetic average emission concentrations using CEMS outlet data.

(7) At a minimum, valid CEMS hourly averages shall be obtained as specified in paragraph (c)(7)(i) of this section for 75 percent of the total operating hours per 30-day rolling average.

(i) At least two data points per hour shall be used to calculate each 1-hour arithmetic average.

(ii) [Reserved]

(8) The 1-hour arithmetic averages required under paragraph (c)(7) of this section shall be expressed in ng/J or lb/MMBtu heat input and shall be used to calculate the boiler operating day daily arithmetic average emission concentrations. The 1-hour

arithmetic averages shall be calculated using the data points required under §60.13(e)(2) of subpart A of this part.

(9) All valid CEMS data shall be used in calculating average emission concentrations even if the minimum CEMS data requirements of paragraph (c)(7) of this section are not met.

(10) The CEMS shall be operated according to Performance Specification 11 in appendix B of this part.

(11) During the correlation testing runs of the CEMS required by Performance Specification 11 in appendix B of this part, PM and O₂ (or CO₂) data shall be collected concurrently (or within a 30- to 60-minute period) by both the continuous emission monitors and performance tests conducted using the following test methods.

(i) For PM, Method 5 or 5B of appendix A-3 of this part or Method 17 of appendix A-6 of this part shall be used; and

(ii) For O₂ (or CO₂), Method 3A or 3B of appendix A-2 of this part, as applicable shall be used.

(12) Quarterly accuracy determinations and daily calibration drift tests shall be performed in accordance with procedure 2 in appendix F of this part. Relative Response Audit's must be performed annually and Response Correlation Audits must be performed every 3 years.

(13) When PM emissions data are not obtained because of CEMS breakdowns, repairs, calibration checks, and zero and span adjustments, emissions data shall be obtained by using other monitoring systems as approved by the Administrator or EPA Reference Method 19 of appendix A of this part to provide, as necessary, valid emissions data for a minimum of 75 percent of total operating hours on a 30-day rolling average.

(14) As of January 1, 2012, and within 90 days after the date of completing each performance test, as defined in §60.8, conducted to demonstrate compliance with this subpart, you must submit relative accuracy test audit (*i.e.*, reference method) data and performance test (*i.e.*, compliance test) data, except opacity data, electronically to EPA's Central Data Exchange (CDX) by using the Electronic Reporting Tool (ERT) (see http://www.epa.gov/ttn/chief/ert/ert_tool.html/) or other compatible electronic spreadsheet. Only data collected using test methods compatible with ERT are subject to this requirement to be submitted electronically into EPA's WebFIRE database.

(d) The owner or operator of an affected facility seeking to demonstrate compliance under §60.43c(e)(4) shall follow the applicable procedures under §60.48c(f). For residual oil-fired affected facilities, fuel supplier certifications are only allowed for facilities with heat input capacities between 2.9 and 8.7 MW (10 to 30 MMBtu/h).

[72 FR 32759, June 13, 2007, as amended at 74 FR 5091, Jan. 28, 2009; 76 FR 3523, Jan. 20, 2011; 77 FR 9463, Feb. 16, 2012]

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§60.46c Emission monitoring for sulfur dioxide.

(a) Except as provided in paragraphs (d) and (e) of this section, the owner or operator of an affected facility subject to the SO₂ emission limits under §60.42c shall install, calibrate, maintain, and operate a CEMS for measuring SO₂ concentrations and either O₂ or CO₂ concentrations at the outlet of the SO₂ control device (or the outlet of the steam generating unit if no SO₂ control device is used), and shall record the output of the system. The owner or operator of an affected facility subject to the percent reduction requirements under §60.42c shall measure SO₂ concentrations and either O₂ or CO₂ concentrations at both the inlet and outlet of the SO₂ control device.

(b) The 1-hour average SO₂ emission rates measured by a CEMS shall be expressed in ng/J or lb/MMBtu heat input and shall be used to calculate the average emission rates under §60.42c. Each 1-hour average SO₂ emission rate must be based on at least 30 minutes of operation, and shall be calculated using the data points required under §60.13(h)(2). Hourly SO₂ emission rates are not calculated if the affected facility is operated less than 30 minutes in a 1-hour period and are not counted toward determination of a steam generating unit operating day.

(c) The procedures under §60.13 shall be followed for installation, evaluation, and operation of the CEMS.

(1) All CEMS shall be operated in accordance with the applicable procedures under Performance Specifications 1, 2, and 3 of appendix B of this part.

(2) Quarterly accuracy determinations and daily calibration drift tests shall be performed in accordance with Procedure 1 of appendix F of this part.

(3) For affected facilities subject to the percent reduction requirements under §60.42c, the span value of the SO₂ CEMS at the inlet to the SO₂ control device shall be 125 percent of the maximum estimated hourly potential SO₂ emission rate of the fuel

combusted, and the span value of the SO₂ CEMS at the outlet from the SO₂ control device shall be 50 percent of the maximum estimated hourly potential SO₂ emission rate of the fuel combusted.

(4) For affected facilities that are not subject to the percent reduction requirements of §60.42c, the span value of the SO₂ CEMS at the outlet from the SO₂ control device (or outlet of the steam generating unit if no SO₂ control device is used) shall be 125 percent of the maximum estimated hourly potential SO₂ emission rate of the fuel combusted.

(d) As an alternative to operating a CEMS at the inlet to the SO₂ control device (or outlet of the steam generating unit if no SO₂ control device is used) as required under paragraph (a) of this section, an owner or operator may elect to determine the average SO₂ emission rate by sampling the fuel prior to combustion. As an alternative to operating a CEMS at the outlet from the SO₂ control device (or outlet of the steam generating unit if no SO₂ control device is used) as required under paragraph (a) of this section, an owner or operator may elect to determine the average SO₂ emission rate by using Method 6B of appendix A of this part. Fuel sampling shall be conducted pursuant to either paragraph (d)(1) or (d)(2) of this section. Method 6B of appendix A of this part shall be conducted pursuant to paragraph (d)(3) of this section.

(1) For affected facilities combusting coal or oil, coal or oil samples shall be collected daily in an as-fired condition at the inlet to the steam generating unit and analyzed for sulfur content and heat content according to the Method 19 of appendix A of this part. Method 19 of appendix A of this part provides procedures for converting these measurements into the format to be used in calculating the average SO₂ input rate.

(2) As an alternative fuel sampling procedure for affected facilities combusting oil, oil samples may be collected from the fuel tank for each steam generating unit immediately after the fuel tank is filled and before any oil is combusted. The owner or operator of the affected facility shall analyze the oil sample to determine the sulfur content of the oil. If a partially empty fuel tank is refilled, a new sample and analysis of the fuel in the tank would be required upon filling. Results of the fuel analysis taken after each new shipment of oil is received shall be used as the daily value when calculating the 30-day rolling average until the next shipment is received. If the fuel analysis shows that the sulfur content in the fuel tank is greater than 0.5 weight percent sulfur, the owner or operator shall ensure that the sulfur content of subsequent oil shipments is low enough to cause the 30-day rolling average sulfur content to be 0.5 weight percent sulfur or less.

(3) Method 6B of appendix A of this part may be used in lieu of CEMS to measure SO₂ at the inlet or outlet of the SO₂ control system. An initial stratification test is required to verify the adequacy of the Method 6B of appendix A of this part sampling location. The stratification test shall consist of three paired runs of a suitable SO₂ and CO₂ measurement train operated at the candidate location and a second similar train operated according to the procedures in §3.2 and the applicable procedures in section 7 of Performance Specification 2 of appendix B of this part. Method 6B of appendix A of this part, Method 6A of appendix A of this part, or a combination of Methods 6 and 3 of appendix A of this part or Methods 6C and 3A of appendix A of this part are suitable measurement techniques. If Method 6B of appendix A of this part is used for the second train, sampling time and timer operation may be adjusted for the stratification test as long as an adequate sample volume is collected; however, both sampling trains are to be operated similarly. For the location to be adequate for Method 6B of appendix A of this part 24-hour tests, the mean of the absolute difference between the three paired runs must be less than 10 percent (0.10).

(e) The monitoring requirements of paragraphs (a) and (d) of this section shall not apply to affected facilities subject to §60.42c(h) (1), (2), or (3) where the owner or operator of the affected facility seeks to demonstrate compliance with the SO₂ standards based on fuel supplier certification, as described under §60.48c(f), as applicable.

(f) The owner or operator of an affected facility operating a CEMS pursuant to paragraph (a) of this section, or conducting as-fired fuel sampling pursuant to paragraph (d)(1) of this section, shall obtain emission data for at least 75 percent of the operating hours in at least 22 out of 30 successive steam generating unit operating days. If this minimum data requirement is not met with a single monitoring system, the owner or operator of the affected facility shall supplement the emission data with data collected with other monitoring systems as approved by the Administrator.

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§60.47c Emission monitoring for particulate matter.

(a) Except as provided in paragraphs (c), (d), (e), and (f) of this section, the owner or operator of an affected facility combusting coal, oil, or wood that is subject to the opacity standards under §60.43c shall install, calibrate, maintain, and operate a continuous opacity monitoring system (COMS) for measuring the opacity of the emissions discharged to the atmosphere and record the output of the system. The owner or operator of an affected facility subject to an opacity standard in §60.43c(c) that is not required to use a COMS due to paragraphs (c), (d), (e), or (f) of this section that elects not to use a COMS shall conduct a performance test using Method 9 of appendix A-4 of this part and the procedures in §60.11 to demonstrate compliance with the applicable limit in §60.43c by April 29, 2011, within 45 days of stopping use of an existing COMS, or within 180 days after initial startup of the facility, whichever is later, and shall comply with either paragraphs (a)(1), (a)(2), or (a)(3) of this section. The observation period for Method 9 of appendix A-4 of this part performance tests may be reduced from 3 hours

to 60 minutes if all 6-minute averages are less than 10 percent and all individual 15-second observations are less than or equal to 20 percent during the initial 60 minutes of observation.

(1) Except as provided in paragraph (a)(2) and (a)(3) of this section, the owner or operator shall conduct subsequent Method 9 of appendix A-4 of this part performance tests using the procedures in paragraph (a) of this section according to the applicable schedule in paragraphs (a)(1)(i) through (a)(1)(iv) of this section, as determined by the most recent Method 9 of appendix A-4 of this part performance test results.

(i) If no visible emissions are observed, a subsequent Method 9 of appendix A-4 of this part performance test must be completed within 12 calendar months from the date that the most recent performance test was conducted or within 45 days of the next day that fuel with an opacity standard is combusted, whichever is later;

(ii) If visible emissions are observed but the maximum 6-minute average opacity is less than or equal to 5 percent, a subsequent Method 9 of appendix A-4 of this part performance test must be completed within 6 calendar months from the date that the most recent performance test was conducted or within 45 days of the next day that fuel with an opacity standard is combusted, whichever is later;

(iii) If the maximum 6-minute average opacity is greater than 5 percent but less than or equal to 10 percent, a subsequent Method 9 of appendix A-4 of this part performance test must be completed within 3 calendar months from the date that the most recent performance test was conducted or within 45 days of the next day that fuel with an opacity standard is combusted, whichever is later; or

(iv) If the maximum 6-minute average opacity is greater than 10 percent, a subsequent Method 9 of appendix A-4 of this part performance test must be completed within 45 calendar days from the date that the most recent performance test was conducted.

(2) If the maximum 6-minute opacity is less than 10 percent during the most recent Method 9 of appendix A-4 of this part performance test, the owner or operator may, as an alternative to performing subsequent Method 9 of appendix A-4 of this part performance tests, elect to perform subsequent monitoring using Method 22 of appendix A-7 of this part according to the procedures specified in paragraphs (a)(2)(i) and (ii) of this section.

(i) The owner or operator shall conduct 10 minute observations (during normal operation) each operating day the affected facility fires fuel for which an opacity standard is applicable using Method 22 of appendix A-7 of this part and demonstrate that the sum of the occurrences of any visible emissions is not in excess of 5 percent of the observation period (*i.e.*, 30 seconds per 10 minute period). If the sum of the occurrence of any visible emissions is greater than 30 seconds during the initial 10 minute observation, immediately conduct a 30 minute observation. If the sum of the occurrence of visible emissions is greater than 5 percent of the observation period (*i.e.*, 90 seconds per 30 minute period), the owner or operator shall either document and adjust the operation of the facility and demonstrate within 24 hours that the sum of the occurrence of visible emissions is equal to or less than 5 percent during a 30 minute observation (*i.e.*, 90 seconds) or conduct a new Method 9 of appendix A-4 of this part performance test using the procedures in paragraph (a) of this section within 45 calendar days according to the requirements in §60.45c(a)(8).

(ii) If no visible emissions are observed for 10 operating days during which an opacity standard is applicable, observations can be reduced to once every 7 operating days during which an opacity standard is applicable. If any visible emissions are observed, daily observations shall be resumed.

(3) If the maximum 6-minute opacity is less than 10 percent during the most recent Method 9 of appendix A-4 of this part performance test, the owner or operator may, as an alternative to performing subsequent Method 9 of appendix A-4 performance tests, elect to perform subsequent monitoring using a digital opacity compliance system according to a site-specific monitoring plan approved by the Administrator. The observations shall be similar, but not necessarily identical, to the requirements in paragraph (a)(2) of this section. For reference purposes in preparing the monitoring plan, see OAQPS "Determination of Visible Emission Opacity from Stationary Sources Using Computer-Based Photographic Analysis Systems." This document is available from the U.S. Environmental Protection Agency (U.S. EPA); Office of Air Quality and Planning Standards; Sector Policies and Programs Division; Measurement Policy Group (D243-02), Research Triangle Park, NC 27711. This document is also available on the Technology Transfer Network (TTN) under Emission Measurement Center Preliminary Methods.

(b) All COMS shall be operated in accordance with the applicable procedures under Performance Specification 1 of appendix B of this part. The span value of the opacity COMS shall be between 60 and 80 percent.

(c) Owners and operators of an affected facilities that burn only distillate oil that contains no more than 0.5 weight percent sulfur and/or liquid or gaseous fuels with potential sulfur dioxide emission rates of 26 ng/J (0.060 lb/MMBtu) heat input or less and that do not use a post-combustion technology to reduce SO₂ or PM emissions and that are subject to an opacity standard in §60.43c(c) are not required to operate a COMS if they follow the applicable procedures in §60.48c(f).

(d) Owners or operators complying with the PM emission limit by using a PM CEMS must calibrate, maintain, operate, and record the output of the system for PM emissions discharged to the atmosphere as specified in §60.45c(c). The CEMS specified in paragraph §60.45c(c) shall be operated and data recorded during all periods of operation of the affected facility except for CEMS breakdowns and repairs. Data is recorded during calibration checks, and zero and span adjustments.

(e) Owners and operators of an affected facility that is subject to an opacity standard in §60.43c(c) and that does not use post-combustion technology (except a wet scrubber) for reducing PM, SO₂, or carbon monoxide (CO) emissions, burns only gaseous fuels or fuel oils that contain less than or equal to 0.5 weight percent sulfur, and is operated such that emissions of CO discharged to the atmosphere from the affected facility are maintained at levels less than or equal to 0.15 lb/MMBtu on a boiler operating day average basis is not required to operate a COMS. Owners and operators of affected facilities electing to comply with this paragraph must demonstrate compliance according to the procedures specified in paragraphs (e)(1) through (4) of this section; or

(1) You must monitor CO emissions using a CEMS according to the procedures specified in paragraphs (e)(1)(i) through (iv) of this section.

(i) The CO CEMS must be installed, certified, maintained, and operated according to the provisions in §60.58b(i)(3) of subpart Eb of this part.

(ii) Each 1-hour CO emissions average is calculated using the data points generated by the CO CEMS expressed in parts per million by volume corrected to 3 percent oxygen (dry basis).

(iii) At a minimum, valid 1-hour CO emissions averages must be obtained for at least 90 percent of the operating hours on a 30-day rolling average basis. The 1-hour averages are calculated using the data points required in §60.13(h)(2).

(iv) Quarterly accuracy determinations and daily calibration drift tests for the CO CEMS must be performed in accordance with procedure 1 in appendix F of this part.

(2) You must calculate the 1-hour average CO emissions levels for each steam generating unit operating day by multiplying the average hourly CO output concentration measured by the CO CEMS times the corresponding average hourly flue gas flow rate and divided by the corresponding average hourly heat input to the affected source. The 24-hour average CO emission level is determined by calculating the arithmetic average of the hourly CO emission levels computed for each steam generating unit operating day.

(3) You must evaluate the preceding 24-hour average CO emission level each steam generating unit operating day excluding periods of affected source startup, shutdown, or malfunction. If the 24-hour average CO emission level is greater than 0.15 lb/MMBtu, you must initiate investigation of the relevant equipment and control systems within 24 hours of the first discovery of the high emission incident and, take the appropriate corrective action as soon as practicable to adjust control settings or repair equipment to reduce the 24-hour average CO emission level to 0.15 lb/MMBtu or less.

(4) You must record the CO measurements and calculations performed according to paragraph (e) of this section and any corrective actions taken. The record of corrective action taken must include the date and time during which the 24-hour average CO emission level was greater than 0.15 lb/MMBtu, and the date, time, and description of the corrective action.

(f) An owner or operator of an affected facility that is subject to an opacity standard in §60.43c(c) is not required to operate a COMS provided that the affected facility meets the conditions in either paragraphs (f)(1), (2), or (3) of this section.

(1) The affected facility uses a fabric filter (baghouse) as the primary PM control device and, the owner or operator operates a bag leak detection system to monitor the performance of the fabric filter according to the requirements in section §60.48Da of this part.

(2) The affected facility uses an ESP as the primary PM control device, and the owner or operator uses an ESP predictive model to monitor the performance of the ESP developed in accordance and operated according to the requirements in section §60.48Da of this part.

(3) The affected facility burns only gaseous fuels and/or fuel oils that contain no greater than 0.5 weight percent sulfur, and the owner or operator operates the unit according to a written site-specific monitoring plan approved by the permitting authority. This monitoring plan must include procedures and criteria for establishing and monitoring specific parameters for the affected facility indicative of compliance with the opacity standard. For testing performed as part of this site-specific monitoring plan, the permitting authority may require as an alternative to the notification and reporting requirements specified in §§60.8 and 60.11 that the owner or operator submit any deviations with the excess emissions report required under §60.48c(c).

§60.48c Reporting and recordkeeping requirements.

(a) The owner or operator of each affected facility shall submit notification of the date of construction or reconstruction and actual startup, as provided by §60.7 of this part. This notification shall include:

(1) The design heat input capacity of the affected facility and identification of fuels to be combusted in the affected facility.

(2) If applicable, a copy of any federally enforceable requirement that limits the annual capacity factor for any fuel or mixture of fuels under §60.42c, or §60.43c.

(3) The annual capacity factor at which the owner or operator anticipates operating the affected facility based on all fuels fired and based on each individual fuel fired.

(4) Notification if an emerging technology will be used for controlling SO₂ emissions. The Administrator will examine the description of the control device and will determine whether the technology qualifies as an emerging technology. In making this determination, the Administrator may require the owner or operator of the affected facility to submit additional information concerning the control device. The affected facility is subject to the provisions of §60.42c(a) or (b)(1), unless and until this determination is made by the Administrator.

(b) The owner or operator of each affected facility subject to the SO₂ emission limits of §60.42c, or the PM or opacity limits of §60.43c, shall submit to the Administrator the performance test data from the initial and any subsequent performance tests and, if applicable, the performance evaluation of the CEMS and/or COMS using the applicable performance specifications in appendix B of this part.

(c) In addition to the applicable requirements in §60.7, the owner or operator of an affected facility subject to the opacity limits in §60.43c(c) shall submit excess emission reports for any excess emissions from the affected facility that occur during the reporting period and maintain records according to the requirements specified in paragraphs (c)(1) through (3) of this section, as applicable to the visible emissions monitoring method used.

(1) For each performance test conducted using Method 9 of appendix A-4 of this part, the owner or operator shall keep the records including the information specified in paragraphs (c)(1)(i) through (iii) of this section.

(i) Dates and time intervals of all opacity observation periods;

(ii) Name, affiliation, and copy of current visible emission reading certification for each visible emission observer participating in the performance test; and

(iii) Copies of all visible emission observer opacity field data sheets;

(2) For each performance test conducted using Method 22 of appendix A-4 of this part, the owner or operator shall keep the records including the information specified in paragraphs (c)(2)(i) through (iv) of this section.

(i) Dates and time intervals of all visible emissions observation periods;

(ii) Name and affiliation for each visible emission observer participating in the performance test;

(iii) Copies of all visible emission observer opacity field data sheets; and

(iv) Documentation of any adjustments made and the time the adjustments were completed to the affected facility operation by the owner or operator to demonstrate compliance with the applicable monitoring requirements.

(3) For each digital opacity compliance system, the owner or operator shall maintain records and submit reports according to the requirements specified in the site-specific monitoring plan approved by the Administrator

(d) The owner or operator of each affected facility subject to the SO₂ emission limits, fuel oil sulfur limits, or percent reduction requirements under §60.42c shall submit reports to the Administrator.

(e) The owner or operator of each affected facility subject to the SO₂ emission limits, fuel oil sulfur limits, or percent reduction requirements under §60.42c shall keep records and submit reports as required under paragraph (d) of this section, including the following information, as applicable.

(1) Calendar dates covered in the reporting period.

(2) Each 30-day average SO₂ emission rate (ng/J or lb/MMBtu), or 30-day average sulfur content (weight percent), calculated during the reporting period, ending with the last 30-day period; reasons for any noncompliance with the emission

standards; and a description of corrective actions taken.

(3) Each 30-day average percent of potential SO₂ emission rate calculated during the reporting period, ending with the last 30-day period; reasons for any noncompliance with the emission standards; and a description of the corrective actions taken.

(4) Identification of any steam generating unit operating days for which SO₂ or diluent (O₂ or CO₂) data have not been obtained by an approved method for at least 75 percent of the operating hours; justification for not obtaining sufficient data; and a description of corrective actions taken.

(5) Identification of any times when emissions data have been excluded from the calculation of average emission rates; justification for excluding data; and a description of corrective actions taken if data have been excluded for periods other than those during which coal or oil were not combusted in the steam generating unit.

(6) Identification of the F factor used in calculations, method of determination, and type of fuel combusted.

(7) Identification of whether averages have been obtained based on CEMS rather than manual sampling methods.

(8) If a CEMS is used, identification of any times when the pollutant concentration exceeded the full span of the CEMS.

(9) If a CEMS is used, description of any modifications to the CEMS that could affect the ability of the CEMS to comply with Performance Specifications 2 or 3 of appendix B of this part.

(10) If a CEMS is used, results of daily CEMS drift tests and quarterly accuracy assessments as required under appendix F, Procedure 1 of this part.

(11) If fuel supplier certification is used to demonstrate compliance, records of fuel supplier certification as described under paragraph (f)(1), (2), (3), or (4) of this section, as applicable. In addition to records of fuel supplier certifications, the report shall include a certified statement signed by the owner or operator of the affected facility that the records of fuel supplier certifications submitted represent all of the fuel combusted during the reporting period.

(f) Fuel supplier certification shall include the following information:

(1) For distillate oil:

(i) The name of the oil supplier;

(ii) A statement from the oil supplier that the oil complies with the specifications under the definition of distillate oil in §60.41c; and

(iii) The sulfur content or maximum sulfur content of the oil.

(2) For residual oil:

(i) The name of the oil supplier;

(ii) The location of the oil when the sample was drawn for analysis to determine the sulfur content of the oil, specifically including whether the oil was sampled as delivered to the affected facility, or whether the sample was drawn from oil in storage at the oil supplier's or oil refiner's facility, or other location;

(iii) The sulfur content of the oil from which the shipment came (or of the shipment itself); and

(iv) The method used to determine the sulfur content of the oil.

(3) For coal:

(i) The name of the coal supplier;

(ii) The location of the coal when the sample was collected for analysis to determine the properties of the coal, specifically including whether the coal was sampled as delivered to the affected facility or whether the sample was collected from coal in storage at the mine, at a coal preparation plant, at a coal supplier's facility, or at another location. The certification shall include the name of the coal mine (and coal seam), coal storage facility, or coal preparation plant (where the sample was collected);

(iii) The results of the analysis of the coal from which the shipment came (or of the shipment itself) including the sulfur content, moisture content, ash content, and heat content; and

(iv) The methods used to determine the properties of the coal.

(4) For other fuels:

(i) The name of the supplier of the fuel;

(ii) The potential sulfur emissions rate or maximum potential sulfur emissions rate of the fuel in ng/J heat input; and

(iii) The method used to determine the potential sulfur emissions rate of the fuel.

(g)(1) Except as provided under paragraphs (g)(2) and (g)(3) of this section, the owner or operator of each affected facility shall record and maintain records of the amount of each fuel combusted during each operating day.

(2) As an alternative to meeting the requirements of paragraph (g)(1) of this section, the owner or operator of an affected facility that combusts only natural gas, wood, fuels using fuel certification in §60.48c(f) to demonstrate compliance with the SO₂ standard, fuels not subject to an emissions standard (excluding opacity), or a mixture of these fuels may elect to record and maintain records of the amount of each fuel combusted during each calendar month.

(3) As an alternative to meeting the requirements of paragraph (g)(1) of this section, the owner or operator of an affected facility or multiple affected facilities located on a contiguous property unit where the only fuels combusted in any steam generating unit (including steam generating units not subject to this subpart) at that property are natural gas, wood, distillate oil meeting the most current requirements in §60.42C to use fuel certification to demonstrate compliance with the SO₂ standard, and/or fuels, excluding coal and residual oil, not subject to an emissions standard (excluding opacity) may elect to record and maintain records of the total amount of each steam generating unit fuel delivered to that property during each calendar month.

(h) The owner or operator of each affected facility subject to a federally enforceable requirement limiting the annual capacity factor for any fuel or mixture of fuels under §60.42c or §60.43c shall calculate the annual capacity factor individually for each fuel combusted. The annual capacity factor is determined on a 12-month rolling average basis with a new annual capacity factor calculated at the end of the calendar month.

(i) All records required under this section shall be maintained by the owner or operator of the affected facility for a period of two years following the date of such record.

(j) The reporting period for the reports required under this subpart is each six-month period. All reports shall be submitted to the Administrator and shall be postmarked by the 30th day following the end of the reporting period.

[72 FR 32759, June 13, 2007, as amended at 74 FR 5091, Jan. 28, 2009]

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Appendix B

40 CFR Part 63, Subpart DDDDD – *National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters*

ELECTRONIC CODE OF FEDERAL REGULATIONS

e-CFR data is current as of April 11, 2019

Title 40 → Chapter I → Subchapter C → Part 63 → Subpart DDDDD

Title 40: Protection of Environment

PART 63—NATIONAL EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS FOR SOURCE CATEGORIES
(CONTINUED)

Subpart DDDDD—National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters

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SOURCE: 76 FR 15664, Mar. 21, 2011, unless otherwise noted.

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WHAT THIS SUBPART COVERS

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§63.7480 What is the purpose of this subpart?

This subpart establishes national emission limitations and work practice standards for hazardous air pollutants (HAP) emitted from industrial, commercial, and institutional boilers and process heaters located at major sources of HAP. This subpart also establishes requirements to demonstrate initial and continuous compliance with the emission limitations and work practice standards.

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§63.7485 Am I subject to this subpart?

You are subject to this subpart if you own or operate an industrial, commercial, or institutional boiler or process heater as defined in §63.7575 that is located at, or is part of, a major source of HAP, except as specified in §63.7491. For purposes of this subpart, a major source of HAP is as defined in §63.2, except that for oil and natural gas production facilities, a major source of HAP is as defined in §63.7575.

[78 FR 7162, Jan. 31, 2013]

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§63.7490 What is the affected source of this subpart?

(a) This subpart applies to new, reconstructed, and existing affected sources as described in paragraphs (a)(1) and (2) of this section.

(1) The affected source of this subpart is the collection at a major source of all existing industrial, commercial, and institutional boilers and process heaters within a subcategory as defined in §63.7575.

(2) The affected source of this subpart is each new or reconstructed industrial, commercial, or institutional boiler or process heater, as defined in §63.7575, located at a major source.

(b) A boiler or process heater is new if you commence construction of the boiler or process heater after June 4, 2010, and you meet the applicability criteria at the time you commence construction.

(c) A boiler or process heater is reconstructed if you meet the reconstruction criteria as defined in §63.2, you commence reconstruction after June 4, 2010, and you meet the applicability criteria at the time you commence reconstruction.

(d) A boiler or process heater is existing if it is not new or reconstructed.

(e) An existing electric utility steam generating unit (EGU) that meets the applicability requirements of this subpart after the effective date of this final rule due to a change (e.g., fuel switch) is considered to be an existing source under this subpart.

[76 FR 15664, Mar. 21, 2011, as amended at 78 FR 7162, Jan. 31, 2013]

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§63.7491 Are any boilers or process heaters not subject to this subpart?

The types of boilers and process heaters listed in paragraphs (a) through (n) of this section are not subject to this subpart.

(a) An electric utility steam generating unit (EGU) covered by subpart UUUUU of this part or a natural gas-fired EGU as defined in subpart UUUUU of this part firing at least 85 percent natural gas on an annual heat input basis.

(b) A recovery boiler or furnace covered by subpart MM of this part.

(c) A boiler or process heater that is used specifically for research and development, including test steam boilers used to provide steam for testing the propulsion systems on military vessels. This does not include units that provide heat or steam to a process at a research and development facility.

(d) A hot water heater as defined in this subpart.

(e) A refining kettle covered by subpart X of this part.

(f) An ethylene cracking furnace covered by subpart YY of this part.

(g) Blast furnace stoves as described in EPA-453/R-01-005 (incorporated by reference, see §63.14).

(h) Any boiler or process heater that is part of the affected source subject to another subpart of this part, such as boilers and process heaters used as control devices to comply with subparts JJJ, OOO, PPP, and U of this part.

(i) Any boiler or process heater that is used as a control device to comply with another subpart of this part, or part 60, part 61, or part 65 of this chapter provided that at least 50 percent of the average annual heat input during any 3 consecutive calendar years to the boiler or process heater is provided by regulated gas streams that are subject to another standard.

(j) Temporary boilers and process heaters as defined in this subpart.

(k) Blast furnace gas fuel-fired boilers and process heaters as defined in this subpart.

(l) Any boiler or process heater specifically listed as an affected source in any standard(s) established under section 129 of the Clean Air Act.

(m) A unit that burns hazardous waste covered by Subpart EEE of this part. A unit that is exempt from Subpart EEE as specified in §63.1200(b) is not covered by Subpart EEE.

(n) Residential boilers as defined in this subpart.

[76 FR 15664, Mar. 21, 2011, as amended at 78 FR 7162, Jan. 31, 2013; 80 FR 72806, Nov. 20, 2015]

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§63.7495 When do I have to comply with this subpart?

(a) If you have a new or reconstructed boiler or process heater, you must comply with this subpart by April 1, 2013, or upon startup of your boiler or process heater, whichever is later.

(b) If you have an existing boiler or process heater, you must comply with this subpart no later than January 31, 2016, except as provided in §63.6(i).

(c) If you have an area source that increases its emissions or its potential to emit such that it becomes a major source of HAP, paragraphs (c)(1) and (2) of this section apply to you.

(1) Any new or reconstructed boiler or process heater at the existing source must be in compliance with this subpart upon startup.

(2) Any existing boiler or process heater at the existing source must be in compliance with this subpart within 3 years after the source becomes a major source.

(d) You must meet the notification requirements in §63.7545 according to the schedule in §63.7545 and in subpart A of this part. Some of the notifications must be submitted before you are required to comply with the emission limits and work practice standards in this subpart.

(e) If you own or operate an industrial, commercial, or institutional boiler or process heater and would be subject to this subpart except for the exemption in §63.7491(l) for commercial and industrial solid waste incineration units covered by part 60, subpart CCCC or subpart DDDD, and you cease combusting solid waste, you must be in compliance with this subpart and are no longer subject to part 60, subparts CCCC or DDDD beginning on the effective date of the switch as identified under the provisions of §60.2145(a)(2) and (3) or §60.2710(a)(2) and (3).

(f) If you own or operate an existing EGU that becomes subject to this subpart after January 31, 2016, you must be in compliance with the applicable existing source provisions of this subpart on the effective date such unit becomes subject to this subpart.

(g) If you own or operate an existing industrial, commercial, or institutional boiler or process heater and would be subject to this subpart except for an exemption in §63.7491(i) that becomes subject to this subpart after January 31, 2013, you must be in compliance with the applicable existing source provisions of this subpart within 3 years after such unit becomes subject to this subpart.

(h) If you own or operate an existing industrial, commercial, or institutional boiler or process heater and have switched fuels or made a physical change to the boiler or process heater that resulted in the applicability of a different subcategory after the compliance date of this subpart, you must be in compliance with the applicable existing source provisions of this subpart on the effective date of the fuel switch or physical change.

(i) If you own or operate a new industrial, commercial, or institutional boiler or process heater and have switched fuels or made a physical change to the boiler or process heater that resulted in the applicability of a different subcategory, you must be in compliance with the applicable new source provisions of this subpart on the effective date of the fuel switch or physical change.

[76 FR 15664, Mar. 21, 2011, as amended at 78 FR 7162, Jan. 31, 2013; 80 FR 72807, Nov. 20, 2015]

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EMISSION LIMITATIONS AND WORK PRACTICE STANDARDS

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§63.7499 What are the subcategories of boilers and process heaters?

The subcategories of boilers and process heaters, as defined in §63.7575 are:

- (a) Pulverized coal/solid fossil fuel units.
- (b) Stokers designed to burn coal/solid fossil fuel.
- (c) Fluidized bed units designed to burn coal/solid fossil fuel.
- (d) Stokers/sloped grate/other units designed to burn kiln dried biomass/bio-based solid.
- (e) Fluidized bed units designed to burn biomass/bio-based solid.
- (f) Suspension burners designed to burn biomass/bio-based solid.
- (g) Fuel cells designed to burn biomass/bio-based solid.
- (h) Hybrid suspension/grate burners designed to burn wet biomass/bio-based solid.
- (i) Stokers/sloped grate/other units designed to burn wet biomass/bio-based solid.
- (j) Dutch ovens/pile burners designed to burn biomass/bio-based solid.
- (k) Units designed to burn liquid fuel that are non-continental units.
- (l) Units designed to burn gas 1 fuels.

- (m) Units designed to burn gas 2 (other) gases.
- (n) Metal process furnaces.
- (o) Limited-use boilers and process heaters.
- (p) Units designed to burn solid fuel.
- (q) Units designed to burn liquid fuel.
- (r) Units designed to burn coal/solid fossil fuel.
- (s) Fluidized bed units with an integrated fluidized bed heat exchanger designed to burn coal/solid fossil fuel.
- (t) Units designed to burn heavy liquid fuel.
- (u) Units designed to burn light liquid fuel.

[76 FR 15664, Mar. 21, 2011, as amended at 78 FR 7163, Jan. 31, 2013]

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§63.7500 What emission limitations, work practice standards, and operating limits must I meet?

(a) You must meet the requirements in paragraphs (a)(1) through (3) of this section, except as provided in paragraphs (b), through (e) of this section. You must meet these requirements at all times the affected unit is operating, except as provided in paragraph (f) of this section.

(1) You must meet each emission limit and work practice standard in Tables 1 through 3, and 11 through 13 to this subpart that applies to your boiler or process heater, for each boiler or process heater at your source, except as provided under §63.7522. The output-based emission limits, in units of pounds per million Btu of steam output, in Tables 1 or 2 to this subpart are an alternative applicable only to boilers and process heaters that generate either steam, cogenerate steam with electricity, or both. The output-based emission limits, in units of pounds per megawatt-hour, in Tables 1 or 2 to this subpart are an alternative applicable only to boilers that generate only electricity. Boilers that perform multiple functions (cogeneration and electricity generation) or supply steam to common headers would calculate a total steam energy output using equation 21 of §63.7575 to demonstrate compliance with the output-based emission limits, in units of pounds per million Btu of steam output, in Tables 1 or 2 to this subpart. If you operate a new boiler or process heater, you can choose to comply with alternative limits as discussed in paragraphs (a)(1)(i) through (iii) of this section, but on or after January 31, 2016, you must comply with the emission limits in Table 1 to this subpart.

(i) If your boiler or process heater commenced construction or reconstruction after June 4, 2010 and before May 20, 2011, you may comply with the emission limits in Table 1 or 11 to this subpart until January 31, 2016.

(ii) If your boiler or process heater commenced construction or reconstruction on or after May 20, 2011 and before December 23, 2011, you may comply with the emission limits in Table 1 or 12 to this subpart until January 31, 2016.

(iii) If your boiler or process heater commenced construction or reconstruction on or after December 23, 2011 and before April 1, 2013, you may comply with the emission limits in Table 1 or 13 to this subpart until January 31, 2016.

(2) You must meet each operating limit in Table 4 to this subpart that applies to your boiler or process heater. If you use a control device or combination of control devices not covered in Table 4 to this subpart, or you wish to establish and monitor an alternative operating limit or an alternative monitoring parameter, you must apply to the EPA Administrator for approval of alternative monitoring under §63.8(f).

(3) At all times, you must operate and maintain any affected source (as defined in §63.7490), including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Administrator that may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source.

(b) As provided in §63.6(g), EPA may approve use of an alternative to the work practice standards in this section.

(c) Limited-use boilers and process heaters must complete a tune-up every 5 years as specified in §63.7540. They are not subject to the emission limits in Tables 1 and 2 or 11 through 13 to this subpart, the annual tune-up, or the energy assessment requirements in Table 3 to this subpart, or the operating limits in Table 4 to this subpart.

(d) Boilers and process heaters with a heat input capacity of less than or equal to 5 million Btu per hour in the units designed to burn gas 2 (other) fuels subcategory or units designed to burn light liquid fuels subcategory must complete a tune-up every 5 years as specified in §63.7540.

(e) Boilers and process heaters in the units designed to burn gas 1 fuels subcategory with a heat input capacity of less than or equal to 5 million Btu per hour must complete a tune-up every 5 years as specified in §63.7540. Boilers and process heaters in the units designed to burn gas 1 fuels subcategory with a heat input capacity greater than 5 million Btu per hour and less than 10 million Btu per hour must complete a tune-up every 2 years as specified in §63.7540. Boilers and process heaters in the units designed to burn gas 1 fuels subcategory are not subject to the emission limits in Tables 1 and 2 or 11 through 13 to this subpart, or the operating limits in Table 4 to this subpart.

(f) These standards apply at all times the affected unit is operating, except during periods of startup and shutdown during which time you must comply only with items 5 and 6 of Table 3 to this subpart.

[76 FR 15664, Mar. 21, 2011, as amended at 78 FR 7163, Jan. 31, 2013; 80 FR 72807, Nov. 20, 2015]

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§63.7501 [Reserved]

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GENERAL COMPLIANCE REQUIREMENTS

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§63.7505 What are my general requirements for complying with this subpart?

(a) You must be in compliance with the emission limits, work practice standards, and operating limits in this subpart. These emission and operating limits apply to you at all times the affected unit is operating except for the periods noted in §63.7500(f).

(b) [Reserved]

(c) You must demonstrate compliance with all applicable emission limits using performance stack testing, fuel analysis, or continuous monitoring systems (CMS), including a continuous emission monitoring system (CEMS), or particulate matter continuous parameter monitoring system (PM CPMS), where applicable. You may demonstrate compliance with the applicable emission limit for hydrogen chloride (HCl), mercury, or total selected metals (TSM) using fuel analysis if the emission rate calculated according to §63.7530(c) is less than the applicable emission limit. (For gaseous fuels, you may not use fuel analyses to comply with the TSM alternative standard or the HCl standard.) Otherwise, you must demonstrate compliance for HCl, mercury, or TSM using performance stack testing, if subject to an applicable emission limit listed in Tables 1, 2, or 11 through 13 to this subpart.

(d) If you demonstrate compliance with any applicable emission limit through performance testing and subsequent compliance with operating limits through the use of CPMS, or with a CEMS or COMS, you must develop a site-specific monitoring plan according to the requirements in paragraphs (d)(1) through (4) of this section for the use of any CEMS, COMS, or CPMS. This requirement also applies to you if you petition the EPA Administrator for alternative monitoring parameters under §63.8(f).

(1) For each CMS required in this section (including CEMS, COMS, or CPMS), you must develop, and submit to the Administrator for approval upon request, a site-specific monitoring plan that addresses design, data collection, and the quality assurance and quality control elements outlined in §63.8(d) and the elements described in paragraphs (d)(1)(i) through (iii) of this section. You must submit this site-specific monitoring plan, if requested, at least 60 days before your initial performance evaluation of your CMS. This requirement to develop and submit a site specific monitoring plan does not apply to affected sources with existing CEMS or COMS operated according to the performance specifications under appendix B to part 60 of this chapter and that meet the requirements of §63.7525. Using the process described in §63.8(f)(4), you may request approval of alternative monitoring system quality assurance and quality control procedures in place of those specified in this paragraph and, if approved, include the alternatives in your site-specific monitoring plan.

(i) Installation of the CMS sampling probe or other interface at a measurement location relative to each affected process unit such that the measurement is representative of control of the exhaust emissions (e.g., on or downstream of the last control device);

(ii) Performance and equipment specifications for the sample interface, the pollutant concentration or parametric signal analyzer, and the data collection and reduction systems; and

(iii) Performance evaluation procedures and acceptance criteria (e.g., calibrations, accuracy audits, analytical drift).

(2) In your site-specific monitoring plan, you must also address paragraphs (d)(2)(i) through (iii) of this section.

(i) Ongoing operation and maintenance procedures in accordance with the general requirements of §63.8(c)(1)(ii), (c)(3), and (c)(4)(ii);

(ii) Ongoing data quality assurance procedures in accordance with the general requirements of §63.8(d); and

(iii) Ongoing recordkeeping and reporting procedures in accordance with the general requirements of §63.10(c) (as applicable in Table 10 to this subpart), (e)(1), and (e)(2)(i).

(3) You must conduct a performance evaluation of each CMS in accordance with your site-specific monitoring plan.

(4) You must operate and maintain the CMS in continuous operation according to the site-specific monitoring plan.

(e) If you have an applicable emission limit, and you choose to comply using definition (2) of “startup” in §63.7575, you must develop and implement a written startup and shutdown plan (SSP) according to the requirements in Table 3 to this subpart. The SSP must be maintained onsite and available upon request for public inspection.

[76 FR 15664, Mar. 21, 2011, as amended at 78 FR 7164, Jan. 31, 2013; 80 FR 72807, Nov. 20, 2015]

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TESTING, FUEL ANALYSES, AND INITIAL COMPLIANCE REQUIREMENTS

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§63.7510 What are my initial compliance requirements and by what date must I conduct them?

(a) For each boiler or process heater that is required or that you elect to demonstrate compliance with any of the applicable emission limits in Tables 1 or 2 or 11 through 13 of this subpart through performance (stack) testing, your initial compliance requirements include all the following:

(1) Conduct performance tests according to §63.7520 and Table 5 to this subpart.

(2) Conduct a fuel analysis for each type of fuel burned in your boiler or process heater according to §63.7521 and Table 6 to this subpart, except as specified in paragraphs (a)(2)(i) through (iii) of this section.

(i) For each boiler or process heater that burns a single type of fuel, you are not required to conduct a fuel analysis for each type of fuel burned in your boiler or process heater according to §63.7521 and Table 6 to this subpart. For purposes of this subpart, units that use a supplemental fuel only for startup, unit shutdown, and transient flame stability purposes still qualify as units that burn a single type of fuel, and the supplemental fuel is not subject to the fuel analysis requirements under §63.7521 and Table 6 to this subpart.

(ii) When natural gas, refinery gas, or other gas 1 fuels are co-fired with other fuels, you are not required to conduct a fuel analysis of those Gas 1 fuels according to §63.7521 and Table 6 to this subpart. If gaseous fuels other than natural gas, refinery gas, or other gas 1 fuels are co-fired with other fuels and those non-Gas 1 gaseous fuels are subject to another subpart of this part, part 60, part 61, or part 65, you are not required to conduct a fuel analysis of those non-Gas 1 fuels according to §63.7521 and Table 6 to this subpart.

(iii) You are not required to conduct a chlorine fuel analysis for any gaseous fuels. You must conduct a fuel analysis for mercury on gaseous fuels unless the fuel is exempted in paragraphs (a)(2)(i) and (ii) of this section.

(3) Establish operating limits according to §63.7530 and Table 7 to this subpart.

(4) Conduct CMS performance evaluations according to §63.7525.

(b) For each boiler or process heater that you elect to demonstrate compliance with the applicable emission limits in Tables 1 or 2 or 11 through 13 to this subpart for HCl, mercury, or TSM through fuel analysis, your initial compliance requirement is to conduct a fuel analysis for each type of fuel burned in your boiler or process heater according to §63.7521 and Table 6 to this subpart and establish operating limits according to §63.7530 and Table 8 to this subpart. The fuels described in paragraph (a)(2)(i) and (ii) of this section are exempt from these fuel analysis and operating limit requirements. The fuels described in paragraph (a)(2)(ii) of this section are exempt from the chloride fuel analysis and operating limit requirements. Boilers and process heaters that use a CEMS for mercury or HCl are exempt from the performance testing and operating limit requirements specified in paragraph (a) of this section for the HAP for which CEMS are used.

(c) If your boiler or process heater is subject to a carbon monoxide (CO) limit, your initial compliance demonstration for CO is to conduct a performance test for CO according to Table 5 to this subpart or conduct a performance evaluation of your continuous CO monitor, if applicable, according to §63.7525(a). Boilers and process heaters that use a CO CEMS to comply with the applicable alternative CO CEMS emission standard listed in Tables 1, 2, or 11 through 13 to this subpart, as specified in §63.7525(a), are exempt from the initial CO performance testing and oxygen concentration operating limit requirements specified in paragraph (a) of this section.

(d) If your boiler or process heater is subject to a PM limit, your initial compliance demonstration for PM is to conduct a performance test in accordance with §63.7520 and Table 5 to this subpart.

(e) For existing affected sources (as defined in §63.7490), you must complete the initial compliance demonstrations, as specified in paragraphs (a) through (d) of this section, no later than 180 days after the compliance date that is specified for your source in §63.7495 and according to the applicable provisions in §63.7(a)(2) as cited in Table 10 to this subpart, except as specified in paragraph (j) of this section. You must complete an initial tune-up by following the procedures described in §63.7540(a)(10)(i) through (vi) no later than the compliance date specified in §63.7495, except as specified in paragraph (j) of this section. You must complete the one-time energy assessment specified in Table 3 to this subpart no later than the compliance date specified in §63.7495.

(f) For new or reconstructed affected sources (as defined in §63.7490), you must complete the initial compliance demonstration with the emission limits no later than July 30, 2013 or within 180 days after startup of the source, whichever is later. If you are demonstrating compliance with an emission limit in Tables 11 through 13 to this subpart that is less stringent (that is, higher) than the applicable emission limit in Table 1 to this subpart, you must demonstrate compliance with the applicable emission limit in Table 1 no later than July 29, 2016.

(g) For new or reconstructed affected sources (as defined in §63.7490), you must demonstrate initial compliance with the applicable work practice standards in Table 3 to this subpart within the applicable annual, biennial, or 5-year schedule as specified in §63.7515(d) following the initial compliance date specified in §63.7495(a). Thereafter, you are required to complete the applicable annual, biennial, or 5-year tune-up as specified in §63.7515(d).

(h) For affected sources (as defined in §63.7490) that ceased burning solid waste consistent with §63.7495(e) and for which the initial compliance date has passed, you must demonstrate compliance within 60 days of the effective date of the waste-to-fuel switch. If you have not conducted your compliance demonstration for this subpart within the previous 12 months, you must complete all compliance demonstrations for this subpart before you commence or recommence combustion of solid waste.

(i) For an existing EGU that becomes subject after January 31, 2016, you must demonstrate compliance within 180 days after becoming an affected source.

(j) For existing affected sources (as defined in §63.7490) that have not operated between the effective date of the rule and the compliance date that is specified for your source in §63.7495, you must complete the initial compliance demonstration, if subject to the emission limits in Table 2 to this subpart, as specified in paragraphs (a) through (d) of this section, no later than 180 days after the re-start of the affected source and according to the applicable provisions in §63.7(a)(2) as cited in Table 10 to this subpart. You must complete an initial tune-up by following the procedures described in §63.7540(a)(10)(i) through (vi) no later than 30 days after the re-start of the affected source and, if applicable, complete the one-time energy assessment specified in Table 3 to this subpart, no later than the compliance date specified in §63.7495.

(k) For affected sources, as defined in §63.7490, that switch subcategories consistent with §63.7545(h) after the initial compliance date, you must demonstrate compliance within 60 days of the effective date of the switch, unless you had previously conducted your compliance demonstration for this subcategory within the previous 12 months.

[78 FR 7164, Jan. 31, 2013, as amended at 80 FR 72808, Nov. 20, 2015]

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§63.7515 When must I conduct subsequent performance tests, fuel analyses, or tune-ups?

(a) You must conduct all applicable performance tests according to §63.7520 on an annual basis, except as specified in paragraphs (b) through (e), (g), and (h) of this section. Annual performance tests must be completed no more than 13 months after the previous performance test, except as specified in paragraphs (b) through (e), (g), and (h) of this section.

(b) If your performance tests for a given pollutant for at least 2 consecutive years show that your emissions are at or below 75 percent of the emission limit (or, in limited instances as specified in Tables 1 and 2 or 11 through 13 to this subpart, at or below the emission limit) for the pollutant, and if there are no changes in the operation of the individual boiler or process heater or air pollution control equipment that could increase emissions, you may choose to conduct performance tests for the pollutant every third year. Each such performance test must be conducted no more than 37 months after the previous performance test.

If you elect to demonstrate compliance using emission averaging under §63.7522, you must continue to conduct performance tests annually. The requirement to test at maximum chloride input level is waived unless the stack test is conducted for HCl. The requirement to test at maximum mercury input level is waived unless the stack test is conducted for mercury. The requirement to test at maximum TSM input level is waived unless the stack test is conducted for TSM.

(c) If a performance test shows emissions exceeded the emission limit or 75 percent of the emission limit (as specified in Tables 1 and 2 or 11 through 13 to this subpart) for a pollutant, you must conduct annual performance tests for that pollutant until all performance tests over a consecutive 2-year period meet the required level (at or below 75 percent of the emission limit, as specified in Tables 1 and 2 or 11 through 13 to this subpart).

(d) If you are required to meet an applicable tune-up work practice standard, you must conduct an annual, biennial, or 5-year performance tune-up according to §63.7540(a)(10), (11), or (12), respectively. Each annual tune-up specified in §63.7540(a)(10) must be no more than 13 months after the previous tune-up. Each biennial tune-up specified in §63.7540(a)(11) must be conducted no more than 25 months after the previous tune-up. Each 5-year tune-up specified in §63.7540(a)(12) must be conducted no more than 61 months after the previous tune-up. For a new or reconstructed affected source (as defined in §63.7490), the first annual, biennial, or 5-year tune-up must be no later than 13 months, 25 months, or 61 months, respectively, after April 1, 2013 or the initial startup of the new or reconstructed affected source, whichever is later.

(e) If you demonstrate compliance with the mercury, HCl, or TSM based on fuel analysis, you must conduct a monthly fuel analysis according to §63.7521 for each type of fuel burned that is subject to an emission limit in Tables 1, 2, or 11 through 13 to this subpart. You may comply with this monthly requirement by completing the fuel analysis any time within the calendar month as long as the analysis is separated from the previous analysis by at least 14 calendar days. If you burn a new type of fuel, you must conduct a fuel analysis before burning the new type of fuel in your boiler or process heater. You must still meet all applicable continuous compliance requirements in §63.7540. If each of 12 consecutive monthly fuel analyses demonstrates 75 percent or less of the compliance level, you may decrease the fuel analysis frequency to quarterly for that fuel. If any quarterly sample exceeds 75 percent of the compliance level or you begin burning a new type of fuel, you must return to monthly monitoring for that fuel, until 12 months of fuel analyses are again less than 75 percent of the compliance level. If sampling is conducted on one day per month, samples should be no less than 14 days apart, but if multiple samples are taken per month, the 14-day restriction does not apply.

(f) You must report the results of performance tests and the associated fuel analyses within 60 days after the completion of the performance tests. This report must also verify that the operating limits for each boiler or process heater have not changed or provide documentation of revised operating limits established according to §63.7530 and Table 7 to this subpart, as applicable. The reports for all subsequent performance tests must include all applicable information required in §63.7550.

(g) For affected sources (as defined in §63.7490) that have not operated since the previous compliance demonstration and more than one year has passed since the previous compliance demonstration, you must complete the subsequent compliance demonstration, if subject to the emission limits in Tables 1, 2, or 11 through 13 to this subpart, no later than 180 days after the re-start of the affected source and according to the applicable provisions in §63.7(a)(2) as cited in Table 10 to this subpart. You must complete a subsequent tune-up by following the procedures described in §63.7540(a)(10)(i) through (vi) and the schedule described in §63.7540(a)(13) for units that are not operating at the time of their scheduled tune-up.

(h) If your affected boiler or process heater is in the unit designed to burn light liquid subcategory and you combust ultra-low sulfur liquid fuel, you do not need to conduct further performance tests (stack tests or fuel analyses) if the pollutants measured during the initial compliance performance tests meet the emission limits in Tables 1 or 2 of this subpart providing you demonstrate ongoing compliance with the emissions limits by monitoring and recording the type of fuel combusted on a monthly basis. If you intend to use a fuel other than ultra-low sulfur liquid fuel, natural gas, refinery gas, or other gas 1 fuel, you must conduct new performance tests within 60 days of burning the new fuel type.

(i) If you operate a CO CEMS that meets the Performance Specifications outlined in §63.7525(a)(3) of this subpart to demonstrate compliance with the applicable alternative CO CEMS emission standard listed in Tables 1, 2, or 11 through 13 to this subpart, you are not required to conduct CO performance tests and are not subject to the oxygen concentration operating limit requirement specified in §63.7510(a).

[78 FR 7165, Jan. 31, 2013, as amended at 80 FR 72808, Nov. 20, 2015]

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§63.7520 What stack tests and procedures must I use?

(a) You must conduct all performance tests according to §63.7(c), (d), (f), and (h). You must also develop a site-specific stack test plan according to the requirements in §63.7(c). You shall conduct all performance tests under such conditions as the Administrator specifies to you based on the representative performance of each boiler or process heater for the period being

tested. Upon request, you shall make available to the Administrator such records as may be necessary to determine the conditions of the performance tests.

(b) You must conduct each performance test according to the requirements in Table 5 to this subpart.

(c) You must conduct each performance test under the specific conditions listed in Tables 5 and 7 to this subpart. You must conduct performance tests at representative operating load conditions while burning the type of fuel or mixture of fuels that has the highest content of chlorine and mercury, and TSM if you are opting to comply with the TSM alternative standard and you must demonstrate initial compliance and establish your operating limits based on these performance tests. These requirements could result in the need to conduct more than one performance test. Following each performance test and until the next performance test, you must comply with the operating limit for operating load conditions specified in Table 4 to this subpart.

(d) You must conduct a minimum of three separate test runs for each performance test required in this section, as specified in §63.7(e)(3). Each test run must comply with the minimum applicable sampling times or volumes specified in Tables 1 and 2 or 11 through 13 to this subpart.

(e) To determine compliance with the emission limits, you must use the F-Factor methodology and equations in sections 12.2 and 12.3 of EPA Method 19 at 40 CFR part 60, appendix A-7 of this chapter to convert the measured particulate matter (PM) concentrations, the measured HCl concentrations, the measured mercury concentrations, and the measured TSM concentrations that result from the performance test to pounds per million Btu heat input emission rates.

(f) Except for a 30-day rolling average based on CEMS (or sorbent trap monitoring system) data, if measurement results for any pollutant are reported as below the method detection level (e.g., laboratory analytical results for one or more sample components are below the method defined analytical detection level), you must use the method detection level as the measured emissions level for that pollutant in calculating compliance. The measured result for a multiple component analysis (e.g., analytical values for multiple Method 29 fractions both for individual HAP metals and for total HAP metals) may include a combination of method detection level data and analytical data reported above the method detection level.

[76 FR 15664, Mar. 21, 2011, as amended at 78 FR 7166, Jan. 31, 2013]

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§63.7521 What fuel analyses, fuel specification, and procedures must I use?

(a) For solid and liquid fuels, you must conduct fuel analyses for chloride and mercury according to the procedures in paragraphs (b) through (e) of this section and Table 6 to this subpart, as applicable. For solid fuels and liquid fuels, you must also conduct fuel analyses for TSM if you are opting to comply with the TSM alternative standard. For gas 2 (other) fuels, you must conduct fuel analyses for mercury according to the procedures in paragraphs (b) through (e) of this section and Table 6 to this subpart, as applicable. (For gaseous fuels, you may not use fuel analyses to comply with the TSM alternative standard or the HCl standard.) For purposes of complying with this section, a fuel gas system that consists of multiple gaseous fuels collected and mixed with each other is considered a single fuel type and sampling and analysis is only required on the combined fuel gas system that will feed the boiler or process heater. Sampling and analysis of the individual gaseous streams prior to combining is not required. You are not required to conduct fuel analyses for fuels used for only startup, unit shutdown, and transient flame stability purposes. You are required to conduct fuel analyses only for fuels and units that are subject to emission limits for mercury, HCl, or TSM in Tables 1 and 2 or 11 through 13 to this subpart. Gaseous and liquid fuels are exempt from the sampling requirements in paragraphs (c) and (d) of this section.

(b) You must develop a site-specific fuel monitoring plan according to the following procedures and requirements in paragraphs (b)(1) and (2) of this section, if you are required to conduct fuel analyses as specified in §63.7510.

(1) If you intend to use an alternative analytical method other than those required by Table 6 to this subpart, you must submit the fuel analysis plan to the Administrator for review and approval no later than 60 days before the date that you intend to conduct the initial compliance demonstration described in §63.7510.

(2) You must include the information contained in paragraphs (b)(2)(i) through (vi) of this section in your fuel analysis plan.

(i) The identification of all fuel types anticipated to be burned in each boiler or process heater.

(ii) For each anticipated fuel type, the notification of whether you or a fuel supplier will be conducting the fuel analysis.

(iii) For each anticipated fuel type, a detailed description of the sample location and specific procedures to be used for collecting and preparing the composite samples if your procedures are different from paragraph (c) or (d) of this section. Samples should be collected at a location that most accurately represents the fuel type, where possible, at a point prior to mixing with other dissimilar fuel types.

(iv) For each anticipated fuel type, the analytical methods from Table 6, with the expected minimum detection levels, to be used for the measurement of chlorine or mercury.

(v) If you request to use an alternative analytical method other than those required by Table 6 to this subpart, you must also include a detailed description of the methods and procedures that you are proposing to use. Methods in Table 6 shall be used until the requested alternative is approved.

(vi) If you will be using fuel analysis from a fuel supplier in lieu of site-specific sampling and analysis, the fuel supplier must use the analytical methods required by Table 6 to this subpart.

(c) You must obtain composite fuel samples for each fuel type according to the procedures in paragraph (c)(1) or (2) of this section, or the methods listed in Table 6 to this subpart, or use an automated sampling mechanism that provides representative composite fuel samples for each fuel type that includes both coarse and fine material. At a minimum, for demonstrating initial compliance by fuel analysis, you must obtain three composite samples. For monthly fuel analyses, at a minimum, you must obtain a single composite sample. For fuel analyses as part of a performance stack test, as specified in §63.7510(a), you must obtain a composite fuel sample during each performance test run.

(1) If sampling from a belt (or screw) feeder, collect fuel samples according to paragraphs (c)(1)(i) and (ii) of this section.

(i) Stop the belt and withdraw a 6-inch wide sample from the full cross-section of the stopped belt to obtain a minimum two pounds of sample. You must collect all the material (fines and coarse) in the full cross-section. You must transfer the sample to a clean plastic bag.

(ii) Each composite sample will consist of a minimum of three samples collected at approximately equal one-hour intervals during the testing period for sampling during performance stack testing.

(2) If sampling from a fuel pile or truck, you must collect fuel samples according to paragraphs (c)(2)(i) through (iii) of this section.

(i) For each composite sample, you must select a minimum of five sampling locations uniformly spaced over the surface of the pile.

(ii) At each sampling site, you must dig into the pile to a uniform depth of approximately 18 inches. You must insert a clean shovel into the hole and withdraw a sample, making sure that large pieces do not fall off during sampling; use the same shovel to collect all samples.

(iii) You must transfer all samples to a clean plastic bag for further processing.

(d) You must prepare each composite sample according to the procedures in paragraphs (d)(1) through (7) of this section.

(1) You must thoroughly mix and pour the entire composite sample over a clean plastic sheet.

(2) You must break large sample pieces (e.g., larger than 3 inches) into smaller sizes.

(3) You must make a pie shape with the entire composite sample and subdivide it into four equal parts.

(4) You must separate one of the quarter samples as the first subset.

(5) If this subset is too large for grinding, you must repeat the procedure in paragraph (d)(3) of this section with the quarter sample and obtain a one-quarter subset from this sample.

(6) You must grind the sample in a mill.

(7) You must use the procedure in paragraph (d)(3) of this section to obtain a one-quarter subsample for analysis. If the quarter sample is too large, subdivide it further using the same procedure.

(e) You must determine the concentration of pollutants in the fuel (mercury and/or chlorine and/or TSM) in units of pounds per million Btu of each composite sample for each fuel type according to the procedures in Table 6 to this subpart, for use in Equations 7, 8, and 9 of this subpart.

(f) To demonstrate that a gaseous fuel other than natural gas or refinery gas qualifies as an other gas 1 fuel, as defined in §63.7575, you must conduct a fuel specification analyses for mercury according to the procedures in paragraphs (g) through (i) of this section and Table 6 to this subpart, as applicable, except as specified in paragraph (f)(1) through (4) of this section, or as an alternative where fuel specification analysis is not practical, you must measure mercury concentration in the exhaust gas when firing only the gaseous fuel to be demonstrated as an other gas 1 fuel in the boiler or process heater according to the procedures in Table 6 to this subpart.

(1) You are not required to conduct the fuel specification analyses in paragraphs (g) through (i) of this section for natural gas or refinery gas.

(2) You are not required to conduct the fuel specification analyses in paragraphs (g) through (i) of this section for gaseous fuels that are subject to another subpart of this part, part 60, part 61, or part 65.

(3) You are not required to conduct the fuel specification analyses in paragraphs (g) through (i) of this section on gaseous fuels for units that are complying with the limits for units designed to burn gas 2 (other) fuels.

(4) You are not required to conduct the fuel specification analyses in paragraphs (g) through (i) of this section for gas streams directly derived from natural gas at natural gas production sites or natural gas plants.

(g) You must develop a site-specific fuel analysis plan for other gas 1 fuels according to the following procedures and requirements in paragraphs (g)(1) and (2) of this section.

(1) If you intend to use an alternative analytical method other than those required by Table 6 to this subpart, you must submit the fuel analysis plan to the Administrator for review and approval no later than 60 days before the date that you intend to conduct the initial compliance demonstration described in §63.7510.

(2) You must include the information contained in paragraphs (g)(2)(i) through (vi) of this section in your fuel analysis plan.

(i) The identification of all gaseous fuel types other than those exempted from fuel specification analysis under (f)(1) through (3) of this section anticipated to be burned in each boiler or process heater.

(ii) For each anticipated fuel type, the identification of whether you or a fuel supplier will be conducting the fuel specification analysis.

(iii) For each anticipated fuel type, a detailed description of the sample location and specific procedures to be used for collecting and preparing the samples if your procedures are different from the sampling methods contained in Table 6 to this subpart. Samples should be collected at a location that most accurately represents the fuel type, where possible, at a point prior to mixing with other dissimilar fuel types. If multiple boilers or process heaters are fueled by a common fuel stream it is permissible to conduct a single gas specification at the common point of gas distribution.

(iv) For each anticipated fuel type, the analytical methods from Table 6 to this subpart, with the expected minimum detection levels, to be used for the measurement of mercury.

(v) If you request to use an alternative analytical method other than those required by Table 6 to this subpart, you must also include a detailed description of the methods and procedures that you are proposing to use. Methods in Table 6 to this subpart shall be used until the requested alternative is approved.

(vi) If you will be using fuel analysis from a fuel supplier in lieu of site-specific sampling and analysis, the fuel supplier must use the analytical methods required by Table 6 to this subpart. When using a fuel supplier's fuel analysis, the owner or operator is not required to submit the information in §63.7521(g)(2)(iii).

(h) You must obtain a single fuel sample for each fuel type for fuel specification of gaseous fuels.

(i) You must determine the concentration in the fuel of mercury, in units of microgram per cubic meter, dry basis, of each sample for each other gas 1 fuel type according to the procedures in Table 6 to this subpart.

[78 FR 7167, Jan. 31, 2013, as amended at 80 FR 72808, Nov. 20, 2015]

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§63.7522 Can I use emissions averaging to comply with this subpart?

(a) As an alternative to meeting the requirements of §63.7500 for PM (or TSM), HCl, or mercury on a boiler or process heater-specific basis, if you have more than one existing boiler or process heater in any subcategories located at your facility, you may demonstrate compliance by emissions averaging, if your averaged emissions are not more than 90 percent of the applicable emission limit, according to the procedures in this section. You may not include new boilers or process heaters in an emissions average.

(b) For a group of two or more existing boilers or process heaters in the same subcategory that each vent to a separate stack, you may average PM (or TSM), HCl, or mercury emissions among existing units to demonstrate compliance with the limits in Table 2 to this subpart as specified in paragraph (b)(1) through (3) of this section, if you satisfy the requirements in paragraphs (c) through (g) of this section.

(1) You may average units using a CEMS or PM CPMS for demonstrating compliance.

(2) For mercury and HCl, averaging is allowed as follows:

(i) You may average among units in any of the solid fuel subcategories.

(ii) You may average among units in any of the liquid fuel subcategories.

(iii) You may average among units in a subcategory of units designed to burn gas 2 (other) fuels.

(iv) You may not average across the units designed to burn liquid, units designed to burn solid fuel, and units designed to burn gas 2 (other) subcategories.

(3) For PM (or TSM), averaging is only allowed between units within each of the following subcategories and you may not average across subcategories:

(i) Units designed to burn coal/solid fossil fuel.

(ii) Stokers/sloped grate/other units designed to burn kiln dried biomass/bio-based solids.

(iii) Stokers/sloped grate/other units designed to burn wet biomass/bio-based solids.

(iv) Fluidized bed units designed to burn biomass/bio-based solid.

(v) Suspension burners designed to burn biomass/bio-based solid.

(vi) Dutch ovens/pile burners designed to burn biomass/bio-based solid.

(vii) Fuel Cells designed to burn biomass/bio-based solid.

(viii) Hybrid suspension/grate burners designed to burn wet biomass/bio-based solid.

(ix) Units designed to burn heavy liquid fuel.

(x) Units designed to burn light liquid fuel.

(xi) Units designed to burn liquid fuel that are non-continental units.

(xii) Units designed to burn gas 2 (other) gases.

(c) For each existing boiler or process heater in the averaging group, the emission rate achieved during the initial compliance test for the HAP being averaged must not exceed the emission level that was being achieved on April 1, 2013 or the control technology employed during the initial compliance test must not be less effective for the HAP being averaged than the control technology employed on April 1, 2013.

(d) The averaged emissions rate from the existing boilers and process heaters participating in the emissions averaging option must not exceed 90 percent of the limits in Table 2 to this subpart at all times the affected units are subject to numeric emission limits following the compliance date specified in §63.7495.

(e) You must demonstrate initial compliance according to paragraph (e)(1) or (2) of this section using the maximum rated heat input capacity or maximum steam generation capacity of each unit and the results of the initial performance tests or fuel analysis.

(1) You must use Equation 1a or 1b or 1c of this section to demonstrate that the PM (or TSM), HCl, or mercury emissions from all existing units participating in the emissions averaging option for that pollutant do not exceed the emission limits in Table 2 to this subpart. Use Equation 1a if you are complying with the emission limits on a heat input basis, use Equation 1b if you are complying with the emission limits on a steam generation (output) basis, and use Equation 1c if you are complying with the emission limits on a electric generation (output) basis.

$$AveWeightedEmissions = 1.1 \times \frac{\sum_{j=1}^n (Er \times Hm)}{\sum_{i=1}^n Hm} \quad (\text{Eq. 1a})$$

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Where:

AveWeightedEmissions = Average weighted emissions for PM (or TSM), HCl, or mercury, in units of pounds per million Btu of heat input.

Er = Emission rate (as determined during the initial compliance demonstration) of PM (or TSM), HCl, or mercury from unit, i, in units of pounds per million Btu of heat input. Determine the emission rate for PM (or TSM), HCl, or mercury by performance testing according to Table 5 to this subpart, or by fuel analysis for HCl or mercury or TSM using the applicable equation in §63.7530(c).

Hm = Maximum rated heat input capacity of unit, i, in units of million Btu per hour.

n = Number of units participating in the emissions averaging option.

1.1 = Required discount factor.

$$AveWeightedEmissions = 1.1 \times \sum_{i=1}^n (Er \times So) \div \sum_{i=1}^n So \quad (\text{Eq. 1b})$$

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Where:

AveWeightedEmissions = Average weighted emissions for PM (or TSM), HCl, or mercury, in units of pounds per million Btu of steam output.

Er = Emission rate (as determined during the initial compliance demonstration) of PM (or TSM), HCl, or mercury from unit, i, in units of pounds per million Btu of steam output. Determine the emission rate for PM (or TSM), HCl, or mercury by performance testing according to Table 5 to this subpart, or by fuel analysis for HCl or mercury or TSM using the applicable equation in §63.7530(c). If you are taking credit for energy conservation measures from a unit according to §63.7533, use the adjusted emission level for that unit, Eadj, determined according to §63.7533 for that unit.

So = Maximum steam output capacity of unit, i, in units of million Btu per hour, as defined in §63.7575.

n = Number of units participating in the emissions averaging option.

1.1 = Required discount factor.

$$AveWeightedEmissions = 1.1 \times \sum_{i=1}^n (Er \times Eo) \div \sum_{i=1}^n Eo \quad (\text{Eq. 1c})$$

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Where:

AveWeightedEmissions = Average weighted emissions for PM (or TSM), HCl, or mercury, in units of pounds per megawatt hour.

Er = Emission rate (as determined during the initial compliance demonstration) of PM (or TSM), HCl, or mercury from unit, i, in units of pounds per megawatt hour. Determine the emission rate for PM (or TSM), HCl, or mercury by performance testing according to Table 5 to this subpart, or by fuel analysis for HCl or mercury or TSM using the applicable equation in §63.7530(c). If you are taking credit for energy conservation measures from a unit according to §63.7533, use the adjusted emission level for that unit, Eadj, determined according to §63.7533 for that unit.

Eo = Maximum electric generating output capacity of unit, i, in units of megawatt hour, as defined in §63.7575.

n = Number of units participating in the emissions averaging option.

1.1 = Required discount factor.

(2) If you are not capable of determining the maximum rated heat input capacity of one or more boilers that generate steam, you may use Equation 2 of this section as an alternative to using Equation 1a of this section to demonstrate that the PM (or TSM), HCl, or mercury emissions from all existing units participating in the emissions averaging option do not exceed the emission limits for that pollutant in Table 2 to this subpart that are in pounds per million Btu of heat input.

$$AveWeightedEmissions = 1.1 \times \sum_{i=1}^n (Er \times Sm \times Cfi) \div \sum_{i=1}^n (Sm \times Cfi) \quad (\text{Eq. 2})$$

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Where:

AveWeightedEmissions = Average weighted emission level for PM (or TSM), HCl, or mercury, in units of pounds per million Btu of heat input.

Er = Emission rate (as determined during the most recent compliance demonstration) of PM (or TSM), HCl, or mercury from unit, i, in units of pounds per million Btu of heat input. Determine the emission rate for PM (or TSM), HCl, or mercury by performance testing according to Table 5 to this subpart, or by fuel analysis for HCl or mercury or TSM using the applicable equation in §63.7530(c).

Sm = Maximum steam generation capacity by unit, i, in units of pounds per hour.

Cfi = Conversion factor, calculated from the most recent compliance test, in units of million Btu of heat input per pounds of steam generated for unit, i.

1.1 = Required discount factor.

(f) After the initial compliance demonstration described in paragraph (e) of this section, you must demonstrate compliance on a monthly basis determined at the end of every month (12 times per year) according to paragraphs (f)(1) through (3) of this section. The first monthly period begins on the compliance date specified in §63.7495. If the affected source elects to collect monthly data for up the 11 months preceding the first monthly period, these additional data points can be used to compute the 12-month rolling average in paragraph (f)(3) of this section.

(1) For each calendar month, you must use Equation 3a or 3b or 3c of this section to calculate the average weighted emission rate for that month. Use Equation 3a and the actual heat input for the month for each existing unit participating in the emissions averaging option if you are complying with emission limits on a heat input basis. Use Equation 3b and the actual steam generation for the month if you are complying with the emission limits on a steam generation (output) basis. Use Equation 3c and the actual electrical generation for the month if you are complying with the emission limits on an electrical generation (output) basis.

$$AveWeightedEmissions = 1.1 \times \sum_{i=1}^n (Er \times Hb) \div \sum_{i=1}^n Hb \quad (\text{Eq. 3a})$$

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Where:

AveWeightedEmissions = Average weighted emission level for PM (or TSM), HCl, or mercury, in units of pounds per million Btu of heat input, for that calendar month.

Er = Emission rate (as determined during the most recent compliance demonstration) of PM (or TSM), HCl, or mercury from unit, i, in units of pounds per million Btu of heat input. Determine the emission rate for PM (or TSM), HCl, or mercury by performance testing according to Table 5 to this subpart, or by fuel analysis for HCl or mercury or TSM according to Table 6 to this subpart.

Hb = The heat input for that calendar month to unit, i, in units of million Btu.

n = Number of units participating in the emissions averaging option.

1.1 = Required discount factor.

$$AveWeightedEmissions = 1.1 \times \sum_{i=1}^n (Er \times So) \div \sum_{i=1}^n So \quad (\text{Eq. 3b})$$

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Where:

AveWeightedEmissions = Average weighted emission level for PM (or TSM), HCl, or mercury, in units of pounds per million Btu of steam output, for that calendar month.

Er = Emission rate (as determined during the most recent compliance demonstration) of PM (or TSM), HCl, or mercury from unit, i, in units of pounds per million Btu of steam output. Determine the emission rate for PM (or TSM), HCl, or mercury by performance testing according to Table 5 to this subpart, or by fuel analysis for HCl or mercury or TSM according to Table 6 to this subpart. If you are taking credit for energy conservation measures from a unit according to §63.7533, use the adjusted emission level for that unit, E_{adj} , determined according to §63.7533 for that unit.

So = The steam output for that calendar month from unit, i, in units of million Btu, as defined in §63.7575.

n = Number of units participating in the emissions averaging option.

1.1 = Required discount factor.

$$AveWeightedEmissions = 1.1 \times \sum_{i=1}^n (Er \times Eo) \div \sum_{i=1}^n Eo \quad (\text{Eq. 3c})$$

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Where:

AveWeightedEmissions = Average weighted emission level for PM (or TSM), HCl, or mercury, in units of pounds per megawatt hour, for that calendar month.

Er = Emission rate (as determined during the most recent compliance demonstration) of PM (or TSM), HCl, or mercury from unit, i, in units of pounds per megawatt hour. Determine the emission rate for PM (or TSM), HCl, or mercury by performance testing according to Table 5 to this subpart, or by fuel analysis for HCl or mercury or TSM according to Table 6 to this subpart. If you are taking credit for energy conservation measures from a unit according to §63.7533, use the adjusted emission level for that unit, E_{adj} , determined according to §63.7533 for that unit.

Eo = The electric generating output for that calendar month from unit, i, in units of megawatt hour, as defined in §63.7575.

n = Number of units participating in the emissions averaging option.

1.1 = Required discount factor.

(2) If you are not capable of monitoring heat input, you may use Equation 4 of this section as an alternative to using Equation 3a of this section to calculate the average weighted emission rate using the actual steam generation from the boilers participating in the emissions averaging option.

$$AveWeightedEmissions = 1.1 \times \sum_{i=1}^n (Er \times Sa \times Cfi) \div \sum_{i=1}^n (Sa \times Cfi) \quad (\text{Eq. 4})$$

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Where:

AveWeightedEmissions = average weighted emission level for PM (or TSM), HCl, or mercury, in units of pounds per million Btu of heat input for that calendar month.

Er = Emission rate (as determined during the most recent compliance demonstration of PM (or TSM), HCl, or mercury from unit, i, in units of pounds per million Btu of heat input. Determine the emission rate for PM (or TSM), HCl, or mercury by performance testing according to Table 5 to this subpart, or by fuel analysis for HCl or mercury or TSM according to Table 6 to this subpart.

Sa = Actual steam generation for that calendar month by boiler, i, in units of pounds.

Cfi = Conversion factor, as calculated during the most recent compliance test, in units of million Btu of heat input per pounds of steam generated for boiler, i.

1.1 = Required discount factor.

(3) Until 12 monthly weighted average emission rates have been accumulated, calculate and report only the average weighted emission rate determined under paragraph (f)(1) or (2) of this section for each calendar month. After 12 monthly weighted average emission rates have been accumulated, for each subsequent calendar month, use Equation 5 of this section to calculate the 12-month rolling average of the monthly weighted average emission rates for the current calendar month and the previous 11 calendar months.

$$E_{avg} = \frac{\sum_{i=1}^{12} ER_i}{12} \quad (\text{Eq. 5})$$

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Where:

Eavg = 12-month rolling average emission rate, (pounds per million Btu heat input)

ERi = Monthly weighted average, for calendar month "i" (pounds per million Btu heat input), as calculated by paragraph (f)(1) or (2) of this section.

(g) You must develop, and submit upon request to the applicable Administrator for review and approval, an implementation plan for emission averaging according to the following procedures and requirements in paragraphs (g)(1) through (4) of this section.

(1) If requested, you must submit the implementation plan no later than 180 days before the date that the facility intends to demonstrate compliance using the emission averaging option.

(2) You must include the information contained in paragraphs (g)(2)(i) through (vii) of this section in your implementation plan for all emission sources included in an emissions average:

(i) The identification of all existing boilers and process heaters in the averaging group, including for each either the applicable HAP emission level or the control technology installed as of January 31, 2013 and the date on which you are requesting emission averaging to commence;

(ii) The process parameter (heat input or steam generated) that will be monitored for each averaging group;

(iii) The specific control technology or pollution prevention measure to be used for each emission boiler or process heater in the averaging group and the date of its installation or application. If the pollution prevention measure reduces or eliminates emissions from multiple boilers or process heaters, the owner or operator must identify each boiler or process heater;

(iv) The test plan for the measurement of PM (or TSM), HCl, or mercury emissions in accordance with the requirements in §63.7520;

(v) The operating parameters to be monitored for each control system or device consistent with §63.7500 and Table 4, and a description of how the operating limits will be determined;

(vi) If you request to monitor an alternative operating parameter pursuant to §63.7525, you must also include:

(A) A description of the parameter(s) to be monitored and an explanation of the criteria used to select the parameter(s); and

(B) A description of the methods and procedures that will be used to demonstrate that the parameter indicates proper operation of the control device; the frequency and content of monitoring, reporting, and recordkeeping requirements; and a demonstration, to the satisfaction of the Administrator, that the proposed monitoring frequency is sufficient to represent control device operating conditions; and

(vii) A demonstration that compliance with each of the applicable emission limit(s) will be achieved under representative operating load conditions. Following each compliance demonstration and until the next compliance demonstration, you must comply with the operating limit for operating load conditions specified in Table 4 to this subpart.

(3) If submitted upon request, the Administrator shall review and approve or disapprove the plan according to the following criteria:

- (i) Whether the content of the plan includes all of the information specified in paragraph (g)(2) of this section; and
- (ii) Whether the plan presents sufficient information to determine that compliance will be achieved and maintained.

(4) The applicable Administrator shall not approve an emission averaging implementation plan containing any of the following provisions:

- (i) Any averaging between emissions of differing pollutants or between differing sources; or
- (ii) The inclusion of any emission source other than an existing unit in the same subcategories.

(h) For a group of two or more existing affected units, each of which vents through a single common stack, you may average PM (or TSM), HCl, or mercury emissions to demonstrate compliance with the limits for that pollutant in Table 2 to this subpart if you satisfy the requirements in paragraph (i) or (j) of this section.

(i) For a group of two or more existing units in the same subcategory, each of which vents through a common emissions control system to a common stack, that does not receive emissions from units in other subcategories or categories, you may treat such averaging group as a single existing unit for purposes of this subpart and comply with the requirements of this subpart as if the group were a single unit.

(j) For all other groups of units subject to the common stack requirements of paragraph (h) of this section, including situations where the exhaust of affected units are each individually controlled and then sent to a common stack, the owner or operator may elect to:

(1) Conduct performance tests according to procedures specified in §63.7520 in the common stack if affected units from other subcategories vent to the common stack. The emission limits that the group must comply with are determined by the use of Equation 6 of this section.

$$E_n = \sum_{i=1}^n (EL_i \times H_i) + \sum_{i=1}^n H_i \quad (\text{Eq. 6})$$

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Where:

E_n = HAP emission limit, pounds per million British thermal units (lb/MMBtu) or parts per million (ppm).

E_{Li} = Appropriate emission limit from Table 2 to this subpart for unit i , in units of lb/MMBtu or ppm.

H_i = Heat input from unit i , MMBtu.

(2) Conduct performance tests according to procedures specified in §63.7520 in the common stack. If affected units and non-affected units vent to the common stack, the non-affected units must be shut down or vented to a different stack during the performance test unless the facility determines to demonstrate compliance with the non-affected units venting to the stack; and

(3) Meet the applicable operating limit specified in §63.7540 and Table 8 to this subpart for each emissions control system (except that, if each unit venting to the common stack has an applicable opacity operating limit, then a single continuous opacity monitoring system may be located in the common stack instead of in each duct to the common stack).

(k) The common stack of a group of two or more existing boilers or process heaters in the same subcategories subject to paragraph (h) of this section may be treated as a separate stack for purposes of paragraph (b) of this section and included in an emissions averaging group subject to paragraph (b) of this section.

[76 FR 15664, Mar. 21, 2011, as amended at 78 FR 7168, Jan. 31, 2013; 80 FR 72809, Nov. 20, 2015]

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§63.7525 What are my monitoring, installation, operation, and maintenance requirements?

(a) If your boiler or process heater is subject to a CO emission limit in Tables 1, 2, or 11 through 13 to this subpart, you must install, operate, and maintain an oxygen analyzer system, as defined in §63.7575, or install, certify, operate and maintain continuous emission monitoring systems for CO and oxygen (or carbon dioxide (CO₂)) according to the procedures in paragraphs (a)(1) through (6) of this section.

(1) Install the CO CEMS and oxygen (or CO₂) analyzer by the compliance date specified in §63.7495. The CO and oxygen (or CO₂) levels shall be monitored at the same location at the outlet of the boiler or process heater. An owner or operator may request an alternative test method under §63.7 of this chapter, in order that compliance with the CO emissions limit be determined using CO₂ as a diluent correction in place of oxygen at 3 percent. EPA Method 19 F-factors and EPA Method 19 equations must be used to generate the appropriate CO₂ correction percentage for the fuel type burned in the unit, and must also take into account that the 3 percent oxygen correction is to be done on a dry basis. The alternative test method request must account for any CO₂ being added to, or removed from, the emissions gas stream as a result of limestone injection, scrubber media, etc.

(2) To demonstrate compliance with the applicable alternative CO CEMS emission standard listed in Tables 1, 2, or 11 through 13 to this subpart, you must install, certify, operate, and maintain a CO CEMS and an oxygen analyzer according to the applicable procedures under Performance Specification 4, 4A, or 4B at 40 CFR part 60, appendix B; part 75 of this chapter (if an CO₂ analyzer is used); the site-specific monitoring plan developed according to §63.7505(d); and the requirements in §63.7540(a)(8) and paragraph (a) of this section. Any boiler or process heater that has a CO CEMS that is compliant with Performance Specification 4, 4A, or 4B at 40 CFR part 60, appendix B, a site-specific monitoring plan developed according to §63.7505(d), and the requirements in §63.7540(a)(8) and paragraph (a) of this section must use the CO CEMS to comply with the applicable alternative CO CEMS emission standard listed in Tables 1, 2, or 11 through 13 to this subpart.

(i) You must conduct a performance evaluation of each CO CEMS according to the requirements in §63.8(e) and according to Performance Specification 4, 4A, or 4B at 40 CFR part 60, appendix B.

(ii) During each relative accuracy test run of the CO CEMS, you must collect emission data for CO concurrently (or within a 30- to 60-minute period) by both the CO CEMS and by Method 10, 10A, or 10B at 40 CFR part 60, appendix A-4. The relative accuracy testing must be at representative operating conditions.

(iii) You must follow the quality assurance procedures (e.g., quarterly accuracy determinations and daily calibration drift tests) of Procedure 1 of appendix F to part 60. The measurement span value of the CO CEMS must be two times the applicable CO emission limit, expressed as a concentration.

(iv) Any CO CEMS that does not comply with §63.7525(a) cannot be used to meet any requirement in this subpart to demonstrate compliance with a CO emission limit listed in Tables 1, 2, or 11 through 13 to this subpart.

(v) For a new unit, complete the initial performance evaluation no later than July 30, 2013, or 180 days after the date of initial startup, whichever is later. For an existing unit, complete the initial performance evaluation no later than July 29, 2016.

(vi) When CO₂ is used to correct CO emissions and CO₂ is measured on a wet basis, correct for moisture as follows: Install, operate, maintain, and quality assure a continuous moisture monitoring system for measuring and recording the moisture content of the flue gases, in order to correct the measured hourly volumetric flow rates for moisture when calculating CO concentrations. The following continuous moisture monitoring systems are acceptable: A continuous moisture sensor; an oxygen analyzer (or analyzers) capable of measuring O₂ both on a wet basis and on a dry basis; or a stack temperature sensor and a moisture look-up table, *i.e.*, a psychrometric chart (for saturated gas streams following wet scrubbers or other demonstrably saturated gas streams, only). The moisture monitoring system shall include as a component the automated data acquisition and handling system (DAHS) for recording and reporting both the raw data (e.g., hourly average wet-and dry basis O₂ values) and the hourly average values of the stack gas moisture content derived from those data. When a moisture look-up table is used, the moisture monitoring system shall be represented as a single component, the certified DAHS, in the monitoring plan for the unit or common stack.

(3) Complete a minimum of one cycle of CO and oxygen (or CO₂) CEMS operation (sampling, analyzing, and data recording) for each successive 15-minute period. Collect CO and oxygen (or CO₂) data concurrently. Collect at least four CO and oxygen (or CO₂) CEMS data values representing the four 15-minute periods in an hour, or at least two 15-minute data values during an hour when CEMS calibration, quality assurance, or maintenance activities are being performed.

(4) Reduce the CO CEMS data as specified in §63.8(g)(2).

(5) Calculate one-hour arithmetic averages, corrected to 3 percent oxygen (or corrected to an CO₂ percentage determined to be equivalent to 3 percent oxygen) from each hour of CO CEMS data in parts per million CO concentration. The one-hour arithmetic averages required shall be used to calculate the 30-day or 10-day rolling average emissions. Use Equation 19-19 in section 12.4.1 of Method 19 of 40 CFR part 60, appendix A-7 for calculating the average CO concentration from the hourly values.

(6) For purposes of collecting CO data, operate the CO CEMS as specified in §63.7535(b). You must use all the data collected during all periods in calculating data averages and assessing compliance, except that you must exclude certain data

as specified in §63.7535(c). Periods when CO data are unavailable may constitute monitoring deviations as specified in §63.7535(d).

(7) Operate an oxygen trim system with the oxygen level set no lower than the lowest hourly average oxygen concentration measured during the most recent CO performance test as the operating limit for oxygen according to Table 7 to this subpart.

(b) If your boiler or process heater is in the unit designed to burn coal/solid fossil fuel subcategory or the unit designed to burn heavy liquid subcategory and has an average annual heat input rate greater than 250 MMBtu per hour from solid fossil fuel and/or heavy liquid, and you demonstrate compliance with the PM limit instead of the alternative TSM limit, you must install, maintain, and operate a PM CPMS monitoring emissions discharged to the atmosphere and record the output of the system as specified in paragraphs (b)(1) through (4) of this section. As an alternative to use of a PM CPMS to demonstrate compliance with the PM limit, you may choose to use a PM CEMS. If you choose to use a PM CEMS to demonstrate compliance with the PM limit instead of the alternative TSM limit, you must install, certify, maintain, and operate a PM CEMS monitoring emissions discharged to the atmosphere and record the output of the system as specified in paragraph (b)(5) through (8) of this section. For other boilers or process heaters, you may elect to use a PM CPMS or PM CEMS operated in accordance with this section in lieu of using other CMS for monitoring PM compliance (e.g., bag leak detectors, ESP secondary power, and PM scrubber pressure). Owners of boilers and process heaters who elect to comply with the alternative TSM limit are not required to install a PM CPMS.

(1) Install, operate, and maintain your PM CPMS according to the procedures in your approved site-specific monitoring plan developed in accordance with §63.7505(d), the requirements in §63.7540(a)(9), and paragraphs (b)(1)(i) through (iii) of this section.

(i) The operating principle of the PM CPMS must be based on in-stack or extractive light scatter, light scintillation, beta attenuation, or mass accumulation detection of PM in the exhaust gas or representative exhaust gas sample. The reportable measurement output from the PM CPMS must be expressed as milliamps.

(ii) The PM CPMS must have a cycle time (i.e., period required to complete sampling, measurement, and reporting for each measurement) no longer than 60 minutes.

(iii) The PM CPMS must have a documented detection limit of 0.5 milligram per actual cubic meter, or less.

(2) For a new unit, complete the initial performance evaluation no later than July 30, 2013, or 180 days after the date of initial startup, whichever is later. For an existing unit, complete the initial performance evaluation no later than July 29, 2016.

(3) Collect PM CPMS hourly average output data for all boiler or process heater operating hours except as indicated in §63.7535(a) through (d). Express the PM CPMS output as milliamps.

(4) Calculate the arithmetic 30-day rolling average of all of the hourly average PM CPMS output data collected during all boiler or process heater operating hours (milliamps).

(5) Install, certify, operate, and maintain your PM CEMS according to the procedures in your approved site-specific monitoring plan developed in accordance with §63.7505(d), the requirements in §63.7540(a)(9), and paragraphs (b)(5)(i) through (iv) of this section.

(i) You shall conduct a performance evaluation of the PM CEMS according to the applicable requirements of §60.8(e), and Performance Specification 11 at 40 CFR part 60, appendix B of this chapter.

(ii) During each PM correlation testing run of the CEMS required by Performance Specification 11 at 40 CFR part 60, appendix B of this chapter, you shall collect PM and oxygen (or carbon dioxide) data concurrently (or within a 30-to 60-minute period) by both the CEMS and conducting performance tests using Method 5 at 40 CFR part 60, appendix A-3 or Method 17 at 40 CFR part 60, appendix A-6 of this chapter.

(iii) You shall perform quarterly accuracy determinations and daily calibration drift tests in accordance with Procedure 2 at 40 CFR part 60, appendix F of this chapter. You must perform Relative Response Audits annually and perform Response Correlation Audits every 3 years.

(iv) Within 60 days after the date of completing each CEMS relative accuracy test audit or performance test conducted to demonstrate compliance with this subpart, you must submit the relative accuracy test audit data and performance test data to the EPA by successfully submitting the data electronically into the EPA's Central Data Exchange by using the Electronic Reporting Tool (see <http://www.epa.gov/ttn/chief/ert/erttool.html>).

(6) For a new unit, complete the initial performance evaluation no later than July 30, 2013, or 180 days after the date of initial startup, whichever is later. For an existing unit, complete the initial performance evaluation no later than July 29, 2016.

(7) Collect PM CEMS hourly average output data for all boiler or process heater operating hours except as indicated in §63.7535(a) through (d).

(8) Calculate the arithmetic 30-day rolling average of all of the hourly average PM CEMS output data collected during all boiler or process heater operating hours.

(c) If you have an applicable opacity operating limit in this rule, and are not otherwise required or elect to install and operate a PM CPMS, PM CEMS, or a bag leak detection system, you must install, operate, certify and maintain each COMS according to the procedures in paragraphs (c)(1) through (7) of this section by the compliance date specified in §63.7495.

(1) Each COMS must be installed, operated, and maintained according to Performance Specification 1 at appendix B to part 60 of this chapter.

(2) You must conduct a performance evaluation of each COMS according to the requirements in §63.8(e) and according to Performance Specification 1 at appendix B to part 60 of this chapter.

(3) As specified in §63.8(c)(4)(i), each COMS must complete a minimum of one cycle of sampling and analyzing for each successive 10-second period and one cycle of data recording for each successive 6-minute period.

(4) The COMS data must be reduced as specified in §63.8(g)(2).

(5) You must include in your site-specific monitoring plan procedures and acceptance criteria for operating and maintaining each COMS according to the requirements in §63.8(d). At a minimum, the monitoring plan must include a daily calibration drift assessment, a quarterly performance audit, and an annual zero alignment audit of each COMS.

(6) You must operate and maintain each COMS according to the requirements in the monitoring plan and the requirements of §63.8(e). You must identify periods the COMS is out of control including any periods that the COMS fails to pass a daily calibration drift assessment, a quarterly performance audit, or an annual zero alignment audit. Any 6-minute period for which the monitoring system is out of control and data are not available for a required calculation constitutes a deviation from the monitoring requirements.

(7) You must determine and record all the 6-minute averages (and daily block averages as applicable) collected for periods during which the COMS is not out of control.

(d) If you have an operating limit that requires the use of a CMS other than a PM CPMS or COMS, you must install, operate, and maintain each CMS according to the procedures in paragraphs (d)(1) through (5) of this section by the compliance date specified in §63.7495.

(1) The CPMS must complete a minimum of one cycle of operation every 15-minutes. You must have a minimum of four successive cycles of operation, one representing each of the four 15-minute periods in an hour, to have a valid hour of data.

(2) You must operate the monitoring system as specified in §63.7535(b), and comply with the data calculation requirements specified in §63.7535(c).

(3) Any 15-minute period for which the monitoring system is out-of-control and data are not available for a required calculation constitutes a deviation from the monitoring requirements. Other situations that constitute a monitoring deviation are specified in §63.7535(d).

(4) You must determine the 30-day rolling average of all recorded readings, except as provided in §63.7535(c).

(5) You must record the results of each inspection, calibration, and validation check.

(e) If you have an operating limit that requires the use of a flow monitoring system, you must meet the requirements in paragraphs (d) and (e)(1) through (4) of this section.

(1) You must install the flow sensor and other necessary equipment in a position that provides a representative flow.

(2) You must use a flow sensor with a measurement sensitivity of no greater than 2 percent of the design flow rate.

(3) You must minimize, consistent with good engineering practices, the effects of swirling flow or abnormal velocity distributions due to upstream and downstream disturbances.

(4) You must conduct a flow monitoring system performance evaluation in accordance with your monitoring plan at the time of each performance test but no less frequently than annually.

(f) If you have an operating limit that requires the use of a pressure monitoring system, you must meet the requirements in paragraphs (d) and (f)(1) through (6) of this section.

(1) Install the pressure sensor(s) in a position that provides a representative measurement of the pressure (e.g., PM scrubber pressure drop).

(2) Minimize or eliminate pulsating pressure, vibration, and internal and external corrosion consistent with good engineering practices.

(3) Use a pressure sensor with a minimum tolerance of 1.27 centimeters of water or a minimum tolerance of 1 percent of the pressure monitoring system operating range, whichever is less.

(4) Perform checks at least once each process operating day to ensure pressure measurements are not obstructed (e.g., check for pressure tap pluggage daily).

(5) Conduct a performance evaluation of the pressure monitoring system in accordance with your monitoring plan at the time of each performance test but no less frequently than annually.

(6) If at any time the measured pressure exceeds the manufacturer's specified maximum operating pressure range, conduct a performance evaluation of the pressure monitoring system in accordance with your monitoring plan and confirm that the pressure monitoring system continues to meet the performance requirements in your monitoring plan. Alternatively, install and verify the operation of a new pressure sensor.

(g) If you have an operating limit that requires a pH monitoring system, you must meet the requirements in paragraphs (d) and (g)(1) through (4) of this section.

(1) Install the pH sensor in a position that provides a representative measurement of scrubber effluent pH.

(2) Ensure the sample is properly mixed and representative of the fluid to be measured.

(3) Calibrate the pH monitoring system in accordance with your monitoring plan and according to the manufacturer's instructions. Clean the pH probe at least once each process operating day. Maintain on-site documentation that your calibration frequency is sufficient to maintain the specified accuracy of your device.

(4) Conduct a performance evaluation (including a two-point calibration with one of the two buffer solutions having a pH within 1 of the pH of the operating limit) of the pH monitoring system in accordance with your monitoring plan at the time of each performance test but no less frequently than annually.

(h) If you have an operating limit that requires a secondary electric power monitoring system for an electrostatic precipitator (ESP) operated with a wet scrubber, you must meet the requirements in paragraphs (h)(1) and (2) of this section.

(1) Install sensors to measure (secondary) voltage and current to the precipitator collection plates.

(2) Conduct a performance evaluation of the electric power monitoring system in accordance with your monitoring plan at the time of each performance test but no less frequently than annually.

(i) If you have an operating limit that requires the use of a monitoring system to measure sorbent injection rate (e.g., weigh belt, weigh hopper, or hopper flow measurement device), you must meet the requirements in paragraphs (d) and (i)(1) through (2) of this section.

(1) Install the system in a position(s) that provides a representative measurement of the total sorbent injection rate.

(2) Conduct a performance evaluation of the sorbent injection rate monitoring system in accordance with your monitoring plan at the time of each performance test but no less frequently than annually.

(j) If you are not required to use a PM CPMS and elect to use a fabric filter bag leak detection system to comply with the requirements of this subpart, you must install, calibrate, maintain, and continuously operate the bag leak detection system as specified in paragraphs (j)(1) through (6) of this section.

(1) You must install a bag leak detection sensor(s) in a position(s) that will be representative of the relative or absolute PM loadings for each exhaust stack, roof vent, or compartment (e.g., for a positive pressure fabric filter) of the fabric filter.

(2) Conduct a performance evaluation of the bag leak detection system in accordance with your monitoring plan and consistent with the guidance provided in EPA-454/R-98-015 (incorporated by reference, see §63.14).

(3) Use a bag leak detection system certified by the manufacturer to be capable of detecting PM emissions at concentrations of 10 milligrams per actual cubic meter or less.

(4) Use a bag leak detection system equipped with a device to record continuously the output signal from the sensor.

(5) Use a bag leak detection system equipped with a system that will alert plant operating personnel when an increase in relative PM emissions over a preset level is detected. The alert must easily recognizable (e.g., heard or seen) by plant operating personnel.

(6) Where multiple bag leak detectors are required, the system's instrumentation and alert may be shared among detectors.

(k) For each unit that meets the definition of limited-use boiler or process heater, you must keep fuel use records for the days the boiler or process heater was operating.

(l) For each unit for which you decide to demonstrate compliance with the mercury or HCl emissions limits in Tables 1 or 2 or 11 through 13 of this subpart by use of a CEMS for mercury or HCl, you must install, certify, maintain, and operate a CEMS measuring emissions discharged to the atmosphere and record the output of the system as specified in paragraphs (l)(1) through (8) of this section. For HCl, this option for an affected unit takes effect on the date a final performance specification for a HCl CEMS is published in the FEDERAL REGISTER or the date of approval of a site-specific monitoring plan.

(1) Notify the Administrator one month before starting use of the CEMS, and notify the Administrator one month before stopping use of the CEMS.

(2) Each CEMS shall be installed, certified, operated, and maintained according to the requirements in §63.7540(a)(14) for a mercury CEMS and §63.7540(a)(15) for a HCl CEMS.

(3) For a new unit, you must complete the initial performance evaluation of the CEMS by the latest of the dates specified in paragraph (l)(3)(i) through (iii) of this section.

(i) No later than July 30, 2013.

(ii) No later 180 days after the date of initial startup.

(iii) No later 180 days after notifying the Administrator before starting to use the CEMS in place of performance testing or fuel analysis to demonstrate compliance.

(4) For an existing unit, you must complete the initial performance evaluation by the latter of the two dates specified in paragraph (l)(4)(i) and (ii) of this section.

(i) No later than July 29, 2016.

(ii) No later 180 days after notifying the Administrator before starting to use the CEMS in place of performance testing or fuel analysis to demonstrate compliance.

(5) Compliance with the applicable emissions limit shall be determined based on the 30-day rolling average of the hourly arithmetic average emissions rates using the continuous monitoring system outlet data. The 30-day rolling arithmetic average emission rate (lb/MMBtu) shall be calculated using the equations in EPA Reference Method 19 at 40 CFR part 60, appendix A-7, but substituting the mercury or HCl concentration for the pollutant concentrations normally used in Method 19.

(6) Collect CEMS hourly averages for all operating hours on a 30-day rolling average basis. Collect at least four CMS data values representing the four 15-minute periods in an hour, or at least two 15-minute data values during an hour when CMS calibration, quality assurance, or maintenance activities are being performed.

(7) The one-hour arithmetic averages required shall be expressed in lb/MMBtu and shall be used to calculate the boiler 30-day and 10-day rolling average emissions.

(8) You are allowed to substitute the use of the PM, mercury or HCl CEMS for the applicable fuel analysis, annual performance test, and operating limits specified in Table 4 to this subpart to demonstrate compliance with the PM, mercury or HCl emissions limit, and if you are using an acid gas wet scrubber or dry sorbent injection control technology to comply with the HCl emission limit, you are allowed to substitute the use of a sulfur dioxide (SO₂) CEMS for the applicable fuel analysis, annual performance test, and operating limits specified in Table 4 to this subpart to demonstrate compliance with HCl emissions limit.

(m) If your unit is subject to a HCl emission limit in Tables 1, 2, or 11 through 13 of this subpart and you have an acid gas wet scrubber or dry sorbent injection control technology and you elect to use an SO₂ CEMS to demonstrate continuous

compliance with the HCl emission limit, you must install the monitor at the outlet of the boiler or process heater, downstream of all emission control devices, and you must install, certify, operate, and maintain the CEMS according to either part 60 or part 75 of this chapter.

(1) The SO₂ CEMS must be installed by the compliance date specified in §63.7495.

(2) For on-going quality assurance (QA), the SO₂ CEMS must meet either the applicable daily and quarterly requirements in Procedure 1 of appendix F of part 60 or the applicable daily, quarterly, and semiannual or annual requirements in sections 2.1 through 2.3 of appendix B to part 75 of this chapter, with the following addition: You must perform the linearity checks required in section 2.2 of appendix B to part 75 of this chapter if the SO₂ CEMS has a span value of 30 ppm or less.

(3) For a new unit, the initial performance evaluation shall be completed no later than July 30, 2013, or 180 days after the date of initial startup, whichever is later. For an existing unit, the initial performance evaluation shall be completed no later than July 29, 2016.

(4) For purposes of collecting SO₂ data, you must operate the SO₂ CEMS as specified in §63.7535(b). You must use all the data collected during all periods in calculating data averages and assessing compliance, except that you must exclude certain data as specified in §63.7535(c). Periods when SO₂ data are unavailable may constitute monitoring deviations as specified in §63.7535(d).

(5) Collect CEMS hourly averages for all operating hours on a 30-day rolling average basis.

(6) Use only unadjusted, quality-assured SO₂ concentration values in the emissions calculations; do not apply bias adjustment factors to the part 75 SO₂ data and do not use part 75 substitute data values.

[76 FR 15664, Mar. 21, 2011, as amended at 78 FR 7171, Jan. 31, 2013; 80 FR 72810, Nov. 20, 2015]

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§63.7530 How do I demonstrate initial compliance with the emission limitations, fuel specifications and work practice standards?

(a) You must demonstrate initial compliance with each emission limit that applies to you by conducting initial performance tests and fuel analyses and establishing operating limits, as applicable, according to §63.7520, paragraphs (b) and (c) of this section, and Tables 5 and 7 to this subpart. The requirement to conduct a fuel analysis is not applicable for units that burn a single type of fuel, as specified by §63.7510(a)(2). If applicable, you must also install, operate, and maintain all applicable CMS (including CEMS, COMS, and CPMS) according to §63.7525.

(b) If you demonstrate compliance through performance stack testing, you must establish each site-specific operating limit in Table 4 to this subpart that applies to you according to the requirements in §63.7520, Table 7 to this subpart, and paragraph (b)(4) of this section, as applicable. You must also conduct fuel analyses according to §63.7521 and establish maximum fuel pollutant input levels according to paragraphs (b)(1) through (3) of this section, as applicable, and as specified in §63.7510(a)(2). (Note that §63.7510(a)(2) exempts certain fuels from the fuel analysis requirements.) However, if you switch fuel(s) and cannot show that the new fuel(s) does (do) not increase the chlorine, mercury, or TSM input into the unit through the results of fuel analysis, then you must repeat the performance test to demonstrate compliance while burning the new fuel(s).

(1) You must establish the maximum chlorine fuel input (C_{input}) during the initial fuel analysis according to the procedures in paragraphs (b)(1)(i) through (iii) of this section.

(i) You must determine the fuel type or fuel mixture that you could burn in your boiler or process heater that has the highest content of chlorine.

(ii) During the fuel analysis for hydrogen chloride, you must determine the fraction of the total heat input for each fuel type burned (Q_i) based on the fuel mixture that has the highest content of chlorine, and the average chlorine concentration of each fuel type burned (C_i).

(iii) You must establish a maximum chlorine input level using Equation 7 of this section.

$$C_{input} = \sum_{i=1}^n (C_i \times Q_i) \quad (\text{Eq. 7})$$

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Where:

C_{input} = Maximum amount of chlorine entering the boiler or process heater through fuels burned in units of pounds per million Btu.

C_i = Arithmetic average concentration of chlorine in fuel type, i , analyzed according to §63.7521, in units of pounds per million Btu.

Q_i = Fraction of total heat input from fuel type, i , based on the fuel mixture that has the highest content of chlorine during the initial compliance test. If you do not burn multiple fuel types during the performance testing, it is not necessary to determine the value of this term. Insert a value of "1" for Q_i . For continuous compliance demonstration, the actual fraction of the fuel burned during the month should be used.

n = Number of different fuel types burned in your boiler or process heater for the mixture that has the highest content of chlorine.

(2) You must establish the maximum mercury fuel input level (Mercuryinput) during the initial fuel analysis using the procedures in paragraphs (b)(2)(i) through (iii) of this section.

(i) You must determine the fuel type or fuel mixture that you could burn in your boiler or process heater that has the highest content of mercury.

(ii) During the compliance demonstration for mercury, you must determine the fraction of total heat input for each fuel burned (Q_i) based on the fuel mixture that has the highest content of mercury, and the average mercury concentration of each fuel type burned (HG_i).

(iii) You must establish a maximum mercury input level using Equation 8 of this section.

$$\text{Mercuryinput} = \sum_{i=1}^n (HG_i \times Q_i) \quad (\text{Eq. 8})$$

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Where:

Mercuryinput = Maximum amount of mercury entering the boiler or process heater through fuels burned in units of pounds per million Btu.

HG_i = Arithmetic average concentration of mercury in fuel type, i , analyzed according to §63.7521, in units of pounds per million Btu.

Q_i = Fraction of total heat input from fuel type, i , based on the fuel mixture that has the highest mercury content during the initial compliance test. If you do not burn multiple fuel types during the performance test, it is not necessary to determine the value of this term. Insert a value of "1" for Q_i . For continuous compliance demonstration, the actual fraction of the fuel burned during the month should be used.

n = Number of different fuel types burned in your boiler or process heater for the mixture that has the highest content of mercury.

(3) If you opt to comply with the alternative TSM limit, you must establish the maximum TSM fuel input (TSMinput) for solid or liquid fuels during the initial fuel analysis according to the procedures in paragraphs (b)(3)(i) through (iii) of this section.

(i) You must determine the fuel type or fuel mixture that you could burn in your boiler or process heater that has the highest content of TSM.

(ii) During the fuel analysis for TSM, you must determine the fraction of the total heat input for each fuel type burned (Q_i) based on the fuel mixture that has the highest content of TSM, and the average TSM concentration of each fuel type burned (TSM_i).

(iii) You must establish a maximum TSM input level using Equation 9 of this section.

$$\text{TSMinput} = \sum_{i=1}^n (TSM_i \times Q_i) \quad (\text{Eq. 9})$$

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Where:

TSMinput = Maximum amount of TSM entering the boiler or process heater through fuels burned in units of pounds per million Btu.

TSM_i = Arithmetic average concentration of TSM in fuel type, i , analyzed according to §63.7521, in units of pounds per million Btu.

Q_i = Fraction of total heat input from fuel type, i , based on the fuel mixture that has the highest content of TSM during the initial compliance test. If you do not burn multiple fuel types during the performance testing, it is not necessary to determine the value of this term. Insert a value of "1" for Q_i . For continuous compliance demonstration, the actual fraction of the fuel burned during the month should be used.

n = Number of different fuel types burned in your boiler or process heater for the mixture that has the highest content of TSM.

(4) You must establish parameter operating limits according to paragraphs (b)(4)(i) through (ix) of this section. As indicated in Table 4 to this subpart, you are not required to establish and comply with the operating parameter limits when you are using a CEMS to monitor and demonstrate compliance with the applicable emission limit for that control device parameter.

(i) For a wet acid gas scrubber, you must establish the minimum scrubber effluent pH and liquid flow rate as defined in §63.7575, as your operating limits during the performance test during which you demonstrate compliance with your applicable limit. If you use a wet scrubber and you conduct separate performance tests for HCl and mercury emissions, you must establish one set of minimum scrubber effluent pH, liquid flow rate, and pressure drop operating limits. The minimum scrubber effluent pH

operating limit must be established during the HCl performance test. If you conduct multiple performance tests, you must set the minimum liquid flow rate operating limit at the higher of the minimum values established during the performance tests.

(ii) For any particulate control device (e.g., ESP, particulate wet scrubber, fabric filter) for which you use a PM CPMS, you must establish your PM CPMS operating limit and determine compliance with it according to paragraphs (b)(4)(ii)(A) through (F) of this section.

(A) Determine your operating limit as the average PM CPMS output value recorded during the most recent performance test run demonstrating compliance with the filterable PM emission limit or at the PM CPMS output value corresponding to 75 percent of the emission limit if your PM performance test demonstrates compliance below 75 percent of the emission limit. You must verify an existing or establish a new operating limit after each repeated performance test. You must repeat the performance test annually and reassess and adjust the site-specific operating limit in accordance with the results of the performance test.

(1) Your PM CPMS must provide a 4-20 milliamp output and the establishment of its relationship to manual reference method measurements must be determined in units of milliamps.

(2) Your PM CPMS operating range must be capable of reading PM concentrations from zero to a level equivalent to at least two times your allowable emission limit. If your PM CPMS is an auto-ranging instrument capable of multiple scales, the primary range of the instrument must be capable of reading PM concentration from zero to a level equivalent to two times your allowable emission limit.

(3) During the initial performance test or any such subsequent performance test that demonstrates compliance with the PM limit, record and average all milliamp output values from the PM CPMS for the periods corresponding to the compliance test runs (e.g., average all your PM CPMS output values for three corresponding 2-hour Method 5I test runs).

(B) If the average of your three PM performance test runs are below 75 percent of your PM emission limit, you must calculate an operating limit by establishing a relationship of PM CPMS signal to PM concentration using the PM CPMS instrument zero, the average PM CPMS values corresponding to the three compliance test runs, and the average PM concentration from the Method 5 or performance test with the procedures in paragraphs (b)(4)(ii)(B)(1) through (4) of this section.

(1) Determine your instrument zero output with one of the following procedures:

(i) Zero point data for *in-situ* instruments should be obtained by removing the instrument from the stack and monitoring ambient air on a test bench.

(ii) Zero point data for *extractive* instruments should be obtained by removing the extractive probe from the stack and drawing in clean ambient air.

(iii) The zero point may also be established by performing manual reference method measurements when the flue gas is free of PM emissions or contains very low PM concentrations (e.g., when your process is not operating, but the fans are operating or your source is combusting only natural gas) and plotting these with the compliance data to find the zero intercept.

(iv) If none of the steps in paragraphs (b)(4)(ii)(B)(1)(i) through (iii) of this section are possible, you must use a zero output value provided by the manufacturer.

(2) Determine your PM CPMS instrument average in milliamps, and the average of your corresponding three PM compliance test runs, using equation 10.

$$\bar{X} = \frac{1}{n} \sum_{i=1}^n X_i, \bar{Y} = \frac{1}{n} \sum_{i=1}^n Y_i \quad (\text{Eq. 10})$$

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Where:

X_i = the PM CPMS data points for the three runs constituting the performance test,

Y_i = the PM concentration value for the three runs constituting the performance test, and

n = the number of data points.

(3) With your instrument zero expressed in milliamps, your three run average PM CPMS milliamp value, and your three run average PM concentration from your three compliance tests, determine a relationship of lb/MMBtu per milliamp with equation 11.

$$R = \frac{Y_1}{(X_1 - z)} \quad (\text{Eq. 11})$$

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Where:

R = the relative lb/MMBtu per milliamp for your PM CPMS,

Y_1 = the three run average lb/MMBtu PM concentration,

X_1 = the three run average milliamp output from you PM CPMS, and

z = the milliamp equivalent of your instrument zero determined from (B)(i).

(4) Determine your source specific 30-day rolling average operating limit using the lb/MMBtu per milliamp value from Equation 11 in equation 12, below. This sets your operating limit at the PM CPMS output value corresponding to 75 percent of your emission limit.

$$O_1 = z + \frac{0.75L}{R} \quad (\text{Eq. 12})$$

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Where:

O_1 = the operating limit for your PM CPMS on a 30-day rolling average, in milliamps.

L = your source emission limit expressed in lb/MMBtu,

z = your instrument zero in milliamps, determined from (B)(i), and

R = the relative lb/MMBtu per milliamp for your PM CPMS, from Equation 11.

(C) If the average of your three PM compliance test runs is at or above 75 percent of your PM emission limit you must determine your 30-day rolling average operating limit by averaging the PM CPMS milliamp output corresponding to your three PM performance test runs that demonstrate compliance with the emission limit using equation 13 and you must submit all compliance test and PM CPMS data according to the reporting requirements in paragraph (b)(4)(ii)(F) of this section.

$$O_h = \frac{1}{n} \sum_{i=1}^n X_i \quad (\text{Eq. 13})$$

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Where:

X_i = the PM CPMS data points for all runs i,

n = the number of data points, and

O_h = your site specific operating limit, in milliamps.

(D) To determine continuous compliance, you must record the PM CPMS output data for all periods when the process is operating and the PM CPMS is not out-of-control. You must demonstrate continuous compliance by using all quality-assured hourly average data collected by the PM CPMS for all operating hours to calculate the arithmetic average operating parameter in units of the operating limit (milliamps) on a 30-day rolling average basis, updated at the end of each new operating hour. Use Equation 14 to determine the 30-day rolling average.

$$30\text{-day} = \frac{\sum_{i=1}^n H_{pvi}}{n} \quad (\text{Eq. 14})$$

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Where:

30-day = 30-day average.

H_{pvi} = is the hourly parameter value for hour i

n = is the number of valid hourly parameter values collected over the previous 30 operating days.

(E) Use EPA Method 5 of appendix A to part 60 of this chapter to determine PM emissions. For each performance test, conduct three separate runs under the conditions that exist when the affected source is operating at the highest load or capacity level reasonably expected to occur. Conduct each test run to collect a minimum sample volume specified in Tables 1, 2, or 11

through 13 to this subpart, as applicable, for determining compliance with a new source limit or an existing source limit. Calculate the average of the results from three runs to determine compliance. You need not determine the PM collected in the impingers (“back half”) of the Method 5 particulate sampling train to demonstrate compliance with the PM standards of this subpart. This shall not preclude the permitting authority from requiring a determination of the “back half” for other purposes.

(F) For PM performance test reports used to set a PM CPMS operating limit, the electronic submission of the test report must also include the make and model of the PM CPMS instrument, serial number of the instrument, analytical principle of the instrument (e.g. beta attenuation), span of the instruments primary analytical range, milliamp value equivalent to the instrument zero output, technique by which this zero value was determined, and the average milliamp signals corresponding to each PM compliance test run.

(iii) For a particulate wet scrubber, you must establish the minimum pressure drop and liquid flow rate as defined in §63.7575, as your operating limits during the three-run performance test during which you demonstrate compliance with your applicable limit. If you use a wet scrubber and you conduct separate performance tests for PM and TSM emissions, you must establish one set of minimum scrubber liquid flow rate and pressure drop operating limits. The minimum scrubber effluent pH operating limit must be established during the HCl performance test. If you conduct multiple performance tests, you must set the minimum liquid flow rate and pressure drop operating limits at the higher of the minimum values established during the performance tests.

(iv) For an electrostatic precipitator (ESP) operated with a wet scrubber, you must establish the minimum total secondary electric power input, as defined in §63.7575, as your operating limit during the three-run performance test during which you demonstrate compliance with your applicable limit. (These operating limits do not apply to ESP that are operated as dry controls without a wet scrubber.)

(v) For a dry scrubber, you must establish the minimum sorbent injection rate for each sorbent, as defined in §63.7575, as your operating limit during the three-run performance test during which you demonstrate compliance with your applicable limit.

(vi) For activated carbon injection, you must establish the minimum activated carbon injection rate, as defined in §63.7575, as your operating limit during the three-run performance test during which you demonstrate compliance with your applicable limit.

(vii) The operating limit for boilers or process heaters with fabric filters that demonstrate continuous compliance through bag leak detection systems is that a bag leak detection system be installed according to the requirements in §63.7525, and that each fabric filter must be operated such that the bag leak detection system alert is not activated more than 5 percent of the operating time during a 6-month period.

(viii) For a minimum oxygen level, if you conduct multiple performance tests, you must set the minimum oxygen level at the lower of the minimum values established during the performance tests.

(ix) The operating limit for boilers or process heaters that demonstrate continuous compliance with the HCl emission limit using a SO₂ CEMS is to install and operate the SO₂ according to the requirements in §63.7525(m) establish a maximum SO₂ emission rate equal to the highest hourly average SO₂ measurement during the most recent three-run performance test for HCl.

(c) If you elect to demonstrate compliance with an applicable emission limit through fuel analysis, you must conduct fuel analyses according to §63.7521 and follow the procedures in paragraphs (c)(1) through (5) of this section.

(1) If you burn more than one fuel type, you must determine the fuel mixture you could burn in your boiler or process heater that would result in the maximum emission rates of the pollutants that you elect to demonstrate compliance through fuel analysis.

(2) You must determine the 90th percentile confidence level fuel pollutant concentration of the composite samples analyzed for each fuel type using the one-sided t-statistic test described in Equation 15 of this section.

$$P90 = \text{mean} + (SD \times t) \quad (\text{Eq. 15})$$

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Where:

P90 = 90th percentile confidence level pollutant concentration, in pounds per million Btu.

Mean = Arithmetic average of the fuel pollutant concentration in the fuel samples analyzed according to §63.7521, in units of pounds per million Btu.

SD = Standard deviation of the mean of pollutant concentration in the fuel samples analyzed according to §63.7521, in units of pounds per million Btu. SD is calculated as the sample standard deviation divided by the square root of the number of samples.

t = t distribution critical value for 90th percentile ($t_{0,1}$) probability for the appropriate degrees of freedom (number of samples minus one) as obtained from a t-Distribution Critical Value Table.

(3) To demonstrate compliance with the applicable emission limit for HCl, the HCl emission rate that you calculate for your boiler or process heater using Equation 16 of this section must not exceed the applicable emission limit for HCl.

$$HCl = \sum_{i=1}^n (Ci90 \times Qi \times 1.028) \quad (\text{Eq. 16})$$

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Where:

HCl = HCl emission rate from the boiler or process heater in units of pounds per million Btu.

Ci90 = 90th percentile confidence level concentration of chlorine in fuel type, i, in units of pounds per million Btu as calculated according to Equation 15 of this section.

Qi = Fraction of total heat input from fuel type, i, based on the fuel mixture that has the highest content of chlorine. If you do not burn multiple fuel types, it is not necessary to determine the value of this term. Insert a value of "1" for Qi. For continuous compliance demonstration, the actual fraction of the fuel burned during the month should be used.

n = Number of different fuel types burned in your boiler or process heater for the mixture that has the highest content of chlorine.

1.028 = Molecular weight ratio of HCl to chlorine.

(4) To demonstrate compliance with the applicable emission limit for mercury, the mercury emission rate that you calculate for your boiler or process heater using Equation 17 of this section must not exceed the applicable emission limit for mercury.

$$\text{Mercury} = \sum_{i=1}^n (Hgi90 \times Qi) \quad (\text{Eq. 17})$$

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Where:

Mercury = Mercury emission rate from the boiler or process heater in units of pounds per million Btu.

Hgi90 = 90th percentile confidence level concentration of mercury in fuel, i, in units of pounds per million Btu as calculated according to Equation 15 of this section.

Qi = Fraction of total heat input from fuel type, i, based on the fuel mixture that has the highest mercury content. If you do not burn multiple fuel types, it is not necessary to determine the value of this term. Insert a value of "1" for Qi. For continuous compliance demonstration, the actual fraction of the fuel burned during the month should be used.

n = Number of different fuel types burned in your boiler or process heater for the mixture that has the highest mercury content.

(5) To demonstrate compliance with the applicable emission limit for TSM for solid or liquid fuels, the TSM emission rate that you calculate for your boiler or process heater from solid fuels using Equation 18 of this section must not exceed the applicable emission limit for TSM.

$$\text{Metals} = \sum_{i=1}^n (TSM90i \times Qi) \quad (\text{Eq. 18})$$

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Where:

Metals = TSM emission rate from the boiler or process heater in units of pounds per million Btu.

TSMi90 = 90th percentile confidence level concentration of TSM in fuel, i, in units of pounds per million Btu as calculated according to Equation 15 of this section.

Qi = Fraction of total heat input from fuel type, i, based on the fuel mixture that has the highest TSM content. If you do not burn multiple fuel types, it is not necessary to determine the value of this term. Insert a value of "1" for Qi. For continuous compliance demonstration, the actual fraction of the fuel burned during the month should be used.

n = Number of different fuel types burned in your boiler or process heater for the mixture that has the highest TSM content.

(d)[Reserved]

(e) You must include with the Notification of Compliance Status a signed certification that either the energy assessment was completed according to Table 3 to this subpart, and that the assessment is an accurate depiction of your facility at the time of the assessment, or that the maximum number of on-site technical hours specified in the definition of energy assessment applicable to the facility has been expended.

(f) You must submit the Notification of Compliance Status containing the results of the initial compliance demonstration according to the requirements in §63.7545(e).

(g) If you elect to demonstrate that a gaseous fuel meets the specifications of another gas 1 fuel as defined in §63.7575, you must conduct an initial fuel specification analyses according to §63.7521(f) through (i) and according to the frequency listed in §63.7540(c) and maintain records of the results of the testing as outlined in §63.7555(g). For samples where the initial mercury specification has not been exceeded, you will include a signed certification with the Notification of Compliance Status that the initial fuel specification test meets the gas specification outlined in the definition of other gas 1 fuels.

(h) If you own or operate a unit subject to emission limits in Tables 1 or 2 or 11 through 13 to this subpart, you must meet the work practice standard according to Table 3 of this subpart. During startup and shutdown, you must only follow the work practice standards according to items 5 and 6 of Table 3 of this subpart.

(i) If you opt to comply with the alternative SO₂ CEMS operating limit in Tables 4 and 8 to this subpart, you may do so only if your affected boiler or process heater:

(1) Has a system using wet scrubber or dry sorbent injection and SO₂ CEMS installed on the unit; and

(2) At all times, you operate the wet scrubber or dry sorbent injection for acid gas control on the unit consistent with §63.7500(a)(3); and

(3) You establish a unit-specific maximum SO₂ operating limit by collecting the maximum hourly SO₂ emission rate on the SO₂ CEMS during the paired 3-run test for HCl. The maximum SO₂ operating limit is equal to the highest hourly average SO₂ concentration measured during the HCl performance test.

[76 FR 15664, Mar. 21, 2011, as amended at 78 FR 7174, Jan. 31, 2013; 80 FR 72811, Nov. 20, 2015]

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§63.7533 Can I use efficiency credits earned from implementation of energy conservation measures to comply with this subpart?

(a) If you elect to comply with the alternative equivalent output-based emission limits, instead of the heat input-based limits listed in Table 2 to this subpart, and you want to take credit for implementing energy conservation measures identified in an energy assessment, you may demonstrate compliance using efficiency credits according to the procedures in this section. You may use this compliance approach for an existing affected boiler for demonstrating initial compliance according to §63.7522(e) and for demonstrating monthly compliance according to §63.7522(f). Owners or operators using this compliance approach must establish an emissions benchmark, calculate and document the efficiency credits, develop an Implementation Plan, comply with the general reporting requirements, and apply the efficiency credit according to the procedures in paragraphs (b) through (f) of this section. You cannot use this compliance approach for a new or reconstructed affected boiler. Additional guidance from the Department of Energy on efficiency credits is available at: <http://www.epa.gov/ttn/atw/boiler/boilerpg.html>.

(b) For each existing affected boiler for which you intend to apply emissions credits, establish a benchmark from which emission reduction credits may be generated by determining the actual annual fuel heat input to the affected boiler before initiation of an energy conservation activity to reduce energy demand (*i.e.*, fuel usage) according to paragraphs (b)(1) through (4) of this section. The benchmark shall be expressed in trillion Btu per year heat input.

(1) The benchmark from which efficiency credits may be generated shall be determined by using the most representative, accurate, and reliable process available for the source. The benchmark shall be established for a one-year period before the date that an energy demand reduction occurs, unless it can be demonstrated that a different time period is more representative of historical operations.

(2) Determine the starting point from which to measure progress. Inventory all fuel purchased and generated on-site (off-gases, residues) in physical units (MMBtu, million cubic feet, etc.).

(3) Document all uses of energy from the affected boiler. Use the most recent data available.

(4) Collect non-energy related facility and operational data to normalize, if necessary, the benchmark to current operations, such as building size, operating hours, etc. If possible, use actual data that are current and timely rather than estimated data.

(c) Efficiency credits can be generated if the energy conservation measures were implemented after January 1, 2008 and if sufficient information is available to determine the appropriate value of credits.

(1) The following emission points cannot be used to generate efficiency credits:

(i) Energy conservation measures implemented on or before January 1, 2008, unless the level of energy demand reduction is increased after January 1, 2008, in which case credit will be allowed only for change in demand reduction achieved after January 1, 2008.

(ii) Efficiency credits on shut-down boilers. Boilers that are shut down cannot be used to generate credits unless the facility provides documentation linking the permanent shutdown to energy conservation measures identified in the energy assessment. In this case, the bench established for the affected boiler to which the credits from the shutdown will be applied must be revised to include the benchmark established for the shutdown boiler.

(2) For all points included in calculating emissions credits, the owner or operator shall:

(i) Calculate annual credits for all energy demand points. Use Equation 19 to calculate credits. Energy conservation measures that meet the criteria of paragraph (c)(1) of this section shall not be included, except as specified in paragraph (c)(1)(i) of this section.

(3) Credits are generated by the difference between the benchmark that is established for each affected boiler, and the actual energy demand reductions from energy conservation measures implemented after January 1, 2008. Credits shall be calculated using Equation 19 of this section as follows:

(i) The overall equation for calculating credits is:

$$ECredits = \left(\sum_{i=1}^n EIS_{iactual} \right) + EI_{baseline} \quad (\text{Eq. 19})$$

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Where:

ECredits = Energy Input Savings for all energy conservation measures implemented for an affected boiler, expressed as a decimal fraction of the baseline energy input.

$EIS_{iactual}$ = Energy Input Savings for each energy conservation measure, i, implemented for an affected boiler, million Btu per year.

$EI_{baseline}$ = Energy Input baseline for the affected boiler, million Btu per year.

n = Number of energy conservation measures included in the efficiency credit for the affected boiler.

(ii) [Reserved]

(d) The owner or operator shall develop, and submit for approval upon request by the Administrator, an Implementation Plan containing all of the information required in this paragraph for all boilers to be included in an efficiency credit approach. The Implementation Plan shall identify all existing affected boilers to be included in applying the efficiency credits. The Implementation Plan shall include a description of the energy conservation measures implemented and the energy savings generated from each measure and an explanation of the criteria used for determining that savings. If requested, you must submit the implementation plan for efficiency credits to the Administrator for review and approval no later than 180 days before the date on which the facility intends to demonstrate compliance using the efficiency credit approach.

(e) The emissions rate as calculated using Equation 20 of this section from each existing boiler participating in the efficiency credit option must be in compliance with the limits in Table 2 to this subpart at all times the affected unit is subject to numeric emission limits, following the compliance date specified in §63.7495.

(f) You must use Equation 20 of this section to demonstrate initial compliance by demonstrating that the emissions from the affected boiler participating in the efficiency credit compliance approach do not exceed the emission limits in Table 2 to this subpart.

$$E_{adj} = E_m \times (1 - ECredits) \quad (\text{Eq. 20})$$

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Where:

E_{adj} = Emission level adjusted by applying the efficiency credits earned, lb per million Btu steam output (or lb per MWh) for the affected boiler.

E_m = Emissions measured during the performance test, lb per million Btu steam output (or lb per MWh) for the affected boiler.

ECredits = Efficiency credits from Equation 19 for the affected boiler.

(g) As part of each compliance report submitted as required under §63.7550, you must include documentation that the energy conservation measures implemented continue to generate the credit for use in demonstrating compliance with the

emission limits.

[76 FR 15664, Mar. 21, 2011, as amended at 78 FR 7178, Jan. 31, 2013; 80 FR 72812, Nov. 20, 2015]

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CONTINUOUS COMPLIANCE REQUIREMENTS

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§63.7535 Is there a minimum amount of monitoring data I must obtain?

(a) You must monitor and collect data according to this section and the site-specific monitoring plan required by §63.7505(d).

(b) You must operate the monitoring system and collect data at all required intervals at all times that each boiler or process heater is operating and compliance is required, except for periods of monitoring system malfunctions or out of control periods (see §63.8(c)(7) of this part), and required monitoring system quality assurance or control activities, including, as applicable, calibration checks, required zero and span adjustments, and scheduled CMS maintenance as defined in your site-specific monitoring plan. 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. You are required to complete monitoring system repairs in response to monitoring system malfunctions or out-of-control periods and to return the monitoring system to operation as expeditiously as practicable.

(c) You may not use data recorded during periods of startup and shutdown, monitoring system malfunctions or out-of-control periods, repairs associated with monitoring system malfunctions or out-of-control periods, or required monitoring system quality assurance or control activities in data averages and calculations used to report emissions or operating levels. You must record and make available upon request results of CMS performance audits and dates and duration of periods when the CMS is out of control to completion of the corrective actions necessary to return the CMS to operation consistent with your site-specific monitoring plan. You must use all the data collected during all other periods in assessing compliance and the operation of the control device and associated control system.

(d) Except for periods of monitoring system malfunctions, repairs associated with monitoring system malfunctions, and required monitoring system quality assurance or quality control activities (including, as applicable, system accuracy audits, calibration checks, and required zero and span adjustments), failure to collect required data is a deviation of the monitoring requirements. In calculating monitoring results, do not use any data collected during periods of startup and shutdown, when the monitoring system is out of control as specified in your site-specific monitoring plan, while conducting repairs associated with periods when the monitoring system is out of control, or while conducting required monitoring system quality assurance or quality control activities. You must calculate monitoring results using all other monitoring data collected while the process is operating. You must report all periods when the monitoring system is out of control in your semi-annual report.

[76 FR 15664, Mar. 21, 2011, as amended at 78 FR 7179, Jan. 31, 2013; 80 FR 72812, Nov. 20, 2015]

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§63.7540 How do I demonstrate continuous compliance with the emission limitations, fuel specifications and work practice standards?

(a) You must demonstrate continuous compliance with each emission limit in Tables 1 and 2 or 11 through 13 to this subpart, the work practice standards in Table 3 to this subpart, and the operating limits in Table 4 to this subpart that applies to you according to the methods specified in Table 8 to this subpart and paragraphs (a)(1) through (19) of this section.

(1) Following the date on which the initial compliance demonstration is completed or is required to be completed under §§63.7 and 63.7510, whichever date comes first, operation above the established maximum or below the established minimum operating limits shall constitute a deviation of established operating limits listed in Table 4 of this subpart except during performance tests conducted to determine compliance with the emission limits or to establish new operating limits. Operating limits must be confirmed or reestablished during performance tests.

(2) As specified in §63.7555(d), you must keep records of the type and amount of all fuels burned in each boiler or process heater during the reporting period to demonstrate that all fuel types and mixtures of fuels burned would result in either of the following:

(i) Equal to or lower emissions of HCl, mercury, and TSM than the applicable emission limit for each pollutant, if you demonstrate compliance through fuel analysis.

(ii) Equal to or lower fuel input of chlorine, mercury, and TSM than the maximum values calculated during the last performance test, if you demonstrate compliance through performance testing.

(3) If you demonstrate compliance with an applicable HCl emission limit through fuel analysis for a solid or liquid fuel and you plan to burn a new type of solid or liquid fuel, you must recalculate the HCl emission rate using Equation 16 of §63.7530 according to paragraphs (a)(3)(i) through (iii) of this section. You are not required to conduct fuel analyses for the fuels described in §63.7510(a)(2)(i) through (iii). You may exclude the fuels described in §63.7510(a)(2)(i) through (iii) when recalculating the HCl emission rate.

(i) You must determine the chlorine concentration for any new fuel type in units of pounds per million Btu, based on supplier data or your own fuel analysis, according to the provisions in your site-specific fuel analysis plan developed according to §63.7521(b).

(ii) You must determine the new mixture of fuels that will have the highest content of chlorine.

(iii) Recalculate the HCl emission rate from your boiler or process heater under these new conditions using Equation 16 of §63.7530. The recalculated HCl emission rate must be less than the applicable emission limit.

(4) If you demonstrate compliance with an applicable HCl emission limit through performance testing and you plan to burn a new type of fuel or a new mixture of fuels, you must recalculate the maximum chlorine input using Equation 7 of §63.7530. If the results of recalculating the maximum chlorine input using Equation 7 of §63.7530 are greater than the maximum chlorine input level established during the previous performance test, then you must conduct a new performance test within 60 days of burning the new fuel type or fuel mixture according to the procedures in §63.7520 to demonstrate that the HCl emissions do not exceed the emission limit. You must also establish new operating limits based on this performance test according to the procedures in §63.7530(b). In recalculating the maximum chlorine input and establishing the new operating limits, you are not required to conduct fuel analyses for and include the fuels described in §63.7510(a)(2)(i) through (iii).

(5) If you demonstrate compliance with an applicable mercury emission limit through fuel analysis, and you plan to burn a new type of fuel, you must recalculate the mercury emission rate using Equation 17 of §63.7530 according to the procedures specified in paragraphs (a)(5)(i) through (iii) of this section. You are not required to conduct fuel analyses for the fuels described in §63.7510(a)(2)(i) through (iii). You may exclude the fuels described in §63.7510(a)(2)(i) through (iii) when recalculating the mercury emission rate.

(i) You must determine the mercury concentration for any new fuel type in units of pounds per million Btu, based on supplier data or your own fuel analysis, according to the provisions in your site-specific fuel analysis plan developed according to §63.7521(b).

(ii) You must determine the new mixture of fuels that will have the highest content of mercury.

(iii) Recalculate the mercury emission rate from your boiler or process heater under these new conditions using Equation 17 of §63.7530. The recalculated mercury emission rate must be less than the applicable emission limit.

(6) If you demonstrate compliance with an applicable mercury emission limit through performance testing, and you plan to burn a new type of fuel or a new mixture of fuels, you must recalculate the maximum mercury input using Equation 8 of §63.7530. If the results of recalculating the maximum mercury input using Equation 8 of §63.7530 are higher than the maximum mercury input level established during the previous performance test, then you must conduct a new performance test within 60 days of burning the new fuel type or fuel mixture according to the procedures in §63.7520 to demonstrate that the mercury emissions do not exceed the emission limit. You must also establish new operating limits based on this performance test according to the procedures in §63.7530(b). You are not required to conduct fuel analyses for the fuels described in §63.7510(a)(2)(i) through (iii). You may exclude the fuels described in §63.7510(a)(2)(i) through (iii) when recalculating the mercury emission rate.

(7) If your unit is controlled with a fabric filter, and you demonstrate continuous compliance using a bag leak detection system, you must initiate corrective action within 1 hour of a bag leak detection system alert and complete corrective actions as soon as practical, and operate and maintain the fabric filter system such that the periods which would cause an alert are no more than 5 percent of the operating time during a 6-month period. You must also keep records of the date, time, and duration of each alert, the time corrective action was initiated and completed, and a brief description of the cause of the alert and the corrective action taken. You must also record the percent of the operating time during each 6-month period that the conditions exist for an alert. In calculating this operating time percentage, if inspection of the fabric filter demonstrates that no corrective action is required, no alert time is counted. If corrective action is required, each alert shall be counted as a minimum of 1 hour. If you take longer than 1 hour to initiate corrective action, the alert time shall be counted as the actual amount of time taken to initiate corrective action.

(8) To demonstrate compliance with the applicable alternative CO CEMS emission limit listed in Tables 1, 2, or 11 through 13 to this subpart, you must meet the requirements in paragraphs (a)(8)(i) through (iv) of this section.

(i) Continuously monitor CO according to §§63.7525(a) and 63.7535.

(ii) Maintain a CO emission level below or at your applicable alternative CO CEMS-based standard in Tables 1 or 2 or 11 through 13 to this subpart at all times the affected unit is subject to numeric emission limits.

(iii) Keep records of CO levels according to §63.7555(b).

(iv) You must record and make available upon request results of CO CEMS performance audits, dates and duration of periods when the CO CEMS is out of control to completion of the corrective actions necessary to return the CO CEMS to operation consistent with your site-specific monitoring plan.

(9) The owner or operator of a boiler or process heater using a PM CPMS or a PM CEMS to meet requirements of this subpart shall install, certify, operate, and maintain the PM CPMS or PM CEMS in accordance with your site-specific monitoring plan as required in §63.7505(d).

(10) If your boiler or process heater has a heat input capacity of 10 million Btu per hour or greater, you must conduct an annual tune-up of the boiler or process heater to demonstrate continuous compliance as specified in paragraphs (a)(10)(i) through (vi) of this section. You must conduct the tune-up while burning the type of fuel (or fuels in case of units that routinely burn a mixture) that provided the majority of the heat input to the boiler or process heater over the 12 months prior to the tune-up. This frequency does not apply to limited-use boilers and process heaters, as defined in §63.7575, or units with continuous oxygen trim systems that maintain an optimum air to fuel ratio.

(i) As applicable, inspect the burner, and clean or replace any components of the burner as necessary (you may perform the burner inspection any time prior to the tune-up or delay the burner inspection until the next scheduled unit shutdown). Units that produce electricity for sale may delay the burner inspection until the first outage, not to exceed 36 months from the previous inspection. At units where entry into a piece of process equipment or into a storage vessel is required to complete the tune-up inspections, inspections are required only during planned entries into the storage vessel or process equipment;

(ii) Inspect the flame pattern, as applicable, and adjust the burner as necessary to optimize the flame pattern. The adjustment should be consistent with the manufacturer's specifications, if available;

(iii) Inspect the system controlling the air-to-fuel ratio, as applicable, and ensure that it is correctly calibrated and functioning properly (you may delay the inspection until the next scheduled unit shutdown). Units that produce electricity for sale may delay the inspection until the first outage, not to exceed 36 months from the previous inspection;

(iv) Optimize total emissions of CO. This optimization should be consistent with the manufacturer's specifications, if available, and with any NO_x requirement to which the unit is subject;

(v) Measure the concentrations in the effluent stream of CO in parts per million, by volume, and oxygen in volume percent, before and after the adjustments are made (measurements may be either on a dry or wet basis, as long as it is the same basis before and after the adjustments are made). Measurements may be taken using a portable CO analyzer; and

(vi) Maintain on-site and submit, if requested by the Administrator, a report containing the information in paragraphs (a)(10)(vi)(A) through (C) of this section,

(A) The concentrations of CO in the effluent stream in parts per million by volume, and oxygen in volume percent, measured at high fire or typical operating load, before and after the tune-up of the boiler or process heater;

(B) A description of any corrective actions taken as a part of the tune-up; and

(C) 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 used by each unit.

(11) If your boiler or process heater has a heat input capacity of less than 10 million Btu per hour (except as specified in paragraph (a)(12) of this section), you must conduct a biennial tune-up of the boiler or process heater as specified in paragraphs (a)(10)(i) through (vi) of this section to demonstrate continuous compliance.

(12) If your boiler or process heater has a continuous oxygen trim system that maintains an optimum air to fuel ratio, or a heat input capacity of less than or equal to 5 million Btu per hour and the unit is in the units designed to burn gas 1; units designed to burn gas 2 (other); or units designed to burn light liquid subcategories, or meets the definition of limited-use boiler or process heater in §63.7575, you must conduct a tune-up of the boiler or process heater every 5 years as specified in

paragraphs (a)(10)(i) through (vi) of this section to demonstrate continuous compliance. You may delay the burner inspection specified in paragraph (a)(10)(i) of this section until the next scheduled or unscheduled unit shutdown, but you must inspect each burner at least once every 72 months. If an oxygen trim system is utilized on a unit without emission standards to reduce the tune-up frequency to once every 5 years, set the oxygen level no lower than the oxygen concentration measured during the most recent tune-up.

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

(14) If you are using a CEMS measuring mercury emissions to meet requirements of this subpart you must install, certify, operate, and maintain the mercury CEMS as specified in paragraphs (a)(14)(i) and (ii) of this section.

(i) Operate the mercury CEMS in accordance with performance specification 12A of 40 CFR part 60, appendix B or operate a sorbent trap based integrated monitor in accordance with performance specification 12B of 40 CFR part 60, appendix B. The duration of the performance test must be 30 operating days if you specified a 30 operating day basis in §63.7545(e)(2)(iii) for mercury CEMS or it must be 720 hours if you specified a 720 hour basis in §63.7545(e)(2)(iii) for mercury CEMS. For each day in which the unit operates, you must obtain hourly mercury concentration data, and stack gas volumetric flow rate data.

(ii) If you are using a mercury CEMS, you must install, operate, calibrate, and maintain an instrument for continuously measuring and recording the mercury mass emissions rate to the atmosphere according to the requirements of performance specifications 6 and 12A of 40 CFR part 60, appendix B, and quality assurance procedure 6 of 40 CFR part 60, appendix F.

(15) If you are using a CEMS to measure HCl emissions to meet requirements of this subpart, you must install, certify, operate, and maintain the HCl CEMS as specified in paragraphs (a)(15)(i) and (ii) of this section. This option for an affected unit takes effect on the date a final performance specification for an HCl CEMS is published in the FEDERAL REGISTER or the date of approval of a site-specific monitoring plan.

(i) Operate the continuous emissions monitoring system in accordance with the applicable performance specification in 40 CFR part 60, appendix B. The duration of the performance test must be 30 operating days if you specified a 30 operating day basis in §63.7545(e)(2)(iii) for HCl CEMS or it must be 720 hours if you specified a 720 hour basis in §63.7545(e)(2)(iii) for HCl CEMS. For each day in which the unit operates, you must obtain hourly HCl concentration data, and stack gas volumetric flow rate data.

(ii) If you are using a HCl CEMS, you must install, operate, calibrate, and maintain an instrument for continuously measuring and recording the HCl mass emissions rate to the atmosphere according to the requirements of the applicable performance specification of 40 CFR part 60, appendix B, and the quality assurance procedures of 40 CFR part 60, appendix F.

(16) If you demonstrate compliance with an applicable TSM emission limit through performance testing, and you plan to burn a new type of fuel or a new mixture of fuels, you must recalculate the maximum TSM input using Equation 9 of §63.7530. If the results of recalculating the maximum TSM input using Equation 9 of §63.7530 are higher than the maximum total selected input level established during the previous performance test, then you must conduct a new performance test within 60 days of burning the new fuel type or fuel mixture according to the procedures in §63.7520 to demonstrate that the TSM emissions do not exceed the emission limit. You must also establish new operating limits based on this performance test according to the procedures in §63.7530(b). You are not required to conduct fuel analyses for the fuels described in §63.7510(a)(2)(i) through (iii). You may exclude the fuels described in §63.7510(a)(2)(i) through (iii) when recalculating the TSM emission rate.

(17) If you demonstrate compliance with an applicable TSM emission limit through fuel analysis for solid or liquid fuels, and you plan to burn a new type of fuel, you must recalculate the TSM emission rate using Equation 18 of §63.7530 according to the procedures specified in paragraphs (a)(5)(i) through (iii) of this section. You are not required to conduct fuel analyses for the fuels described in §63.7510(a)(2)(i) through (iii). You may exclude the fuels described in §63.7510(a)(2)(i) through (iii) when recalculating the TSM emission rate.

(i) You must determine the TSM concentration for any new fuel type in units of pounds per million Btu, based on supplier data or your own fuel analysis, according to the provisions in your site-specific fuel analysis plan developed according to §63.7521(b).

(ii) You must determine the new mixture of fuels that will have the highest content of TSM.

(iii) Recalculate the TSM emission rate from your boiler or process heater under these new conditions using Equation 18 of §63.7530. The recalculated TSM emission rate must be less than the applicable emission limit.

(18) If you demonstrate continuous PM emissions compliance with a PM CPMS you will use a PM CPMS to establish a site-specific operating limit corresponding to the results of the performance test demonstrating compliance with the PM limit. You will conduct your performance test using the test method criteria in Table 5 of this subpart. You will use the PM CPMS to

demonstrate continuous compliance with this operating limit. You must repeat the performance test annually and reassess and adjust the site-specific operating limit in accordance with the results of the performance test.

(i) To determine continuous compliance, you must record the PM CPMS output data for all periods when the process is operating and the PM CPMS is not out-of-control. You must demonstrate continuous compliance by using all quality-assured hourly average data collected by the PM CPMS for all operating hours to calculate the arithmetic average operating parameter in units of the operating limit (milliamps) on a 30-day rolling average basis.

(ii) For any deviation of the 30-day rolling PM CPMS average value from the established operating parameter limit, you must:

(A) Within 48 hours of the deviation, visually inspect the air pollution control device (APCD);

(B) If inspection of the APCD identifies the cause of the deviation, take corrective action as soon as possible and return the PM CPMS measurement to within the established value; and

(C) Within 30 days of the deviation or at the time of the annual compliance test, whichever comes first, conduct a PM emissions compliance test to determine compliance with the PM emissions limit and to verify or re-establish the CPMS operating limit. You are not required to conduct additional testing for any deviations that occur between the time of the original deviation and the PM emissions compliance test required under this paragraph.

(iii) PM CPMS deviations from the operating limit leading to more than four required performance tests in a 12-month operating period constitute a separate violation of this subpart.

(19) If you choose to comply with the PM filterable emissions limit by using PM CEMS you must install, certify, operate, and maintain a PM CEMS and record the output of the PM CEMS as specified in paragraphs (a)(19)(i) through (vii) of this section. The compliance limit will be expressed as a 30-day rolling average of the numerical emissions limit value applicable for your unit in Tables 1 or 2 or 11 through 13 of this subpart.

(i) Install and certify your PM CEMS according to the procedures and requirements in Performance Specification 11— Specifications and Test Procedures for Particulate Matter Continuous Emission Monitoring Systems at Stationary Sources in Appendix B to part 60 of this chapter, using test criteria outlined in Table V of this rule. The reportable measurement output from the PM CEMS must be expressed in units of the applicable emissions limit (e.g., lb/MMBtu, lb/MWh).

(ii) Operate and maintain your PM CEMS according to the procedures and requirements in Procedure 2— Quality Assurance Requirements for Particulate Matter Continuous Emission Monitoring Systems at Stationary Sources in Appendix F to part 60 of this chapter.

(A) You must conduct the relative response audit (RRA) for your PM CEMS at least once annually.

(B) You must conduct the relative correlation audit (RCA) for your PM CEMS at least once every 3 years.

(iii) Collect PM CEMS hourly average output data for all boiler operating hours except as indicated in paragraph (v) of this section.

(iv) Calculate the arithmetic 30-day rolling average of all of the hourly average PM CEMS output data collected during all nonexempt boiler or process heater operating hours.

(v) You must collect data using the PM CEMS at all times the unit is operating and at the intervals specified this paragraph (a), except for periods of monitoring system malfunctions, repairs associated with monitoring system malfunctions, and required monitoring system quality assurance or quality control activities.

(vi) You must use all the data collected during all boiler or process heater operating hours in assessing the compliance with your operating limit except:

(A) Any data collected during monitoring system malfunctions, repairs associated with monitoring system malfunctions, or required monitoring system quality assurance or control activities conducted during monitoring system malfunctions in calculations and report any such periods in your annual deviation report;

(B) Any data collected during periods when the monitoring system is out of control as specified in your site-specific monitoring plan, repairs associated with periods when the monitoring system is out of control, or required monitoring system quality assurance or control activities conducted during out of control periods in calculations used to report emissions or operating levels and report any such periods in your annual deviation report;

(C) Any data recorded during periods of startup or shutdown.

(vii) You must record and make available upon request results of PM CEMS system performance audits, dates and duration of periods when the PM CEMS is out of control to completion of the corrective actions necessary to return the PM CEMS to operation consistent with your site-specific monitoring plan.

(b) You must report each instance in which you did not meet each emission limit and operating limit in Tables 1 through 4 or 11 through 13 to this subpart that apply to you. These instances are deviations from the emission limits or operating limits, respectively, in this subpart. These deviations must be reported according to the requirements in §63.7550.

(c) If you elected to demonstrate that the unit meets the specification for mercury for the unit designed to burn gas 1 subcategory, you must follow the sampling frequency specified in paragraphs (c)(1) through (4) of this section and conduct this sampling according to the procedures in §63.7521(f) through (i).

(1) If the initial mercury constituents in the gaseous fuels are measured to be equal to or less than half of the mercury specification as defined in §63.7575, you do not need to conduct further sampling.

(2) If the initial mercury constituents are greater than half but equal to or less than 75 percent of the mercury specification as defined in §63.7575, you will conduct semi-annual sampling. If 6 consecutive semi-annual fuel analyses demonstrate 50 percent or less of the mercury specification, you do not need to conduct further sampling. If any semi-annual sample exceeds 75 percent of the mercury specification, you must return to monthly sampling for that fuel, until 12 months of fuel analyses again are less than 75 percent of the compliance level.

(3) If the initial mercury constituents are greater than 75 percent of the mercury specification as defined in §63.7575, you will conduct monthly sampling. If 12 consecutive monthly fuel analyses demonstrate 75 percent or less of the mercury specification, you may decrease the fuel analysis frequency to semi-annual for that fuel.

(4) If the initial sample exceeds the mercury specification as defined in §63.7575, each affected boiler or process heater combusting this fuel is not part of the unit designed to burn gas 1 subcategory and must be in compliance with the emission and operating limits for the appropriate subcategory. You may elect to conduct additional monthly sampling while complying with these emissions and operating limits to demonstrate that the fuel qualifies as another gas 1 fuel. If 12 consecutive monthly fuel analyses samples are at or below the mercury specification as defined in §63.7575, each affected boiler or process heater combusting the fuel can elect to switch back into the unit designed to burn gas 1 subcategory until the mercury specification is exceeded.

(d) For startup and shutdown, you must meet the work practice standards according to items 5 and 6 of Table 3 of this subpart.

[78 FR 7179, Jan. 31, 2013, as amended at 80 FR 72813, Nov. 20, 2015]

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§63.7541 How do I demonstrate continuous compliance under the emissions averaging provision?

(a) Following the compliance date, the owner or operator must demonstrate compliance with this subpart on a continuous basis by meeting the requirements of paragraphs (a)(1) through (5) of this section.

(1) For each calendar month, demonstrate compliance with the average weighted emissions limit for the existing units participating in the emissions averaging option as determined in §63.7522(f) and (g).

(2) You must maintain the applicable opacity limit according to paragraphs (a)(2)(i) and (ii) of this section.

(i) For each existing unit participating in the emissions averaging option that is equipped with a dry control system and not vented to a common stack, maintain opacity at or below the applicable limit.

(ii) For each group of units participating in the emissions averaging option where each unit in the group is equipped with a dry control system and vented to a common stack that does not receive emissions from non-affected units, maintain opacity at or below the applicable limit at the common stack.

(3) For each existing unit participating in the emissions averaging option that is equipped with a wet scrubber, maintain the 30-day rolling average parameter values at or above the operating limits established during the most recent performance test.

(4) For each existing unit participating in the emissions averaging option that has an approved alternative operating parameter, maintain the 30-day rolling average parameter values consistent with the approved monitoring plan.

(5) For each existing unit participating in the emissions averaging option venting to a common stack configuration containing affected units from other subcategories, maintain the appropriate operating limit for each unit as specified in Table 4 to this subpart that applies.

(b) Any instance where the owner or operator fails to comply with the continuous monitoring requirements in paragraphs (a) (1) through (5) of this section is a deviation.

[76 FR 15664, Mar. 21, 2011, as amended at 78 FR 7182, Jan. 31, 2013]

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NOTIFICATION, REPORTS, AND RECORDS

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§63.7545 What notifications must I submit and when?

(a) You must submit to the Administrator all of the notifications in §§63.7(b) and (c), 63.8(e), (f)(4) and (6), and 63.9(b) through (h) that apply to you by the dates specified.

(b) As specified in §63.9(b)(2), if you startup your affected source before January 31, 2013, you must submit an Initial Notification not later than 120 days after January 31, 2013.

(c) As specified in §63.9(b)(4) and (5), if you startup your new or reconstructed affected source on or after January 31, 2013, you must submit an Initial Notification not later than 15 days after the actual date of startup of the affected source.

(d) If you are required to conduct a performance test you must submit a Notification of Intent to conduct a performance test at least 60 days before the performance test is scheduled to begin.

(e) If you are required to conduct an initial compliance demonstration as specified in §63.7530, you must submit a Notification of Compliance Status according to §63.9(h)(2)(ii). For the initial compliance demonstration for each boiler or process heater, you must submit the Notification of Compliance Status, including all performance test results and fuel analyses, before the close of business on the 60th day following the completion of all performance test and/or other initial compliance demonstrations for all boiler or process heaters at the facility according to §63.10(d)(2). The Notification of Compliance Status report must contain all the information specified in paragraphs (e)(1) through (8) of this section, as applicable. If you are not required to conduct an initial compliance demonstration as specified in §63.7530(a), the Notification of Compliance Status must only contain the information specified in paragraphs (e)(1) and (8) of this section and must be submitted within 60 days of the compliance date specified at §63.7495(b).

(1) A description of the affected unit(s) including identification of which subcategories the unit is in, the design heat input capacity of the unit, a description of the add-on controls used on the unit to comply with this subpart, description of the fuel(s) burned, including whether the fuel(s) were a secondary material determined by you or the EPA through a petition process to be a non-waste under §241.3 of this chapter, whether the fuel(s) were a secondary material processed from discarded non-hazardous secondary materials within the meaning of §241.3 of this chapter, and justification for the selection of fuel(s) burned during the compliance demonstration.

(2) Summary of the results of all performance tests and fuel analyses, and calculations conducted to demonstrate initial compliance including all established operating limits, and including:

(i) Identification of whether you are complying with the PM emission limit or the alternative TSM emission limit.

(ii) Identification of whether you are complying with the output-based emission limits or the heat input-based (i.e., lb/MMBtu or ppm) emission limits,

(iii) Identification of whether you are complying the arithmetic mean of all valid hours of data from the previous 30 operating days or of the previous 720 hours. This identification shall be specified separately for each operating parameter.

(3) A summary of the maximum CO emission levels recorded during the performance test to show that you have met any applicable emission standard in Tables 1, 2, or 11 through 13 to this subpart, if you are not using a CO CEMS to demonstrate compliance.

(4) Identification of whether you plan to demonstrate compliance with each applicable emission limit through performance testing, a CEMS, or fuel analysis.

(5) Identification of whether you plan to demonstrate compliance by emissions averaging and identification of whether you plan to demonstrate compliance by using efficiency credits through energy conservation:

(i) If you plan to demonstrate compliance by emission averaging, report the emission level that was being achieved or the control technology employed on January 31, 2013.

(ii) [Reserved]

(6) A signed certification that you have met all applicable emission limits and work practice standards.

(7) If you had a deviation from any emission limit, work practice standard, or operating limit, you must also submit a description of the deviation, the duration of the deviation, and the corrective action taken in the Notification of Compliance Status report.

(8) In addition to the information required in §63.9(h)(2), your notification of compliance status must include the following certification(s) of compliance, as applicable, and signed by a responsible official:

(i) "This facility completed the required initial tune-up for all of the boilers and process heaters covered by 40 CFR part 63 subpart DDDDD at this site according to the procedures in §63.7540(a)(10)(i) through (vi)."

(ii) "This facility has had an energy assessment performed according to §63.7530(e)."

(iii) Except for units that burn only natural gas, refinery gas, or other gas 1 fuel, or units that qualify for a statutory exemption as provided in section 129(g)(1) of the Clean Air Act, include the following: "No secondary materials that are solid waste were combusted in any affected unit."

(f) If you operate a unit designed to burn natural gas, refinery gas, or other gas 1 fuels that is subject to this subpart, and you intend to use a fuel other than natural gas, refinery gas, gaseous fuel subject to another subpart of this part, part 60, 61, or 65, or other gas 1 fuel to fire the affected unit during a period of natural gas curtailment or supply interruption, as defined in §63.7575, you must submit a notification of alternative fuel use within 48 hours of the declaration of each period of natural gas curtailment or supply interruption, as defined in §63.7575. The notification must include the information specified in paragraphs (f)(1) through (5) of this section.

(1) Company name and address.

(2) Identification of the affected unit.

(3) Reason you are unable to use natural gas or equivalent fuel, including the date when the natural gas curtailment was declared or the natural gas supply interruption began.

(4) Type of alternative fuel that you intend to use.

(5) Dates when the alternative fuel use is expected to begin and end.

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

(1) The name of the owner or operator of the affected source, as defined in §63.7490, the location of the source, the boiler(s) or process heater(s) that will commence burning solid waste, and the date of the notice.

(2) The currently applicable subcategories under this subpart.

(3) The date on which you became subject to the currently applicable emission limits.

(4) The date upon which you will commence combusting solid waste.

(h) If you have switched fuels or made a physical change to the boiler or process heater and the fuel switch or physical change resulted in the applicability of a different subcategory, you must provide notice of the date upon which you switched fuels or made the physical change within 30 days of the switch/change. The notification must identify:

(1) The name of the owner or operator of the affected source, as defined in §63.7490, the location of the source, the boiler(s) and process heater(s) that have switched fuels, were physically changed, and the date of the notice.

(2) The currently applicable subcategory under this subpart.

(3) The date upon which the fuel switch or physical change occurred.

[76 FR 15664, Mar. 21, 2011, as amended at 78 FR 7183, Jan. 31, 2013; 80 FR 72814, Nov. 20, 2015]

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§63.7550 What reports must I submit and when?

(a) You must submit each report in Table 9 to this subpart that applies to you.

(b) Unless the EPA Administrator has approved a different schedule for submission of reports under §63.10(a), you must submit each report, according to paragraph (h) of this section, by the date in Table 9 to this subpart and according to the requirements in paragraphs (b)(1) through (4) of this section. For units that are subject only to a requirement to conduct subsequent annual, biennial, or 5-year tune-up according to §63.7540(a)(10), (11), or (12), respectively, and not subject to emission limits or Table 4 operating limits, you may submit only an annual, biennial, or 5-year compliance report, as applicable, as specified in paragraphs (b)(1) through (4) of this section, instead of a semi-annual compliance report.

(1) The first semi-annual compliance report must cover the period beginning on the compliance date that is specified for each boiler or process heater in §63.7495 and ending on June 30 or December 31, whichever date is the first date that occurs at least 180 days after the compliance date that is specified for your source in §63.7495. If submitting an annual, biennial, or 5-year compliance report, the first compliance report must cover the period beginning on the compliance date that is specified for each boiler or process heater in §63.7495 and ending on December 31 within 1, 2, or 5 years, as applicable, after the compliance date that is specified for your source in §63.7495.

(2) The first semi-annual compliance report must be postmarked or submitted no later than July 31 or January 31, whichever date is the first date following the end of the first calendar half after the compliance date that is specified for each boiler or process heater in §63.7495. The first annual, biennial, or 5-year compliance report must be postmarked or submitted no later than January 31.

(3) Each subsequent semi-annual compliance report must cover the semiannual reporting period from January 1 through June 30 or the semiannual reporting period from July 1 through December 31. Annual, biennial, and 5-year compliance reports must cover the applicable 1-, 2-, or 5-year periods from January 1 to December 31.

(4) Each subsequent semi-annual compliance report must be postmarked or submitted no later than July 31 or January 31, whichever date is the first date following the end of the semiannual reporting period. Annual, biennial, and 5-year compliance reports must be postmarked or submitted no later than January 31.

(5) For each affected source that is subject to permitting regulations pursuant to part 70 or part 71 of this chapter, and if the permitting authority has established dates for submitting semiannual reports pursuant to 70.6(a)(3)(iii)(A) or 71.6(a)(3)(iii)(A), you may submit the first and subsequent compliance reports according to the dates the permitting authority has established in the permit instead of according to the dates in paragraphs (b)(1) through (4) of this section.

(c) A compliance report must contain the following information depending on how the facility chooses to comply with the limits set in this rule.

(1) If the facility is subject to the requirements of a tune up you must submit a compliance report with the information in paragraphs (c)(5)(i) through (iii) of this section, (xiv) and (xvii) of this section, and paragraph (c)(5)(iv) of this section for limited-use boiler or process heater.

(2) If you are complying with the fuel analysis you must submit a compliance report with the information in paragraphs (c)(5)(i) through (iii), (vi), (x), (xi), (xiii), (xv), (xvii), (xviii) and paragraph (d) of this section.

(3) If you are complying with the applicable emissions limit with performance testing you must submit a compliance report with the information in (c)(5)(i) through (iii), (vi), (vii), (viii), (ix), (xi), (xiii), (xv), (xvii), (xviii) and paragraph (d) of this section.

(4) If you are complying with an emissions limit using a CMS the compliance report must contain the information required in paragraphs (c)(5)(i) through (iii), (v), (vi), (xi) through (xiii), (xv) through (xviii), and paragraph (e) of this section.

(5)(i) Company and Facility name and address.

(ii) Process unit information, emissions limitations, and operating parameter limitations.

(iii) Date of report and beginning and ending dates of the reporting period.

(iv) The total operating time during the reporting period.

(v) If you use a CMS, including CEMS, COMS, or CPMS, you must include the monitoring equipment manufacturer(s) and model numbers and the date of the last CMS certification or audit.

(vi) The total fuel use by each individual boiler or process heater subject to an emission limit within the reporting period, including, but not limited to, a description of the fuel, whether the fuel has received a non-waste determination by the EPA or your basis for concluding that the fuel is not a waste, and the total fuel usage amount with units of measure.

(vii) If you are conducting performance tests once every 3 years consistent with §63.7515(b) or (c), the date of the last 2 performance tests and a statement as to whether there have been any operational changes since the last performance test that could increase emissions.

(viii) A statement indicating that you burned no new types of fuel in an individual boiler or process heater subject to an emission limit. Or, if you did burn a new type of fuel and are subject to a HCl emission limit, you must submit the calculation of chlorine input, using Equation 7 of §63.7530, that demonstrates that your source is still within its maximum chlorine input level established during the previous performance testing (for sources that demonstrate compliance through performance testing) or you must submit the calculation of HCl emission rate using Equation 16 of §63.7530 that demonstrates that your source is still meeting the emission limit for HCl emissions (for boilers or process heaters that demonstrate compliance through fuel analysis). If you burned a new type of fuel and are subject to a mercury emission limit, you must submit the calculation of mercury input, using Equation 8 of §63.7530, that demonstrates that your source is still within its maximum mercury input level established during the previous performance testing (for sources that demonstrate compliance through performance testing), or you must submit the calculation of mercury emission rate using Equation 17 of §63.7530 that demonstrates that your source is still meeting the emission limit for mercury emissions (for boilers or process heaters that demonstrate compliance through fuel analysis). If you burned a new type of fuel and are subject to a TSM emission limit, you must submit the calculation of TSM input, using Equation 9 of §63.7530, that demonstrates that your source is still within its maximum TSM input level established during the previous performance testing (for sources that demonstrate compliance through performance testing), or you must submit the calculation of TSM emission rate, using Equation 18 of §63.7530, that demonstrates that your source is still meeting the emission limit for TSM emissions (for boilers or process heaters that demonstrate compliance through fuel analysis).

(ix) If you wish to burn a new type of fuel in an individual boiler or process heater subject to an emission limit and you cannot demonstrate compliance with the maximum chlorine input operating limit using Equation 7 of §63.7530 or the maximum mercury input operating limit using Equation 8 of §63.7530, or the maximum TSM input operating limit using Equation 9 of §63.7530 you must include in the compliance report a statement indicating the intent to conduct a new performance test within 60 days of starting to burn the new fuel.

(x) A summary of any monthly fuel analyses conducted to demonstrate compliance according to §§63.7521 and 63.7530 for individual boilers or process heaters subject to emission limits, and any fuel specification analyses conducted according to §§63.7521(f) and 63.7530(g).

(xi) If there are no deviations from any emission limits or operating limits in this subpart that apply to you, a statement that there were no deviations from the emission limits or operating limits during the reporting period.

(xii) If there were no deviations from the monitoring requirements including no periods during which the CMSs, including CEMS, COMS, and CPMS, were out of control as specified in §63.8(c)(7), a statement that there were no deviations and no periods during which the CMS were out of control during the reporting period.

(xiii) If a malfunction occurred during the reporting period, the report must include the number, duration, and a brief description for each type of malfunction which occurred during the reporting period and which caused or may have caused any applicable emission limitation to be exceeded. The report must also include a description of actions taken by you during a malfunction of a boiler, process heater, or associated air pollution control device or CMS to minimize emissions in accordance with §63.7500(a)(3), including actions taken to correct the malfunction.

(xiv) Include the date of the most recent tune-up for each unit subject to only the requirement to conduct an annual, biennial, or 5-year tune-up according to §63.7540(a)(10), (11), or (12) respectively. Include the date of the most recent burner inspection if it was not done annually, biennially, or on a 5-year period and was delayed until the next scheduled or unscheduled unit shutdown.

(xv) If you plan to demonstrate compliance by emission averaging, certify the emission level achieved or the control technology employed is no less stringent than the level or control technology contained in the notification of compliance status in §63.7545(e)(5)(i).

(xvi) For each reporting period, the compliance reports must include all of the calculated 30 day rolling average values for CEMS (CO, HCl, SO₂, and mercury), 10 day rolling average values for CO CEMS when the limit is expressed as a 10 day instead of 30 day rolling average, and the PM CPMS data.

(xvii) Statement by a responsible official with that official's name, title, and signature, certifying the truth, accuracy, and completeness of the content of the report.

(xviii) For each instance of startup or shutdown include the information required to be monitored, collected, or recorded according to the requirements of §63.7555(d).

(d) For each deviation from an emission limit or operating limit in this subpart that occurs at an individual boiler or process heater where you are not using a CMS to comply with that emission limit or operating limit, or from the work practice standards for periods of startup and shutdown, the compliance report must additionally contain the information required in paragraphs (d)(1) through (3) of this section.

(1) A description of the deviation and which emission limit, operating limit, or work practice standard from which you deviated.

(2) Information on the number, duration, and cause of deviations (including unknown cause), as applicable, and the corrective action taken.

(3) If the deviation occurred during an annual performance test, provide the date the annual performance test was completed.

(e) For each deviation from an emission limit, operating limit, and monitoring requirement in this subpart occurring at an individual boiler or process heater where you are using a CMS to comply with that emission limit or operating limit, the compliance report must additionally contain the information required in paragraphs (e)(1) through (9) of this section. This includes any deviations from your site-specific monitoring plan as required in §63.7505(d).

(1) The date and time that each deviation started and stopped and description of the nature of the deviation (i.e., what you deviated from).

(2) The date and time that each CMS was inoperative, except for zero (low-level) and high-level checks.

(3) The date, time, and duration that each CMS was out of control, including the information in §63.8(c)(8).

(4) The date and time that each deviation started and stopped.

(5) A summary of the total duration of the deviation during the reporting period and the total duration as a percent of the total source operating time during that reporting period.

(6) A characterization of the total duration of the deviations during the reporting period into those that are due to control equipment problems, process problems, other known causes, and other unknown causes.

(7) A summary of the total duration of CMS's downtime during the reporting period and the total duration of CMS downtime as a percent of the total source operating time during that reporting period.

(8) A brief description of the source for which there was a deviation.

(9) A description of any changes in CMSs, processes, or controls since the last reporting period for the source for which there was a deviation.

(f)-(g) [Reserved]

(h) You must submit the reports according to the procedures specified in paragraphs (h)(1) through (3) of this section.

(1) Within 60 days after the date of completing each performance test (as defined in §63.2) required by this subpart, you must submit the results of the performance tests, including any fuel analyses, following the procedure specified in either paragraph (h)(1)(i) or (ii) of this section.

(i) For data collected using test methods supported by the EPA's Electronic Reporting Tool (ERT) as listed on the EPA's ERT Web site (<http://www.epa.gov/ttn/chief/ert/index.html>), you must submit the results of the performance test to the EPA via the Compliance and Emissions Data Reporting Interface (CEDRI). (CEDRI can be accessed through the EPA's Central Data Exchange (CDX) (<https://cdx.epa.gov/>.) Performance test data must be submitted in a file format generated through use of the EPA's ERT or an electronic file format consistent with the extensible markup language (XML) schema listed on the EPA's ERT Web site. If you claim that some of the performance test information being submitted is confidential business information (CBI), you must submit a complete file generated through the use of the EPA's ERT or an alternate electronic file consistent with the XML schema listed on the EPA's ERT Web site, including information claimed to be CBI, on a compact disc, flash drive, or other commonly used electronic storage media to the EPA. The electronic media must be clearly marked as CBI and mailed to U.S. EPA/OAPQS/CORE CBI Office, Attention: Group Leader, Measurement Policy Group, MD C404-02, 4930 Old Page Rd., Durham, NC 27703. The same ERT or alternate file with the CBI omitted must be submitted to the EPA via the EPA's CDX as described earlier in this paragraph.

(ii) For data collected using test methods that are not supported by the EPA's ERT as listed on the EPA's ERT Web site at the time of the test, you must submit the results of the performance test to the Administrator at the appropriate address listed in

§63.13.

(2) Within 60 days after the date of completing each CEMS performance evaluation (as defined in 63.2), you must submit the results of the performance evaluation following the procedure specified in either paragraph (h)(2)(i) or (ii) of this section.

(i) For performance evaluations of continuous monitoring systems measuring relative accuracy test audit (RATA) pollutants that are supported by the EPA's ERT as listed on the EPA's ERT Web site at the time of the evaluation, you must submit the results of the performance evaluation to the EPA via the CEDRI. (CEDRI can be accessed through the EPA's CDX.) Performance evaluation data must be submitted 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. If you claim that some of the performance evaluation information being transmitted is CBI, you must submit a complete file generated through the use of the EPA's ERT or an alternate electronic file consistent with the XML schema listed on the EPA's ERT Web site, including information claimed to be CBI, on a compact disc, flash drive, or other commonly used electronic storage media to the EPA. The electronic media must be clearly marked as CBI and mailed to U.S. EPA/OAPQS/CORE CBI Office, Attention: Group Leader, Measurement Policy Group, MD C404-02, 4930 Old Page Rd., Durham, NC 27703. The same ERT or alternate file with the CBI omitted must be submitted to the EPA via the EPA's CDX as described earlier in this paragraph.

(ii) For any performance evaluations of continuous monitoring systems measuring RATA pollutants that are not supported by the EPA's ERT as listed on the ERT Web site at the time of the evaluation, you must submit the results of the performance evaluation to the Administrator at the appropriate address listed in §63.13.

(3) You must submit all reports required by Table 9 of this subpart electronically to the EPA via the CEDRI. (CEDRI can be accessed through the EPA's CDX.) You must use the appropriate electronic report in CEDRI for this subpart. Instead of using the electronic report in CEDRI for this subpart, you may submit an alternate electronic file consistent with the XML schema listed on the CEDRI Web site (<http://www.epa.gov/ttn/chief/cedri/index.html>), once the XML schema is available. If the reporting form specific to this subpart is not available in CEDRI at the time that the report is due, you must submit the report to the Administrator at the appropriate address listed in §63.13. You must begin submitting reports via CEDRI no later than 90 days after the form becomes available in CEDRI.

[78 FR 7183, Jan. 31, 2013, as amended at 80 FR 72814, Nov. 20, 2015]

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§63.7555 What records must I keep?

(a) You must keep records according to paragraphs (a)(1) and (2) of this section.

(1) A copy of each notification and report that you submitted to comply with this subpart, including all documentation supporting any Initial Notification or Notification of Compliance Status or semiannual compliance report that you submitted, according to the requirements in §63.10(b)(2)(xiv).

(2) Records of performance tests, fuel analyses, or other compliance demonstrations and performance evaluations as required in §63.10(b)(2)(viii).

(3) For units in the limited use subcategory, 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 fuel use records for the days the boiler or process heater was operating.

(b) For each CEMS, COMS, and continuous monitoring system you must keep records according to paragraphs (b)(1) through (5) of this section.

(1) Records described in §63.10(b)(2)(vii) through (xi).

(2) Monitoring data for continuous opacity monitoring system during a performance evaluation as required in §63.6(h)(7)(i) and (ii).

(3) Previous (*i.e.*, superseded) versions of the performance evaluation plan as required in §63.8(d)(3).

(4) Request for alternatives to relative accuracy test for CEMS as required in §63.8(f)(6)(i).

(5) Records of the date and time that each deviation started and stopped.

(c) You must keep the records required in Table 8 to this subpart including records of all monitoring data and calculated averages for applicable operating limits, such as opacity, pressure drop, pH, and operating load, to show continuous compliance with each emission limit and operating limit that applies to you.

(d) For each boiler or process heater subject to an emission limit in Tables 1, 2, or 11 through 13 to this subpart, you must also keep the applicable records in paragraphs (d)(1) through (11) of this section.

(1) You must keep records of monthly fuel use by each boiler or process heater, including the type(s) of fuel and amount(s) used.

(2) If you combust non-hazardous secondary materials that have been determined not to be solid waste pursuant to §241.3(b)(1) and (2) of this chapter, you must keep a record that documents how the secondary material meets each of the legitimacy criteria under §241.3(d)(1) of this chapter. If you combust a fuel that has been processed from a discarded non-hazardous secondary material pursuant to §241.3(b)(4) of this chapter, you must keep records as to how the operations that produced the fuel satisfy the definition of processing in §241.2 of this chapter. If the fuel received a non-waste determination pursuant to the petition process submitted under §241.3(c) of this chapter, you must keep a record that documents how the fuel satisfies the requirements of the petition process. For operating units that combust non-hazardous secondary materials as fuel per §241.4 of this chapter, you must keep records documenting that the material is listed as a non-waste under §241.4(a) of this chapter. Units exempt from the incinerator standards under section 129(g)(1) of the Clean Air Act because they are qualifying facilities burning a homogeneous waste stream do not need to maintain the records described in this paragraph (d)(2).

(3) A copy of all calculations and supporting documentation of maximum chlorine fuel input, using Equation 7 of §63.7530, that were done to demonstrate continuous compliance with the HCl emission limit, for sources that demonstrate compliance through performance testing. For sources that demonstrate compliance through fuel analysis, a copy of all calculations and supporting documentation of HCl emission rates, using Equation 16 of §63.7530, that were done to demonstrate compliance with the HCl emission limit. Supporting documentation should include results of any fuel analyses and basis for the estimates of maximum chlorine fuel input or HCl emission rates. You can use the results from one fuel analysis for multiple boilers and process heaters provided they are all burning the same fuel type. However, you must calculate chlorine fuel input, or HCl emission rate, for each boiler and process heater.

(4) A copy of all calculations and supporting documentation of maximum mercury fuel input, using Equation 8 of §63.7530, that were done to demonstrate continuous compliance with the mercury emission limit for sources that demonstrate compliance through performance testing. For sources that demonstrate compliance through fuel analysis, a copy of all calculations and supporting documentation of mercury emission rates, using Equation 17 of §63.7530, that were done to demonstrate compliance with the mercury emission limit. Supporting documentation should include results of any fuel analyses and basis for the estimates of maximum mercury fuel input or mercury emission rates. You can use the results from one fuel analysis for multiple boilers and process heaters provided they are all burning the same fuel type. However, you must calculate mercury fuel input, or mercury emission rates, for each boiler and process heater.

(5) If, consistent with §63.7515(b), you choose to stack test less frequently than annually, you must keep a record that documents that your emissions in the previous stack test(s) were less than 75 percent of the applicable emission limit (or, in specific instances noted in Tables 1 and 2 or 11 through 13 to this subpart, less than the applicable emission limit), and document that there was no change in source operations including fuel composition and operation of air pollution control equipment that would cause emissions of the relevant pollutant to increase within the past year.

(6) Records of the occurrence and duration of each malfunction of the boiler or process heater, or of the associated air pollution control and monitoring equipment.

(7) Records of actions taken during periods of malfunction to minimize emissions in accordance with the general duty to minimize emissions in §63.7500(a)(3), including corrective actions to restore the malfunctioning boiler or process heater, air pollution control, or monitoring equipment to its normal or usual manner of operation.

(8) A copy of all calculations and supporting documentation of maximum TSM fuel input, using Equation 9 of §63.7530, that were done to demonstrate continuous compliance with the TSM emission limit for sources that demonstrate compliance through performance testing. For sources that demonstrate compliance through fuel analysis, a copy of all calculations and supporting documentation of TSM emission rates, using Equation 18 of §63.7530, that were done to demonstrate compliance with the TSM emission limit. Supporting documentation should include results of any fuel analyses and basis for the estimates of maximum TSM fuel input or TSM emission rates. You can use the results from one fuel analysis for multiple boilers and process heaters provided they are all burning the same fuel type. However, you must calculate TSM fuel input, or TSM emission rates, for each boiler and process heater.

(9) You must maintain records of the calendar date, time, occurrence and duration of each startup and shutdown.

(10) You must maintain records of the type(s) and amount(s) of fuels used during each startup and shutdown.

(11) For each startup period, for units selecting paragraph (2) of the definition of "startup" in §63.7575 you must maintain records of the time that clean fuel combustion begins; the time when you start feeding fuels that are not clean fuels; the time when useful thermal energy is first supplied; and the time when the PM controls are engaged.

(12) If you choose to rely on paragraph (2) of the definition of “startup” in §63.7575, for each startup period, you must maintain records of the hourly steam temperature, hourly steam pressure, hourly steam flow, hourly flue gas temperature, and all hourly average CMS data (e.g., CEMS, PM CPMS, COMS, ESP total secondary electric power input, scrubber pressure drop, scrubber liquid flow rate) collected during each startup period to confirm that the control devices are engaged. In addition, if compliance with the PM emission limit is demonstrated using a PM control device, you must maintain records as specified in paragraphs (d)(12)(i) through (iii) of this section.

(i) For a boiler or process heater with an electrostatic precipitator, record the number of fields in service, as well as each field's secondary voltage and secondary current during each hour of startup.

(ii) For a boiler or process heater with a fabric filter, record the number of compartments in service, as well as the differential pressure across the baghouse during each hour of startup.

(iii) For a boiler or process heater with a wet scrubber needed for filterable PM control, record the scrubber's liquid flow rate and the pressure drop during each hour of startup.

(13) If you choose to use paragraph (2) of the definition of “startup” in §63.7575 and you find that you are unable to safely engage and operate your PM control(s) within 1 hour of first firing of non-clean fuels, you may choose to rely on paragraph (1) of definition of “startup” in §63.7575 or you may submit to the delegated permitting authority a request for a variance with the PM controls requirement, as described below.

(i) The request shall provide evidence of a documented manufacturer-identified safety issue.

(ii) The request shall provide information to document that the PM control device is adequately designed and sized to meet the applicable PM emission limit.

(iii) In addition, the request shall contain documentation that:

(A) The unit is using clean fuels to the maximum extent possible to bring the unit and PM control device up to the temperature necessary to alleviate or prevent the identified safety issues prior to the combustion of primary fuel;

(B) The unit has explicitly followed the manufacturer's procedures to alleviate or prevent the identified safety issue; and

(C) Identifies with specificity the details of the manufacturer's statement of concern.

(iv) You must comply with all other work practice requirements, including but not limited to data collection, recordkeeping, and reporting requirements.

(e) If you elect to average emissions consistent with §63.7522, you must additionally keep a copy of the emission averaging implementation plan required in §63.7522(g), all calculations required under §63.7522, including monthly records of heat input or steam generation, as applicable, and monitoring records consistent with §63.7541.

(f) If you elect to use efficiency credits from energy conservation measures to demonstrate compliance according to §63.7533, you must keep a copy of the Implementation Plan required in §63.7533(d) and copies of all data and calculations used to establish credits according to §63.7533(b), (c), and (f).

(g) If you elected to demonstrate that the unit meets the specification for mercury for the unit designed to burn gas 1 subcategory, you must maintain monthly records (or at the frequency required by §63.7540(c)) of the calculations and results of the fuel specification for mercury in Table 6.

(h) If you operate a unit in the unit designed to burn gas 1 subcategory that is subject to this subpart, and you use an alternative fuel other than natural gas, refinery gas, gaseous fuel subject to another subpart under this part, other gas 1 fuel, or gaseous fuel subject to another subpart of this part or part 60, 61, or 65, you must keep records of the total hours per calendar year that alternative fuel is burned and the total hours per calendar year that the unit operated during periods of gas curtailment or gas supply emergencies.

[76 FR 15664, Mar. 21, 2011, as amended at 78 FR 7185, Jan. 31, 2013; 80 FR 72816, Nov. 20, 2015]

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§63.7560 In what form and how long must I keep my records?

(a) Your records must be in a form suitable and readily available for expeditious review, according to §63.10(b)(1).

(b) As specified in §63.10(b)(1), you must keep each record for 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record.

(c) You must keep each record on site, or they must be accessible from on site (for example, through a computer network), for at least 2 years after the date of each occurrence, measurement, maintenance, corrective action, report, or record, according to §63.10(b)(1). You can keep the records off site for the remaining 3 years.

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OTHER REQUIREMENTS AND INFORMATION

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§63.7565 What parts of the General Provisions apply to me?

Table 10 to this subpart shows which parts of the General Provisions in §§63.1 through 63.15 apply to you.

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§63.7570 Who implements and enforces this subpart?

(a) This subpart can be implemented and enforced by the EPA, or an Administrator such as your state, local, or tribal agency. If the EPA Administrator has delegated authority to your state, local, or tribal agency, then that agency (as well as the EPA) has the authority to implement and enforce this subpart. You should contact your EPA Regional Office to find out if this subpart is delegated to your state, local, or tribal agency.

(b) In delegating implementation and enforcement authority of this subpart to a state, local, or tribal agency under 40 CFR part 63, subpart E, the authorities listed in paragraphs (b)(1) through (4) of this section are retained by the EPA Administrator and are not transferred to the state, local, or tribal agency, however, the EPA retains oversight of this subpart and can take enforcement actions, as appropriate.

(1) Approval of alternatives to the emission limits and work practice standards in §63.7500(a) and (b) under §63.6(g), except as specified in §63.7555(d)(13).

(2) Approval of major change to test methods in Table 5 to this subpart under §63.7(e)(2)(ii) and (f) and as defined in §63.90, and alternative analytical methods requested under §63.7521(b)(2).

(3) Approval of major change to monitoring under §63.8(f) and as defined in §63.90, and approval of alternative operating parameters under §§63.7500(a)(2) and 63.7522(g)(2).

(4) Approval of major change to recordkeeping and reporting under §63.10(e) and as defined in §63.90.

[76 FR 15664, Mar. 21, 2011, as amended at 78 FR 7186, Jan. 31, 2013; 80 FR 72817, Nov. 20, 2015]

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§63.7575 What definitions apply to this subpart?

Terms used in this subpart are defined in the Clean Air Act, in §63.2 (the General Provisions), and in this section as follows:

10-day rolling average means the arithmetic mean of the previous 240 hours of valid operating data. Valid data excludes hours during startup and shutdown, data collected during periods when the monitoring system is out of control as specified in your site-specific monitoring plan, while conducting repairs associated with periods when the monitoring system is out of control, or while conducting required monitoring system quality assurance or quality control activities, and periods when this unit is not operating. The 240 hours should be consecutive, but not necessarily continuous if operations were intermittent.

30-day rolling average means the arithmetic mean of the previous 720 hours of valid CO CEMS data. The 720 hours should be consecutive, but not necessarily continuous if operations were intermittent. For parameters other than CO, 30-day rolling average means either the arithmetic mean of all valid hours of data from 30 successive operating days or the arithmetic mean of the previous 720 hours of valid operating data. Valid data excludes hours during startup and shutdown, data collected during periods when the monitoring system is out of control as specified in your site-specific monitoring plan, while conducting repairs associated with periods when the monitoring system is out of control, or while conducting required monitoring system quality assurance or quality control activities, and periods when this unit is not operating.

Annual capacity factor means the ratio between the actual heat input to a boiler or process heater from the fuels burned during a calendar year and the potential heat input to the boiler or process heater had it been operated for 8,760 hours during a year at the maximum steady state design heat input capacity.

Annual heat input means the heat input for the 12 months preceding the compliance demonstration.

Average annual heat input rate means total heat input divided by the hours of operation for the 12 months preceding the compliance demonstration.

Bag leak detection system means a group of instruments that are capable of monitoring particulate matter loadings in the exhaust of a fabric filter (*i.e.*, baghouse) in order to detect bag failures. A bag leak detection system includes, but is not limited to, an instrument that operates on electrodynamic, triboelectric, light scattering, light transmittance, or other principle to monitor relative particulate matter loadings.

Benchmark means the fuel heat input for a boiler or process heater for the one-year period before the date that an energy demand reduction occurs, unless it can be demonstrated that a different time period is more representative of historical operations.

Biodiesel means a mono-alkyl ester derived from biomass and conforming to ASTM D6751-11b, Standard Specification for Biodiesel Fuel Blend Stock (B100) for Middle Distillate Fuels (incorporated by reference, see §63.14).

Biomass or bio-based solid fuel means any biomass-based solid fuel that is not a solid waste. This includes, but is not limited to, wood residue; wood products (*e.g.*, trees, tree stumps, tree limbs, bark, lumber, sawdust, sander dust, chips, scraps, slabs, millings, and shavings); animal manure, including litter and other bedding materials; vegetative agricultural and silvicultural materials, such as logging residues (slash), nut and grain hulls and chaff (*e.g.*, almond, walnut, peanut, rice, and wheat), bagasse, orchard prunings, corn stalks, coffee bean hulls and grounds. This definition of biomass is not intended to suggest that these materials are or are not solid waste.

Blast furnace gas fuel-fired boiler or process heater means an industrial/commercial/institutional boiler or process heater that receives 90 percent or more of its total annual gas volume from blast furnace gas.

Boiler means an enclosed device using controlled flame combustion and having the primary purpose of recovering thermal energy in the form of steam or hot water. Controlled flame combustion refers to a steady-state, or near steady-state, process wherein fuel and/or oxidizer feed rates are controlled. A device combusting solid waste, as defined in §241.3 of this chapter, is not a boiler unless the device is exempt from the definition of a solid waste incineration unit as provided in section 129(g)(1) of the Clean Air Act. Waste heat boilers are excluded from this definition.

Boiler system means the boiler and associated components, such as, the feed water system, the combustion air system, the fuel system (including burners), blowdown system, combustion control systems, steam systems, and condensate return systems.

Calendar year means the period between January 1 and December 31, inclusive, for a given year.

Clean dry biomass means any biomass-based solid fuel that have not been painted, pigment-stained, or pressure treated, does not contain contaminants at concentrations not normally associated with virgin biomass materials and has a moisture content of less than 20 percent and is not a solid waste.

Coal means all solid fuels classifiable as anthracite, bituminous, sub-bituminous, or lignite by ASTM D388 (incorporated by reference, see §63.14), coal refuse, and petroleum coke. For the purposes of this subpart, this definition of "coal" includes synthetic fuels derived from coal, including but not limited to, solvent-refined coal, coal-oil mixtures, and coal-water mixtures. Coal derived gases are excluded from this definition.

Coal refuse means any by-product of coal mining or coal cleaning operations with an ash content greater than 50 percent (by weight) and a heating value less than 13,900 kilojoules per kilogram (6,000 Btu per pound) on a dry basis.

Commercial/institutional boiler means a boiler used in commercial establishments or institutional establishments such as medical centers, nursing homes, research centers, institutions of higher education, elementary and secondary schools, libraries, religious establishments, governmental buildings, hotels, restaurants, and laundries to provide electricity, steam, and/or hot water.

Common stack means the exhaust of emissions from two or more affected units through a single flue. Affected units with a common stack may each have separate air pollution control systems located before the common stack, or may have a single air pollution control system located after the exhausts come together in a single flue.

Cost-effective energy conservation measure means a measure that is implemented to improve the energy efficiency of the boiler or facility that has a payback (return of investment) period of 2 years or less.

Daily block average means the arithmetic mean of all valid emission concentrations or parameter levels recorded when a unit is operating measured over the 24-hour period from 12 a.m. (midnight) to 12 a.m. (midnight), except for periods of startup and shutdown or downtime.

Deviation. (1) *Deviation* means any instance in which an affected source subject to this subpart, or an owner or operator of such a source:

(i) Fails to meet any applicable requirement or obligation established by this subpart including, but not limited to, any emission limit, operating limit, or work practice standard; or

(ii) Fails to meet any term or condition that is adopted to implement an applicable requirement in this subpart and that is included in the operating permit for any affected source required to obtain such a permit.

(2) A deviation is not always a violation.

Dioxins/furans means tetra- through octa-chlorinated dibenzo-p-dioxins and dibenzofurans.

Distillate oil means fuel oils that contain 0.05 weight percent nitrogen or less and comply with the specifications for fuel oil numbers 1 and 2, as defined by the American Society of Testing and Materials in ASTM D396 (incorporated by reference, see §63.14) or diesel fuel oil numbers 1 and 2, as defined by the American Society for Testing and Materials in ASTM D975 (incorporated by reference, see §63.14), kerosene, and biodiesel as defined by the American Society of Testing and Materials in ASTM D6751-11b (incorporated by reference, see §60.14).

Dry scrubber means an add-on air pollution control system that injects dry alkaline sorbent (dry injection) or sprays an alkaline sorbent (spray dryer) to react with and neutralize acid gas in the exhaust stream forming a dry powder material. Sorbent injection systems used as control devices in fluidized bed boilers and process heaters are included in this definition. A dry scrubber is a dry control system.

Dutch oven means a unit having a refractory-walled cell connected to a conventional boiler setting. Fuel materials are introduced through an opening in the roof of the dutch oven and burn in a pile on its floor. Fluidized bed boilers are not part of the dutch oven design category.

Efficiency credit means emission reductions above those required by this subpart. Efficiency credits generated may be used to comply with the emissions limits. Credits may come from pollution prevention projects that result in reduced fuel use by affected units. Boilers that are shut down cannot be used to generate credits unless the facility provides documentation linking the permanent shutdown to implementation of the energy conservation measures identified in the energy assessment.

Electric utility steam generating unit (EGU) means a fossil fuel-fired combustion unit of more than 25 megawatts electric (MWe) 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 MWe output to any utility power distribution system for sale is considered an electric utility steam generating unit. To be "capable of combusting" fossil fuels, an EGU would need to have these fuels allowed in their operating permits and have the appropriate fuel handling facilities on-site or otherwise available (e.g., coal handling equipment, including coal storage area, belts and conveyers, pulverizers, etc.; oil storage facilities). In addition, fossil fuel-fired EGU means any EGU that fired fossil fuel for more than 10.0 percent of the average annual heat input in any 3 consecutive calendar years or for more than 15.0 percent of the annual heat input during any one calendar year after April 16, 2012.

Electrostatic precipitator (ESP) means an add-on air pollution control device used to capture particulate matter by charging the particles using an electrostatic field, collecting the particles using a grounded collecting surface, and transporting the particles into a hopper. An electrostatic precipitator is usually a dry control system.

Energy assessment means the following for the emission units covered by this subpart:

(1) The energy assessment for facilities with affected boilers and process heaters with a combined heat input capacity of less than 0.3 trillion Btu (TBtu) per year will be 8 on-site technical labor hours in length maximum, but may be longer at the discretion of the owner or operator of the affected source. The boiler system(s), process heater(s), and any on-site energy use system(s) accounting for at least 50 percent of the affected boiler(s) energy (e.g., steam, hot water, process heat, or electricity) production, as applicable, will be evaluated to identify energy savings opportunities, within the limit of performing an 8-hour on-site energy assessment.

(2) The energy assessment for facilities with affected boilers and process heaters with a combined heat input capacity of 0.3 to 1.0 TBtu/year will be 24 on-site technical labor hours in length maximum, but may be longer at the discretion of the owner or operator of the affected source. The boiler system(s), process heater(s), and any on-site energy use system(s) accounting for at least 33 percent of the energy (e.g., steam, hot water, process heat, or electricity) production, as applicable, will be evaluated to identify energy savings opportunities, within the limit of performing a 24-hour on-site energy assessment.

(3) The energy assessment for facilities with affected boilers and process heaters with a combined heat input capacity greater than 1.0 TBtu/year will be up to 24 on-site technical labor hours in length for the first TBtu/yr plus 8 on-site technical labor hours for every additional 1.0 TBtu/yr not to exceed 160 on-site technical hours, but may be longer at the discretion of the

owner or operator of the affected source. The boiler system(s), process heater(s), and any on-site energy use system(s) accounting for at least 20 percent of the energy (e.g., steam, process heat, hot water, or electricity) production, as applicable, will be evaluated to identify energy savings opportunities.

(4) The on-site energy use systems serving as the basis for the percent of affected boiler(s) and process heater(s) energy production in paragraphs (1), (2), and (3) of this definition may be segmented by production area or energy use area as most logical and applicable to the specific facility being assessed (e.g., product X manufacturing area; product Y drying area; Building Z).

Energy management practices means the set of practices and procedures designed to manage energy use that are demonstrated by the facility's energy policies, a facility energy manager and other staffing responsibilities, energy performance measurement and tracking methods, an energy saving goal, action plans, operating procedures, internal reporting requirements, and periodic review intervals used at the facility.

Energy management program means a program that includes a set of practices and procedures designed to manage energy use that are demonstrated by the facility's energy policies, a facility energy manager and other staffing responsibilities, energy performance measurement and tracking methods, an energy saving goal, action plans, operating procedures, internal reporting requirements, and periodic review intervals used at the facility. Facilities may establish their program through energy management systems compatible with ISO 50001.

Energy use system includes the following systems located on-site that use energy (steam, hot water, or electricity) provided by the affected boiler or process heater: process heating; compressed air systems; machine drive (motors, pumps, fans); process cooling; facility heating, ventilation, and air-conditioning systems; hot water systems; building envelop; and lighting; or other systems that use steam, hot water, process heat, or electricity provided by the affected boiler or process heater. Energy use systems are only those systems using energy clearly produced by affected boilers and process heaters.

Equivalent means the following only as this term is used in Table 6 to this subpart:

(1) An equivalent sample collection procedure means a published voluntary consensus standard or practice (VCS) or EPA method that includes collection of a minimum of three composite fuel samples, with each composite consisting of a minimum of three increments collected at approximately equal intervals over the test period.

(2) An equivalent sample compositing procedure means a published VCS or EPA method to systematically mix and obtain a representative subsample (part) of the composite sample.

(3) An equivalent sample preparation procedure means a published VCS or EPA method that: Clearly states that the standard, practice or method is appropriate for the pollutant and the fuel matrix; or is cited as an appropriate sample preparation standard, practice or method for the pollutant in the chosen VCS or EPA determinative or analytical method.

(4) An equivalent procedure for determining heat content means a published VCS or EPA method to obtain gross calorific (or higher heating) value.

(5) An equivalent procedure for determining fuel moisture content means a published VCS or EPA method to obtain moisture content. If the sample analysis plan calls for determining metals (especially the mercury, selenium, or arsenic) using an aliquot of the dried sample, then the drying temperature must be modified to prevent vaporizing these metals. On the other hand, if metals analysis is done on an "as received" basis, a separate aliquot can be dried to determine moisture content and the metals concentration mathematically adjusted to a dry basis.

(6) An equivalent pollutant (mercury, HCl) determinative or analytical procedure means a published VCS or EPA method that clearly states that the standard, practice, or method is appropriate for the pollutant and the fuel matrix and has a published detection limit equal or lower than the methods listed in Table 6 to this subpart for the same purpose.

Fabric filter means an add-on air pollution control device used to capture particulate matter by filtering gas streams through filter media, also known as a baghouse. A fabric filter is a dry control system.

Federally enforceable means all limitations and conditions that are enforceable by the EPA Administrator, including, but not limited to, the requirements of 40 CFR parts 60, 61, 63, and 65, requirements within any applicable state implementation plan, and any permit requirements established under 40 CFR 52.21 or under 40 CFR 51.18 and 40 CFR 51.24.

Fluidized bed boiler means a boiler utilizing a fluidized bed combustion process that is not a pulverized coal boiler.

Fluidized bed boiler with an integrated fluidized bed heat exchanger means a boiler utilizing a fluidized bed combustion where the entire tube surface area is located outside of the furnace section at the exit of the cyclone section and exposed to the flue gas stream for conductive heat transfer. This design applies only to boilers in the unit designed to burn coal/solid fossil fuel subcategory that fire coal refuse.

Fluidized bed combustion means a process where a fuel is burned in a bed of granulated particles, which are maintained in a mobile suspension by the forward flow of air and combustion products.

Fossil fuel means natural gas, oil, coal, and any form of solid, liquid, or gaseous fuel derived from such material.

Fuel cell means a boiler type in which the fuel is dropped onto suspended fixed grates and is fired in a pile. The refractory-lined fuel cell uses combustion air preheating and positioning of secondary and tertiary air injection ports to improve boiler efficiency. Fluidized bed, dutch oven, pile burner, hybrid suspension grate, and suspension burners are not part of the fuel cell subcategory.

Fuel type means each category of fuels that share a common name or classification. Examples include, but are not limited to, bituminous coal, sub-bituminous coal, lignite, anthracite, biomass, distillate oil, residual oil. Individual fuel types received from different suppliers are not considered new fuel types.

Gaseous fuel includes, but is not limited to, natural gas, process gas, landfill gas, coal derived gas, refinery gas, and biogas. Blast furnace gas and process gases that are regulated under another subpart of this part, or part 60, part 61, or part 65 of this chapter, are exempted from this definition.

Heat input means heat derived from combustion of fuel in a boiler or process heater and does not include the heat input from preheated combustion air, recirculated flue gases, returned condensate, or exhaust gases from other sources such as gas turbines, internal combustion engines, kilns, etc.

Heavy liquid includes residual oil and any other liquid fuel not classified as a light liquid.

Hourly average means the arithmetic average of at least four CMS data values representing the four 15-minute periods in an hour, or at least two 15-minute data values during an hour when CMS calibration, quality assurance, or maintenance activities are being performed.

Hot water heater means a closed vessel with a capacity of no more than 120 U.S. gallons in which water is heated by combustion of gaseous, liquid, or biomass/bio-based solid fuel and is withdrawn for use external to the vessel. Hot water boilers (i.e., not generating steam) combusting gaseous, liquid, or biomass fuel with a heat input capacity of less than 1.6 million Btu per hour are included in this definition. The 120 U.S. gallon capacity threshold to be considered a hot water heater is independent of the 1.6 MMBtu/hr heat input capacity threshold for hot water boilers. Hot water heater also means a tankless unit that provides on demand hot water.

Hybrid suspension grate boiler means a boiler designed with air distributors to spread the fuel material over the entire width and depth of the boiler combustion zone. The biomass fuel combusted in these units exceeds a moisture content of 40 percent on an as-fired annual heat input basis as demonstrated by monthly fuel analysis. The drying and much of the combustion of the fuel takes place in suspension, and the combustion is completed on the grate or floor of the boiler. Fluidized bed, dutch oven, and pile burner designs are not part of the hybrid suspension grate boiler design category.

Industrial boiler means a boiler used in manufacturing, processing, mining, and refining or any other industry to provide steam, hot water, and/or electricity.

Light liquid includes distillate oil, biodiesel, or vegetable oil.

Limited-use boiler or process heater means any boiler or process heater that burns any amount of solid, liquid, or gaseous fuels and has a federally enforceable annual capacity factor of no more than 10 percent.

Liquid fuel includes, but is not limited to, light liquid, heavy liquid, any form of liquid fuel derived from petroleum, used oil, liquid biofuels, biodiesel, and vegetable oil.

Load fraction means the actual heat input of a boiler or process heater divided by heat input during the performance test that established the minimum sorbent injection rate or minimum activated carbon injection rate, expressed as a fraction (e.g., for 50 percent load the load fraction is 0.5). For boilers and process heaters that co-fire natural gas or refinery gas with a solid or liquid fuel, the load fraction is determined by the actual heat input of the solid or liquid fuel divided by heat input of the solid or liquid fuel fired during the performance test (e.g., if the performance test was conducted at 100 percent solid fuel firing, for 100 percent load firing 50 percent solid fuel and 50 percent natural gas the load fraction is 0.5).

Major source for oil and natural gas production facilities, as used in this subpart, shall have the same meaning as in §63.2, except that:

(1) Emissions from any oil or gas exploration or production well (with its associated equipment, as defined in this section), and emissions from any pipeline compressor station or pump station shall not be aggregated with emissions from other similar

units to determine whether such emission points or stations are major sources, even when emission points are in a contiguous area or under common control;

(2) Emissions from processes, operations, or equipment that are not part of the same facility, as defined in this section, shall not be aggregated; and

(3) For facilities that are production field facilities, only HAP emissions from glycol dehydration units and storage vessels with the potential for flash emissions shall be aggregated for a major source determination. For facilities that are not production field facilities, HAP emissions from all HAP emission units shall be aggregated for a major source determination.

Metal process furnaces are a subcategory of process heaters, as defined in this subpart, which include natural gas-fired annealing furnaces, preheat furnaces, reheat furnaces, aging furnaces, heat treat furnaces, and homogenizing furnaces.

Million Btu (MMBtu) means one million British thermal units.

Minimum activated carbon injection rate means load fraction multiplied by the lowest hourly average activated carbon injection rate measured according to Table 7 to this subpart during the most recent performance test demonstrating compliance with the applicable emission limit.

Minimum oxygen level means the lowest hourly average oxygen level measured according to Table 7 to this subpart during the most recent performance test demonstrating compliance with the applicable emission limit.

Minimum pressure drop means the lowest hourly average pressure drop measured according to Table 7 to this subpart during the most recent performance test demonstrating compliance with the applicable emission limit.

Minimum scrubber effluent pH means the lowest hourly average sorbent liquid pH measured at the inlet to the wet scrubber according to Table 7 to this subpart during the most recent performance test demonstrating compliance with the applicable hydrogen chloride emission limit.

Minimum scrubber liquid flow rate means the lowest hourly average liquid flow rate (e.g., to the PM scrubber or to the acid gas scrubber) measured according to Table 7 to this subpart during the most recent performance stack test demonstrating compliance with the applicable emission limit.

Minimum scrubber pressure drop means the lowest hourly average scrubber pressure drop measured according to Table 7 to this subpart during the most recent performance test demonstrating compliance with the applicable emission limit.

Minimum sorbent injection rate means:

(1) The load fraction multiplied by the lowest hourly average sorbent injection rate for each sorbent measured according to Table 7 to this subpart during the most recent performance test demonstrating compliance with the applicable emission limits; or

(2) For fluidized bed combustion not using an acid gas wet scrubber or dry sorbent injection control technology to comply with the HCl emission limit, the lowest average ratio of sorbent to sulfur measured during the most recent performance test.

Minimum total secondary electric power means the lowest hourly average total secondary electric power determined from the values of secondary voltage and secondary current to the electrostatic precipitator measured according to Table 7 to this subpart during the most recent performance test demonstrating compliance with the applicable emission limits.

Natural gas means:

(1) A naturally occurring mixture of hydrocarbon and nonhydrocarbon gases found in geologic formations beneath the earth's surface, of which the principal constituent is methane; or

(2) Liquefied petroleum gas, as defined in ASTM D1835 (incorporated by reference, see §63.14); or

(3) A mixture of hydrocarbons that maintains a gaseous state at ISO conditions. Additionally, natural gas must either be composed of at least 70 percent methane by volume or have a gross calorific value between 35 and 41 megajoules (MJ) per dry standard cubic meter (950 and 1,100 Btu per dry standard cubic foot); or

(4) Propane or propane derived synthetic natural gas. Propane means a colorless gas derived from petroleum and natural gas, with the molecular structure C₃H₈.

Opacity means the degree to which emissions reduce the transmission of light and obscure the view of an object in the background.

Operating day means a 24-hour period between 12 midnight and the following midnight during which any fuel is combusted at any time in the boiler or process heater unit. It is not necessary for fuel to be combusted for the entire 24-hour period. For calculating rolling average emissions, an operating day does not include the hours of operation during startup or shutdown.

Other combustor means a unit designed to burn solid fuel that is not classified as a dutch oven, fluidized bed, fuel cell, hybrid suspension grate boiler, pulverized coal boiler, stoker, sloped grate, or suspension boiler as defined in this subpart.

Other gas 1 fuel means a gaseous fuel that is not natural gas or refinery gas and does not exceed a maximum concentration of 40 micrograms/cubic meters of mercury.

Oxygen analyzer system means all equipment required to determine the oxygen content of a gas stream and used to monitor oxygen in the boiler or process heater flue gas, boiler or process heater, firebox, or other appropriate location. This definition includes oxygen trim systems. The source owner or operator must install, calibrate, maintain, and operate the oxygen analyzer system in accordance with the manufacturer's recommendations.

Oxygen trim system means a system of monitors that is used to maintain excess air at the desired level in a combustion device over its operating load range. A typical system consists of a flue gas oxygen and/or CO monitor that automatically provides a feedback signal to the combustion air controller or draft controller.

Particulate matter (PM) means any finely divided solid or liquid material, other than uncombined water, as measured by the test methods specified under this subpart, or an approved alternative method.

Period of gas curtailment or supply interruption means a period of time during which the supply of gaseous fuel to an affected boiler or process heater is restricted or halted for reasons beyond the control of the facility. The act of entering into a contractual agreement with a supplier of natural gas established for curtailment purposes does not constitute a reason that is under the control of a facility for the purposes of this definition. An increase in the cost or unit price of natural gas due to normal market fluctuations not during periods of supplier delivery restriction does not constitute a period of natural gas curtailment or supply interruption. On-site gaseous fuel system emergencies or equipment failures qualify as periods of supply interruption when the emergency or failure is beyond the control of the facility.

Pile burner means a boiler design incorporating a design where the anticipated biomass fuel has a high relative moisture content. Grates serve to support the fuel, and underfire air flowing up through the grates provides oxygen for combustion, cools the grates, promotes turbulence in the fuel bed, and fires the fuel. The most common form of pile burning is the dutch oven.

Process heater means an enclosed device using controlled flame, and the unit's primary purpose is to transfer heat indirectly to a process material (liquid, gas, or solid) or to a heat transfer material (e.g., glycol or a mixture of glycol and water) for use in a process unit, instead of generating steam. Process heaters are devices in which the combustion gases do not come into direct contact with process materials. A device combusting solid waste, as defined in §241.3 of this chapter, is not a process heater unless the device is exempt from the definition of a solid waste incineration unit as provided in section 129(g)(1) of the Clean Air Act. Process heaters do not include units used for comfort heat or space heat, food preparation for on-site consumption, or autoclaves. Waste heat process heaters are excluded from this definition.

Pulverized coal boiler means a boiler in which pulverized coal or other solid fossil fuel is introduced into an air stream that carries the coal to the combustion chamber of the boiler where it is fired in suspension.

Qualified energy assessor means:

(1) Someone who has demonstrated capabilities to evaluate energy savings opportunities for steam generation and major energy using systems, including, but not limited to:

- (i) Boiler combustion management.
- (ii) Boiler thermal energy recovery, including
 - (A) Conventional feed water economizer,
 - (B) Conventional combustion air preheater, and
 - (C) Condensing economizer.
- (iii) Boiler blowdown thermal energy recovery.
- (iv) Primary energy resource selection, including
 - (A) Fuel (primary energy source) switching, and

(B) Applied steam energy versus direct-fired energy versus electricity.

(v) Insulation issues.

(vi) Steam trap and steam leak management.

(vi) Condensate recovery.

(viii) Steam end-use management.

(2) Capabilities and knowledge includes, but is not limited to:

(i) Background, experience, and recognized abilities to perform the assessment activities, data analysis, and report preparation.

(ii) Familiarity with operating and maintenance practices for steam or process heating systems.

(iii) Additional potential steam system improvement opportunities including improving steam turbine operations and reducing steam demand.

(iv) Additional process heating system opportunities including effective utilization of waste heat and use of proper process heating methods.

(v) Boiler-steam turbine cogeneration systems.

(vi) Industry specific steam end-use systems.

Refinery gas means any gas that is generated at a petroleum refinery and is combusted. Refinery gas includes natural gas when the natural gas is combined and combusted in any proportion with a gas generated at a refinery. Refinery gas includes gases generated from other facilities when that gas is combined and combusted in any proportion with gas generated at a refinery.

Regulated gas stream means an offgas stream that is routed to a boiler or process heater for the purpose of achieving compliance with a standard under another subpart of this part or part 60, part 61, or part 65 of this chapter.

Residential boiler means a boiler used to provide heat and/or hot water and/or as part of a residential combined heat and power system. This definition includes boilers located at an institutional facility (e.g., university campus, military base, church grounds) or commercial/industrial facility (e.g., farm) used primarily to provide heat and/or hot water for:

(1) A dwelling containing four or fewer families; or

(2) A single unit residence dwelling that has since been converted or subdivided into condominiums or apartments.

Residual oil means crude oil, fuel oil that does not comply with the specifications under the definition of distillate oil, and all fuel oil numbers 4, 5, and 6, as defined by the American Society of Testing and Materials in ASTM D396-10 (incorporated by reference, see §63.14(b)).

Responsible official means responsible official as defined in §70.2.

Rolling average means the average of all data collected during the applicable averaging period. For demonstration of compliance with a CO CEMS-based emission limit based on CO concentration a 30-day (10-day) rolling average is comprised of the average of all the hourly average concentrations over the previous 720 (240) operating hours calculated each operating day. To demonstrate compliance on a 30-day rolling average basis for parameters other than CO, you must indicate the basis of the 30-day rolling average period you are using for compliance, as discussed in §63.7545(e)(2)(iii). If you indicate the 30 operating day basis, you must calculate a new average value each operating day and shall include the measured hourly values for the preceding 30 operating days. If you select the 720 operating hours basis, you must average of all the hourly average concentrations over the previous 720 operating hours calculated each operating day.

Secondary material means the material as defined in §241.2 of this chapter.

Shutdown means the period in which cessation of operation of a boiler or process heater is initiated for any purpose. Shutdown begins when the boiler or process heater no longer supplies useful thermal energy (such as heat or steam) for heating, cooling, or process purposes and/or generates electricity or when no fuel is being fed to the boiler or process heater, whichever is earlier. Shutdown ends when the boiler or process heater no longer supplies useful thermal energy (such as steam or heat) for heating, cooling, or process purposes and/or generates electricity, and no fuel is being combusted in the boiler or process heater.

Sloped grate means a unit where the solid fuel is fed to the top of the grate from where it slides downwards; while sliding the fuel first dries and then ignites and burns. The ash is deposited at the bottom of the grate. Fluidized bed, dutch oven, pile burner, hybrid suspension grate, suspension burners, and fuel cells are not considered to be a sloped grate design.

Solid fossil fuel includes, but is not limited to, coal, coke, petroleum coke, and tire derived fuel.

Solid fuel means any solid fossil fuel or biomass or bio-based solid fuel.

Startup means:

(1) Either the first-ever firing of fuel in a boiler or process heater for the purpose of supplying useful thermal energy for heating and/or producing electricity, or for any other purpose, or the firing of fuel in a boiler after a shutdown event for any purpose. Startup ends when any of the useful thermal energy from the boiler or process heater is supplied for heating, and/or producing electricity, or for any other purpose, or

(2) The period in which operation of a boiler or process heater is initiated for any purpose. Startup begins with either the first-ever firing of fuel in a boiler or process heater for the purpose of supplying useful thermal energy (such as steam or heat) for heating, cooling or process purposes, or producing electricity, or the firing of fuel in a boiler or process heater for any purpose after a shutdown event. Startup ends four hours after when the boiler or process heater supplies useful thermal energy (such as heat or steam) for heating, cooling, or process purposes, or generates electricity, whichever is earlier.

Steam output means:

(1) For a boiler that produces steam for process or heating only (no power generation), the energy content in terms of MMBtu of the boiler steam output,

(2) For a boiler that cogenerates process steam and electricity (also known as combined heat and power), the total energy output, which is the sum of the energy content of the steam exiting the turbine and sent to process in MMBtu and the energy of the electricity generated converted to MMBtu at a rate of 10,000 Btu per kilowatt-hour generated (10 MMBtu per megawatt-hour), and

(3) For a boiler that generates only electricity, the alternate output-based emission limits would be the appropriate emission limit from Table 1 or 2 of this subpart in units of pounds per million Btu heat input (lb per MWh).

(4) For a boiler that performs multiple functions and produces steam to be used for any combination of paragraphs (1), (2), and (3) of this definition that includes electricity generation of paragraph (3) of this definition, the total energy output, in terms of MMBtu of steam output, is the sum of the energy content of steam sent directly to the process and/or used for heating (S_1), the energy content of turbine steam sent to process plus energy in electricity according to paragraph (2) of this definition (S_2), and the energy content of electricity generated by a electricity only turbine as paragraph (3) of this definition ($MW_{(3)}$) and would be calculated using Equation 21 of this section. In the case of boilers supplying steam to one or more common heaters, S_1 , S_2 , and $MW_{(3)}$ for each boiler would be calculated based on the its (steam energy) contribution (fraction of total steam energy) to the common heater.

$$SO_M = S_1 + S_2 + (MW_{(3)} \times CF_n) \quad (\text{Eq. 21})$$

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Where:

SO_M = Total steam output for multi-function boiler, MMBtu

S_1 = Energy content of steam sent directly to the process and/or used for heating, MMBtu

S_2 = Energy content of turbine steam sent to the process plus energy in electricity according to (2) above, MMBtu

$MW_{(3)}$ = Electricity generated according to paragraph (3) of this definition, MWh

CF_n = Conversion factor for the appropriate subcategory for converting electricity generated according to paragraph (3) of this definition to equivalent steam energy, MMBtu/MWh

CF_n for emission limits for boilers in the unit designed to burn solid fuel subcategory = 10.8

CF_n PM and CO emission limits for boilers in one of the subcategories of units designed to burn coal = 11.7

CF_n PM and CO emission limits for boilers in one of the subcategories of units designed to burn biomass = 12.1

CF_n for emission limits for boilers in one of the subcategories of units designed to burn liquid fuel = 11.2

CF_n for emission limits for boilers in the unit designed to burn gas 2 (other) subcategory = 6.2

Stoker means a unit consisting of a mechanically operated fuel feeding mechanism, a stationary or moving grate to support the burning of fuel and admit under-grate air to the fuel, an overfire air system to complete combustion, and an ash discharge system. This definition of stoker includes air swept stokers. There are two general types of stokers: Underfeed and overfeed. Overfeed stokers include mass feed and spreader stokers. Fluidized bed, dutch oven, pile burner, hybrid suspension grate, suspension burners, and fuel cells are not considered to be a stoker design.

Stoker/sloped grate/other unit designed to burn kiln dried biomass means the unit is in the units designed to burn biomass/bio-based solid subcategory that is either a stoker, sloped grate, or other combustor design and is not in the stoker/sloped grate/other units designed to burn wet biomass subcategory.

Stoker/sloped grate/other unit designed to burn wet biomass means the unit is in the units designed to burn biomass/bio-based solid subcategory that is either a stoker, sloped grate, or other combustor design and any of the biomass/bio-based solid fuel combusted in the unit exceeds 20 percent moisture on an annual heat input basis.

Suspension burner means a unit designed to fire dry biomass/biobased solid particles in suspension that are conveyed in an airstream to the furnace like pulverized coal. The combustion of the fuel material is completed on a grate or floor below. The biomass/biobased fuel combusted in the unit shall not exceed 20 percent moisture on an annual heat input basis. Fluidized bed, dutch oven, pile burner, and hybrid suspension grate units are not part of the suspension burner subcategory.

Temporary boiler means any gaseous or liquid fuel boiler or process heater that is designed to, and is capable of, being carried or moved from one location to another by means of, for example, wheels, skids, carrying handles, dollies, trailers, or platforms. A boiler or process heater is not a temporary boiler or process heater if any one of the following conditions exists:

(1) The equipment is attached to a foundation.

(2) The boiler or process heater or a replacement remains at a location within the facility and performs the same or similar function for more than 12 consecutive months, unless the regulatory agency approves an extension. An extension may be granted by the regulating agency upon petition by the owner or operator of a unit specifying the basis for such a request. Any temporary boiler or process heater that replaces a temporary boiler or process heater at a location and performs the same or similar function will be included in calculating the consecutive time period.

(3) The equipment is located at a seasonal facility and operates during the full annual operating period of the seasonal facility, remains at the facility for at least 2 years, and operates at that facility for at least 3 months each year.

(4) The equipment is moved from one location to another within the facility but continues to perform the same or similar function and serve the same electricity, process heat, steam, and/or hot water system in an attempt to circumvent the residence time requirements of this definition.

Appendix C

40 CFR Part 60, Subpart CCCC – *Standards of Performance for Commercial and Industrial
Solid Waste Incineration Units*

ELECTRONIC CODE OF FEDERAL REGULATIONS

e-CFR data is current as of April 11, 2019

Title 40 → Chapter I → Subchapter C → Part 60 → Subpart CCCC

Title 40: Protection of Environment

PART 60—STANDARDS OF PERFORMANCE FOR NEW STATIONARY SOURCES (CONTINUED)

Subpart CCCC—Standards of Performance for Commercial and Industrial Solid Waste Incineration Units

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Table 1 to Subpart CCCC of Part 60—Emission Limitations for Incinerators for Which Construction Is Commenced After November 30, 1999, But No Later Than June 4, 2010, or for Which Modification or Reconstruction Is Commenced on or After June 1, 2001, But No Later Than August 7, 2013

Table 2 to Subpart CCCC of Part 60—Operating Limits for Wet Scrubbers

Table 3 to Subpart CCCC of Part 60—Toxic Equivalency Factors

Table 4 to Subpart CCCC of Part 60—Summary of Reporting Requirements

Table 5 to Subpart CCCC of Part 60—Emission Limitations for Incinerators That Commenced Construction After June 4, 2010, or That Commenced Reconstruction or Modification After August 7, 2013

Table 6 to Subpart CCCC of Part 60—Emission Limitations for Energy Recovery Units That Commenced Construction After June 4, 2010, or That Commenced Reconstruction or Modification After August 7, 2013

Table 7 to Subpart CCCC of Part 60—Emission Limitations for Waste-Burning Kilns That Commenced Construction After June 4, 2010, or Reconstruction or Modification After August 7, 2013

Table 8 to Subpart CCCC of Part 60—Emission Limitations for Small, Remote Incinerators That Commenced Construction After June 4, 2010, Or That Commenced Reconstruction or Modification After August 7, 2013

SOURCE: 81 FR 40970, June, 23, 2016, unless otherwise noted.

INTRODUCTION

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§60.2000 What does this subpart do?

This subpart establishes new source performance standards for commercial and industrial solid waste incineration (CISWI) units.

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§60.2005 When does this subpart become effective?

This subpart takes effect on August 7, 2013. Some of the requirements in this subpart apply to planning the CISWI unit (*i.e.*, the preconstruction requirements in §§60.2045 and 60.2050). Other requirements such as the emission limitations and operating limits apply after the CISWI unit begins operation.

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APPLICABILITY

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§60.2010 Does this subpart apply to my incineration unit?

Yes, if your incineration unit meets all the requirements specified in paragraphs (a) through (c) of this section:

- (a) Your incineration unit is a new incineration unit as defined in §60.2015;
- (b) Your incineration unit is a CISWI unit as defined in §60.2265; and
- (c) Your incineration unit is not exempt under §60.2020.

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§60.2015 What is a new incineration unit?

(a) A new incineration unit is an incineration unit that meets any of the criteria specified in paragraphs (a)(1) through (3) of this section:

- (1) A CISWI unit that commenced construction after June 4, 2010;
- (2) A CISWI unit that commenced reconstruction or modification after August 7, 2013; and

(3) Incinerators and air curtain incinerators, as defined in this subpart, that commenced construction after November 30, 1999, but no later than June 4, 2010, or that commenced reconstruction or modification on or after June 1, 2001, but no later than August 7, 2013, are considered new incineration units and remain subject to the applicable requirements of this subpart until the units become subject to the requirements of an approved state plan or federal plan that implements subpart DDDD of this part (Emission Guidelines and Compliance Times for Commercial and Industrial Solid Waste Incineration Units).

(b) This subpart does not affect your CISWI unit if you make physical or operational changes to your incineration unit primarily to comply with subpart DDDD of this part (Emission Guidelines and Compliance Times for Commercial and Industrial Solid Waste Incineration Units). Such changes do not qualify as reconstruction or modification under this subpart.

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§60.2020 What combustion units are exempt from this subpart?

This subpart exempts the types of units described in paragraphs (a), (c) through (i), and (n) of this section, but some units are required to provide notifications. Air curtain incinerators are exempt from the requirements in this subpart except for the provisions in §§60.2242, 60.2250, and 60.2260.

(a) *Pathological waste incineration units.* Incineration units burning 90 percent or more by weight (on a calendar quarter basis and excluding the weight of auxiliary fuel and combustion air) of pathological waste, low-level radioactive waste, and/or chemotherapeutic waste as defined in §60.2265 are not subject to this subpart if you meet the two requirements specified in paragraphs (a)(1) and (2) of this section:

(1) Notify the Administrator that the unit meets these criteria; and

(2) Keep records on a calendar quarter basis of the weight of pathological waste, low-level radioactive waste, and/or chemotherapeutic waste burned, and the weight of all other fuels and wastes burned in the unit.

(b) [Reserved]

(c) *Municipal waste combustion units.* Incineration units that are subject to subpart Ea of this part (Standards of Performance for Municipal Waste Combustors); subpart Eb of this part (Standards of Performance for Large Municipal Waste Combustors); subpart Cb of this part (Emission Guidelines and Compliance Time for Large Municipal Combustors); subpart AAAA of this part (Standards of Performance for Small Municipal Waste Combustion Units); or subpart BBBB of this part (Emission Guidelines for Small Municipal Waste Combustion Units).

(d) *Medical waste incineration units.* Incineration units regulated under subpart Ec of this part (Standards of Performance for Hospital/Medical/Infectious Waste Incinerators for Which Construction is Commenced After June 20, 1996) or subpart Ce of this part (Emission Guidelines and Compliance Times for Hospital/Medical/Infectious Waste Incinerators).

(e) *Small power production facilities.* Units that meet the three requirements specified in paragraphs (e)(1) through (4) of this section:

(1) The unit qualifies as a small power-production facility under section 3(17)(C) of the Federal Power Act (16 U.S.C. 796(17)(C));

(2) The unit burns homogeneous waste (not including refuse-derived fuel) to produce electricity;

(3) You submit documentation to the Administrator notifying the EPA that the qualifying small power production facility is combusting homogenous waste; and

(4) You maintain the records specified in §60.2175(w).

(f) *Cogeneration facilities.* Units that meet the three requirements specified in paragraphs (f)(1) through (4) of this section:

(1) The unit qualifies as a cogeneration facility under section 3(18)(B) of the Federal Power Act (16 U.S.C. 796(18)(B));

(2) The unit burns homogeneous waste (not including refuse-derived fuel) to produce electricity and steam or other forms of energy used for industrial, commercial, heating, or cooling purposes;

(3) You submit documentation to the Administrator notifying the Agency that the qualifying cogeneration facility is combusting homogenous waste; and

(4) You maintain the records specified in §60.2175(x).

(g) *Hazardous waste combustion units.* Units for which you are required to get a permit under section 3005 of the Solid Waste Disposal Act.

(h) *Materials recovery units.* Units that combust waste for the primary purpose of recovering metals, such as primary and secondary smelters.

(i) *Air curtain incinerators.* Air curtain incinerators that burn only the materials listed in paragraphs (i)(1) through (3) of this section are only required to meet the requirements under §60.2242 and under "Air Curtain Incinerators" (§§60.2245 through 60.2260):

(1) 100 percent wood waste;

(2) 100 percent clean lumber; and

(3) 100 percent mixture of only wood waste, clean lumber, and/or yard waste.

(j)-(l) [Reserved]

(m) *Sewage treatment plants.* Incineration units regulated under subpart O of this part (Standards of Performance for Sewage Treatment Plants).

(n) *Sewage sludge incineration units.* Incineration units combusting sewage sludge for the purpose of reducing the volume of the sewage sludge by removing combustible matter that are subject to subpart LLLL of this part (Standards of Performance

for New Sewage Sludge Incineration Units) or subpart MMMM of this part (Emission Guidelines and Compliance Times for Existing Sewage Sludge Incineration Units).

(o) *Other solid waste incineration units.* Incineration units that are subject to subpart EEEE of this part (Standards of Performance for Other Solid Waste Incineration Units for Which Construction is Commenced After December 9, 2004, or for Which Modification or Reconstruction is Commenced on or After June 16, 2006) or subpart FFFF of this part (Emission Guidelines and Compliance Times for Other Solid Waste Incineration Units That Commenced Construction On or Before December 9, 2004).

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§60.2030 Who implements and enforces this subpart?

(a) This subpart can be implemented and enforced by the U.S. Environmental Protection Agency (EPA), or a delegated authority such as your state, local, or tribal agency. If the EPA Administrator has delegated authority to your state, local, or tribal agency, then that agency (as well as EPA) has the authority to implement and enforce this subpart. You should contact your EPA Regional Office to find out if this subpart is delegated to your state, local, or tribal agency.

(b) In delegating implementation and enforcement authority of this subpart to a state, local, or tribal agency, the authorities contained in paragraph (c) of this section are retained by the EPA Administrator and are not transferred to the state, local, or tribal agency.

(c) The authorities that will not be delegated to state, local, or tribal agencies are specified in paragraphs (c)(1) through (4) and (c)(6) through (11) of this section:

(1) Approval of alternatives to the emission limitations in table 1 of this subpart and operating limits established under §60.2110;

(2) Approval of major alternatives to test methods;

(3) Approval of major alternatives to monitoring;

(4) Approval of major alternatives to recordkeeping and reporting;

(5) [Reserved]

(6) The requirements in §60.2115;

(7) The requirements in §60.2100(b)(2);

(8) Approval of alternative opacity emission limits in §60.2105 under §60.11(e)(6) through (8);

(9) Performance test and data reduction waivers under §60.2125(j), §60.8(b)(4) and (5);

(10) Determination of whether a qualifying small power production facility or cogeneration facility under §60.2020(e) or (f) is combusting homogenous waste; and

(11) Approval of an alternative to any electronic reporting to the EPA required by this subpart.

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§60.2035 How are these new source performance standards structured?

These new source performance standards contain the eleven major components listed in paragraphs (a) through (k) of this section:

(a) Preconstruction siting analysis;

(b) Waste management plan;

(c) Operator training and qualification;

(d) Emission limitations and operating limits;

(e) Performance testing;

(f) Initial compliance requirements;

- (g) Continuous compliance requirements;
- (h) Monitoring;
- (i) Recordkeeping and reporting;
- (j) Definitions; and
- (k) Tables.

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§60.2040 Do all eleven components of these new source performance standards apply at the same time?

No. You must meet the preconstruction siting analysis and waste management plan requirements before you commence construction of the CISWI unit. The operator training and qualification, emission limitations, operating limits, performance testing and compliance, monitoring, and most recordkeeping and reporting requirements are met after the CISWI unit begins operation.

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PRECONSTRUCTION SITING ANALYSIS

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§60.2045 Who must prepare a siting analysis?

- (a) You must prepare a siting analysis if you plan to commence construction of an incinerator after December 1, 2000.
- (b) You must prepare a siting analysis for CISWI units that commenced construction after June 4, 2010, or that commenced reconstruction or modification after August 7, 2013.
- (c) You must prepare a siting analysis if you are required to submit an initial application for a construction permit under 40 CFR part 51, subpart I, or 40 CFR part 52, as applicable, for the reconstruction or modification of your CISWI unit.

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§60.2050 What is a siting analysis?

- (a) The siting analysis must consider air pollution control alternatives that minimize, on a site-specific basis, to the maximum extent practicable, potential risks to public health or the environment. In considering such alternatives, the analysis may consider costs, energy impacts, nonair environmental impacts, or any other factors related to the practicability of the alternatives.
- (b) Analyses of your CISWI unit's impacts that are prepared to comply with state, local, or other federal regulatory requirements may be used to satisfy the requirements of this section, provided they include the consideration of air pollution control alternatives specified in paragraph (a) of this section.
- (c) You must complete and submit the siting requirements of this section as required under §60.2190(c) prior to commencing construction.

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WASTE MANAGEMENT PLAN

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§60.2055 What is a waste management plan?

A waste management plan is a written plan that identifies both the feasibility and the methods used to reduce or separate certain components of solid waste from the waste stream in order to reduce or eliminate toxic emissions from incinerated waste.

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§60.2060 When must I submit my waste management plan?

- (a) You must submit a waste management plan prior to commencing construction.

(b) For CISWI units that commence reconstruction or modification after August 7, 2013, you must submit a waste management plan prior to the commencement of modification or reconstruction.

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§60.2065 What should I include in my waste management plan?

A waste management plan must include consideration of the reduction or separation of waste-stream elements such as paper, cardboard, plastics, glass, batteries, or metals; or the use of recyclable materials. The plan must identify any additional waste management measures and implement those measures the source considers practical and feasible, considering the effectiveness of waste management measures already in place, the costs of additional measures, the emissions reductions expected to be achieved, and any other environmental or energy impacts they might have.

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OPERATOR TRAINING AND QUALIFICATION

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§60.2070 What are the operator training and qualification requirements?

(a) No CISWI unit can be operated unless a fully trained and qualified CISWI unit operator is accessible, either at the facility or can be at the facility within 1 hour. The trained and qualified CISWI unit operator may operate the CISWI unit directly or be the direct supervisor of one or more other plant personnel who operate the unit. If all qualified CISWI unit operators are temporarily not accessible, you must follow the procedures in §60.2100.

(b) Operator training and qualification must be obtained through a state-approved program or by completing the requirements included in paragraph (c) of this section.

(c) Training must be obtained by completing an incinerator operator training course that includes, at a minimum, the three elements described in paragraphs (c)(1) through (3) of this section:

(1) Training on the eleven subjects listed in paragraphs (c)(1)(i) through (xi) of this section;

(i) Environmental concerns, including types of emissions;

(ii) Basic combustion principles, including products of combustion;

(iii) Operation of the specific type of incinerator to be used by the operator, including proper startup, waste charging, and shutdown procedures;

(iv) Combustion controls and monitoring;

(v) Operation of air pollution control equipment and factors affecting performance (if applicable);

(vi) Inspection and maintenance of the incinerator and air pollution control devices;

(vii) Actions to prevent and correct malfunctions or to prevent conditions that may lead to malfunctions;

(viii) Bottom and fly ash characteristics and handling procedures;

(ix) Applicable federal, state, and local regulations, including Occupational Safety and Health Administration workplace standards;

(x) Pollution prevention; and

(xi) Waste management practices.

(2) An examination designed and administered by the instructor.

(3) Written material covering the training course topics that may serve as reference material following completion of the course.

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§60.2075 When must the operator training course be completed?

The operator training course must be completed by the later of the three dates specified in paragraphs (a) through (c) of this section:

- (a) Six months after your CISWI unit startup;
- (b) December 3, 2001; and

(c) The date before an employee assumes responsibility for operating the CISWI unit or assumes responsibility for supervising the operation of the CISWI unit.

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§60.2080 How do I obtain my operator qualification?

(a) You must obtain operator qualification by completing a training course that satisfies the criteria under §60.2070(b).

(b) Qualification is valid from the date on which the training course is completed and the operator successfully passes the examination required under §60.2070(c)(2).

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§60.2085 How do I maintain my operator qualification?

To maintain qualification, you must complete an annual review or refresher course covering, at a minimum, the five topics described in paragraphs (a) through (e) of this section:

- (a) Update of regulations;
- (b) Incinerator operation, including startup and shutdown procedures, waste charging, and ash handling;
- (c) Inspection and maintenance;
- (d) Prevention and correction of malfunctions or conditions that may lead to malfunction; and
- (e) Discussion of operating problems encountered by attendees.

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§60.2090 How do I renew my lapsed operator qualification?

You must renew a lapsed operator qualification by one of the two methods specified in paragraphs (a) and (b) of this section:

- (a) For a lapse of less than 3 years, you must complete a standard annual refresher course described in §60.2085; and
- (b) For a lapse of 3 years or more, you must repeat the initial qualification requirements in §60.2080(a).

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§60.2095 What site-specific documentation is required?

(a) Documentation must be available at the facility and readily accessible for all CISWI unit operators that addresses the ten topics described in paragraphs (a)(1) through (10) of this section. You must maintain this information and the training records required by paragraph (c) of this section in a manner that they can be readily accessed and are suitable for inspection upon request:

- (1) Summary of the applicable standards under this subpart;
- (2) Procedures for receiving, handling, and charging waste;
- (3) Incinerator startup, shutdown, and malfunction procedures;
- (4) Procedures for maintaining proper combustion air supply levels;

(5) Procedures for operating the incinerator and associated air pollution control systems within the standards established under this subpart;

- (6) Monitoring procedures for demonstrating compliance with the incinerator operating limits;
- (7) Reporting and recordkeeping procedures;
- (8) The waste management plan required under §§60.2055 through 60.2065;
- (9) Procedures for handling ash; and
- (10) A list of the wastes burned during the performance test.

(b) You must establish a program for reviewing the information listed in paragraph (a) of this section with each incinerator operator:

(1) The initial review of the information listed in paragraph (a) of this section must be conducted within 6 months after the effective date of this subpart or prior to an employee's assumption of responsibilities for operation of the CISWI unit, whichever date is later; and

(2) Subsequent annual reviews of the information listed in paragraph (a) of this section must be conducted not later than 12 months following the previous review.

(c) You must also maintain the information specified in paragraphs (c)(1) through (3) of this section:

(1) Records showing the names of CISWI unit operators who have completed review of the information in §60.2095(a) as required by §60.2095(b), including the date of the initial review and all subsequent annual reviews;

(2) Records showing the names of the CISWI operators who have completed the operator training requirements under §60.2070, met the criteria for qualification under §60.2080, and maintained or renewed their qualification under §60.2085 or §60.2090. Records must include documentation of training, the dates of the initial and refresher training, and the dates of their qualification and all subsequent renewals of such qualifications; and

(3) For each qualified operator, the phone and/or pager number at which they can be reached during operating hours.

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§60.2100 What if all the qualified operators are temporarily not accessible?

If all qualified operators are temporarily not accessible (*i.e.*, not at the facility and not able to be at the facility within 1 hour), you must meet one of the two criteria specified in paragraphs (a) and (b) of this section, depending on the length of time that a qualified operator is not accessible:

(a) When all qualified operators are not accessible for more than 8 hours, but less than 2 weeks, the CISWI unit may be operated by other plant personnel familiar with the operation of the CISWI unit who have completed a review of the information specified in §60.2095(a) within the past 12 months. However, you must record the period when all qualified operators were not accessible and include this deviation in the annual report as specified under §60.2210; and

(b) When all qualified operators are not accessible for 2 weeks or more, you must take the two actions that are described in paragraphs (b)(1) and (2) of this section:

(1) Notify the Administrator of this deviation in writing within 10 days. In the notice, state what caused this deviation, what you are doing to ensure that a qualified operator is accessible, and when you anticipate that a qualified operator will be accessible; and

(2) Submit a status report to the Administrator every 4 weeks outlining what you are doing to ensure that a qualified operator is accessible, stating when you anticipate that a qualified operator will be accessible and requesting approval from the Administrator to continue operation of the CISWI unit. You must submit the first status report 4 weeks after you notify the Administrator of the deviation under paragraph (b)(1) of this section. If the Administrator notifies you that your request to continue operation of the CISWI unit is disapproved, the CISWI unit may continue operation for 90 days, then must cease operation. Operation of the unit may resume if you meet the two requirements in paragraphs (b)(2)(i) and (ii) of this section:

(i) A qualified operator is accessible as required under §60.2070(a); and

(ii) You notify the Administrator that a qualified operator is accessible and that you are resuming operation.

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EMISSION LIMITATIONS AND OPERATING LIMITS

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§60.2105 What emission limitations must I meet and by when?

(a) You must meet the emission limitations for each CISWI unit, including bypass stack or vent, specified in table 1 of this subpart or tables 5 through 8 of this subpart by the applicable date in §60.2140. You must be in compliance with the emission limitations of this subpart that apply to you at all times.

(b) An incinerator or air curtain incinerator that commenced construction after November 30, 1999, but no later than June 4, 2010, or that commenced reconstruction or modification on or after June 1, 2001 but no later than August 7, 2013, must continue to meet the emission limits in table 1 of this subpart for units in the incinerator subcategory and §60.2250 for air curtain incinerators until the units become subject to the requirements of an approved state plan or federal plan that implements subpart DDDD of this part (Emission Guidelines and Compliance Times for Commercial and Industrial Solid Waste Incineration Units).

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§60.2110 What operating limits must I meet and by when?

(a) If you use a wet scrubber(s) to comply with the emission limitations, you must establish operating limits for up to four operating parameters (as specified in table 2 of this subpart) as described in paragraphs (a)(1) through (4) of this section during the initial performance test:

(1) Maximum charge rate, calculated using one of the two different procedures in paragraph (a)(1)(i) or (ii) of this section, as appropriate:

(i) For continuous and intermittent units, maximum charge rate is 110 percent of the average charge rate measured during the most recent performance test demonstrating compliance with all applicable emission limitations; and

(ii) For batch units, maximum charge rate is 110 percent of the daily charge rate measured during the most recent performance test demonstrating compliance with all applicable emission limitations.

(2) Minimum pressure drop across the wet particulate matter scrubber, which is calculated as the lowest 1-hour average pressure drop across the wet scrubber measured during the most recent performance test demonstrating compliance with the particulate matter emission limitations; or minimum amperage to the wet scrubber, which is calculated as the lowest 1-hour average amperage to the wet scrubber measured during the most recent performance test demonstrating compliance with the particulate matter emission limitations;

(3) Minimum scrubber liquid flow rate, which is calculated as the lowest 1-hour average liquid flow rate at the inlet to the wet acid gas or particulate matter scrubber measured during the most recent performance test demonstrating compliance with all applicable emission limitations; and

(4) Minimum scrubber liquor pH, which is calculated as the lowest 1-hour average liquor pH at the inlet to the wet acid gas scrubber measured during the most recent performance test demonstrating compliance with the HCl emission limitation.

(b) You must meet the operating limits established during the initial performance test 60 days after your CISWI unit reaches the charge rate at which it will operate, but no later than 180 days after its initial startup.

(c) If you use a fabric filter to comply with the emission limitations and you do not use a PM CPMS for monitoring PM compliance, you must operate each fabric filter system such that the bag leak detection system alarm does not sound more than 5 percent of the operating time during a 6-month period. In calculating this operating time percentage, if inspection of the fabric filter demonstrates that no corrective action is required, no alarm time is counted. If corrective action is required, each alarm shall be counted as a minimum of 1 hour. If you take longer than 1 hour to initiate corrective action, the alarm time shall be counted as the actual amount of time taken by you to initiate corrective action.

(d) If you use an electrostatic precipitator to comply with the emission limitations and you do not use a PM CPMS for monitoring PM compliance, you must measure the (secondary) voltage and amperage of the electrostatic precipitator collection plates during the particulate matter performance test. Calculate the average electric power value (secondary voltage × secondary current = secondary electric power) for each test run. The operating limit for the electrostatic precipitator is calculated as the lowest 1-hour average secondary electric power measured during the most recent performance test demonstrating compliance with the particulate matter emission limitations.

(e) If you use activated carbon sorbent injection to comply with the emission limitations, you must measure the sorbent flow rate during the performance testing. The operating limit for the carbon sorbent injection is calculated as the lowest 1-hour average sorbent flow rate measured during the most recent performance test demonstrating compliance with the mercury

emission limitations. For energy recovery units, when your unit operates at lower loads, multiply your sorbent injection rate by the load fraction, as defined in this subpart, to determine the required injection rate (e.g., for 50 percent load, multiply the injection rate operating limit by 0.5).

(f) If you use selective noncatalytic reduction to comply with the emission limitations, you must measure the charge rate, the secondary chamber temperature (if applicable to your CISWI unit), and the reagent flow rate during the nitrogen oxides performance testing. The operating limits for the selective noncatalytic reduction are calculated as the highest 1-hour average charge rate, lower secondary chamber temperature, and lowest reagent flow rate measured during the most recent performance test demonstrating compliance with the nitrogen oxides emission limitations.

(g) If you use a dry scrubber to comply with the emission limitations, you must measure the injection rate of each sorbent during the performance testing. The operating limit for the injection rate of each sorbent is calculated as the lowest 1-hour average injection rate of each sorbent measured during the most recent performance test demonstrating compliance with the hydrogen chloride emission limitations. For energy recovery units, when your unit operates at lower loads, multiply your sorbent injection rate by the load fraction, as defined in this subpart, to determine the required injection rate (e.g., for 50 percent load, multiply the injection rate operating limit by 0.5).

(h) If you do not use a wet scrubber, electrostatic precipitator, or fabric filter to comply with the emission limitations, and if you do not determine compliance with your particulate matter emission limitation with either a particulate matter CEMS or a particulate matter CPMS, you must maintain opacity to less than or equal to 10 percent opacity (1-hour block average).

(i) If you use a PM CPMS to demonstrate compliance, you must establish your PM CPMS operating limit and determine compliance with it according to paragraphs (i)(1) through (5) of this section:

(1) Determine your operating limit as the average PM CPMS output value recorded during the performance test or at a PM CPMS output value corresponding to 75 percent of the emission limit if your PM performance test demonstrates compliance below 75 percent of the emission limit. You must verify an existing or establish a new operating limit after each repeated performance test. You must repeat the performance test annually and reassess and adjust the site-specific operating limit in accordance with the results of the performance test:

(i) Your PM CPMS must provide a 4-20 milliamp output, or digital equivalent, and the establishment of its relationship to manual reference method measurements must be determined in units of milliamperes;

(ii) Your PM CPMS operating range must be capable of reading PM concentrations from zero to a level equivalent to at least two times your allowable emission limit. If your PM CPMS is an auto-ranging instrument capable of multiple scales, the primary range of the instrument must be capable of reading PM concentration from zero to a level equivalent to two times your allowable emission limit; and

(iii) During the initial performance test or any such subsequent performance test that demonstrates compliance with the PM limit, record and average all milliamp output values, or their digital equivalent, from the PM CPMS for the periods corresponding to the compliance test runs (e.g., average all your PM CPMS output values for three corresponding 2-hour Method 5I test runs).

(2) If the average of your three PM performance test runs are below 75 percent of your PM emission limit, you must calculate an operating limit by establishing a relationship of PM CPMS signal to PM concentration using the PM CPMS instrument zero, the average PM CPMS output values corresponding to the three compliance test runs, and the average PM concentration from the Method 5 or performance test with the procedures in (i)(1) through (5) of this section:

(i) Determine your instrument zero output with one of the following procedures:

(A) Zero point data for *in-situ* instruments should be obtained by removing the instrument from the stack and monitoring ambient air on a test bench;

(B) Zero point data for extractive instruments should be obtained by removing the extractive probe from the stack and drawing in clean ambient air;

(C) The zero point can also be established by performing manual reference method measurements when the flue gas is free of PM emissions or contains very low PM concentrations (e.g., when your process is not operating, but the fans are operating or your source is combusting only natural gas) and plotting these with the compliance data to find the zero intercept; and

(D) If none of the steps in paragraphs (i)(2)(i)(A) through (C) of this section are possible, you must use a zero output value provided by the manufacturer.

(ii) Determine your PM CPMS instrument average in milliamperes, or the digital equivalent, and the average of your corresponding three PM compliance test runs, using equation 1:

$$\bar{x} = \frac{1}{n} \sum_{i=1}^n X_i, \bar{y} = \frac{1}{n} \sum_{i=1}^n Y_i \quad (\text{Eq. 1})$$

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Where:

X_i = the PM CPMS output data points for the three runs constituting the performance test,

Y_i = the PM concentration value for the three runs constituting the performance test, and

n = the number of data points.

(iii) With your instrument zero expressed in milliamps, or the digital equivalent, your three run average PM CPMS milliamp value, or its digital equivalent, and your three run average PM concentration from your three compliance tests, determine a relationship of mg/dscm per milliamp or digital signal equivalent with equation 2:

$$R = \frac{Y_i}{(X_i - z)} \quad (\text{Eq. 2})$$

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Where:

R = the relative mg/dscm per milliamp or digital equivalent for your PM CPMS,

Y_i = the three run average mg/dscm PM concentration,

X_i = the three run average milliamp or digital signal output from you PM CPMS, and

z = the milliamp or digital signal equivalent of your instrument zero determined from paragraph (2)(i) of this section.

(iv) Determine your source specific 30-day rolling average operating limit using the mg/dscm per milliamp or digital value from equation 2 in equation 3, below. This sets your operating limit at the PM CPMS output value corresponding to 75 percent of your emission limit:

$$O_h = z + \frac{0.75(L)}{R} \quad (\text{Eq. 3})$$

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Where:

O_h = the operating limit for your PM CPMS on a 30-day rolling average, in milliamps or their digital signal equivalent,

L = your source emission limit expressed in mg/dscm,

z = your instrument zero in milliamps or the digital equivalent, determined from paragraph (2)(i) of this section, and

R = the relative mg/dscm per milliamp or digital signal output equivalent for your PM CPMS, from equation 2.

(3) If the average of your three PM compliance test runs is at or above 75 percent of your PM emission limit you must determine your operating limit by averaging the PM CPMS milliamp or digital signal output corresponding to your three PM performance test runs that demonstrate compliance with the emission limit using equation 4 and you must submit all compliance test and PM CPMS data according to the reporting requirements in paragraph (i)(5) of this section:

$$O_h = \frac{1}{n} \sum_{i=1}^n X_i \quad (\text{Eq. 4})$$

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Where:

X_i = the PM CPMS data points for all runs i ,

n = the number of data points, and

O_h = your site specific operating limit, in milliamps or digital signal equivalent.

(4) To determine continuous compliance, you must record the PM CPMS output data for all periods when the process is operating and the PM CPMS is not out-of-control. You must demonstrate continuous compliance by using all quality-assured hourly average data collected by the PM CPMS for all operating hours to calculate the arithmetic average operating parameter in units of the operating limit (e.g., milliamps or digital signal bits, PM concentration, raw data signal) on a 30-day rolling average basis.

(5) For PM performance test reports used to set a PM CPMS operating limit, the electronic submission of the test report must also include the make and model of the PM CPMS instrument, serial number of the instrument, analytical principle of the instrument (e.g., beta attenuation), span of the instruments primary analytical range, milliamp or digital signal value equivalent to the instrument zero output, technique by which this zero value was determined, and the average milliamp or digital signals corresponding to each PM compliance test run.

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§60.2115 What if I do not use a wet scrubber, fabric filter, activated carbon injection, selective noncatalytic reduction, an electrostatic precipitator, or a dry scrubber to comply with the emission limitations?

If you use an air pollution control device other than a wet scrubber, activated carbon injection, selective noncatalytic reduction, fabric filter, an electrostatic precipitator, or a dry scrubber or limit emissions in some other manner, including material balances, to comply with the emission limitations under §60.2105, you must petition the EPA Administrator for specific operating limits to be established during the initial performance test and continuously monitored thereafter. You must submit the petition at least sixty days before the performance test is scheduled to begin. Your petition must include the five items listed in paragraphs (a) through (e) of this section:

(a) Identification of the specific parameters you propose to use as additional operating limits;

(b) A discussion of the relationship between these parameters and emissions of regulated pollutants, identifying how emissions of regulated pollutants change with changes in these parameters and how limits on these parameters will serve to limit emissions of regulated pollutants;

(c) A discussion of how you will establish the upper and/or lower values for these parameters which will establish the operating limits on these parameters;

(d) A discussion identifying the methods you will use to measure and the instruments you will use to monitor these parameters, as well as the relative accuracy and precision of these methods and instruments; and

(e) A discussion identifying the frequency and methods for recalibrating the instruments you will use for monitoring these parameters.

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PERFORMANCE TESTING

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§60.2125 How do I conduct the initial and annual performance test?

(a) All performance tests must consist of a minimum of three test runs conducted under conditions representative of normal operations.

(b) You must document that the waste burned during the performance test is representative of the waste burned under normal operating conditions by maintaining a log of the quantity of waste burned (as required in §60.2175(b)(1)) and the types of waste burned during the performance test.

(c) All performance tests must be conducted using the minimum run duration specified in table 1 of this subpart or tables 5 through 8 of this subpart.

(d) Method 1 of appendix A of this part must be used to select the sampling location and number of traverse points.

(e) Method 3A or 3B of appendix A of this part must be used for gas composition analysis, including measurement of oxygen concentration. Method 3A or 3B of appendix A of this part must be used simultaneously with each method.

(f) All pollutant concentrations, except for opacity, must be adjusted to 7 percent oxygen using equation 5 of this section:

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Where:

C_{adj} = pollutant concentration adjusted to 7 percent oxygen;

C_{meas} = pollutant concentration measured on a dry basis;

(20.9-7) = 20.9 percent oxygen-7 percent oxygen (defined oxygen correction basis);

20.9 = oxygen concentration in air, percent; and

%O₂ = oxygen concentration measured on a dry basis, percent.

(g) You must determine dioxins/furans toxic equivalency by following the procedures in paragraphs (g)(1) through (4) of this section:

(1) Measure the concentration of each dioxin/furan tetra-through octa-chlorinated isomer emitted using EPA Method 23 at 40 CFR part 60, appendix A-7;

(2) Quantify isomers meeting identification criteria 2, 3, 4, and 5 in Section 5.3.2.5 of Method 23, regardless of whether the isomers meet identification criteria 1 and 7. You must quantify the isomers per Section 9.0 of Method 23. (Note: You may reanalyze the sample aliquot or split to reduce the number of isomers not meeting identification criteria 1 or 7 of Section 5.3.2.5.);

(3) For each dioxin/furan (tetra-through octa-chlorinated) isomer measured in accordance with paragraphs (g)(1) and (2) of this section, multiply the isomer concentration by its corresponding toxic equivalency factor specified in table 3 of this subpart; and

(4) Sum the products calculated in accordance with paragraph (g)(3) of this section to obtain the total concentration of dioxins/furans emitted in terms of toxic equivalency.

(h) Method 22 at 40 CFR part 60, appendix A-7 of this part must be used to determine compliance with the fugitive ash emission limit in table 1 of this subpart or tables 5 through 8 of this subpart.

(i) If you have an applicable opacity operating limit, you must determine compliance with the opacity limit using Method 9 at 40 CFR part 60, appendix A-4, based on three 1-hour blocks consisting of ten 6-minute average opacity values, unless you are required to install a continuous opacity monitoring system, consistent with §§60.2145 and 60.2165.

(j) You must determine dioxins/furans total mass basis by following the procedures in paragraphs (j)(1) through (3) of this section:

(1) Measure the concentration of each dioxin/furan tetra-through octa-chlorinated isomer emitted using EPA Method 23 at 40 CFR part 60, appendix A-7;

(2) Quantify isomers meeting identification criteria 2, 3, 4, and 5 in Section 5.3.2.5 of Method 23, regardless of whether the isomers meet identification criteria 1 and 7. You must quantify the isomers per Section 9.0 of Method 23. (Note: You may reanalyze the sample aliquot or split to reduce the number of isomers not meeting identification criteria 1 or 7 of Section 5.3.2.5.); and

(3) Sum the quantities measured in accordance with paragraphs (j)(1) and (2) of this section to obtain the total concentration of dioxins/furans emitted in terms of total mass basis.

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§60.2130 How are the performance test data used?

You use results of performance tests to demonstrate compliance with the emission limitations in table 1 of this subpart or tables 5 through 8 of this subpart.

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INITIAL COMPLIANCE REQUIREMENTS

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§60.2135 How do I demonstrate initial compliance with the emission limitations and establish the operating limits?

You must conduct a performance test, as required under §§60.2125 and 60.2105 to determine compliance with the emission limitations in table 1 of this subpart or tables 5 through 8 of this subpart, to establish compliance with any opacity operating limit in §60.2110, to establish the kiln-specific emission limit in §60.2145(y), as applicable, and to establish operating limits using the procedures in §60.2110 or §60.2115. The performance test must be conducted using the test methods listed in table 1 of this subpart or tables 5 through 8 of this subpart and the procedures in §60.2125. The use of the bypass stack during a performance test shall invalidate the performance test. You must conduct a performance evaluation of each continuous monitoring system within 60 days of installation of the monitoring system.

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§60.2140 By what date must I conduct the initial performance test?

(a) The initial performance test must be conducted within 60 days after your CISWI unit reaches the charge rate at which it will operate, but no later than 180 days after its initial startup.

(b) If you commence or recommence combusting a solid waste at an existing combustion unit at any commercial or industrial facility, and you conducted a test consistent with the provisions of this subpart while combusting the solid waste within the 6 months preceding the reintroduction of that solid waste in the combustion chamber, you do not need to retest until 6 months from the date you reintroduce that solid waste.

(c) If you commence or recommence combusting a solid waste at an existing combustion unit at any commercial or industrial facility and you have not conducted a performance test consistent with the provisions of this subpart while combusting the solid waste within the 6 months preceding the reintroduction of that solid waste in the combustion chamber, you must conduct a performance test within 60 days from the date you reintroduce that solid waste.

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§60.2141 By what date must I conduct the initial air pollution control device inspection?

(a) The initial air pollution control device inspection must be conducted within 60 days after installation of the control device and the associated CISWI unit reaches the charge rate at which it will operate, but no later than 180 days after the device's initial startup.

(b) Within 10 operating days following an air pollution control device inspection, all necessary repairs must be completed unless the owner or operator obtains written approval from the state agency establishing a date whereby all necessary repairs of the designated facility must be completed.

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CONTINUOUS COMPLIANCE REQUIREMENTS

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§60.2145 How do I demonstrate continuous compliance with the emission limitations and the operating limits?

(a) *Compliance with standards.* (1) The emission standards and operating requirements set forth in this subpart apply at all times;

(2) If you cease combusting solid waste, you may opt to remain subject to the provisions of this subpart. Consistent with the definition of CISWI unit, you are subject to the requirements of this subpart at least 6 months following the last date of solid waste combustion. Solid waste combustion is ceased when solid waste is not in the combustion chamber (*i.e.*, the solid waste feed to the combustor has been cut off for a period of time not less than the solid waste residence time);

(3) If you cease combusting solid waste, you must be in compliance with any newly applicable standards on the effective date of the waste-to-fuel switch. The effective date of the waste-to-fuel switch is a date selected by you, that must be at least 6 months from the date that you ceased combusting solid waste, consistent with §60.2145(a)(2). Your source must remain in compliance with this subpart until the effective date of the waste-to-fuel switch;

(4) If you own or operate an existing commercial or industrial combustion unit that combusted a fuel or non-waste material, and you commence or recommence combustion of solid waste, you are subject to the provisions of this subpart as of the first day you introduce or reintroduce solid waste to the combustion chamber, and this date constitutes the effective date of the fuel-to-waste switch. You must complete all initial compliance demonstrations for any section 112 standards that are applicable to your facility before you commence or recommence combustion of solid waste. You must provide 30 days prior notice of the effective date of the waste-to-fuel switch. The notification must identify:

(i) The name of the owner or operator of the CISWI unit, the location of the source, the emissions unit(s) that will cease burning solid waste, and the date of the notice;

(ii) The currently applicable subcategory under this subpart, and any 40 CFR part 63 subpart and subcategory that will be applicable after you cease combusting solid waste;

(iii) The fuel(s), non-waste material(s) and solid waste(s) the CISWI unit is currently combusting and has combusted over the past 6 months, and the fuel(s) or non-waste materials the unit will commence combusting;

(iv) The date on which you became subject to the currently applicable emission limits; and

(v) The date upon which you will cease combusting solid waste, and the date (if different) that you intend for any new requirements to become applicable (*i.e.*, the effective date of the waste-to-fuel switch), consistent with paragraphs (a)(2) and (3) of this section.

(5) All air pollution control equipment necessary for compliance with any newly applicable emissions limits which apply as a result of the cessation or commencement or recommencement of combusting solid waste must be installed and operational as of the effective date of the waste-to-fuel, or fuel-to-waste switch.

(6) All monitoring systems necessary for compliance with any newly applicable monitoring requirements which apply as a result of the cessation or commencement or recommencement of combusting solid waste must be installed and operational as of the effective date of the waste-to-fuel, or fuel-to-waste switch. All calibration and drift checks must be performed as of the effective date of the waste-to-fuel, or fuel-to-waste switch. Relative accuracy tests must be performed as of the performance test deadline for PM CEMS (if PM CEMS are elected to demonstrate continuous compliance with the particulate matter emission limits). Relative accuracy testing for other CEMS need not be repeated if that testing was previously performed consistent with Clean Air Act section 112 monitoring requirements or monitoring requirements under this subpart.

(b) You must conduct an annual performance test for the pollutants listed in table 1 of this subpart or tables 5 through 8 of this subpart and opacity for each CISWI unit as required under §60.2125. The annual performance test must be conducted using the test methods listed in table 1 of this subpart or tables 5 through 8 of this subpart and the procedures in §60.2125. Annual performance tests are not required if you use CEMS or continuous opacity monitoring systems to determine compliance.

(c) You must continuously monitor the operating parameters specified in §60.2110 or established under §60.2115 and as specified in §60.2170. Use 3-hour block average values to determine compliance (except for baghouse leak detection system alarms) unless a different averaging period is established under §60.2115 or, for energy recovery units, where the averaging time for each operating parameter is a 30-day rolling, calculated each hour as the average of the previous 720 operating hours. Operation above the established maximum, below the established minimum, or outside the allowable range of operating limits specified in paragraph (a) of this section constitutes a deviation from your operating limits established under this subpart, except during performance tests conducted to determine compliance with the emission and operating limits or to establish new operating limits. Operating limits are confirmed or reestablished during performance tests.

(d) You must burn only the same types of waste and fuels used to establish subcategory applicability (for energy recovery units) and operating limits during the performance test.

(e) For energy recovery units, incinerators, and small remote units, you must perform an annual visual emissions test for ash handling.

(f) For energy recovery units, you must conduct an annual performance test for opacity (except where particulate matter CEMS or continuous opacity monitoring systems are used) and the pollutants listed in table 6 of this subpart.

(g) You may elect to demonstrate continuous compliance with the carbon monoxide emission limit using a carbon monoxide CEMS according to the following requirements:

(1) You must measure emissions according to §60.13 to calculate 1-hour arithmetic averages, corrected to 7 percent oxygen. CEMS data during startup and shutdown, as defined in this subpart, are not corrected to 7 percent oxygen, and are measured at stack oxygen content. You must demonstrate initial compliance with the carbon monoxide emissions limit using a 30-day rolling average of these 1-hour arithmetic average emission concentrations, including CEMS data during startup and shutdown as defined in this subpart, calculated using equation 19-19 in section 12.4.1 of EPA Reference Method 19 at 40 CFR part 60, appendix A-7 of this part; and

(2) Operate the carbon monoxide CEMS in accordance with the requirements of performance specification 4A of appendix B of this part and quality assurance procedure 1 of appendix F of this part.

(h) Coal and liquid/gas energy recovery units with average annual heat input rates greater than or equal to 250 MMBtu/hr may elect to demonstrate continuous compliance with the particulate matter emissions limit using a particulate matter CEMS according to the procedures in §60.2165(n) instead of the particulate matter continuous parameter monitoring system (CPMS) specified in §60.2145. Coal and liquid/gas energy recovery units with annual average heat input rates less than 250 MMBtu/hr, incinerators, and small remote incinerators may also elect to demonstrate compliance using a particulate matter CEMS according to the procedures in §60.2165(n) instead of particulate matter testing with EPA Method 5 at 40 CFR part 60, appendix A-3 and, if applicable, the continuous opacity monitoring requirements in paragraph (i) of this section.

(i) For energy recovery units with annual average heat input rates greater than or equal to 10 MMBtu/hour and less than 250 MMBtu/hr, you must install, operate, certify and maintain a continuous opacity monitoring system (COMS) according to the procedures in §60.2165.

(j) For waste-burning kilns, you must conduct an annual performance test for cadmium, lead, dioxins/furans and hydrogen chloride as listed in table 7 of this subpart. If you do not use an acid gas wet scrubber or dry scrubber, you must determine compliance with the hydrogen chloride emissions limit according to the requirements in paragraph (j)(1) of this section. You must determine compliance with the mercury emissions limit using a mercury CEMS according to paragraph (j)(2) of this section. You must determine compliance with nitrogen oxides, sulfur dioxide, and carbon monoxide using CEMS. You must determine compliance with particulate matter using CPMS:

(1) If you monitor compliance with the HCl emissions limit by operating an HCl CEMS, you must do so in accordance with Performance Specification 15 (PS 15) of appendix B to 40 CFR part 60, or, PS 18 of appendix B to 40 CFR part 60. You must operate, maintain, and quality assure a HCl CEMS installed and certified under PS 15 according to the quality assurance requirements in Procedure 1 of appendix F to 40 CFR part 60 except that the Relative Accuracy Test Audit requirements of Procedure 1 must be replaced with the validation requirements and criteria of sections 11.1.1 and 12.0 of PS 15. You must operate, maintain and quality assure a HCl CEMS installed and certified under PS 18 according to the quality assurance requirements in Procedure 6 of appendix F to 40 CFR part 60. For any performance specification that you use, you must use Method 321 of appendix A to 40 CFR part 63 as the reference test method for conducting relative accuracy testing. The span value and calibration requirements in paragraphs (j)(1)(i) and (ii) of this section apply to all HCl CEMS used under this subpart:

(i) You must use a measurement span value for any HCl CEMS of 0-10 ppmvw unless the monitor is installed on a kiln without an inline raw mill. Kilns without an inline raw mill may use a higher span value sufficient to quantify all expected emissions concentrations. The HCl CEMS data recorder output range must include the full range of expected HCl concentration values which would include those expected during "mill off" conditions. The corresponding data recorder range shall be documented in the site-specific monitoring plan and associated records;

(ii) In order to quality assure data measured above the span value, you must use one of the three options in paragraphs (j)(1)(ii)(A) through (C) of this section:

(A) Include a second span that encompasses the HCl emission concentrations expected to be encountered during "mill off" conditions. This second span may be rounded to a multiple of 5 ppm of total HCl. The requirements of the appropriate HCl monitor performance specification shall be followed for this second span with the exception that a RATA with the mill off is not required;

(B) Quality assure any data above the span value by proving instrument linearity beyond the span value established in paragraph (j)(1)(i) of this section using the following procedure. Conduct a weekly "above span linearity" calibration challenge of the monitoring system using a reference gas with a certified value greater than your highest expected hourly concentration or greater than 75% of the highest measured hourly concentration. The "above span" reference gas must meet the requirements of the applicable performance specification and must be introduced to the measurement system at the probe. Record and report the results of this procedure as you would for a daily calibration. The "above span linearity" challenge is successful if the value measured by the HCl CEMS falls within 10 percent of the certified value of the reference gas. If the value measured by the HCl CEMS during the above span linearity challenge exceeds 10 percent of the certified value of the reference gas, the monitoring system must be evaluated and repaired and a new "above span linearity" challenge met before returning the HCl CEMS to service, or data above span from the HCl CEMS must be subject to the quality assurance procedures established in (j)(1)(ii)(D) of this section. In this manner values measured by the HCl CEMS during the above span linearity challenge exceeding ± 20 percent of the certified value of the reference gas must be normalized using equation 6;

(C) Quality assure any data above the span value established in paragraph (j)(1)(i) of this section using the following procedure. Any time two consecutive one-hour average measured concentration of HCl exceeds the span value you must, within 24 hours before or after, introduce a higher, "above span" HCl reference gas standard to the HCl CEMS. The "above span" reference gas must meet the requirements of the applicable performance specification and target a concentration level between 50 and 150 percent of the highest expected hourly concentration measured during the period of measurements above span, and must be introduced at the probe. While this target represents a desired concentration range that is not always achievable in practice, it is expected that the intent to meet this range is demonstrated by the value of the reference gas. Expected values may include above span calibrations done before or after the above-span measurement period. Record and report the results of this procedure as you would for a daily calibration. The "above span" calibration is successful if the value measured by the HCl CEMS is within 20 percent of the certified value of the reference gas. If the value measured by the HCl CEMS is not within 20 percent of the certified value of the reference gas, then you must normalize the stack gas values measured above span as described in paragraph (j)(1)(ii)(D) of this section. If the "above span" calibration is conducted during the period when measured emissions are above span and there is a failure to collect the one data point in an hour due to the calibration duration, then you must determine the emissions average for that missed hour as the average of hourly averages for the hour preceding the missed hour and the hour following the missed hour. In an hour where an "above span" calibration is

being conducted and one or more data points are collected, the emissions average is represented by the average of all valid data points collected in that hour;

(D) In the event that the “above span” calibration is not successful (*i.e.*, the HCl CEMS measured value is not within 20 percent of the certified value of the reference gas), then you must normalize the one-hour average stack gas values measured above the span during the 24-hour period preceding or following the “above span” calibration for reporting based on the HCl CEMS response to the reference gas as shown in equation 6:

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Only one “above span” calibration is needed per 24-hour period.

(2) Compliance with the mercury emissions limit must be determined using a mercury CEMS according to the following requirements:

(i) You must operate a CEMS system in accordance with performance specification 12A of 40 CFR part 60, appendix B or a sorbent trap based integrated monitor in accordance with performance specification 12B of 40 CFR part 60, appendix B. The duration of the performance test must be a calendar month. For each calendar month in which the waste-burning kiln operates, hourly mercury concentration data, and stack gas volumetric flow rate data must be obtained. You must demonstrate compliance with the mercury emissions limit using a 30-day rolling average of these 1-hour mercury concentrations, including CEMS data during startup and shutdown as defined in this subpart, calculated using equation 19-19 in section 12.4.1 of EPA Reference Method 19 at 40 CFR part 60, appendix A-7 of this part. CEMS data during startup and shutdown, as defined in this subpart, are not corrected to 7 percent oxygen, and are measured at stack oxygen content;

(ii) Owners or operators using a mercury CEMS must install, operate, calibrate, and maintain an instrument for continuously measuring and recording the mercury mass emissions rate to the atmosphere according to the requirements of performance specifications 6 and 12A of 40 CFR part 60, appendix B, and quality assurance procedure 6 of 40 CFR part 60, appendix F; and

(iii) The owner or operator of a waste-burning kiln must demonstrate initial compliance by operating a mercury CEMS while the raw mill of the in-line kiln/raw mill is operating under normal conditions and including at least one period when the raw mill is off.

(k) If you use an air pollution control device to meet the emission limitations in this subpart, you must conduct an initial and annual inspection of the air pollution control device. The inspection must include, at a minimum, the following:

(1) Inspect air pollution control device(s) for proper operation; and.

(2) Develop a site-specific monitoring plan according to the requirements in paragraph (l) of this section. This requirement also applies to you if you petition the EPA Administrator for alternative monitoring parameters under §60.13(i).

(l) For each continuous monitoring system required in this section, you must develop and submit to the EPA Administrator for approval a site-specific monitoring plan according to the requirements of this paragraph (l) that addresses paragraphs (l)(1) (i) through (vi) of this section:

(1) You must submit this site-specific monitoring plan at least 60 days before your initial performance evaluation of your continuous monitoring system:

(i) Installation of the continuous monitoring system sampling probe or other interface at a measurement location relative to each affected process unit such that the measurement is representative of control of the exhaust emissions (*e.g.*, on or downstream of the last control device);

(ii) Performance and equipment specifications for the sample interface, the pollutant concentration or parametric signal analyzer and the data collection and reduction systems.

(iii) Performance evaluation procedures and acceptance criteria (*e.g.*, calibrations);

(iv) Ongoing operation and maintenance procedures in accordance with the general requirements of §60.11(d);

(v) Ongoing data quality assurance procedures in accordance with the general requirements of §60.13; and

(vi) Ongoing recordkeeping and reporting procedures in accordance with the general requirements of §60.7(b), (c), (c)(1), (c)(4), (d), (e), (f), and (g).

(2) You must conduct a performance evaluation of each continuous monitoring system in accordance with your site-specific monitoring plan.

(3) You must operate and maintain the continuous monitoring system in continuous operation according to the site-specific monitoring plan.

(m) If you have an operating limit that requires the use of a flow monitoring system, you must meet the requirements in paragraphs (l) and (m)(1) through (4) of this section:

(1) Install the flow sensor and other necessary equipment in a position that provides a representative flow;

(2) Use a flow sensor with a measurement sensitivity at full scale of no greater than 2 percent;

(3) Minimize the effects of swirling flow or abnormal velocity distributions due to upstream and downstream disturbances; and

(4) Conduct a flow monitoring system performance evaluation in accordance with your monitoring plan at the time of each performance test but no less frequently than annually.

(n) If you have an operating limit that requires the use of a pressure monitoring system, you must meet the requirements in paragraphs (l) and (n)(1) through (6) of this section:

(1) Install the pressure sensor(s) in a position that provides a representative measurement of the pressure (e.g., PM scrubber pressure drop);

(2) Minimize or eliminate pulsating pressure, vibration, and internal and external corrosion;

(3) Use a pressure sensor with a minimum tolerance of 1.27 centimeters of water or a minimum tolerance of 1 percent of the pressure monitoring system operating range, whichever is less;

(4) Perform checks at the frequency outlined in your site-specific monitoring plan to ensure pressure measurements are not obstructed (e.g., check for pressure tap plugging daily);

(5) Conduct a performance evaluation of the pressure monitoring system in accordance with your monitoring plan at the time of each performance test but no less frequently than annually; and

(6) If at any time the measured pressure exceeds the manufacturer's specified maximum operating pressure range, conduct a performance evaluation of the pressure monitoring system in accordance with your monitoring plan and confirm that the pressure monitoring system continues to meet the performance requirements in your monitoring plan. Alternatively, install and verify the operation of a new pressure sensor.

(o) If you have an operating limit that requires a pH monitoring system, you must meet the requirements in paragraphs (l) and (o)(1) through (4) of this section:

(1) Install the pH sensor in a position that provides a representative measurement of scrubber effluent pH;

(2) Ensure the sample is properly mixed and representative of the fluid to be measured;

(3) Conduct a performance evaluation of the pH monitoring system in accordance with your monitoring plan at least once each process operating day; and

(4) Conduct a performance evaluation (including a two-point calibration with one of the two buffer solutions having a pH within 1 of the pH of the operating limit) of the pH monitoring system in accordance with your monitoring plan at the time of each performance test but no less frequently than quarterly.

(p) If you have an operating limit that requires a secondary electric power monitoring system for an electrostatic precipitator, you must meet the requirements in paragraphs (l) and (p)(1) and (2) of this section:

(1) Install sensors to measure (secondary) voltage and current to the precipitator collection plates; and

(2) Conduct a performance evaluation of the electric power monitoring system in accordance with your monitoring plan at the time of each performance test but no less frequently than annually.

(q) If you have an operating limit that requires the use of a monitoring system to measure sorbent injection rate (e.g., weigh belt, weigh hopper, or hopper flow measurement device), you must meet the requirements in paragraphs (l) and (q)(1) and (2) of this section:

(1) Install the system in a position(s) that provides a representative measurement of the total sorbent injection rate; and

(2) Conduct a performance evaluation of the sorbent injection rate monitoring system in accordance with your monitoring plan at the time of each performance test but no less frequently than annually.

(r) If you elect to use a fabric filter bag leak detection system to comply with the requirements of this subpart, you must install, calibrate, maintain, and continuously operate a bag leak detection system as specified in paragraphs (l) and (r)(1) through (5) of this section:

(1) Install a bag leak detection sensor(s) in a position(s) that will be representative of the relative or absolute particulate matter loadings for each exhaust stack, roof vent, or compartment (e.g., for a positive pressure fabric filter) of the fabric filter;

(2) Use a bag leak detection system certified by the manufacturer to be capable of detecting particulate matter emissions at concentrations of 10 milligrams per actual cubic meter or less;

(3) Conduct a performance evaluation of the bag leak detection system in accordance with your monitoring plan and consistent with the guidance provided in EPA-454/R-98-015 (incorporated by reference, see §60.17);

(4) Use a bag leak detection system equipped with a device to continuously record the output signal from the sensor; and

(5) Use a bag leak detection system equipped with a system that will sound an alarm when an increase in relative particulate matter emissions over a preset level is detected. The alarm must be located where it is observed readily by plant operating personnel.

(s) For facilities using a CEMS to demonstrate compliance with the sulfur dioxide emission limit, compliance with the sulfur dioxide emission limit may be demonstrated by using the CEMS specified in §60.2165 to measure sulfur dioxide. CEMS data during startup and shutdown, as defined in this subpart, are not corrected to 7 percent oxygen, and are measured at stack oxygen content. You must calculate a 30-day rolling average of the 1-hour arithmetic average emission concentrations, including CEMS data during startup and shutdown as defined in this subpart, calculated using equation 19-19 in section 12.4.1 of EPA Reference Method 19 at 40 CFR part 60, appendix A-7 of this part. The sulfur dioxide CEMS must be operated according to performance specification 2 in appendix B of this part and must follow the procedures and methods specified in paragraph (s) of this section. For sources that have actual inlet emissions less than 100 parts per million dry volume, the relative accuracy criterion for inlet sulfur dioxide CEMS should be no greater than 20 percent of the mean value of the reference method test data in terms of the units of the emission standard, or 5 parts per million dry volume absolute value of the mean difference between the reference method and the CEMS, whichever is greater:

(1) During each relative accuracy test run of the CEMS required by performance specification 2 in appendix B of this part, collect sulfur dioxide and oxygen (or carbon dioxide) data concurrently (or within a 30- to 60-minute period) with both the CEMS and the test methods specified in paragraphs (s)(1)(i) and (ii) of this section:

(i) For sulfur dioxide, EPA Reference Method 6 or 6C, or as an alternative ANSI/ASME PTC 19.10-1981 (incorporated by reference, see §60.17) must be used; and

(ii) For oxygen (or carbon dioxide), EPA Reference Method 3A or 3B, or as an alternative ANSI/ASME PTC 19.10-1981 (incorporated by reference, see §60.17), must be used.

(2) The span value of the CEMS at the inlet to the sulfur dioxide control device must be 125 percent of the maximum estimated hourly potential sulfur dioxide emissions of the unit subject to this subpart. The span value of the CEMS at the outlet of the sulfur dioxide control device must be 50 percent of the maximum estimated hourly potential sulfur dioxide emissions of the unit subject to this subpart.

(3) Conduct accuracy determinations quarterly and calibration drift tests daily in accordance with procedure 1 in appendix F of this part.

(t) For facilities using a CEMS to demonstrate continuous compliance with the nitrogen oxides emission limit, compliance with the nitrogen oxides emission limit may be demonstrated by using the CEMS specified in §60.2165 to measure nitrogen oxides. CEMS data during startup and shutdown, as defined in this subpart, are not corrected to 7 percent oxygen, and are measured at stack oxygen content. You must calculate a 30-day rolling average of the 1-hour arithmetic average emission concentrations, including CEMS data during startup and shutdown as defined in this subpart, using equation 19-19 in section 12.4.1 of EPA Reference Method 19 at 40 CFR part 60, appendix A-7 of this part. The nitrogen oxides CEMS must be operated according to performance specification 2 in appendix B of this part and must follow the procedures and methods specified in paragraphs (t)(1) through (4) of this section:

(1) During each relative accuracy test run of the CEMS required by performance specification 2 of appendix B of this part, collect nitrogen oxides and oxygen (or carbon dioxide) data concurrently (or within a 30- to 60-minute period) with both the

CEMS and the test methods specified in paragraphs (t)(1)(i) and (ii) of this section:

(i) For nitrogen oxides, EPA Reference Method 7 or 7E at 40 CFR part 60, appendix A-4 must be used; and

(ii) For oxygen (or carbon dioxide), EPA Reference Method 3A or 3B at 40 CFR part 60, appendix A-3, or as an alternative ANSI/ASME PTC 19-10.1981 (incorporated by reference, see §60.17), as applicable, must be used.

(2) The span value of the continuous emission monitoring system must be 125 percent of the maximum estimated hourly potential nitrogen oxide emissions of the unit.

(3) Conduct accuracy determinations quarterly and calibration drift tests daily in accordance with procedure 1 in appendix F of this part.

(4) The owner or operator of an affected facility may request that compliance with the nitrogen oxides emission limit be determined using carbon dioxide measurements corrected to an equivalent of 7 percent oxygen. If carbon dioxide is selected for use in diluent corrections, the relationship between oxygen and carbon dioxide levels must be established during the initial performance test according to the procedures and methods specified in paragraphs (t)(4)(i) through (iv) of this section. This relationship may be re-established during performance compliance tests:

(i) The fuel factor equation in Method 3B must be used to determine the relationship between oxygen and carbon dioxide at a sampling location. Method 3A or 3B, or as an alternative ANSI/ASME PTC 19.10-1981 (incorporated by reference, see §60.17), as applicable, must be used to determine the oxygen concentration at the same location as the carbon dioxide monitor;

(ii) Samples must be taken for at least 30 minutes in each hour;

(iii) Each sample must represent a 1-hour average; and

(iv) A minimum of three runs must be performed.

(u) For facilities using a CEMS to demonstrate continuous compliance with any of the emission limits of this subpart, you must complete the following:

(1) Demonstrate compliance with the appropriate emission limit(s) using a 30-day rolling average of 1-hour arithmetic average emission concentrations, including CEMS data during startup and shutdown as defined in this subpart, calculated using equation 19-19 in section 12.4.1 of EPA Reference Method 19 at 40 CFR part 60, appendix A-7 of this part. CEMS data during startup and shutdown, as defined in the subpart, are not corrected to 7 percent oxygen, and are measured at stack oxygen content; and

(2) Operate all CEMS in accordance with the applicable procedures under appendices B and F of this part.

(v) Use of the bypass stack at any time is an emissions standards deviation for particulate matter, HCl, Pb, Cd, Hg, NO_x, SO₂, and dioxin/furans.

(w) For energy recovery units with a design heat input capacity of 100 MMBtu per hour or greater that do not use a carbon monoxide CEMS, you must install, operate, and maintain a oxygen analyzer system as defined in §60.2265 according to the procedures in paragraphs (w)(1) through (4) of this section:

(1) The oxygen analyzer system must be installed by the initial performance test date specified in §60.2140;

(2) You must operate the oxygen trim system within compliance with paragraph (w)(3) of this section at all times;

(3) You must maintain the oxygen level such that the 30-day rolling average that is established as the operating limit for oxygen is not below the lowest hourly average oxygen concentration measured during the most recent CO performance test; and

(4) You must calculate and record a 30-day rolling average oxygen concentration using equation 19-19 in section 12.4.1 of EPA Reference Method 19 of Appendix A-7 of this part.

(x) For energy recovery units with annual average heat input rates greater than or equal to 250 MMBtu/hour and waste-burning kilns, you must install, calibrate, maintain, and operate a PM CPMS and record the output of the system as specified in paragraphs (x)(1) through (8) of this section. For other energy recovery units, you may elect to use PM CPMS operated in accordance with this section. PM CPMS are suitable in lieu of using other CMS for monitoring PM compliance (e.g., bag leak detectors, ESP secondary power, PM scrubber pressure):

(1) Install, calibrate, operate, and maintain your PM CPMS according to the procedures in your approved site-specific monitoring plan developed in accordance with paragraphs (l) and (x)(1)(i) through (iii) of this section:

(i) The operating principle of the PM CPMS must be based on in-stack or extractive light scatter, light scintillation, beta attenuation, or mass accumulation detection of the exhaust gas or representative sample. The reportable measurement output from the PM CPMS must be expressed as milliamps or the digital signal equivalent;

(ii) The PM CPMS must have a cycle time (*i.e.*, period required to complete sampling, measurement, and reporting for each measurement) no longer than 60 minutes; and

(iii) The PM CPMS must be capable of detecting and responding to particulate matter concentrations increments no greater than 0.5 mg/actual cubic meter.

(2) During the initial performance test or any such subsequent performance test that demonstrates compliance with the PM limit, you must adjust the site-specific operating limit in accordance with the results of the performance test according to the procedures specified in §60.2110.

(3) Collect PM CPMS hourly average output data for all energy recovery unit or waste-burning kiln operating hours. Express the PM CPMS output as milliamps.

(4) Calculate the arithmetic 30-day rolling average of all of the hourly average PM CPMS output collected during all energy recovery unit or waste-burning kiln operating hours data (milliamps or their digital equivalent).

(5) You must collect data using the PM CPMS at all times the energy recovery unit or waste-burning kiln is operating and at the intervals specified in paragraph (x)(1)(ii) of this section, except for periods of monitoring system malfunctions, repairs associated with monitoring system malfunctions, required monitoring system quality assurance or quality control activities (including, as applicable, calibration checks and required zero and span adjustments), and any scheduled maintenance as defined in your site-specific monitoring plan.

(6) You must use all the data collected during all energy recovery unit or waste-burning kiln operating hours in assessing the compliance with your operating limit except:

(i) Any data collected during monitoring system malfunctions, repairs associated with monitoring system malfunctions, or required monitoring system quality assurance or quality control activities conducted during monitoring system malfunctions are not used in calculations (report any such periods in your annual deviation report);

(ii) Any data collected during periods when the monitoring system is out of control as specified in your site-specific monitoring plan, repairs associated with periods when the monitoring system is out of control, or required monitoring system quality assurance or quality control activities conducted during out-of-control periods are not used in calculations (report emissions or operating levels and report any such periods in your annual deviation report);

(iii) Any PM CPMS data recorded during periods of CEMS data during startup and shutdown, as defined in this subpart.

(7) You must record and make available upon request results of PM CPMS system performance audits, as well as the dates and duration of periods from when the PM CPMS is out of control until completion of the corrective actions necessary to return the PM CPMS to operation consistent with your site-specific monitoring plan.

(8) For any deviation of the 30-day rolling average PM CPMS average value from the established operating parameter limit, you must:

(i) Within 48 hours of the deviation, visually inspect the air pollution control device;

(ii) If inspection of the air pollution control device identifies the cause of the deviation, take corrective action as soon as possible and return the PM CPMS measurement to within the established value;

(iii) Within 30 days of the deviation or at the time of the annual compliance test, whichever comes first, conduct a PM emissions compliance test to determine compliance with the PM emissions limit and to verify. Within 45 days of the deviation, you must re-establish the CPMS operating limit. You are not required to conduct additional testing for any deviations that occur between the time of the original deviation and the PM emissions compliance test required under paragraph (x) of this section; and

(iv) PM CPMS deviations leading to more than four required performance tests in a 12-month process operating period (rolling monthly) constitute a violation of this subpart.

(y) When there is an alkali bypass and/or an in-line coal mill that exhaust emissions through a separate stack(s), the combined emissions are subject to the emission limits applicable to waste-burning kilns. To determine the kiln-specific emission limit for demonstrating compliance, you must:

(1) Calculate a kiln-specific emission limit using equation 7:

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Where:

C_{ks} = Kiln stack concentration (ppmvd, mg/dscm, ng/dscm, depending on pollutant. Each corrected to 7% O₂.)

Q_{ab} = Alkali bypass flow rate (volume/hr)

C_{ab} = Alkali bypass concentration (ppmvd, mg/dscm, ng/dscm, depending on pollutant. Each corrected to 7% O₂.)

Q_{cm} = In-line coal mill flow rate (volume/hr)

C_{cm} = In-line coal mill concentration (ppmvd, mg/dscm, ng/dscm, depending on pollutant. Each corrected to 7% O₂.)

Q_{ks} = Kiln stack flow rate (volume/hr)

(2) Particulate matter concentration must be measured downstream of the in-line coal mill. All other pollutant concentrations must be measured either upstream or downstream of the in-line coal mill; and

(3) For purposes of determining the combined emissions from kilns equipped with an alkali bypass or that exhaust kiln gases to a coal mill that exhausts through a separate stack, instead of installing a CEMS or PM CPMS on the alkali bypass stack or in-line coal mill stack, the results of the initial and subsequent performance test can be used to demonstrate compliance with the relevant emissions limit. A performance test must be conducted on an annual basis (between 11 and 13 calendar months following the previous performance test).

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§60.2150 By what date must I conduct the annual performance test?

You must conduct annual performance tests between 11 and 13 months of the previous performance test.

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§60.2151 By what date must I conduct the annual air pollution control device inspection?

On an annual basis (no more than 12 months following the previous annual air pollution control device inspection), you must complete the air pollution control device inspection as described in §60.2141.

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§60.2155 May I conduct performance testing less often?

(a) You must conduct annual performance tests according to the schedule specified in §60.2150, with the following exceptions:

(1) You may conduct a repeat performance test at any time to establish new values for the operating limits to apply from that point forward, as specified in §60.2160. The Administrator may request a repeat performance test at any time;

(2) You must repeat the performance test within 60 days of a process change, as defined in §60.2265;

(3) If the initial or any subsequent performance test for any pollutant in table 1 or tables 5 through 8 of this subpart, as applicable, demonstrates that the emission level for the pollutant is no greater than the emission level specified in paragraph (a) (3)(i) or (a)(3)(ii) of this section, as

(i) For particulate matter, hydrogen chloride, mercury, nitrogen oxides, sulfur dioxide, cadmium, lead and dioxins/furans, the emission level equal to 75 percent of the applicable emission limit in table 1 or tables 5 through 8 of this subpart, as applicable, to this subpart; and

(ii) For fugitive emissions, visible emissions (of combustion ash from the ash conveying system) for 2 percent of the time during each of the three 1-hour observations periods.

(4) If you are conducting less frequent testing for a pollutant as provided in paragraph (a)(3) of this section and a subsequent performance test for the pollutant indicates that your CISWI unit does not meet the emission level specified in paragraph (a)(3)(i) or (a)(3)(ii) of this section, as applicable, you must conduct annual performance tests for the pollutant according to the schedule specified in paragraph (a) of this section until you qualify for less frequent testing for the pollutant as specified in paragraph (a)(3) of this section.

(b) [Reserved]

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§60.2160 May I conduct a repeat performance test to establish new operating limits?

(a) Yes. You may conduct a repeat performance test at any time to establish new values for the operating limits. The Administrator may request a repeat performance test at any time.

(b) You must repeat the performance test if your feed stream is different than the feed streams used during any performance test used to demonstrate compliance.

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MONITORING

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§60.2165 What monitoring equipment must I install and what parameters must I monitor?

(a) If you are using a wet scrubber to comply with the emission limitation under §60.2105, you must install, calibrate (to manufacturers' specifications), maintain, and operate devices (or establish methods) for monitoring the value of the operating parameters used to determine compliance with the operating limits listed in table 2 of this subpart. These devices (or methods) must measure and record the values for these operating parameters at the frequencies indicated in table 2 of this subpart at all times except as specified in §60.2170(a).

(b) If you use a fabric filter to comply with the requirements of this subpart and you do not use a PM CPMS for monitoring PM compliance, you must install, calibrate, maintain, and continuously operate a bag leak detection system as specified in paragraphs (b)(1) through (8) of this section:

(1) You must install and operate a bag leak detection system for each exhaust stack of the fabric filter;

(2) Each bag leak detection system must be installed, operated, calibrated, and maintained in a manner consistent with the manufacturer's written specifications and recommendations;

(3) The bag leak detection system must be certified by the manufacturer to be capable of detecting particulate matter emissions at concentrations of 10 milligrams per actual cubic meter or less;

(4) The bag leak detection system sensor must provide output of relative or absolute particulate matter loadings;

(5) The bag leak detection system must be equipped with a device to continuously record the output signal from the sensor;

(6) The bag leak detection system must be equipped with an alarm system that will alert automatically an operator when an increase in relative particulate matter emissions over a preset level is detected. The alarm must be located where it is observed easily by plant operating personnel;

(7) For positive pressure fabric filter systems, a bag leak detection system must be installed in each baghouse compartment or cell. For negative pressure or induced air fabric filters, the bag leak detector must be installed downstream of the fabric filter; and

(8) Where multiple detectors are required, the system's instrumentation and alarm may be shared among detectors.

(c) If you are using something other than a wet scrubber, activated carbon, selective non-catalytic reduction, an electrostatic precipitator, or a dry scrubber to comply with the emission limitations under §60.2105, you must install, calibrate (to the manufacturers' specifications), maintain, and operate the equipment necessary to monitor compliance with the site-specific operating limits established using the procedures in §60.2115.

(d) If you use activated carbon injection to comply with the emission limitations in this subpart, you must measure the minimum mercury sorbent flow rate once per hour.

(e) If you use selective noncatalytic reduction to comply with the emission limitations, you must complete the following:

(1) Following the date on which the initial performance test is completed or is required to be completed under §60.2125, whichever date comes first, ensure that the affected facility does not operate above the maximum charge rate, or below the minimum secondary chamber temperature (if applicable to your CISWI unit) or the minimum reagent flow rate measured as 3-hour block averages at all times; and

(2) Operation of the affected facility above the maximum charge rate, below the minimum secondary chamber temperature and below the minimum reagent flow rate simultaneously constitute a violation of the nitrogen oxides emissions limit.

(f) If you use an electrostatic precipitator to comply with the emission limits of this subpart and you do not use a PM CPMS for monitoring PM compliance, you must monitor the secondary power to the electrostatic precipitator collection plates and maintain the 3-hour block averages at or above the operating limits established during the mercury or particulate matter performance test.

(g) For waste-burning kilns not equipped with a wet scrubber or dry scrubber, in place of hydrogen chloride testing with EPA Method 321 at 40 CFR part 63, appendix A, an owner or operator must install, calibrate, maintain, and operate a CEMS for monitoring hydrogen chloride emissions, as specified in §60.2145(j) of this subpart, discharged to the atmosphere and record the output of the system. To demonstrate continuous compliance with the hydrogen chloride emissions limit for units other than waste-burning kilns not equipped with a wet scrubber or dry scrubber, a facility may substitute use of a hydrogen chloride CEMS for conducting the hydrogen chloride annual performance test, monitoring the minimum hydrogen chloride sorbent flow rate, monitoring the minimum scrubber liquor pH, and monitoring minimum injection rate.

(h) To demonstrate continuous compliance with the particulate matter emissions limit, a facility may substitute use of either a particulate matter CEMS or a particulate matter CPMS for conducting the PM annual performance test and using other CMS for monitoring PM compliance (e.g., bag leak detectors, ESP secondary power, PM scrubber pressure).

(i) To demonstrate continuous compliance with the dioxin/furan emissions limit, a facility may substitute use of a continuous automated sampling system for the dioxin/furan annual performance test. You must record the output of the system and analyze the sample according to EPA Method 23 at 40 CFR part 60, appendix A-7 of this part. This option to use a continuous automated sampling system takes effect on the date a final performance specification applicable to dioxin/furan from continuous monitors is published in the FEDERAL REGISTER. The owner or operator who elects to continuously sample dioxin/furan emissions instead of sampling and testing using EPA Method 23 at 40 CFR part 60, appendix A-7 must install, calibrate, maintain, and operate a continuous automated sampling system and must comply with the requirements specified in §60.58b(p) and (q). A facility may substitute continuous dioxin/furan monitoring for the minimum sorbent flow rate, if activated carbon sorbent injection is used solely for compliance with the dioxin/furan emission limit.

(j) To demonstrate continuous compliance with the mercury emissions limit, a facility may substitute use of a continuous automated sampling system for the mercury annual performance test. You must record the output of the system and analyze the sample at set intervals using any suitable determinative technique that can meet performance specification 12B. The owner or operator who elects to continuously sample mercury emissions instead of sampling and testing using EPA Reference Method 29 or 30B at 40 CFR part 60, appendix A-8, ASTM D6784-02 (Reapproved 2008) (incorporated by reference, see §60.17), or an approved alternative method for measuring mercury emissions, must install, calibrate, maintain, and operate a continuous automated sampling system and must comply with performance specification 12A and quality assurance procedure 5, as well as the requirements specified in §60.58b(p) and (q). A facility may substitute continuous mercury monitoring for the minimum sorbent flow rate, if activated carbon sorbent injection is used solely for compliance with the mercury emission limit. Waste-burning kilns must install, calibrate, maintain, and operate a mercury CEMS as specified in §60.2145(j).

(k) To demonstrate continuous compliance with the nitrogen oxides emissions limit, a facility may substitute use of a CEMS for the nitrogen oxides annual performance test to demonstrate compliance with the nitrogen oxides emissions limits and monitoring the charge rate, secondary chamber temperature, and reagent flow for selective noncatalytic reduction, if applicable:

(1) Install, calibrate, maintain, and operate a CEMS for measuring nitrogen oxides emissions discharged to the atmosphere and record the output of the system. The requirements under performance specification 2 of appendix B of this part, the quality assurance procedure one of appendix F of this part and the procedures under §60.13 must be followed for installation, evaluation, and operation of the CEMS; and

(2) Following the date that the initial performance test for nitrogen oxides is completed or is required to be completed under §60.2125, compliance with the emission limit for nitrogen oxides required under §60.52b(d) must be determined based on the 30-day rolling average of the hourly emission concentrations using CEMS outlet data. The 1-hour arithmetic averages must be expressed in parts per million by volume corrected to 7 percent oxygen (dry basis) and used to calculate the 30-day rolling

average concentrations. CEMS data during startup and shutdown, as defined in this subpart, are not corrected to 7 percent oxygen, and are measured at stack oxygen content. The 1-hour arithmetic averages must be calculated using the data points required under §60.13(e)(2).

(l) To demonstrate continuous compliance with the sulfur dioxide emissions limit, a facility may substitute use of a continuous automated sampling system for the sulfur dioxide annual performance test to demonstrate compliance with the sulfur dioxide emissions limits:

(1) Install, calibrate, maintain, and operate a CEMS for measuring sulfur dioxide emissions discharged to the atmosphere and record the output of the system. The requirements under performance specification 2 of appendix B of this part, the quality assurance requirements of procedure one of appendix F of this part and procedures under §60.13 must be followed for installation, evaluation, and operation of the CEMS; and

(2) Following the date that the initial performance test for sulfur dioxide is completed or is required to be completed under §60.2125, compliance with the sulfur dioxide emission limit may be determined based on the 30-day rolling average of the hourly arithmetic average emission concentrations using CEMS outlet data. The 1-hour arithmetic averages must be expressed in parts per million corrected to 7 percent oxygen (dry basis) and used to calculate the 30-day rolling average emission concentrations. CEMS data during startup and shutdown, as defined in this subpart, are not corrected to 7 percent oxygen, and are measured at stack oxygen content. The 1-hour arithmetic averages must be calculated using the data points required under §60.13(e)(2).

(m) For energy recovery units over 10 MMBtu/hr but less than 250 MMBtu/hr annual average heat input rates that do not use a wet scrubber, fabric filter with bag leak detection system, or particulate matter CEMS, you must install, operate, certify, and maintain a continuous opacity monitoring system according to the procedures in paragraphs (m)(1) through (5) of this section by the compliance date specified in §60.2105. Energy recovery units that use a CEMS to demonstrate initial and continuing compliance according to the procedures in §60.2165(n) are not required to install a continuous opacity monitoring system and must perform the annual performance tests for the opacity consistent with §60.2145(f):

(1) Install, operate, and maintain each continuous opacity monitoring system according to performance specification 1 of 40 CFR part 60, appendix B;

(2) Conduct a performance evaluation of each continuous opacity monitoring system according to the requirements in §60.13 and according to PS-1 of 40 CFR part 60, appendix B;

(3) As specified in §60.13(e)(1), each continuous opacity monitoring system must complete a minimum of one cycle of sampling and analyzing for each successive 10-second period and one cycle of data recording for each successive 6-minute period;

(4) Reduce the continuous opacity monitoring system data as specified in §60.13(h)(1); and

(5) Determine and record all the 6-minute averages (and 1-hour block averages as applicable) collected.

(n) For coal and liquid/gas energy recovery units, incinerators, and small remote incinerators, an owner or operator may elect to install, calibrate, maintain, and operate a CEMS for monitoring particulate matter emissions discharged to the atmosphere and record the output of the system. The owner or operator of an affected facility who continuously monitors particulate matter emissions instead of conducting performance testing using EPA Method 5 at 40 CFR part 60, appendix A-3 or, as applicable, monitor with a particulate matter CPMS according to paragraph (r) of this section, must install, calibrate, maintain, and operate a CEMS and must comply with the requirements specified in paragraphs (n)(1) through (13) of this section:

(1) Notify the Administrator 1 month before starting use of the system;

(2) Notify the Administrator 1 month before stopping use of the system;

(3) The monitor must be installed, evaluated, and operated in accordance with the requirements of performance specification 11 of appendix B of this part and quality assurance requirements of procedure two of appendix F of this part and §60.13. Use Method 5 or Method 5I of appendix A of this part for the PM CEMS correlation testing;

(4) The initial performance evaluation must be completed no later than 180 days after the date of initial startup of the affected facility, as specified under §60.2125 or within 180 days of notification to the Administrator of use of the continuous monitoring system if the owner or operator was previously determining compliance by Method 5 performance tests, whichever is later;

(5) The owner or operator of an affected facility may request that compliance with the particulate matter emission limit be determined using carbon dioxide measurements corrected to an equivalent of 7 percent oxygen. The relationship between

oxygen and carbon dioxide levels for the affected facility must be established according to the procedures and methods specified in §60.2145(t)(4)(i) through (iv);

(6) The owner or operator of an affected facility must conduct an initial performance test for particulate matter emissions as required under §60.2125. Compliance with the particulate matter emission limit, if PM CEMS are elected for demonstrating compliance, must be determined by using the CEMS specified in paragraph (n) of this section to measure particulate matter. You must calculate a 30-day rolling average of 1-hour arithmetic average emission concentrations, including CEMS data during startup and shutdown, as defined in this subpart, using equation 19-19 in section 12.4.1 of EPA Reference Method 19 at 40 CFR part 60, appendix A-7;

(7) Compliance with the particulate matter emission limit must be determined based on the 30-day rolling average calculated using equation 19-19 in section 12.4.1 of EPA Reference Method 19 at 40 CFR part 60, appendix A-7 from the 1-hour arithmetic average CEMS outlet data;

(8) At a minimum, valid continuous monitoring system hourly averages must be obtained as specified in §60.2170(e);

(9) The 1-hour arithmetic averages required under paragraph (n)(7) of this section must be expressed in milligrams per dry standard cubic meter corrected to 7 percent oxygen (dry basis) and must be used to calculate the 30-day rolling average emission concentrations. CEMS data during startup and shutdown, as defined in this subpart, are not corrected to 7 percent oxygen, and are measured at stack oxygen content. The 1-hour arithmetic averages must be calculated using the data points required under §60.13(e)(2);

(10) All valid CEMS data must be used in calculating average emission concentrations even if the minimum CEMS data requirements of paragraph (n)(8) of this section are not met.

(11) The CEMS must be operated according to performance specification 11 in appendix B of this part;

(12) During each relative accuracy test run of the CEMS required by performance specification 11 in appendix B of this part, particulate matter and oxygen (or carbon dioxide) data must be collected concurrently (or within a 30- to 60-minute period) by both the CEMS and the following test methods:

(i) For particulate matter, EPA Reference Method 5 must be used; and

(ii) For oxygen (or carbon dioxide), EPA Reference Method 3A or 3B, as applicable, must be used; and

(13) Quarterly accuracy determinations and daily calibration drift tests must be performed in accordance with procedure 2 in appendix F of this part.

(o) To demonstrate continuous compliance with the carbon monoxide emissions limit, you may substitute use of a continuous automated sampling system for the carbon monoxide annual performance test:

(1) Install, calibrate, maintain, and operate a CEMS for measuring carbon monoxide emissions discharged to the atmosphere and record the output of the system. The requirements under performance specification 4B of appendix B of this part, the quality assurance procedure 1 of appendix F of this part and the procedures under §60.13 must be followed for installation, evaluation, and operation of the CEMS; and

(2) Following the date that the initial performance test for carbon monoxide is completed or is required to be completed under §60.2140, compliance with the carbon monoxide emission limit may be determined based on the 30-day rolling average of the hourly arithmetic average emission concentrations, including CEMS data during startup and shutdown as defined in this subpart, using CEMS outlet data. Except for CEMS data during startup and shutdown, as defined in this subpart, the 1-hour arithmetic averages must be expressed in parts per million corrected to 7 percent oxygen (dry basis) and used to calculate the 30-day rolling average emission concentrations. CEMS data during startup and shutdown, as defined in this subpart, are not corrected to 7 percent oxygen, and are measured at stack oxygen content. The 1-hour arithmetic averages must be calculated using the data points required under §60.13(e)(2).

(p) The owner/operator of an affected source with a bypass stack shall install, calibrate (to manufacturers' specifications), maintain, and operate a device or method for measuring the use of the bypass stack including date, time and duration.

(q) For energy recovery units with a design heat input capacity of 100 MMBtu per hour or greater that do not use a carbon monoxide CEMS, you must install, operate, and maintain an oxygen analyzer system as defined in §60.2265 according to the procedures in paragraphs (q)(1) through (4) of this section:

(1) The oxygen analyzer system must be installed by the initial performance test date specified in §60.2140;

(2) You must operate the oxygen trim system within compliance with paragraph (q)(3) of this section at all times;

(3) You must maintain the oxygen level such that the 30-day rolling average that is established as the operating limit for oxygen according to paragraph (q)(4) of this section is not below the lowest hourly average oxygen concentration measured during the most recent CO performance test; and

(4) You must calculate and record a 30-day rolling average oxygen concentration using equation 19-19 in section 12.4.1 of EPA Reference Method 19 of appendix A-7 of this part.

(r) For energy recovery units with annual average heat input rates greater than or equal to 250 MMBtu/hour and waste-burning kilns, you must install, calibrate, maintain, and operate a PM CPMS and record the output of the system as specified in paragraphs (r)(1) through (8) of this section. If you elect to use a particulate matter CEMS as specified in paragraph (n) of this section, you are not required to use a PM CPMS to monitor particulate matter emissions. For other energy recovery units, you may elect to use PM CPMS operated in accordance with this section. PM CPMS are suitable in lieu of using other CMS for monitoring PM compliance (e.g., bag leak detectors, ESP secondary power, PM scrubber pressure):

(1) Install, calibrate, operate, and maintain your PM CPMS according to the procedures in your approved site-specific monitoring plan developed in accordance with §60.2145(l) and (r)(1)(i) through (iii) of this section:

(i) The operating principle of the PM CPMS must be based on in-stack or extractive light scatter, light scintillation, beta attenuation, or mass accumulation detection of PM in the exhaust gas or representative sample. The reportable measurement output from the PM CPMS must be expressed as milliamps or a digital signal equivalent;

(ii) The PM CPMS must have a cycle time (*i.e.*, period required to complete sampling, measurement, and reporting for each measurement) no longer than 60 minutes; and

(iii) The PM CPMS must be capable of detecting and responding to particulate matter concentration increments no greater than 0.5 mg/actual cubic meter.

(2) During the initial performance test or any such subsequent performance test that demonstrates compliance with the PM limit, you must adjust the site-specific operating limit in accordance with the results of the performance test according to the procedures specified in §60.2110.

(3) Collect PM CPMS hourly average output data for all energy recovery unit or waste-burning kiln operating hours. Express the PM CPMS output as milliamps or the digital signal equivalent.

(4) Calculate the arithmetic 30-day rolling average of all of the hourly average PM CPMS output collected during all energy recovery unit or waste-burning kiln operating hours data (milliamps or digital bits).

(5) You must collect data using the PM CPMS at all times the energy recovery unit or waste-burning kiln is operating and at the intervals specified in paragraph (r)(1)(ii) of this section, except for periods of monitoring system malfunctions, repairs associated with monitoring system malfunctions, required monitoring system quality assurance or quality control activities (including, as applicable, calibration checks and required zero and span adjustments), and any scheduled maintenance as defined in your site-specific monitoring plan.

(6) You must use all the data collected during all energy recovery unit or waste-burning kiln operating hours in assessing the compliance with your operating limit except:

(i) Any data collected during monitoring system malfunctions, repairs associated with monitoring system malfunctions, or required monitoring system quality assurance or quality control activities conducted during monitoring system malfunctions are not used in calculations (report any such periods in your annual deviation report);

(ii) Any data collected during periods when the monitoring system is out of control as specified in your site-specific monitoring plan, repairs associated with periods when the monitoring system is out of control, or required monitoring system quality assurance or quality control activities conducted during out-of-control periods are not used in calculations (report emissions or operating levels and report any such periods in your annual deviation report); and

(iii) Any PM CPMS data recorded during periods of CEMS data during startup and shutdown, as defined in this subpart.

(7) You must record and make available upon request results of PM CPMS system performance audits, as well as the dates and duration of periods from when the PM CPMS is out of control until completion of the corrective actions necessary to return the PM CPMS to operation consistent with your site-specific monitoring plan.

(8) For any deviation of the 30-day rolling average PM CPMS average value from the established operating parameter limit, you must:

(i) Within 48 hours of the deviation, visually inspect the air pollution control device;

(ii) If inspection of the air pollution control device identifies the cause of the deviation, take corrective action as soon as possible and return the PM CPMS measurement to within the established value;

(iii) Within 30 days of the deviation or at the time of the annual compliance test, whichever comes first, conduct a PM emissions compliance test to determine compliance with the PM emissions limit and to verify the operation of the emissions control device(s). Within 45 days of the deviation, you must re-establish the CPMS operating limit. You are not required to conduct additional testing for any deviations that occur between the time of the original deviation and the PM emissions compliance test required under this paragraph; and

(iv) PM CPMS deviations leading to more than four required performance tests in a 12-month process operating period (rolling monthly) constitute a violation of this subpart.

(s) If you use a dry scrubber to comply with the emission limits of this subpart, you must monitor the injection rate of each sorbent and maintain the 3-hour block averages at or above the operating limits established during the hydrogen chloride performance test.

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§60.2170 Is there a minimum amount of monitoring data I must obtain?

For each continuous monitoring system required or optionally allowed under §60.2165, you must collect data according to this section:

(a) You must operate the monitoring system and collect data at all required intervals at all times compliance is required except for periods of monitoring system malfunctions or out-of-control periods, repairs associated with monitoring system malfunctions or out-of-control periods (as specified in 60.2210(o)), and required monitoring system quality assurance or quality control activities (including, as applicable, calibration checks and required zero and span adjustments). 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. You are required to effect monitoring system repairs in response to monitoring system malfunctions or out-of-control periods and to return the monitoring system to operation as expeditiously as practicable;

(b) You may not use data recorded during monitoring system malfunctions or out-of-control periods, repairs associated with monitoring system malfunctions or out-of-control periods, or required monitoring system quality assurance or control activities in calculations used to report emissions or operating levels. You must use all the data collected during all other periods, including data normalized for above scale readings, in assessing the operation of the control device and associated control system; and

(c) Except for periods of monitoring system malfunctions or out-of-control periods, repairs associated with monitoring system malfunctions or out-of-control periods, and required monitoring system quality assurance or quality control activities including, as applicable, calibration checks and required zero and span adjustments, failure to collect required data is a deviation of the monitoring requirements.

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RECORDKEEPING AND REPORTING

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§60.2175 What records must I keep?

You must maintain the items (as applicable) as specified in paragraphs (a), (b), and (e) through (x) of this section for a period of at least 5 years:

(a) Calendar date of each record; and

(b) Records of the data described in paragraphs (b)(1) through (6) of this section:

(1) The CISWI unit charge dates, times, weights, and hourly charge rates;

(2) Liquor flow rate to the wet scrubber inlet every 15 minutes of operation, as applicable;

(3) Pressure drop across the wet scrubber system every 15 minutes of operation or amperage to the wet scrubber every 15 minutes of operation, as applicable;

(4) Liquor pH as introduced to the wet scrubber every 15 minutes of operation, as applicable;

(5) For affected CISWI units that establish operating limits for controls other than wet scrubbers under §60.2110(d) through (g) or §60.2115, you must maintain data collected for all operating parameters used to determine compliance with the operating limits. For energy recovery units using activated carbon injection or a dry scrubber, you must also maintain records of the load fraction and corresponding sorbent injection rate records;

(6) If a fabric filter is used to comply with the emission limitations, you must record the date, time, and duration of each alarm and the time corrective action was initiated and completed, and a brief description of the cause of the alarm and the corrective action taken. You must also record the percent of operating time during each 6-month period that the alarm sounds, calculated as specified in §60.2110(c);

(c)-(d) [Reserved]

(e) Identification of calendar dates and times for which data show a deviation from the operating limits in table 2 of this subpart or a deviation from other operating limits established under §60.2110(d) through (g) or §60.2115 with a description of the deviations, reasons for such deviations, and a description of corrective actions taken;

(f) The results of the initial, annual, and any subsequent performance tests conducted to determine compliance with the emission limits and/or to establish operating limits, as applicable. Retain a copy of the complete test report including calculations;

(g) All documentation produced as a result of the siting requirements of §§60.2045 and 60.2050;

(h) Records showing the names of CISWI unit operators who have completed review of the information in §60.2095(a) as required by §60.2095(b), including the date of the initial review and all subsequent annual reviews;

(i) Records showing the names of the CISWI operators who have completed the operator training requirements under §60.2070, met the criteria for qualification under §60.2080, and maintained or renewed their qualification under §60.2085 or §60.2090. Records must include documentation of training, the dates of the initial and refresher training, and the dates of their qualification and all subsequent renewals of such qualifications;

(j) For each qualified operator, the phone and/or pager number at which they can be reached during operating hours;

(k) Records of calibration of any monitoring devices as required under §60.2165;

(l) Equipment vendor specifications and related operation and maintenance requirements for the incinerator, emission controls, and monitoring equipment;

(m) The information listed in §60.2095(a);

(n) On a daily basis, keep a log of the quantity of waste burned and the types of waste burned (always required);

(o) Maintain records of the annual air pollution control device inspections that are required for each CISWI unit subject to the emissions limits in table 1 of this subpart or tables 5 through 8 of this subpart, any required maintenance, and any repairs not completed within 10 days of an inspection or the timeframe established by the state regulatory agency;

(p) For continuously monitored pollutants or parameters, you must document and keep a record of the following parameters measured using continuous monitoring systems:

(1) All 6-minute average levels of opacity;

(2) All 1-hour average concentrations of sulfur dioxide emissions;

(3) All 1-hour average concentrations of nitrogen oxides emissions;

(4) All 1-hour average concentrations of carbon monoxide emissions. You must indicate which data are CEMS data during startup and shutdown;

(5) All 1-hour average concentrations of particulate matter emissions;

(6) All 1-hour average concentrations of mercury emissions;

(7) All 1-hour average concentrations of hydrogen chloride emissions;

(8) All 1-hour average percent oxygen concentrations; and

(9) All 1-hour average PM CPMS readings or particulate matter CEMS outputs;

(q) Records indicating use of the bypass stack, including dates, times, and durations.

(r) If you choose to stack test less frequently than annually, consistent with §60.2155(a) through (c), you must keep annual records that document that your emissions in the previous stack test(s) were less than 75 percent of the applicable emission limit and document that there was no change in source operations including fuel composition and operation of air pollution control equipment that would cause emissions of the relevant pollutant to increase within the past year.

(s) Records of the occurrence and duration of each malfunction of operation (*i.e.*, process equipment) or the air pollution control and monitoring equipment.

(t) Records of all required maintenance performed on the air pollution control and monitoring equipment.

(u) Records of actions taken during periods of malfunction to minimize emissions in accordance with §60.11(d), including corrective actions to restore malfunctioning process and air pollution control and monitoring equipment to its normal or usual manner of operation.

(v) For operating units that combust non-hazardous secondary materials that have been determined not to be solid waste pursuant to §241.3(b)(1) of this chapter, you must keep a record which documents how the secondary material meets each of the legitimacy criteria under §241.3(d)(1). If you combust a fuel that has been processed from a discarded non-hazardous secondary material pursuant to §241.3(b)(4) of this chapter, you must keep records as to how the operations that produced the fuel satisfies the definition of processing in §241.2 and each of the legitimacy criteria of §241.3(d)(1) of this chapter. If the fuel received a non-waste determination pursuant to the petition process submitted under §241.3(c) of this chapter, you must keep a record that documents how the fuel satisfies the requirements of the petition process. For operating units that combust non-hazardous secondary materials as fuel per §241.4, you must keep records documenting that the material is a listed non-waste under §241.4(a).

(w) Records of the criteria used to establish that the unit qualifies as a small power production facility under section 3(17)(C) of the Federal Power Act (16 U.S.C. 796(17)(C)) and that the waste material the unit is proposed to burn is homogeneous.

(x) Records of the criteria used to establish that the unit qualifies as a cogeneration facility under section 3(18)(B) of the Federal Power Act (16 U.S.C. 796(18)(B)) and that the waste material the unit is proposed to burn is homogeneous.

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§60.2180 Where and in what format must I keep my records?

All records must be available onsite in either paper copy or computer-readable format that can be printed upon request, unless an alternative format is approved by the Administrator.

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§60.2185 What reports must I submit?

See table 4 of this subpart for a summary of the reporting requirements.

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§60.2190 What must I submit prior to commencing construction?

You must submit a notification prior to commencing construction that includes the five items listed in paragraphs (a) through (e) of this section:

- (a) A statement of intent to construct;
- (b) The anticipated date of commencement of construction;
- (c) All documentation produced as a result of the siting requirements of §60.2050;
- (d) The waste management plan as specified in §§60.2055 through 60.2065; and
- (e) Anticipated date of initial startup.

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§60.2195 What information must I submit prior to initial startup?

You must submit the information specified in paragraphs (a) through (e) of this section prior to initial startup:

- (a) The type(s) of waste to be burned;
- (b) The maximum design waste burning capacity;
- (c) The anticipated maximum charge rate;
- (d) If applicable, the petition for site-specific operating limits under §60.2115; and
- (e) The anticipated date of initial startup.

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§60.2200 What information must I submit following my initial performance test?

You must submit the information specified in paragraphs (a) through (c) of this section no later than 60 days following the initial performance test. All reports must be signed by the facilities manager:

- (a) The complete test report for the initial performance test results obtained under §60.2135, as applicable;
- (b) The values for the site-specific operating limits established in §60.2110 or §60.2115; and

(c) If you are using a fabric filter to comply with the emission limitations, documentation that a bag leak detection system has been installed and is being operated, calibrated, and maintained as required by §60.2165(b).

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§60.2205 When must I submit my annual report?

You must submit an annual report no later than 12 months following the submission of the information in §60.2200. You must submit subsequent reports no more than 12 months following the previous report. (If the unit is subject to permitting requirements under title V of the Clean Air Act, you may be required by the permit to submit these reports more frequently.)

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§60.2210 What information must I include in my annual report?

The annual report required under §60.2205 must include the ten items listed in paragraphs (a) through (j) of this section. If you have a deviation from the operating limits or the emission limitations, you must also submit deviation reports as specified in §§60.2215, 60.2220, and 60.2225:

- (a) Company name and address;
- (b) Statement by a responsible official, with that official's name, title, and signature, certifying the accuracy of the content of the report;
- (c) Date of report and beginning and ending dates of the reporting period;
- (d) The values for the operating limits established pursuant to §60.2110 or §60.2115;
- (e) If no deviation from any emission limitation or operating limit that applies to you has been reported, a statement that there was no deviation from the emission limitations or operating limits during the reporting period;
- (f) The highest recorded 3-hour average and the lowest recorded 3-hour average, as applicable, for each operating parameter recorded for the calendar year being reported;
- (g) Information recorded under §60.2175(b)(6) and (c) through (e) for the calendar year being reported;
- (h) For each performance test conducted during the reporting period, if any performance test is conducted, the process unit(s) tested, the pollutant(s) tested and the date that such performance test was conducted. Submit, following the procedure specified in §60.2235(b)(1), the performance test report no later than the date that you submit the annual report;
- (i) If you met the requirements of §60.2155(a) or (b), and did not conduct a performance test during the reporting period, you must state that you met the requirements of §60.2155(a) or (b), and, therefore, you were not required to conduct a performance test during the reporting period;

(j) Documentation of periods when all qualified CISWI unit operators were unavailable for more than 8 hours, but less than 2 weeks;

(k) If you had a malfunction during the reporting period, the compliance report must include the number, duration, and a brief description for each type of malfunction that occurred during the reporting period and that caused or may have caused any applicable emission limitation to be exceeded. The report must also include a description of actions taken by an owner or operator during a malfunction of an affected source to minimize emissions in accordance with §60.11(d), including actions taken to correct a malfunction;

(l) For each deviation from an emission or operating limitation that occurs for a CISWI unit for which you are not using a continuous monitoring system to comply with the emission or operating limitations in this subpart, the annual report must contain the following information:

(1) The total operating time of the CISWI unit at which the deviation occurred during the reporting period; and

(2) Information on the number, duration, and cause of deviations (including unknown cause, if applicable), as applicable, and the corrective action taken.

(m) If there were periods during which the continuous monitoring system, including the CEMS, was out of control as specified in paragraph (o) of this section, the annual report must contain the following information for each deviation from an emission or operating limitation occurring for a CISWI unit for which you are using a continuous monitoring system to comply with the emission and operating limitations in this subpart:

(1) The date and time that each malfunction started and stopped;

(2) The date, time, and duration that each CMS was inoperative, except for zero (low-level) and high-level checks;

(3) The date, time, and duration that each continuous monitoring system was out-of-control, including start and end dates and hours and descriptions of corrective actions taken;

(4) The date and time that each deviation started and stopped, and whether each deviation occurred during a period of malfunction or during another period;

(5) A summary of the total duration of the deviation during the reporting period, and the total duration as a percent of the total source operating time during that reporting period;

(6) A breakdown of the total duration of the deviations during the reporting period into those that are due to control equipment problems, process problems, other known causes, and other unknown causes;

(7) A summary of the total duration of continuous monitoring system downtime during the reporting period, and the total duration of continuous monitoring system downtime as a percent of the total operating time of the CISWI unit at which the continuous monitoring system downtime occurred during that reporting period;

(8) An identification of each parameter and pollutant that was monitored at the CISWI unit;

(9) A brief description of the CISWI unit;

(10) A brief description of the continuous monitoring system;

(11) The date of the latest continuous monitoring system certification or audit; and

(12) A description of any changes in continuous monitoring system, processes, or controls since the last reporting period.

(n) If there were periods during which the continuous monitoring system, including the CEMS, was not out of control as specified in paragraph (o) of this section, a statement that there were not periods during which the continuous monitoring system was out of control during the reporting period.

(o) A continuous monitoring system is out of control in accordance with the procedure in 40 CFR part 60, appendix F of this part, as if any of the following occur:

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

(2) The continuous monitoring system fails a performance test audit (e.g., cylinder gas audit), relative accuracy audit, relative accuracy test audit, or linearity test audit; and

(3) The continuous opacity monitoring system calibration drift exceeds two times the limit in the applicable performance specification in the relevant standard.

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§60.2215 What else must I report if I have a deviation from the operating limits or the emission limitations?

(a) You must submit a deviation report if any recorded 3-hour average parameter level is above the maximum operating limit or below the minimum operating limit established under this subpart, if the bag leak detection system alarm sounds for more than 5 percent of the operating time for the 6-month reporting period, or if a performance test was conducted that deviated from any emission limitation.

(b) The deviation report must be submitted by August 1 of that year for data collected during the first half of the calendar year (January 1 to June 30), and by February 1 of the following year for data you collected during the second half of the calendar year (July 1 to December 31).

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§60.2220 What must I include in the deviation report?

In each report required under §60.2215, for any pollutant or parameter that deviated from the emission limitations or operating limits specified in this subpart, include the six items described in paragraphs (a) through (f) of this section:

(a) The calendar dates and times your unit deviated from the emission limitations or operating limit requirements;

(b) The averaged and recorded data for those dates;

(c) Durations and causes of the following:

(1) Each deviation from emission limitations or operating limits and your corrective actions;

(2) Bypass events and your corrective actions; and

(d) A copy of the operating limit monitoring data during each deviation and for any test report that documents the emission levels the process unit(s) tested, the pollutant(s) tested and the date that the performance test was conducted. Submit, following the procedure specified in §60.2235(b)(1), the performance test report no later than the date that you submit the deviation report.

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§60.2225 What else must I report if I have a deviation from the requirement to have a qualified operator accessible?

(a) If all qualified operators are not accessible for 2 weeks or more, you must take the two actions in paragraphs (a)(1) and (2) of this section:

(1) Submit a notification of the deviation within 10 days that includes the three items in paragraphs (a)(1)(i) through (iii) of this section:

(i) A statement of what caused the deviation;

(ii) A description of what you are doing to ensure that a qualified operator is accessible; and

(iii) The date when you anticipate that a qualified operator will be available.

(2) Submit a status report to the Administrator every 4 weeks that includes the three items in paragraphs (a)(2)(i) through (iii) of this section:

(i) A description of what you are doing to ensure that a qualified operator is accessible;

(ii) The date when you anticipate that a qualified operator will be accessible; and

(iii) Request approval from the Administrator to continue operation of the CISWI unit.

(b) If your unit was shut down by the Administrator, under the provisions of §60.2100(b)(2), due to a failure to provide an accessible qualified operator, you must notify the Administrator that you are resuming operation once a qualified operator is accessible.

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§60.2230 Are there any other notifications or reports that I must submit?

(a) Yes. You must submit notifications as provided by §60.7.

(b) If you cease combusting solid waste but continue to operate, you must provide 30 days prior notice of the effective date of the waste-to-fuel switch, consistent with 60.2145(a). The notification must identify:

(1) The name of the owner or operator of the CISWI unit, the location of the source, the emissions unit(s) that will cease burning solid waste, and the date of the notice;

(2) The currently applicable subcategory under this subpart, and any 40 CFR part 63 subpart and subcategory that will be applicable after you cease combusting solid waste;

(3) The fuel(s), non-waste material(s) and solid waste(s) the CISWI unit is currently combusting and has combusted over the past 6 months, and the fuel(s) or non-waste materials the unit will commence combusting;

(4) The date on which you became subject to the currently applicable emission limits; and

(5) The date upon which you will cease combusting solid waste, and the date (if different) that you intend for any new requirements to become applicable (*i.e.*, the effective date of the waste-to-fuel switch), consistent with paragraphs (b)(2) and (3) of this section.

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§60.2235 In what form can I submit my reports?

(a) Submit initial, annual and deviation reports electronically on or before the submittal due dates. Submit the reports to the EPA via the Compliance and Emissions Data Reporting Interface (CEDRI). (CEDRI can be accessed through the EPA's Central Data Exchange (CDX) (<https://cdx.epa.gov/>.) Use the appropriate electronic report in CEDRI for this subpart or an alternate electronic file format consistent with the extensible markup language (XML) schema listed on the CEDRI Web site (<https://www3.epa.gov/ttn/chief/cedri/index.html>). If the reporting form specific to this subpart is not available in CEDRI at the time that the report is due, submit the report to the Administrator at the appropriate address listed in §60.4. Once the form has been available in CEDRI for 90 calendar days, you must begin submitting all subsequent reports via CEDRI. The reports must be submitted by the deadlines specified in this subpart, regardless of the method in which the report is submitted.

(b) Submit results of each performance test and CEMS performance evaluation required by this subpart as follows:

(1) Within 60 days after the date of completing each performance test (*see* §60.8) required by this subpart, you must submit the results of the performance test following the procedure specified in either paragraph (b)(1)(i) or (b)(1)(ii) of this section:

(i) For data collected using test methods supported by the EPA's Electronic Reporting Tool (ERT) as listed on the EPA's ERT Web site (https://www3.epa.gov/ttn/chief/ert/ert_info.html) at the time of the test, you must submit the results of the performance test to the EPA via the CEDRI. (CEDRI can be accessed through the EPA's CDX (<https://cdx.epa.gov/>.) Performance test data must be submitted in a file format generated through the use of the EPA's ERT or an alternate electronic file format consistent with the XML schema listed on the EPA's ERT Web site. If you claim that some of the performance test information being submitted is confidential business information (CBI), you must submit a complete file generated through the use of the EPA's ERT or an alternate electronic file consistent with the XML schema listed on the EPA's ERT Web site, including information claimed to be CBI, on a compact disc, flash drive, or other commonly used electronic storage media to the EPA. The electronic media must be clearly marked as CBI and mailed to U.S. EPA/OAQPS/CORE CBI Office, Attention: Group Leader, Measurement Policy Group, MD C404-02, 4930 Old Page Rd., Durham, NC 27703. The same ERT or alternate file with the CBI omitted must be submitted to the EPA via the EPA's CDX as described earlier in this paragraph; and

(ii) For data collected using test methods that are not supported by the EPA's ERT as listed on the EPA's ERT Web site at the time of the test, you must submit the results of the performance test to the Administrator at the appropriate address listed in §60.4.

(2) Within 60 days after the date of completing each continuous emissions monitoring system performance evaluation you must submit the results of the performance evaluation following the procedure specified in either paragraph (b)(2)(i) or (b)(2)(ii) of this section:

(i) For performance evaluations of continuous monitoring systems measuring relative accuracy test audit (RATA) pollutants that are supported by the EPA's ERT as listed on the EPA's ERT Web site at the time of the evaluation, you must submit the

results of the performance evaluation to the EPA via the CEDRI. (CEDRI can be accessed through the EPA's CDX.) Performance evaluation data must be submitted 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. If you claim that some of the performance evaluation information being submitted is CBI, you must submit a complete file generated through the use of the EPA's ERT or an alternate electronic file consistent with the XML schema listed on the EPA's ERT Web site, including information claimed to be CBI, on a compact disc, flash drive, or other commonly used electronic storage media to the EPA. The electronic storage media must be clearly marked as CBI and mailed to U.S. EPA/OAQPS/CORE CBI Office, Attention: Group Leader, Measurement Policy Group, MD C404-02, 4930 Old Page Rd., Durham, NC 27703. The same ERT or alternate file with the CBI omitted must be submitted to the EPA via the EPA's CDX as described earlier in this paragraph; and

(ii) For any performance evaluations of continuous monitoring systems measuring RATA pollutants that are not supported by the EPA's ERT as listed on the EPA's ERT Web site at the time of the evaluation, you must submit the results of the performance evaluation to the Administrator at the appropriate address listed in §60.4.

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§60.2240 Can reporting dates be changed?

If the Administrator agrees, you may change the semiannual or annual reporting dates. See §60.19(c) for procedures to seek approval to change your reporting date.

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TITLE V OPERATING PERMITS

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§60.2242 Am I required to apply for and obtain a Title V operating permit for my unit?

Yes. Each CISWI unit and air curtain incinerator subject to standards under this subpart must operate pursuant to a permit issued under Section 129(e) and Title V of the Clean Air Act.

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AIR CURTAIN INCINERATORS

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§60.2245 What is an air curtain incinerator?

(a) An air curtain incinerator operates by forcefully projecting a curtain of air across an open chamber or open pit in which combustion occurs. Incinerators of this type can be constructed above or below ground and with or without refractory walls and floor. (Air curtain incinerators are not to be confused with conventional combustion devices with enclosed fireboxes and controlled air technology such as mass burn, modular, and fluidized bed combustors.)

(b) Air curtain incinerators that burn only the materials listed in paragraphs (b)(1) through (3) of this section are only required to meet the requirements under §60.2242 and under "Air Curtain Incinerators" (§§60.2245 through 60.2260):

- (1) 100 percent wood waste;
- (2) 100 percent clean lumber; and
- (3) 100 percent mixture of only wood waste, clean lumber, and/or yard waste.

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§60.2250 What are the emission limitations for air curtain incinerators?

Within 60 days after your air curtain incinerator reaches the charge rate at which it will operate, but no later than 180 days after its initial startup, you must meet the two limitations specified in paragraphs (a) and (b) of this section:

(a) Maintain opacity to less than or equal to 10 percent opacity (as determined by the average of three 1-hour blocks consisting of ten 6-minute average opacity values), except as described in paragraph (b) of this section; and

(b) Maintain opacity to less than or equal to 35 percent opacity (as determined by the average of three 1-hour blocks consisting of ten 6-minute average opacity values) during the startup period that is within the first 30 minutes of operation.

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§60.2255 How must I monitor opacity for air curtain incinerators?

- (a) Use Method 9 of appendix A of this part to determine compliance with the opacity limitation.
- (b) Conduct an initial test for opacity as specified in §60.8.
- (c) After the initial test for opacity, conduct annual tests no more than 12 calendar months following the date of your previous test.

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§60.2260 What are the recordkeeping and reporting requirements for air curtain incinerators?

- (a) Prior to commencing construction on your air curtain incinerator, submit the three items described in paragraphs (a)(1) through (3) of this section:
 - (1) Notification of your intent to construct the air curtain incinerators;
 - (2) Your planned initial startup date; and
 - (3) Types of materials you plan to burn in your air curtain incinerator.
- (b) Keep records of results of all initial and annual opacity tests onsite in either paper copy or electronic format, unless the Administrator approves another format, for at least 5 years.
- (c) Make all records available for submittal to the Administrator or for an inspector's onsite review.
- (d) You must submit the results (as determined by the average of three 1-hour blocks consisting of ten 6-minute average opacity values) of the initial opacity tests no later than 60 days following the initial test. Submit annual opacity test results within 12 months following the previous report.
- (e) Submit initial and annual opacity test reports as electronic or paper copy on or before the applicable submittal date.
- (f) Keep a copy of the initial and annual reports onsite for a period of 5 years.

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DEFINITIONS

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§60.2265 What definitions must I know?

Terms used but not defined in this subpart are defined in the Clean Air Act and subpart A (General Provisions) of this part.

30-day rolling average means the arithmetic mean of the previous 720 hours of valid operating data. Valid data excludes periods when this unit is not operating. The 720 hours should be consecutive, but not necessarily continuous if operations are intermittent.

Administrator means the Administrator of the U.S. Environmental Protection Agency or his/her authorized representative or Administrator of a State Air Pollution Control Agency.

Air curtain incinerator means an incinerator that operates by forcefully projecting a curtain of air across an open chamber or pit in which combustion occurs. Incinerators of this type can be constructed above or below ground and with or without refractory walls and floor. (Air curtain incinerators are not to be confused with conventional combustion devices with enclosed fireboxes and controlled air technology such as mass burn, modular, and fluidized bed combustors.)

Annual heat input means the heat input for the 12 months preceding the compliance demonstration.

Auxiliary fuel means natural gas, liquified petroleum gas, fuel oil, or diesel fuel.

Average annual heat input rate means annual heat input divided by the hours of operation for the 12 months preceding the compliance demonstration.

Bag leak detection system means an instrument that is capable of monitoring particulate matter loadings in the exhaust of a fabric filter (*i.e.*, baghouse) in order to detect bag failures. A bag leak detection system includes, but is not limited to, an instrument that operates on triboelectric, light scattering, light transmittance, or other principle to monitor relative particulate matter loadings.

Burn-off oven means any rack reclamation unit, part reclamation unit, or drum reclamation unit. A burn-off oven is not an incinerator, waste-burning kiln, an energy recovery unit or a small, remote incinerator under this subpart.

Bypass stack means a device used for discharging combustion gases to avoid severe damage to the air pollution control device or other equipment.

Calendar quarter means three consecutive months (nonoverlapping) beginning on: January 1, April 1, July 1, or October 1.

Calendar year means 365 consecutive days starting on January 1 and ending on December 31.

CEMS data during startup and shutdown means the following:

(1) For incinerators and small remote incinerators: CEMS data collected during the first hours of a CISWI unit startup from a cold start until waste is fed to the unit and the hours of operation following the cessation of waste material being fed to the CISWI unit during a unit shutdown. For each startup event, the length of time that CEMS data may be claimed as being CEMS data during startup must be 48 operating hours or less. For each shutdown event, the length of time that CEMS data may be claimed as being CEMS data during shutdown must be 24 operating hours or less;

(2) For energy recovery units: CEMS data collected during the startup or shutdown periods of operation. Startup begins with either the first-ever firing of fuel in a boiler or process heater for the purpose of supplying useful thermal energy (such as steam or heat) for heating, cooling or process purposes, or producing electricity, or the firing of fuel in a boiler or process heater for any purpose after a shutdown event. Startup ends four hours after when the boiler or process heater makes useful thermal energy (such as heat or steam) for heating, cooling, or process purposes, or generates electricity, whichever is earlier. Shutdown begins when the boiler or process heater no longer makes useful thermal energy (such as heat or steam) for heating, cooling, or process purposes and/or generates electricity or when no fuel is being fed to the boiler or process heater, whichever is earlier. Shutdown ends when the boiler or process heater no longer makes useful thermal energy (such as steam or heat) for heating, cooling, or process purposes and/or generates electricity, and no fuel is being combusted in the boiler or process heater; and

(3) For waste-burning kilns: CEMS data collected during the periods of kiln operation that do not include normal operations. Startup means the time from when a shutdown kiln first begins firing fuel until it begins producing clinker. Startup begins when a shutdown kiln turns on the induced draft fan and begins firing fuel in the main burner. Startup ends when feed is being continuously introduced into the kiln for at least 120 minutes or when the feed rate exceeds 60 percent of the kiln design limitation rate, whichever occurs first. Shutdown means the cessation of kiln operation. Shutdown begins when feed to the kiln is halted and ends when continuous kiln rotation ceases.

Chemical recovery unit means combustion units burning materials to recover chemical constituents or to produce chemical compounds where there is an existing commercial market for such recovered chemical constituents or compounds. A chemical recovery unit is not an incinerator, a waste-burning kiln, an energy recovery unit or a small, remote incinerator under this subpart. The following seven types of units are considered chemical recovery units:

(1) Units burning only pulping liquors (*i.e.*, black liquor) that are reclaimed in a pulping liquor recovery process and reused in the pulping process;

(2) Units burning only spent sulfuric acid used to produce virgin sulfuric acid;

(3) Units burning only wood or coal feedstock for the production of charcoal;

(4) Units burning only manufacturing byproduct streams/residue containing catalyst metals that are reclaimed and reused as catalysts or used to produce commercial grade catalysts;

(5) Units burning only coke to produce purified carbon monoxide that is used as an intermediate in the production of other chemical compounds;

(6) Units burning only hydrocarbon liquids or solids to produce hydrogen, carbon monoxide, synthesis gas, or other gases for use in other manufacturing processes; and

(7) Units burning only photographic film to recover silver.

Chemotherapeutic waste means waste material resulting from the production or use of antineoplastic agents used for the purpose of stopping or reversing the growth of malignant cells.

Clean lumber means wood or wood products that have been cut or shaped and include wet, air-dried, and kiln-dried wood products. Clean lumber does not include wood products that have been painted, pigment-stained, or pressure-treated by compounds such as chromate copper arsenate, pentachlorophenol, and creosote.

Commercial and industrial solid waste incineration (CISWI) unit means any distinct operating unit of any commercial or industrial facility that combusts, or has combusted in the preceding 6 months, any solid waste as that term is defined in 40 CFR part 241. If the operating unit burns materials other than traditional fuels as defined in §241.2 that have been discarded, and you do not keep and produce records as required by §60.2175(v), the operating unit is a CISWI unit. While not all CISWI units will include all of the following components, a CISWI unit includes, but is not limited to, the solid waste feed system, grate system, flue gas system, waste heat recovery equipment, if any, and bottom ash system. The CISWI unit does not include air pollution control equipment or the stack. The CISWI unit boundary starts at the solid waste hopper (if applicable) and extends through two areas: The combustion unit flue gas system, which ends immediately after the last combustion chamber or after the waste heat recovery equipment, if any; and the combustion unit bottom ash system, which ends at the truck loading station or similar equipment that transfers the ash to final disposal. The CISWI unit includes all ash handling systems connected to the bottom ash handling system.

Contained gaseous material means gases that are in a container when that container is combusted.

Continuous emission monitoring system (CEMS) means the total equipment that may be required to meet the data acquisition and availability requirements of this subpart, used to sample, condition (if applicable), analyze, and provide a record of emissions.

Continuous monitoring system (CMS) means the total equipment, required under the emission monitoring sections in applicable subparts, used to sample and condition (if applicable), to analyze, and to provide a permanent record of emissions or process parameters. A particulate matter continuous parameter monitoring system (PM CPMS) is a type of CMS.

Cyclonic burn barrel means a combustion device for waste materials that is attached to a 55 gallon, open-head drum. The device consists of a lid, which fits onto and encloses the drum, and a blower that forces combustion air into the drum in a cyclonic manner to enhance the mixing of waste material and air. A cyclonic burn barrel is not an incinerator, a waste-burning kiln, an energy recovery unit or a small, remote incinerator under this subpart.

Deviation means any instance in which an affected source subject to this subpart, or an owner or operator of such a source:

(1) Fails to meet any requirement or obligation established by this subpart, including but not limited to any emission limitation, operating limit, or operator qualification and accessibility requirements; and

(2) Fails to meet any term or condition that is adopted to implement an applicable requirement in this subpart and that is included in the operating permit for any affected source required to obtain such a permit.

Dioxins/furans means tetra- through octa-chlorinated dibenzo-p-dioxins and dibenzofurans.

Discard means, for purposes of this subpart and 40 CFR part 60, subpart DDDD, only, burned in an incineration unit without energy recovery.

Drum reclamation unit means a unit that burns residues out of drums (e.g., 55 gallon drums) so that the drums can be reused.

Dry scrubber means an add-on air pollution control system that injects dry alkaline sorbent (dry injection) or sprays an alkaline sorbent (spray dryer) to react with and neutralize acid gas in the exhaust stream forming a dry powder material. Sorbent injection systems in fluidized bed boilers and process heaters are included in this definition. A dry scrubber is a dry control system.

Energy recovery means the process of recovering thermal energy from combustion for useful purposes such as steam generation or process heating.

Energy recovery unit means a combustion unit combusting solid waste (as that term is defined by the Administrator in 40 CFR part 241) for energy recovery. Energy recovery units include units that would be considered boilers and process heaters if they did not combust solid waste.

Energy recovery unit designed to burn biomass (Biomass) means an energy recovery unit that burns solid waste, biomass, and non-coal solid materials but less than 10 percent coal, on a heat input basis on an annual average, either alone or in

combination with liquid waste, liquid fuel or gaseous fuels.

Energy recovery unit designed to burn coal (Coal) means an energy recovery unit that burns solid waste and at least 10 percent coal on a heat input basis on an annual average, either alone or in combination with liquid waste, liquid fuel or gaseous fuels.

Energy recovery unit designed to burn liquid waste materials and gas (Liquid/gas) means an energy recovery unit that burns a liquid waste with liquid or gaseous fuels not combined with any solid fuel or waste materials.

Energy recovery unit designed to burn solid materials (Solids) includes energy recovery units designed to burn coal and energy recovery units designed to burn biomass.

Fabric filter means an add-on air pollution control device used to capture particulate matter by filtering gas streams through filter media, also known as a baghouse.

Foundry sand thermal reclamation unit means a type of part reclamation unit that removes coatings that are on foundry sand. A foundry sand thermal reclamation unit is not an incinerator, a waste-burning kiln, an energy recovery unit or a small, remote incinerator under this subpart.

Incinerator means any furnace used in the process of combusting solid waste (as that term is defined by the Administrator in 40 CFR part 241) for the purpose of reducing the volume of the waste by removing combustible matter. Incinerator designs include single chamber and two-chamber.

In-line coal mill means those coal mills using kiln exhaust gases in their process. Coal mills with a heat source other than the kiln or coal mills using exhaust gases from the clinker cooler alone are not an in-line coal mill.

In-line kiln/raw mill means a system in a Portland Cement production process where a dry kiln system is integrated with the raw mill so that all or a portion of the kiln exhaust gases are used to perform the drying operation of the raw mill, with no auxiliary heat source used. In this system the kiln is capable of operating without the raw mill operating, but the raw mill cannot operate without the kiln gases, and consequently, the raw mill does not generate a separate exhaust gas stream.

Kiln means an oven or furnace, including any associated preheater or precalciner devices, in-line raw mills, in-line coal mills or alkali bypasses used for processing a substance by burning, firing or drying. Kilns include cement kilns that produce clinker by heating limestone and other materials for subsequent production of Portland Cement. Because the alkali bypass, in-line raw mill and in-line coal mill are considered an integral part of the kiln, the kiln emissions limits also apply to the exhaust of the alkali bypass, in-line raw mill and in-line coal mill.

Laboratory analysis unit means units that burn samples of materials for the purpose of chemical or physical analysis. A laboratory analysis unit is not an incinerator, waste-burning kiln, an energy recovery unit or a small, remote incinerator under this subpart.

Load fraction means the actual heat input of an energy recovery unit divided by heat input during the performance test that established the minimum sorbent injection rate or minimum activated carbon injection rate, expressed as a fraction (e.g., for 50 percent load the load fraction is 0.5).

Low-level radioactive waste means waste material which contains radioactive nuclides emitting primarily beta or gamma radiation, or both, in concentrations or quantities that exceed applicable federal or state standards for unrestricted release. Low-level radioactive waste is not high-level radioactive waste, spent nuclear fuel, or byproduct material as defined by the Atomic Energy Act of 1954 (42 U.S.C. 2014(e)(2)).

Malfunction means any sudden, infrequent, and not reasonably preventable failure of air pollution control equipment, process equipment, or a process to operate in a normal or usual manner. Failures that are caused, in part, by poor maintenance or careless operation are not malfunctions.

Minimum voltage or amperage means 90 percent of the lowest test-run average voltage or amperage to the electrostatic precipitator measured during the most recent particulate matter or mercury performance test demonstrating compliance with the applicable emission limits.

Modification or modified CISWI unit means a CISWI unit that has been changed later than August 7, 2013 and that meets one of two criteria:

(1) The cumulative cost of the changes over the life of the unit exceeds 50 percent of the original cost of building and installing the CISWI unit (not including the cost of land) updated to current costs (current dollars). To determine what systems are within the boundary of the CISWI unit used to calculate these costs, see the definition of CISWI unit; and

(2) Any physical change in the CISWI unit or change in the method of operating it that increases the amount of any air pollutant emitted for which section 129 or section 111 of the Clean Air Act has established standards.

Municipal solid waste or municipal-type solid waste means household, commercial/retail, or institutional waste. Household waste includes material discarded by residential dwellings, hotels, motels, and other similar permanent or temporary housing. Commercial/retail waste includes material discarded by stores, offices, restaurants, warehouses, nonmanufacturing activities at industrial facilities, and other similar establishments or facilities. Institutional waste includes materials discarded by schools, by hospitals (nonmedical), by nonmanufacturing activities at prisons and government facilities, and other similar establishments or facilities. Household, commercial/retail, and institutional waste does include yard waste and refuse-derived fuel. Household, commercial/retail, and institutional waste does not include used oil; sewage sludge; wood pallets; construction, renovation, and demolition wastes (which include railroad ties and telephone poles); clean wood; industrial process or manufacturing wastes; medical waste; or motor vehicles (including motor vehicle parts or vehicle fluff).

Opacity means the degree to which emissions reduce the transmission of light and obscure the view of an object in the background.

Operating day means a 24-hour period between 12 midnight and the following midnight during which any amount of solid waste is combusted at any time in the CISWI unit.

Oxygen analyzer system means all equipment required to determine the oxygen content of a gas stream and used to monitor oxygen in the boiler or process heater flue gas, boiler or process heater, firebox, or other appropriate location. This definition includes oxygen trim systems and certified oxygen CEMS. The source owner or operator is responsible to install, calibrate, maintain, and operate the oxygen analyzer system in accordance with the manufacturer's recommendations.

Oxygen trim system means a system of monitors that is used to maintain excess air at the desired level in a combustion device over its operating range. A typical system consists of a flue gas oxygen and/or carbon monoxide monitor that automatically provides a feedback signal to the combustion air controller or draft controller.

Part reclamation unit means a unit that burns coatings off parts (e.g., tools, equipment) so that the parts can be reconditioned and reused.

Particulate matter means total particulate matter emitted from CISWI units as measured by Method 5 or Method 29 of appendix A of this part.

Pathological waste means waste material consisting of only human or animal remains, anatomical parts, and/or tissue, the bags/containers used to collect and transport the waste material, and animal bedding (if applicable).

Performance evaluation means the conduct of relative accuracy testing, calibration error testing, and other measurements used in validating the continuous monitoring system data.

Performance test means the collection of data resulting from the execution of a test method (usually three emission test runs) used to demonstrate compliance with a relevant emission standard as specified in the performance test section of the relevant standard.

Process change means any of the following physical or operational changes:

(1) A physical change (maintenance activities excluded) to the CISWI unit which may increase the emission rate of any air pollutant to which a standard applies;

(2) An operational change to the CISWI unit where a new type of non-hazardous secondary material is being combusted;

(3) A physical change (maintenance activities excluded) to the air pollution control devices used to comply with the emission limits for the CISWI unit (e.g., replacing an electrostatic precipitator with a fabric filter); and

(4) An operational change to the air pollution control devices used to comply with the emission limits for the affected CISWI unit (e.g., change in the sorbent injection rate used for activated carbon injection).

Rack reclamation unit means a unit that burns the coatings off racks used to hold small items for application of a coating. The unit burns the coating overspray off the rack so the rack can be reused.

Raw mill means a ball or tube mill, vertical roller mill or other size reduction equipment, that is not part of an in-line kiln/raw mill, used to grind feed to the appropriate size. Moisture may be added or removed from the feed during the grinding operation. If the raw mill is used to remove moisture from feed materials, it is also, by definition, a raw material dryer. The raw mill also includes the air separator associated with the raw mill.

Reconstruction means rebuilding a CISWI unit and meeting two criteria:

(1) The reconstruction begins on or after August 7, 2013; and

(2) The cumulative cost of the construction over the life of the incineration unit exceeds 50 percent of the original cost of building and installing the CISWI unit (not including land) updated to current costs (current dollars). To determine what systems are within the boundary of the CISWI unit used to calculate these costs, see the definition of CISWI unit.

Refuse-derived fuel means a type of municipal solid waste produced by processing municipal solid waste through shredding and size classification. This includes all classes of refuse-derived fuel including two fuels:

(1) Low-density fluff refuse-derived fuel through densified refuse-derived fuel; and

(2) Pelletized refuse-derived fuel.

Responsible official means one of the following:

(1) For a corporation: A president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision-making functions for the corporation, or a duly authorized representative of such person if the representative is responsible for the overall operation of one or more manufacturing, production, or operating facilities applying for or subject to a permit and either:

(i) The facilities employ more than 250 persons or have gross annual sales or expenditures exceeding \$25 million (in second quarter 1980 dollars); or

(ii) The delegation of authority to such representatives is approved in advance by the permitting authority;

(2) For a partnership or sole proprietorship: A general partner or the proprietor, respectively;

(3) For a municipality, state, federal, or other public agency: Either a principal executive officer or ranking elected official. For the purposes of this part, a principal executive officer of a federal agency includes the chief executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., a Regional Administrator of EPA); or

(4) For affected facilities:

(i) The designated representative in so far as actions, standards, requirements, or prohibitions under Title IV of the Clean Air Act or the regulations promulgated thereunder are concerned; or

(ii) The designated representative for any other purposes under part 60.

Shutdown means, for incinerators and small, remote incinerators, the period of time after all waste has been combusted in the primary chamber.

Small, remote incinerator means an incinerator that combusts solid waste (as that term is defined by the Administrator in 40 CFR part 241) and combusts 3 tons per day or less solid waste and is more than 25 miles driving distance to the nearest municipal solid waste landfill.

Soil treatment unit means a unit that thermally treats petroleum-contaminated soils for the sole purpose of site remediation. A soil treatment unit may be direct-fired or indirect fired. A soil treatment unit is not an incinerator, a waste-burning kiln, an energy recovery unit or a small, remote incinerator under this subpart.

Solid waste means the term solid waste as defined in 40 CFR 241.2.

Solid waste incineration unit means a distinct operating unit of any facility which combusts any solid waste (as that term is defined by the Administrator in 40 CFR part 241) material from commercial or industrial establishments or the general public (including single and multiple residences, hotels and motels). Such term does not include incinerators or other units required to have a permit under section 3005 of the Solid Waste Disposal Act. The term "solid waste incineration unit" does not include:

(1) Materials recovery facilities (including primary or secondary smelters) which combust waste for the primary purpose of recovering metals;

(2) Qualifying small power production facilities, as defined in section 3(17)(C) of the Federal Power Act (16 U.S.C. 769(17)(C)), or qualifying cogeneration facilities, as defined in section 3(18)(B) of the Federal Power Act (16 U.S.C. 796(18)(B)), which burn homogeneous waste (such as units which burn tires or used oil, but not including refuse-derived fuel) for the production of electric energy or in the case of qualifying cogeneration facilities which burn homogeneous waste for the production of electric

energy and steam or forms of useful energy (such as heat) which are used for industrial, commercial, heating or cooling purposes; or

(3) Air curtain incinerators provided that such incinerators only burn wood wastes, yard wastes, and clean lumber and that such air curtain incinerators comply with opacity limitations to be established by the Administrator by rule.

Space heater means a unit that meets the requirements of 40 CFR 279.23. A space heater is not an incinerator, a waste-burning kiln, an energy recovery unit or a small, remote incinerator under this subpart.

Standard conditions, when referring to units of measure, means a temperature of 68 °F (20 °C) and a pressure of 1 atmosphere (101.3 kilopascals).

Startup period means, for incinerators and small, remote incinerators, the period of time between the activation of the system and the first charge to the unit.

Useful thermal energy means energy (*i.e.*, steam, hot water, or process heat) that meets the minimum operating temperature and/or pressure required by any energy use system that uses energy provided by the affected energy recovery unit.

Waste-burning kiln means a kiln that is heated, in whole or in part, by combusting solid waste (as that term is defined by the Administrator in 40 CFR part 241). Secondary materials used in Portland cement kilns shall not be deemed to be combusted unless they are introduced into the flame zone in the hot end of the kiln or mixed with the precalciner fuel.

Wet scrubber means an add-on air pollution control device that uses an aqueous or alkaline scrubbing liquor to collect particulate matter (including nonvaporous metals and condensed organics) and/or to absorb and neutralize acid gases.

Wood waste means untreated wood and untreated wood products, including tree stumps (whole or chipped), trees, tree limbs (whole or chipped), bark, sawdust, chips, scraps, slabs, millings, and shavings. Wood waste does not include:

- (1) Grass, grass clippings, bushes, shrubs, and clippings from bushes and shrubs from residential, commercial/retail, institutional, or industrial sources as part of maintaining yards or other private or public lands;
- (2) Construction, renovation, or demolition wastes; and
- (3) Clean lumber.

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Table 1 to Subpart CCCC of Part 60—Emission Limitations for Incinerators for Which Construction Is Commenced After November 30, 1999, But No Later Than June 4, 2010, or for Which Modification or Reconstruction Is Commenced on or After June 1, 2001, But No Later Than August 7, 2013

For the air pollutant	You must meet this emission limitation ¹	Using this averaging time	And determining compliance using this method
Cadmium	0.004 milligrams per dry standard cubic meter	3-run average (1 hour minimum sample time per run)	Performance test (Method 29 of appendix A of this part).
Carbon monoxide	157 parts per million by dry volume	3-run average (1 hour minimum sample time per run)	Performance test (Method 10 at 40 CFR part 60, appendix A-4).
Dioxin/Furan (toxic equivalency basis)	0.41 nanograms per dry standard cubic meter	3-run average (collect a minimum volume of 4 dry standard cubic meters per run)	Performance test (Method 23 of appendix A-7 of this part).
Hydrogen chloride	62 parts per million by dry volume	3-run average (For Method 26, collect a minimum volume of 120 liters per run. For Method 26A, collect a minimum volume of 1 dry standard cubic meter per run)	Performance test (Method 26 or 26A at 40 CFR part 60, appendix A-8).
Lead	0.04 milligrams per dry standard cubic meter	3-run average (1 hour minimum sample time per run)	Performance test (Method 29 of appendix A of this part).
Mercury	0.47 milligrams per dry standard cubic meter	3-run average (1 hour minimum sample time per run)	Performance test (Method 29 of appendix A of this part).
Nitrogen Oxides	388 parts per million by dry volume	3-run average (for Method 7E, 1 hour minimum sample time per run)	Performance test (Method 7 or 7E at 40 CFR part 60, appendix A-4).
Opacity	10 percent	6-minute averages	Performance test (Method 9 of appendix A of this part).
Oxides of nitrogen	388 parts per million by dry volume	3-run average (1 hour minimum sample time per run)	Performance test (Method 7, 7A, 7C, 7D, or 7E of appendix A of this part).
Particulate matter	70 milligrams per dry standard cubic meter	3-run average (1 hour minimum sample time per run)	Performance test (Method 5 or 29 of appendix A of this part).
Sulfur Dioxide	20 parts per million by dry volume	3-run average (For Method 6, collect a minimum volume of 20 liters per run. For Method 6C, collect sample for a minimum duration of 1 hour per run)	Performance test (Method 6 or 6C at 40 CFR part 60, appendix A-4).

¹All emission limitations (except for opacity) are measured at 7 percent oxygen, dry basis at standard conditions.

Table 2 to Subpart CCCC of Part 60—Operating Limits for Wet Scrubbers

For these operating parameters	You must establish these operating limits	And monitoring using these minimum frequencies		
		Data measurement	Data recording	Averaging time
Charge rate	Maximum charge rate	Continuous	Every hour	Daily (batch units) 3-hour rolling (continuous and intermittent units). ¹
Pressure drop across the wet scrubber or amperage to wet scrubber	Minimum pressure drop or amperage	Continuous	Every 15 minutes	3-hour rolling. ¹
Scrubber liquor flow rate	Minimum flow rate	Continuous	Every 15 minutes	3-hour rolling. ¹
Scrubber liquor pH	Minimum pH	Continuous	Every 15 minutes	3-hour rolling. ¹

¹Calculated each hour as the average of the previous 3 operating hours.

Table 3 to Subpart CCCC of Part 60—Toxic Equivalency Factors

Dioxin/furan congener	Toxic equivalency factor
2,3,7,8-tetrachlorinated dibenzo-p-dioxin	1
1,2,3,7,8-pentachlorinated dibenzo-p-dioxin	0.5
1,2,3,4,7,8-hexachlorinated dibenzo-p-dioxin	0.1
1,2,3,7,8,9-hexachlorinated dibenzo-p-dioxin	0.1
1,2,3,6,7,8-hexachlorinated dibenzo-p-dioxin	0.1
1,2,3,4,6,7,8-heptachlorinated dibenzo-p-dioxin	0.01
Octachlorinated dibenzo-p-dioxin	0.001
2,3,7,8-tetrachlorinated dibenzofuran	0.1
2,3,4,7,8-pentachlorinated dibenzofuran	0.5
1,2,3,7,8-pentachlorinated dibenzofuran	0.05
1,2,3,4,7,8-hexachlorinated dibenzofuran	0.1
1,2,3,6,7,8-hexachlorinated dibenzofuran	0.1
1,2,3,7,8,9-hexachlorinated dibenzofuran	0.1
2,3,4,6,7,8-hexachlorinated dibenzofuran	0.1
1,2,3,4,6,7,8-heptachlorinated dibenzofuran	0.01
1,2,3,4,7,8,9-heptachlorinated dibenzofuran	0.01
Octachlorinated dibenzofuran	0.001

Table 4 to Subpart CCCC of Part 60—Summary of Reporting Requirements¹

Report	Due date	Contents	Reference
Preconstruction report	Prior to commencing construction	Statement of intent to construct	\$60.2190.
		Anticipated date of commencement of construction	
		Documentation for siting requirements	
		Waste management plan	
Startup notification	Prior to initial startup	Anticipated date of initial startup	\$60.2195.
		• Type of waste to be burned	
		• Maximum design waste burning capacity	
		• Anticipated maximum charge rate	
Initial test report	No later than 60 days following the initial performance test	• If applicable, the petition for site-specific operating limits	\$60.2200.
		• Complete test report for the initial performance test	
		• The values for the site-specific operating limits	
Annual report	No later than 12 months following the submission of the initial test report. Subsequent reports are to be submitted no more than 12 months following the previous report	• Installation of bag leak detection system for fabric filter	§§60.2205 and 60.2210.
		• Name and address	
		• Statement and signature by responsible official	
		• Date of report.	
		• Values for the operating limits.	
		• Highest recorded 3-hour average and the lowest 3-hour average, as applicable, for each operating parameter recorded for the calendar year being reported	
		• For each performance test conducted during the reporting period, if any performance test is conducted, the process unit(s) tested, the pollutant(s) tested, and the date that such performance test was conducted	
• If a performance test was not conducted during the reporting period, a statement that the requirements of §60.2155(a) were met			
		• Documentation of periods when all qualified CISWI unit operators were unavailable for more than 8 hours but less than 2 weeks	
		• If you are conducting performance tests once every 3 years consistent with §60.2155(a), the date of the last 2 performance tests, a comparison of the emission level you achieved in the last 2 performance tests to the 75 percent emission limit threshold required in §60.2155(a)	

		and a statement as to whether there have been any operational changes since the last performance test that could increase emissions	
Emission limitation or operating limit deviation report	By August 1 of that year for data collected during the first half of the calendar year. By February 1 of the following year for data collected during the second half of the calendar year	<ul style="list-style-type: none"> Dates and times of deviation Averaged and recorded data for those dates Duration and causes of each deviation and the corrective actions taken Copy of operating limit monitoring data and, if any performance test was conducted that documents emission levels, the process unit(s) tested, the pollutant(s) tested, and the date that such performance test was conducted Dates, times and causes for monitor downtime incidents 	§60.2215 and 60.2220.
Qualified operator deviation notification	Within 10 days of deviation	<ul style="list-style-type: none"> Statement of cause of deviation Description of efforts to have an accessible qualified operator 	§60.2225(a)(1).
		<ul style="list-style-type: none"> The date a qualified operator will be accessible 	
Qualified operator deviation status report	Every 4 weeks following deviation	<ul style="list-style-type: none"> Description of efforts to have an accessible qualified operator The date a qualified operator will be accessible 	§60.2225(a)(2).
		<ul style="list-style-type: none"> Request for approval to continue operation 	
Qualified operator deviation notification of resumed operation	Prior to resuming operation	<ul style="list-style-type: none"> Notification that you are resuming operation 	§60.2225(b).

¹This table is only a summary, see the referenced sections of the rule for the complete requirements.

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Table 5 to Subpart CCCC of Part 60—Emission Limitations for Incinerators That Commenced Construction After June 4, 2010, or That Commenced Reconstruction or Modification After August 7, 2013

For the air pollutant	You must meet this emission limitation ¹	Using this averaging time	And determining compliance using this method
Cadmium	0.0023 milligrams per dry standard cubic meter	3-run average (collect a minimum volume of 4 dry standard cubic meter per run)	Performance test (Method 29 at 40 CFR part 60, appendix A-8 of this part). Use ICPMS for the analytical finish.
Carbon monoxide	17 parts per million by dry volume	3-run average (1 hour minimum sample time per run)	Performance test (Method 10 at 40 CFR part 60, appendix A-4).
Dioxin/furan (Total Mass Basis)	0.58 nanograms per dry standard cubic meter ³	3-run average (collect a minimum volume of 4 dry standard cubic meters per run)	Performance test (Method 23 at 40 CFR part 60, appendix A-7).
Dioxin/furan (toxic equivalency basis)	0.13 nanograms per dry standard cubic meter	3-run average (collect a minimum volume of 4 dry standard cubic meter per run)	Performance test (Method 23 at 40 CFR part 60, appendix A-7).
Fugitive ash	Visible emissions for no more than 5 percent of the hourly observation period	Three 1-hour observation periods	Visible emission test (Method 22 at 40 CFR part 60, appendix A-7).
Hydrogen chloride	0.091 parts per million by dry volume	3-run average (For Method 26, collect a minimum volume of 360 liters per run. For Method 26A, collect a minimum volume of 3 dry standard cubic meters per run)	Performance test (Method 26 or 26A at 40 CFR part 60, appendix A-8).
Lead	0.015 milligrams per dry standard cubic meter ³	3-run average (collect a minimum volume of 4 dry standard cubic meters per run)	Performance test (Method 29 of appendix A-8 at 40 CFR part 60). Use ICPMS for the analytical finish.
Mercury	0.00084 milligrams per dry standard cubic meter ³	3-run average (collect enough volume to meet a detection limit data quality objective of 0.03 ug/dry standard cubic meter)	Performance test (Method 29 or 30B at 40 CFR part 60, appendix A-8) or ASTM D6784-02 (Reapproved 2008). ²
Nitrogen Oxides	23 parts per million dry volume	3-run average (for Method 7E, 1 hour minimum sample time per run)	Performance test (Method 7 or 7E at 40 CFR part 60, appendix A-4).
Particulate matter (filterable)	18 milligrams per dry standard cubic meter	3-run average (collect a minimum volume of 2 dry standard cubic meters per run)	Performance test (Method 5 or 29 at 40 CFR part 60, appendix A-3 or appendix A-8 at 40 CFR part 60).
Sulfur dioxide	11 parts per million dry volume	3-run average (1 hour minimum sample time per run)	Performance test (Method 6 or 6C at 40 CFR part 60, appendix A-4).

¹All emission limitations are measured at 7 percent oxygen, dry basis at standard conditions. For dioxins/furans, you must meet either the Total Mass Limit or the toxic equivalency basis limit.

²Incorporated by reference, see §60.17.

³If you are conducting stack tests to demonstrate compliance and your performance tests for this pollutant for at least 2 consecutive years show that your emissions are at or below this limit, you can skip testing according to §60.2155 if all of the other provisions of §60.2155 are met. For all other pollutants that do not contain a footnote “3”, your performance tests for this pollutant for at least 2 consecutive years must show that your emissions are at or below 75 percent of this limit in order to qualify for skip testing.

Table 6 to Subpart CCCC of Part 60—Emission Limitations for Energy Recovery Units That Commenced Construction After June 4, 2010, or That Commenced Reconstruction or Modification After August 7, 2013

For the air pollutant	You must meet this emission limitation ¹		Using this averaging time	And determining compliance using this method
	Liquid/gas	Solids		
Cadmium	0.023 milligrams per dry standard cubic meter	Biomass—0.0014 milligrams per dry standard cubic meter. ³ Coal—0.0017 milligrams per dry standard cubic meter	3-run average (collect a minimum volume of 4 dry standard cubic meters per run)	Performance test (Method 29 at 40 CFR part 60, appendix A-8). Use ICPMS for the analytical finish.
Carbon monoxide	35 parts per million dry volume	Biomass—240 parts per million dry volume. Coal—95 parts per million dry volume	3-run average (1 hour minimum sample time per run)	Performance test (Method 10 at 40 CFR part 60, appendix A-4).
Dioxin/furans (Total Mass Basis)	No Total Mass Basis limit, must meet the toxic equivalency basis limit below	Biomass—0.52 nanograms per dry standard cubic meter. ³ Coal—5.1 nanograms per dry standard cubic meter ³	3-run average (collect a minimum volume of 4 dry standard cubic meters)	Performance test (Method 23 at 40 CFR part 60, appendix A-7).
Dioxins/furans (toxic equivalency basis)	0.093 nanograms per dry standard cubic meter ³	Biomass—0.076 nanograms per dry standard cubic meter. ³ Coal—0.075 nanograms per dry standard cubic meter ³	3-run average (collect a minimum volume of 4 dry standard cubic meters per run)	Performance test (Method 23 of appendix A-7 of this part).
Fugitive ash	Visible emissions for no more than 5 percent of the hourly observation period	Three 1-hour observation periods	Visible emission test (Method 22 at 40 CFR part 60, appendix A-7)	Fugitive ash.
Hydrogen chloride	14 parts per million dry volume	Biomass—0.20 parts per million dry volume. Coal—58 parts per million dry volume	3-run average (For Method 26, collect a minimum volume of 360 liters per run. For Method 26A, collect a minimum volume of 3 dry standard cubic meters per run)	Performance test (Method 26 or 26A at 40 CFR part 60, appendix A-8).
Lead	0.096 milligrams per dry standard cubic meter	Biomass—0.014 milligrams per dry standard cubic meter. ³ Coal—0.057 milligrams per dry standard cubic meter	3-run average (collect a minimum volume of 4 dry standard cubic meters per run)	Performance test (Method 29 at 40 CFR part 60, appendix A-8). Use ICPMS for the analytical finish.
Mercury	0.00056 milligrams per dry standard cubic meter ³	Biomass—0.0022 milligrams per dry standard cubic meter. Coal—0.013 milligrams per dry standard cubic meter	3-run average (collect enough volume to meet an in-stack detection limit data quality objective of 0.03 ug/dscm)	Performance test (Method 29 or 30B at 40 CFR part 60, appendix A-8) or ASTM D6784-02 (Reapproved 2008). ²
Oxides of nitrogen	76 parts per million dry volume	Biomass—290 parts per million dry volume. Coal—460 parts per million dry volume	3-run average (for Method 7E, 1 hour minimum sample time per run)	Performance test (Method 7 or 7E at 40 CFR part 60, appendix A-4).
Particulate matter (filterable)	110 milligrams per dry standard cubic meter	Biomass—5.1 milligrams per dry standard cubic meter. Coal—130 milligrams per dry standard cubic meter	3-run average (collect a minimum volume of 1 dry standard cubic meter per run)	Performance test (Method 5 or 29 at 40 CFR part 60, appendix A-3 or appendix A-8) if the unit has an annual average heat input rate less than 250 MMBtu/hr; or PM CPMS (as specified in §60.2145(x)) if the unit has an annual average heat input rate equal to or greater than 250 MMBtu/hr.
Sulfur dioxide	720 parts per million dry volume	Biomass—7.3 parts per million dry volume. Coal—850 parts per million dry volume	3-run average (for Method 6, collect a minimum of 60 liters, for Method 6C, 1 hour minimum sample time per run)	Performance test (Method 6 or 6C at 40 CFR part 60, appendix A-4).

¹All emission limitations are measured at 7 percent oxygen, dry basis at standard conditions. For dioxins/furans, you must meet either the Total Mass Basis limit or the toxic equivalency basis limit.

²Incorporated by reference, see §60.17.

³If you are conducting stack tests to demonstrate compliance and your performance tests for this pollutant for at least 2 consecutive years show that your emissions are at or below this limit, you can skip testing according to §60.2155 if all of the other provisions of §60.2155 are met. For all other pollutants that do not contain a footnote “3”, your performance tests for this pollutant for at least 2 consecutive years must show that your emissions are at or below 75 percent of this limit in order to qualify for skip testing.

Table 7 to Subpart CCCC of Part 60—Emission Limitations for Waste-Burning Kilns That Commenced Construction After June 4, 2010, or Reconstruction or Modification After August 7, 2013

For the air pollutant	You must meet this emission limitation ¹	Using this averaging time	And determining compliance using this method ³
Cadmium	0.0014 milligrams per dry standard cubic meter ²	3-run average (collect a minimum volume of 4 dry standard cubic meters per run)	Performance test (Method 29 at 40 CFR part 60, appendix A-8). Use ICPMS for the analytical finish.
Carbon monoxide	90 (long kilns)/190 (preheater/precalciner) parts per million dry volume	3-run average (1 hour minimum sample time per run)	Performance test (Method 10 at 40 CFR part 60, appendix A-4).
Dioxins/furans (total mass basis)	0.51 nanograms per dry standard cubic meter ²	3-run average (collect a minimum volume of 4 dry standard cubic meters per run)	Performance test (Method 23 at 40 CFR part 60, appendix A-7).
Dioxins/furans (toxic equivalency basis)	0.075 nanograms per dry standard cubic meter ²	3-run average (collect a minimum volume of 4 dry standard cubic meters)	Performance test (Method 23 at 40 CFR part 60, appendix A-7).
Hydrogen chloride	3.0 parts per million dry volume ²	3-run average (1 hour minimum sample time per run) or 30-day rolling average if HCl CEMS are used	Performance test (Method 321 at 40 CFR part 63, appendix A) or HCl CEMS if a wet scrubber or dry scrubber is not used, as specified in §60.2145(j).
Lead	0.014 milligrams per dry standard cubic meter ²	3-run average (collect a minimum volume of 4 dry standard cubic meters)	Performance test (Method 29 at 40 CFR part 60, appendix A-8). Use ICPMS for the analytical finish.
Mercury	0.0037 milligrams per dry standard cubic meter	30-day rolling average	Mercury CEMS or sorbent trap monitoring system (performance specification 12A or 12B, respectively, of appendix B of this part), as specified in §60.2145(j).
Oxides of nitrogen	200 parts per million dry volume	30-day rolling average	NO _x CEMS (performance specification 2 of appendix B and procedure 1 of appendix F of this part).
Particulate matter (filterable)	4.9 milligrams per dry standard cubic meter	30-day rolling average	PM CPMS (as specified in §60.2145(x)).
Sulfur dioxide	28 parts per million dry volume	30-day rolling average	Sulfur dioxide CEMS (performance specification 2 of appendix B and procedure 1 of appendix F of this part).

¹All emission limitations are measured at 7 percent oxygen (except for CEMS data during startup and shutdown), dry basis at standard conditions. For dioxins/furans, you must meet either the Total Mass Basis limit or the toxic equivalency basis limit.

²If you are conducting stack tests to demonstrate compliance and your performance tests for this pollutant for at least 2 consecutive years show that your emissions are at or below this limit, you can skip testing according to §60.2155 if all of the other provisions of §60.2155 are met. For all other pollutants that do not contain a footnote “2”, your performance tests for this pollutant for at least 2 consecutive years must show that your emissions are at or below 75 percent of this limit in order to qualify for skip testing.

³Alkali bypass and in-line coal mill stacks are subject to performance testing only, as specified in §60.2145(y)(3). They are not subject to the CEMS, sorbent trap or CPMS requirements that otherwise may apply to the main kiln exhaust.

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Table 8 to Subpart CCCC of Part 60—Emission Limitations for Small, Remote Incinerators That Commenced Construction After June 4, 2010, Or That Commenced Reconstruction or Modification After August 7, 2013

For the air pollutant	You must meet this emission limitation ¹	Using this averaging time	And determining compliance using this method
Cadmium	0.67 milligrams per dry standard cubic meter	3-run average (collect a minimum volume of 1 dry standard cubic meters per run)	Performance test (Method 29 at 40 CFR part 60, appendix A-8).
Carbon monoxide	13 parts per million dry volume	3-run average (1 hour minimum sample time per run)	Performance test (Method 10 at 40 CFR part 60, appendix A-4).
Dioxins/furans (total mass basis)	1,800 nanograms per dry standard cubic meter.	3-run average (collect a minimum volume of 1 dry standard cubic meters per run)	Performance test (Method 23 at 40 CFR part 60, appendix A-7).
Dioxins/furans (toxic equivalency basis)	31 nanograms per dry standard cubic meter	3-run average (collect a minimum volume of 1 dry standard cubic meters)	Performance test (Method 23 at 40 CFR part 60, appendix A-7).
Fugitive ash	Visible emissions for no more than 5 percent of the hourly observation period	Three 1-hour observation periods	Visible emissions test (Method 22 at 40 CFR part 60, appendix A-7).
Hydrogen chloride	200 parts per million by dry volume	3-run average (For Method 26, collect a minimum volume of 60 liters per run. For Method 26A, collect a minimum volume of 1 dry standard cubic meter per run)	Performance test (Method 26 or 26A at 40 CFR part 60, appendix A-8).
Lead	2.0 milligrams per dry standard cubic meter	3-run average (collect a minimum volume of 1 dry standard cubic meters)	Performance test (Method 29 at 40 CFR part 60, appendix A-8). Use ICPMS for the analytical finish.
Mercury	0.0035 milligrams per dry standard cubic meter	3-run average (For Method 29 and ASTM D6784-02 (Reapproved 2008), ² collect a minimum volume of 2 dry standard cubic meters per run. For Method 30B, collect a minimum volume as specified in Method 30B at 40 CFR part 60, appendix A)	Performance test (Method 29 or 30B at 40 CFR part 60, appendix A-8) or ASTM D6784-02 (Reapproved 2008). ²
Oxides of nitrogen	170 parts per million dry volume	3-run average (for Method 7E, 1 hour minimum sample time per run)	Performance test (Method 7 or 7E at 40 CFR part 60, appendix A-4).

Particulate matter (filterable)	270 milligrams per dry standard cubic meter	3-run average (collect a minimum volume of 1 dry standard cubic meters)	Performance test (Method 5 or 29 at 40 CFR part 60, appendix A-3 or appendix A-8).
Sulfur dioxide	1.2 parts per million dry volume	3-run average (1 hour minimum sample time per run)	Performance test (Method 6 or 6c at 40 CFR part 60, appendix A-4).

¹All emission limitations are measured at 7 percent oxygen, dry basis at standard conditions. For dioxins/furans, you must meet either the Total Mass Basis limit or the toxic equivalency basis limit.

²Incorporated by reference, see §60.17.

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Appendix D

40 CFR Part 60, Subpart III – *Standards of Performance for Stationary Compression Ignition
Internal Combustion Engines*

ELECTRONIC CODE OF FEDERAL REGULATIONS

e-CFR data is current as of April 11, 2019

Title 40 → Chapter I → Subchapter C → Part 60 → Subpart IIII

Title 40: Protection of Environment

PART 60—STANDARDS OF PERFORMANCE FOR NEW STATIONARY SOURCES (CONTINUED)

Subpart IIII—Standards of Performance for Stationary Compression Ignition Internal Combustion Engines

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SOURCE: 71 FR 39172, July 11, 2006, unless otherwise noted.

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WHAT THIS SUBPART COVERS

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§60.4200 Am I subject to this subpart?

(a) The provisions of this subpart are applicable to manufacturers, owners, and operators of stationary compression ignition (CI) internal combustion engines (ICE) and other persons as specified in paragraphs (a)(1) through (4) of this section. For the purposes of this subpart, the date that construction commences is the date the engine is ordered by the owner or operator.

(1) Manufacturers of stationary CI ICE with a displacement of less than 30 liters per cylinder where the model year is:

(i) 2007 or later, for engines that are not fire pump engines;

(ii) The model year listed in Table 3 to this subpart or later model year, for fire pump engines.

(2) Owners and operators of stationary CI ICE that commence construction after July 11, 2005, where the stationary CI ICE are:

(i) Manufactured after April 1, 2006, and are not fire pump engines, or

(ii) Manufactured as a certified National Fire Protection Association (NFPA) fire pump engine after July 1, 2006.

(3) Owners and operators of any stationary CI ICE that are modified or reconstructed after July 11, 2005 and any person that modifies or reconstructs any stationary CI ICE after July 11, 2005.

(4) The provisions of §60.4208 of this subpart are applicable to all owners and operators of stationary CI ICE that commence construction after July 11, 2005.

(b) The provisions of this subpart are not applicable to stationary CI ICE being tested at a stationary CI ICE test cell/stand.

(c) If you are an owner or operator of an area source subject to this subpart, you are exempt from the obligation to obtain a permit under 40 CFR part 70 or 40 CFR part 71, provided you are not required to obtain a permit under 40 CFR 70.3(a) or 40

CFR 71.3(a) for a reason other than your status as an area source under this subpart. Notwithstanding the previous sentence, you must continue to comply with the provisions of this subpart applicable to area sources.

(d) Stationary CI ICE may be eligible for exemption from the requirements of this subpart as described in 40 CFR part 1068, subpart C (or the exemptions described in 40 CFR part 89, subpart J and 40 CFR part 94, subpart J, for engines that would need to be certified to standards in those parts), except that owners and operators, as well as manufacturers, may be eligible to request an exemption for national security.

(e) Owners and operators of facilities with CI ICE that are acting as temporary replacement units and that are located at a stationary source for less than 1 year and that have been properly certified as meeting the standards that would be applicable to such engine under the appropriate nonroad engine provisions, are not required to meet any other provisions under this subpart with regard to such engines.

[71 FR 39172, July 11, 2006, as amended at 76 FR 37967, June 28, 2011]

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EMISSION STANDARDS FOR MANUFACTURERS

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§60.4201 What emission standards must I meet for non-emergency engines if I am a stationary CI internal combustion engine manufacturer?

(a) Stationary CI internal combustion engine manufacturers must certify their 2007 model year and later non-emergency stationary CI ICE with a maximum engine power less than or equal to 2,237 kilowatt (KW) (3,000 horsepower (HP)) and a displacement of less than 10 liters per cylinder to the certification emission standards for new nonroad CI engines in 40 CFR 89.112, 40 CFR 89.113, 40 CFR 1039.101, 40 CFR 1039.102, 40 CFR 1039.104, 40 CFR 1039.105, 40 CFR 1039.107, and 40 CFR 1039.115, as applicable, for all pollutants, for the same model year and maximum engine power.

(b) Stationary CI internal combustion engine manufacturers must certify their 2007 through 2010 model year non-emergency stationary CI ICE with a maximum engine power greater than 2,237 KW (3,000 HP) and a displacement of less than 10 liters per cylinder to the emission standards in table 1 to this subpart, for all pollutants, for the same maximum engine power.

(c) Stationary CI internal combustion engine manufacturers must certify their 2011 model year and later non-emergency stationary CI ICE with a maximum engine power greater than 2,237 KW (3,000 HP) and a displacement of less than 10 liters per cylinder to the certification emission standards for new nonroad CI engines in 40 CFR 1039.101, 40 CFR 1039.102, 40 CFR 1039.104, 40 CFR 1039.105, 40 CFR 1039.107, and 40 CFR 1039.115, as applicable, for all pollutants, for the same maximum engine power.

(d) Stationary CI internal combustion engine manufacturers must certify the following non-emergency stationary CI ICE to the certification emission standards for new marine CI engines in 40 CFR 94.8, as applicable, for all pollutants, for the same displacement and maximum engine power:

(1) Their 2007 model year through 2012 non-emergency stationary CI ICE with a displacement of greater than or equal to 10 liters per cylinder and less than 30 liters per cylinder;

(2) Their 2013 model year non-emergency stationary CI ICE with a maximum engine power greater than or equal to 3,700 KW (4,958 HP) and a displacement of greater than or equal to 10 liters per cylinder and less than 15 liters per cylinder; and

(3) Their 2013 model year non-emergency stationary CI ICE with a displacement of greater than or equal to 15 liters per cylinder and less than 30 liters per cylinder.

(e) Stationary CI internal combustion engine manufacturers must certify the following non-emergency stationary CI ICE to the certification emission standards and other requirements for new marine CI engines in 40 CFR 1042.101, 40 CFR 1042.107, 40 CFR 1042.110, 40 CFR 1042.115, 40 CFR 1042.120, and 40 CFR 1042.145, as applicable, for all pollutants, for the same displacement and maximum engine power:

(1) Their 2013 model year non-emergency stationary CI ICE with a maximum engine power less than 3,700 KW (4,958 HP) and a displacement of greater than or equal to 10 liters per cylinder and less than 15 liters per cylinder; and

(2) Their 2014 model year and later non-emergency stationary CI ICE with a displacement of greater than or equal to 10 liters per cylinder and less than 30 liters per cylinder.

(f) Notwithstanding the requirements in paragraphs (a) through (c) of this section, stationary non-emergency CI ICE identified in paragraphs (a) and (c) may be certified to the provisions of 40 CFR part 94 or, if Table 1 to 40 CFR 1042.1 identifies

40 CFR part 1042 as being applicable, 40 CFR part 1042, if the engines will be used solely in either or both of the following locations:

- (1) Remote areas of Alaska; and
- (2) Marine offshore installations.

(g) Notwithstanding the requirements in paragraphs (a) through (f) of this section, stationary CI internal combustion engine manufacturers are not required to certify reconstructed engines; however manufacturers may elect to do so. The reconstructed engine must be certified to the emission standards specified in paragraphs (a) through (e) of this section that are applicable to the model year, maximum engine power, and displacement of the reconstructed stationary CI ICE.

(h) Stationary CI ICE certified to the standards in 40 CFR part 1039 and equipped with auxiliary emission control devices (AECs) as specified in 40 CFR 1039.665 must meet the Tier 1 certification emission standards for new nonroad CI engines in 40 CFR 89.112 while the AEC is activated during a qualified emergency situation. A qualified emergency situation is defined in 40 CFR 1039.665. When the qualified emergency situation has ended and the AEC is deactivated, the engine must resume meeting the otherwise applicable emission standard specified in this section.

[71 FR 39172, July 11, 2006, as amended at 76 FR 37967, June 28, 2011; 81 FR 44219, July 7, 2016]

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§60.4202 What emission standards must I meet for emergency engines if I am a stationary CI internal combustion engine manufacturer?

(a) Stationary CI internal combustion engine manufacturers must certify their 2007 model year and later emergency stationary CI ICE with a maximum engine power less than or equal to 2,237 KW (3,000 HP) and a displacement of less than 10 liters per cylinder that are not fire pump engines to the emission standards specified in paragraphs (a)(1) through (2) of this section.

(1) For engines with a maximum engine power less than 37 KW (50 HP):

(i) The certification emission standards for new nonroad CI engines for the same model year and maximum engine power in 40 CFR 89.112 and 40 CFR 89.113 for all pollutants for model year 2007 engines, and

(ii) The certification emission standards for new nonroad CI engines in 40 CFR 1039.104, 40 CFR 1039.105, 40 CFR 1039.107, 40 CFR 1039.115, and table 2 to this subpart, for 2008 model year and later engines.

(2) For engines with a maximum engine power greater than or equal to 37 KW (50 HP), the certification emission standards for new nonroad CI engines for the same model year and maximum engine power in 40 CFR 89.112 and 40 CFR 89.113 for all pollutants beginning in model year 2007.

(b) Stationary CI internal combustion engine manufacturers must certify their 2007 model year and later emergency stationary CI ICE with a maximum engine power greater than 2,237 KW (3,000 HP) and a displacement of less than 10 liters per cylinder that are not fire pump engines to the emission standards specified in paragraphs (b)(1) through (2) of this section.

(1) For 2007 through 2010 model years, the emission standards in table 1 to this subpart, for all pollutants, for the same maximum engine power.

(2) For 2011 model year and later, the certification emission standards for new nonroad CI engines for engines of the same model year and maximum engine power in 40 CFR 89.112 and 40 CFR 89.113 for all pollutants.

(c) [Reserved]

(d) Beginning with the model years in table 3 to this subpart, stationary CI internal combustion engine manufacturers must certify their fire pump stationary CI ICE to the emission standards in table 4 to this subpart, for all pollutants, for the same model year and NFPA nameplate power.

(e) Stationary CI internal combustion engine manufacturers must certify the following emergency stationary CI ICE that are not fire pump engines to the certification emission standards for new marine CI engines in 40 CFR 94.8, as applicable, for all pollutants, for the same displacement and maximum engine power:

(1) Their 2007 model year through 2012 emergency stationary CI ICE with a displacement of greater than or equal to 10 liters per cylinder and less than 30 liters per cylinder;

(2) Their 2013 model year and later emergency stationary CI ICE with a maximum engine power greater than or equal to 3,700 KW (4,958 HP) and a displacement of greater than or equal to 10 liters per cylinder and less than 15 liters per cylinder;

(3) Their 2013 model year emergency stationary CI ICE with a displacement of greater than or equal to 15 liters per cylinder and less than 30 liters per cylinder; and

(4) Their 2014 model year and later emergency stationary CI ICE with a maximum engine power greater than or equal to 2,000 KW (2,682 HP) and a displacement of greater than or equal to 15 liters per cylinder and less than 30 liters per cylinder.

(f) Stationary CI internal combustion engine manufacturers must certify the following emergency stationary CI ICE to the certification emission standards and other requirements applicable to Tier 3 new marine CI engines in 40 CFR 1042.101, 40 CFR 1042.107, 40 CFR 1042.115, 40 CFR 1042.120, and 40 CFR 1042.145, for all pollutants, for the same displacement and maximum engine power:

(1) Their 2013 model year and later emergency stationary CI ICE with a maximum engine power less than 3,700 KW (4,958 HP) and a displacement of greater than or equal to 10 liters per cylinder and less than 15 liters per cylinder; and

(2) Their 2014 model year and later emergency stationary CI ICE with a maximum engine power less than 2,000 KW (2,682 HP) and a displacement of greater than or equal to 15 liters per cylinder and less than 30 liters per cylinder.

(g) Notwithstanding the requirements in paragraphs (a) through (d) of this section, stationary emergency CI internal combustion engines identified in paragraphs (a) and (c) may be certified to the provisions of 40 CFR part 94 or, if Table 2 to 40 CFR 1042.101 identifies Tier 3 standards as being applicable, the requirements applicable to Tier 3 engines in 40 CFR part 1042, if the engines will be used solely in either or both of the following locations:

(1) Remote areas of Alaska; and

(2) Marine offshore installations.

(h) Notwithstanding the requirements in paragraphs (a) through (f) of this section, stationary CI internal combustion engine manufacturers are not required to certify reconstructed engines; however manufacturers may elect to do so. The reconstructed engine must be certified to the emission standards specified in paragraphs (a) through (f) of this section that are applicable to the model year, maximum engine power and displacement of the reconstructed emergency stationary CI ICE.

[71 FR 39172, July 11, 2006, as amended at 76 FR 37968, June 28, 2011; 81 FR 44219, July 7, 2016]

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§60.4203 How long must my engines meet the emission standards if I am a manufacturer of stationary CI internal combustion engines?

Engines manufactured by stationary CI internal combustion engine manufacturers must meet the emission standards as required in §§60.4201 and 60.4202 during the certified emissions life of the engines.

[76 FR 37968, June 28, 2011]

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EMISSION STANDARDS FOR OWNERS AND OPERATORS

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§60.4204 What emission standards must I meet for non-emergency engines if I am an owner or operator of a stationary CI internal combustion engine?

(a) Owners and operators of pre-2007 model year non-emergency stationary CI ICE with a displacement of less than 10 liters per cylinder must comply with the emission standards in table 1 to this subpart. Owners and operators of pre-2007 model year non-emergency stationary CI ICE with a displacement of greater than or equal to 10 liters per cylinder and less than 30 liters per cylinder must comply with the emission standards in 40 CFR 94.8(a)(1).

(b) Owners and operators of 2007 model year and later non-emergency stationary CI ICE with a displacement of less than 30 liters per cylinder must comply with the emission standards for new CI engines in §60.4201 for their 2007 model year and later stationary CI ICE, as applicable.

(c) Owners and operators of non-emergency stationary CI engines with a displacement of greater than or equal to 30 liters per cylinder must meet the following requirements:

(1) For engines installed prior to January 1, 2012, limit the emissions of NO_x in the stationary CI internal combustion engine exhaust to the following:

(i) 17.0 grams per kilowatt-hour (g/KW-hr) (12.7 grams per horsepower-hr (g/HP-hr)) when maximum engine speed is less than 130 revolutions per minute (rpm);

(ii) $45 \cdot n^{-0.2}$ g/KW-hr ($34 \cdot n^{-0.2}$ g/HP-hr) when maximum engine speed is 130 or more but less than 2,000 rpm, where n is maximum engine speed; and

(iii) 9.8 g/KW-hr (7.3 g/HP-hr) when maximum engine speed is 2,000 rpm or more.

(2) For engines installed on or after January 1, 2012 and before January 1, 2016, limit the emissions of NO_x in the stationary CI internal combustion engine exhaust to the following:

(i) 14.4 g/KW-hr (10.7 g/HP-hr) when maximum engine speed is less than 130 rpm;

(ii) $44 \cdot n^{-0.23}$ g/KW-hr ($33 \cdot n^{-0.23}$ g/HP-hr) when maximum engine speed is greater than or equal to 130 but less than 2,000 rpm and where n is maximum engine speed; and

(iii) 7.7 g/KW-hr (5.7 g/HP-hr) when maximum engine speed is greater than or equal to 2,000 rpm.

(3) For engines installed on or after January 1, 2016, limit the emissions of NO_x in the stationary CI internal combustion engine exhaust to the following:

(i) 3.4 g/KW-hr (2.5 g/HP-hr) when maximum engine speed is less than 130 rpm;

(ii) $9.0 \cdot n^{-0.20}$ g/KW-hr ($6.7 \cdot n^{-0.20}$ g/HP-hr) where n (maximum engine speed) is 130 or more but less than 2,000 rpm; and

(iii) 2.0 g/KW-hr (1.5 g/HP-hr) where maximum engine speed is greater than or equal to 2,000 rpm.

(4) Reduce particulate matter (PM) emissions by 60 percent or more, or limit the emissions of PM in the stationary CI internal combustion engine exhaust to 0.15 g/KW-hr (0.11 g/HP-hr).

(d) Owners and operators of non-emergency stationary CI ICE with a displacement of less than 30 liters per cylinder who conduct performance tests in-use must meet the not-to-exceed (NTE) standards as indicated in §60.4212.

(e) Owners and operators of any modified or reconstructed non-emergency stationary CI ICE subject to this subpart must meet the emission standards applicable to the model year, maximum engine power, and displacement of the modified or reconstructed non-emergency stationary CI ICE that are specified in paragraphs (a) through (d) of this section.

(f) Owners and operators of stationary CI ICE certified to the standards in 40 CFR part 1039 and equipped with AECDs as specified in 40 CFR 1039.665 must meet the Tier 1 certification emission standards for new nonroad CI engines in 40 CFR 89.112 while the AECD is activated during a qualified emergency situation. A qualified emergency situation is defined in 40 CFR 1039.665. When the qualified emergency situation has ended and the AECD is deactivated, the engine must resume meeting the otherwise applicable emission standard specified in this section.

[71 FR 39172, July 11, 2006, as amended at 76 FR 37968, June 28, 2011; 81 FR 44219, July 7, 2016]

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§60.4205 What emission standards must I meet for emergency engines if I am an owner or operator of a stationary CI internal combustion engine?

(a) Owners and operators of pre-2007 model year emergency stationary CI ICE with a displacement of less than 10 liters per cylinder that are not fire pump engines must comply with the emission standards in Table 1 to this subpart. Owners and operators of pre-2007 model year emergency stationary CI ICE with a displacement of greater than or equal to 10 liters per cylinder and less than 30 liters per cylinder that are not fire pump engines must comply with the emission standards in 40 CFR 94.8(a)(1).

(b) Owners and operators of 2007 model year and later emergency stationary CI ICE with a displacement of less than 30 liters per cylinder that are not fire pump engines must comply with the emission standards for new nonroad CI engines in §60.4202, for all pollutants, for the same model year and maximum engine power for their 2007 model year and later emergency stationary CI ICE.

(c) Owners and operators of fire pump engines with a displacement of less than 30 liters per cylinder must comply with the emission standards in table 4 to this subpart, for all pollutants.

(d) Owners and operators of emergency stationary CI engines with a displacement of greater than or equal to 30 liters per cylinder must meet the requirements in this section.

(1) For engines installed prior to January 1, 2012, limit the emissions of NO_x in the stationary CI internal combustion engine exhaust to the following:

(i) 17.0 g/KW-hr (12.7 g/HP-hr) when maximum engine speed is less than 130 rpm;

(ii) $45 \cdot n^{-0.2}$ g/KW-hr ($34 \cdot n^{-0.2}$ g/HP-hr) when maximum engine speed is 130 or more but less than 2,000 rpm, where n is maximum engine speed; and

(iii) 9.8 g/kW-hr (7.3 g/HP-hr) when maximum engine speed is 2,000 rpm or more.

(2) For engines installed on or after January 1, 2012, limit the emissions of NO_x in the stationary CI internal combustion engine exhaust to the following:

(i) 14.4 g/KW-hr (10.7 g/HP-hr) when maximum engine speed is less than 130 rpm;

(ii) $44 \cdot n^{-0.23}$ g/KW-hr ($33 \cdot n^{-0.23}$ g/HP-hr) when maximum engine speed is greater than or equal to 130 but less than 2,000 rpm and where n is maximum engine speed; and

(iii) 7.7 g/KW-hr (5.7 g/HP-hr) when maximum engine speed is greater than or equal to 2,000 rpm.

(3) Limit the emissions of PM in the stationary CI internal combustion engine exhaust to 0.40 g/KW-hr (0.30 g/HP-hr).

(e) Owners and operators of emergency stationary CI ICE with a displacement of less than 30 liters per cylinder who conduct performance tests in-use must meet the NTE standards as indicated in §60.4212.

(f) Owners and operators of any modified or reconstructed emergency stationary CI ICE subject to this subpart must meet the emission standards applicable to the model year, maximum engine power, and displacement of the modified or reconstructed CI ICE that are specified in paragraphs (a) through (e) of this section.

[71 FR 39172, July 11, 2006, as amended at 76 FR 37969, June 28, 2011]

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§60.4206 How long must I meet the emission standards if I am an owner or operator of a stationary CI internal combustion engine?

Owners and operators of stationary CI ICE must operate and maintain stationary CI ICE that achieve the emission standards as required in §§60.4204 and 60.4205 over the entire life of the engine.

[76 FR 37969, June 28, 2011]

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FUEL REQUIREMENTS FOR OWNERS AND OPERATORS

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§60.4207 What fuel requirements must I meet if I am an owner or operator of a stationary CI internal combustion engine subject to this subpart?

(a) Beginning October 1, 2007, owners and operators of stationary CI ICE subject to this subpart that use diesel fuel must use diesel fuel that meets the requirements of 40 CFR 80.510(a).

(b) Beginning October 1, 2010, owners and operators of stationary CI ICE subject to this subpart with a displacement of less than 30 liters per cylinder that use diesel fuel must use diesel fuel that meets the requirements of 40 CFR 80.510(b) for nonroad diesel fuel, except that any existing diesel fuel purchased (or otherwise obtained) prior to October 1, 2010, may be used until depleted.

(c) [Reserved]

(d) Beginning June 1, 2012, owners and operators of stationary CI ICE subject to this subpart with a displacement of greater than or equal to 30 liters per cylinder are no longer subject to the requirements of paragraph (a) of this section, and must use fuel that meets a maximum per-gallon sulfur content of 1,000 parts per million (ppm).

(e) Stationary CI ICE that have a national security exemption under §60.4200(d) are also exempt from the fuel requirements in this section.

[71 FR 39172, July 11, 2006, as amended at 76 FR 37969, June 28, 2011; 78 FR 6695, Jan. 30, 2013]

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OTHER REQUIREMENTS FOR OWNERS AND OPERATORS

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§60.4208 What is the deadline for importing or installing stationary CI ICE produced in previous model years?

(a) After December 31, 2008, owners and operators may not install stationary CI ICE (excluding fire pump engines) that do not meet the applicable requirements for 2007 model year engines.

(b) After December 31, 2009, owners and operators may not install stationary CI ICE with a maximum engine power of less than 19 KW (25 HP) (excluding fire pump engines) that do not meet the applicable requirements for 2008 model year engines.

(c) After December 31, 2014, owners and operators may not install non-emergency stationary CI ICE with a maximum engine power of greater than or equal to 19 KW (25 HP) and less than 56 KW (75 HP) that do not meet the applicable requirements for 2013 model year non-emergency engines.

(d) After December 31, 2013, owners and operators may not install non-emergency stationary CI ICE with a maximum engine power of greater than or equal to 56 KW (75 HP) and less than 130 KW (175 HP) that do not meet the applicable requirements for 2012 model year non-emergency engines.

(e) After December 31, 2012, owners and operators may not install non-emergency stationary CI ICE with a maximum engine power of greater than or equal to 130 KW (175 HP), including those above 560 KW (750 HP), that do not meet the applicable requirements for 2011 model year non-emergency engines.

(f) After December 31, 2016, owners and operators may not install non-emergency stationary CI ICE with a maximum engine power of greater than or equal to 560 KW (750 HP) that do not meet the applicable requirements for 2015 model year non-emergency engines.

(g) After December 31, 2018, owners and operators may not install non-emergency stationary CI ICE with a maximum engine power greater than or equal to 600 KW (804 HP) and less than 2,000 KW (2,680 HP) and a displacement of greater than or equal to 10 liters per cylinder and less than 30 liters per cylinder that do not meet the applicable requirements for 2017 model year non-emergency engines.

(h) In addition to the requirements specified in §§60.4201, 60.4202, 60.4204, and 60.4205, it is prohibited to import stationary CI ICE with a displacement of less than 30 liters per cylinder that do not meet the applicable requirements specified in paragraphs (a) through (g) of this section after the dates specified in paragraphs (a) through (g) of this section.

(i) The requirements of this section do not apply to owners or operators of stationary CI ICE that have been modified, reconstructed, and do not apply to engines that were removed from one existing location and reinstalled at a new location.

[71 FR 39172, July 11, 2006, as amended at 76 FR 37969, June 28, 2011]

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§60.4209 What are the monitoring requirements if I am an owner or operator of a stationary CI internal combustion engine?

If you are an owner or operator, you must meet the monitoring requirements of this section. In addition, you must also meet the monitoring requirements specified in §60.4211.

(a) If you are an owner or operator of an emergency stationary CI internal combustion engine that does not meet the standards applicable to non-emergency engines, you must install a non-resettable hour meter prior to startup of the engine.

(b) If you are an owner or operator of a stationary CI internal combustion engine equipped with a diesel particulate filter to comply with the emission standards in §60.4204, the diesel particulate filter must be installed with a backpressure monitor that notifies the owner or operator when the high backpressure limit of the engine is approached.

[71 FR 39172, July 11, 2006, as amended at 76 FR 37969, June 28, 2011]

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COMPLIANCE REQUIREMENTS

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§60.4210 What are my compliance requirements if I am a stationary CI internal combustion engine manufacturer?

(a) Stationary CI internal combustion engine manufacturers must certify their stationary CI ICE with a displacement of less than 10 liters per cylinder to the emission standards specified in §§60.4201(a) through (c) and 60.4202(a), (b) and (d) using the certification procedures required in 40 CFR part 89, subpart B, or 40 CFR part 1039, subpart C, as applicable, and must test their engines as specified in those parts. For the purposes of this subpart, engines certified to the standards in table 1 to this subpart shall be subject to the same requirements as engines certified to the standards in 40 CFR part 89. For the purposes of this subpart, engines certified to the standards in table 4 to this subpart shall be subject to the same requirements as engines certified to the standards in 40 CFR part 89, except that engines with NFPA nameplate power of less than 37 KW (50 HP) certified to model year 2011 or later standards shall be subject to the same requirements as engines certified to the standards in 40 CFR part 1039.

(b) Stationary CI internal combustion engine manufacturers must certify their stationary CI ICE with a displacement of greater than or equal to 10 liters per cylinder and less than 30 liters per cylinder to the emission standards specified in §§60.4201(d) and (e) and 60.4202(e) and (f) using the certification procedures required in 40 CFR part 94, subpart C, or 40 CFR part 1042, subpart C, as applicable, and must test their engines as specified in 40 CFR part 94 or 1042, as applicable.

(c) Stationary CI internal combustion engine manufacturers must meet the requirements of 40 CFR 1039.120, 1039.125, 1039.130, and 1039.135, and 40 CFR part 1068 for engines that are certified to the emission standards in 40 CFR part 1039. Stationary CI internal combustion engine manufacturers must meet the corresponding provisions of 40 CFR part 89, 40 CFR part 94 or 40 CFR part 1042 for engines that would be covered by that part if they were nonroad (including marine) engines. Labels on such engines must refer to stationary engines, rather than or in addition to nonroad or marine engines, as appropriate. Stationary CI internal combustion engine manufacturers must label their engines according to paragraphs (c)(1) through (3) of this section.

(1) Stationary CI internal combustion engines manufactured from January 1, 2006 to March 31, 2006 (January 1, 2006 to June 30, 2006 for fire pump engines), other than those that are part of certified engine families under the nonroad CI engine regulations, must be labeled according to 40 CFR 1039.20.

(2) Stationary CI internal combustion engines manufactured from April 1, 2006 to December 31, 2006 (or, for fire pump engines, July 1, 2006 to December 31 of the year preceding the year listed in table 3 to this subpart) must be labeled according to paragraphs (c)(2)(i) through (iii) of this section:

(i) Stationary CI internal combustion engines that are part of certified engine families under the nonroad regulations must meet the labeling requirements for nonroad CI engines, but do not have to meet the labeling requirements in 40 CFR 1039.20.

(ii) Stationary CI internal combustion engines that meet Tier 1 requirements (or requirements for fire pumps) under this subpart, but do not meet the requirements applicable to nonroad CI engines must be labeled according to 40 CFR 1039.20. The engine manufacturer may add language to the label clarifying that the engine meets Tier 1 requirements (or requirements for fire pumps) of this subpart.

(iii) Stationary CI internal combustion engines manufactured after April 1, 2006 that do not meet Tier 1 requirements of this subpart, or fire pumps engines manufactured after July 1, 2006 that do not meet the requirements for fire pumps under this subpart, may not be used in the U.S. If any such engines are manufactured in the U.S. after April 1, 2006 (July 1, 2006 for fire pump engines), they must be exported or must be brought into compliance with the appropriate standards prior to initial operation. The export provisions of 40 CFR 1068.230 would apply to engines for export and the manufacturers must label such engines according to 40 CFR 1068.230.

(3) Stationary CI internal combustion engines manufactured after January 1, 2007 (for fire pump engines, after January 1 of the year listed in table 3 to this subpart, as applicable) must be labeled according to paragraphs (c)(3)(i) through (iii) of this section.

(i) Stationary CI internal combustion engines that meet the requirements of this subpart and the corresponding requirements for nonroad (including marine) engines of the same model year and HP must be labeled according to the provisions in 40 CFR parts 89, 94, 1039 or 1042, as appropriate.

(ii) Stationary CI internal combustion engines that meet the requirements of this subpart, but are not certified to the standards applicable to nonroad (including marine) engines of the same model year and HP must be labeled according to the provisions in 40 CFR parts 89, 94, 1039 or 1042, as appropriate, but the words "stationary" must be included instead of "nonroad" or "marine" on the label. In addition, such engines must be labeled according to 40 CFR 1039.20.

(iii) Stationary CI internal combustion engines that do not meet the requirements of this subpart must be labeled according to 40 CFR 1068.230 and must be exported under the provisions of 40 CFR 1068.230.

(d) An engine manufacturer certifying an engine family or families to standards under this subpart that are identical to standards applicable under 40 CFR parts 89, 94, 1039 or 1042 for that model year may certify any such family that contains both nonroad (including marine) and stationary engines as a single engine family and/or may include any such family containing stationary engines in the averaging, banking and trading provisions applicable for such engines under those parts.

(e) Manufacturers of engine families discussed in paragraph (d) of this section may meet the labeling requirements referred to in paragraph (c) of this section for stationary CI ICE by either adding a separate label containing the information required in paragraph (c) of this section or by adding the words "and stationary" after the word "nonroad" or "marine," as appropriate, to the label.

(f) Starting with the model years shown in table 5 to this subpart, stationary CI internal combustion engine manufacturers must add a permanent label stating that the engine is for stationary emergency use only to each new emergency stationary CI internal combustion engine greater than or equal to 19 KW (25 HP) that meets all the emission standards for emergency engines in §60.4202 but does not meet all the emission standards for non-emergency engines in §60.4201. The label must be added according to the labeling requirements specified in 40 CFR 1039.135(b). Engine manufacturers must specify in the owner's manual that operation of emergency engines is limited to emergency operations and required maintenance and testing.

(g) Manufacturers of fire pump engines may use the test cycle in table 6 to this subpart for testing fire pump engines and may test at the NFPA certified nameplate HP, provided that the engine is labeled as "Fire Pump Applications Only".

(h) Engine manufacturers, including importers, may introduce into commerce uncertified engines or engines certified to earlier standards that were manufactured before the new or changed standards took effect until inventories are depleted, as long as such engines are part of normal inventory. For example, if the engine manufacturers' normal industry practice is to keep on hand a one-month supply of engines based on its projected sales, and a new tier of standards starts to apply for the 2009 model year, the engine manufacturer may manufacture engines based on the normal inventory requirements late in the 2008 model year, and sell those engines for installation. The engine manufacturer may not circumvent the provisions of §60.4201 or §60.4202 by stockpiling engines that are built before new or changed standards take effect. Stockpiling of such engines beyond normal industry practice is a violation of this subpart.

(i) The replacement engine provisions of 40 CFR 89.1003(b)(7), 40 CFR 94.1103(b)(3), 40 CFR 94.1103(b)(4) and 40 CFR 1068.240 are applicable to stationary CI engines replacing existing equipment that is less than 15 years old.

(j) Stationary CI ICE manufacturers may equip their stationary CI internal combustion engines certified to the emission standards in 40 CFR part 1039 with AECs for qualified emergency situations according to the requirements of 40 CFR 1039.665. Manufacturers of stationary CI ICE equipped with AECs as allowed by 40 CFR 1039.665 must meet all of the requirements in 40 CFR 1039.665 that apply to manufacturers. Manufacturers must document that the engine complies with the Tier 1 standard in 40 CFR 89.112 when the AECD is activated. Manufacturers must provide any relevant testing, engineering analysis, or other information in sufficient detail to support such statement when applying for certification (including amending an existing certificate) of an engine equipped with an AECD as allowed by 40 CFR 1039.665.

[71 FR 39172, July 11, 2006, as amended at 76 FR 37969, June 28, 2011; 81 FR 44219, July 7, 2016]

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§60.4211 What are my compliance requirements if I am an owner or operator of a stationary CI internal combustion engine?

(a) If you are an owner or operator and must comply with the emission standards specified in this subpart, you must do all of the following, except as permitted under paragraph (g) of this section:

(1) Operate and maintain the stationary CI internal combustion engine and control device according to the manufacturer's emission-related written instructions;

(2) Change only those emission-related settings that are permitted by the manufacturer; and

(3) Meet the requirements of 40 CFR parts 89, 94 and/or 1068, as they apply to you.

(b) If you are an owner or operator of a pre-2007 model year stationary CI internal combustion engine and must comply with the emission standards specified in §§60.4204(a) or 60.4205(a), or if you are an owner or operator of a CI fire pump engine that is manufactured prior to the model years in table 3 to this subpart and must comply with the emission standards specified in §60.4205(c), you must demonstrate compliance according to one of the methods specified in paragraphs (b)(1) through (5) of this section.

(1) Purchasing an engine certified according to 40 CFR part 89 or 40 CFR part 94, as applicable, for the same model year and maximum engine power. The engine must be installed and configured according to the manufacturer's specifications.

(2) Keeping records of performance test results for each pollutant for a test conducted on a similar engine. The test must have been conducted using the same methods specified in this subpart and these methods must have been followed correctly.

(3) Keeping records of engine manufacturer data indicating compliance with the standards.

(4) Keeping records of control device vendor data indicating compliance with the standards.

(5) Conducting an initial performance test to demonstrate compliance with the emission standards according to the requirements specified in §60.4212, as applicable.

(c) If you are an owner or operator of a 2007 model year and later stationary CI internal combustion engine and must comply with the emission standards specified in §60.4204(b) or §60.4205(b), or if you are an owner or operator of a CI fire pump engine that is manufactured during or after the model year that applies to your fire pump engine power rating in table 3 to this subpart and must comply with the emission standards specified in §60.4205(c), you must comply by purchasing an engine certified to the emission standards in §60.4204(b), or §60.4205(b) or (c), as applicable, for the same model year and maximum (or in the case of fire pumps, NFPA nameplate) engine power. The engine must be installed and configured according to the manufacturer's emission-related specifications, except as permitted in paragraph (g) of this section.

(d) If you are an owner or operator and must comply with the emission standards specified in §60.4204(c) or §60.4205(d), you must demonstrate compliance according to the requirements specified in paragraphs (d)(1) through (3) of this section.

(1) Conducting an initial performance test to demonstrate initial compliance with the emission standards as specified in §60.4213.

(2) Establishing operating parameters to be monitored continuously to ensure the stationary internal combustion engine continues to meet the emission standards. The owner or operator must petition the Administrator for approval of operating parameters to be monitored continuously. The petition must include the information described in paragraphs (d)(2)(i) through (v) of this section.

(i) Identification of the specific parameters you propose to monitor continuously;

(ii) A discussion of the relationship between these parameters and NO_x and PM emissions, identifying how the emissions of these pollutants change with changes in these parameters, and how limitations on these parameters will serve to limit NO_x and PM emissions;

(iii) A discussion of how you will establish the upper and/or lower values for these parameters which will establish the limits on these parameters in the operating limitations;

(iv) A discussion identifying the methods and the instruments you will use to monitor these parameters, as well as the relative accuracy and precision of these methods and instruments; and

(v) A discussion identifying the frequency and methods for recalibrating the instruments you will use for monitoring these parameters.

(3) For non-emergency engines with a displacement of greater than or equal to 30 liters per cylinder, conducting annual performance tests to demonstrate continuous compliance with the emission standards as specified in §60.4213.

(e) If you are an owner or operator of a modified or reconstructed stationary CI internal combustion engine and must comply with the emission standards specified in §60.4204(e) or §60.4205(f), you must demonstrate compliance according to one of the methods specified in paragraphs (e)(1) or (2) of this section.

(1) Purchasing, or otherwise owning or operating, an engine certified to the emission standards in §60.4204(e) or §60.4205(f), as applicable.

(2) Conducting a performance test to demonstrate initial compliance with the emission standards according to the requirements specified in §60.4212 or §60.4213, as appropriate. The test must be conducted within 60 days after the engine commences operation after the modification or reconstruction.

(f) If you own or operate an emergency stationary ICE, you must operate the emergency stationary ICE according to the requirements in paragraphs (f)(1) through (3) of this section. In order for the engine to be considered an emergency stationary ICE under this subpart, any operation other than emergency operation, maintenance and testing, emergency demand response, and operation in non-emergency situations for 50 hours per year, as described in paragraphs (f)(1) through (3) of this

section, is prohibited. If you do not operate the engine according to the requirements in paragraphs (f)(1) through (3) of this section, the engine will not be considered an emergency engine under this subpart and must meet all requirements for non-emergency engines.

(1) There is no time limit on the use of emergency stationary ICE in emergency situations.

(2) You may operate your emergency stationary ICE for any combination of the purposes specified in paragraphs (f)(2)(i) through (iii) of this section for a maximum of 100 hours per calendar year. Any operation for non-emergency situations as allowed by paragraph (f)(3) of this section counts as part of the 100 hours per calendar year allowed by this paragraph (f)(2).

(i) Emergency stationary ICE may be operated for maintenance checks and readiness testing, provided that the tests are recommended by federal, state or local government, the manufacturer, the vendor, the regional transmission organization or equivalent balancing authority and transmission operator, or the insurance company associated with the engine. The owner or operator may petition the Administrator for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the owner or operator maintains records indicating that federal, state, or local standards require maintenance and testing of emergency ICE beyond 100 hours per calendar year.

(ii) Emergency stationary ICE may be operated for emergency demand response for periods in which the Reliability Coordinator under the North American Electric Reliability Corporation (NERC) Reliability Standard EOP-002-3, Capacity and Energy Emergencies (incorporated by reference, see §60.17), or other authorized entity as determined by the Reliability Coordinator, has declared an Energy Emergency Alert Level 2 as defined in the NERC Reliability Standard EOP-002-3.

(iii) Emergency stationary ICE may be operated for periods where there is a deviation of voltage or frequency of 5 percent or greater below standard voltage or frequency.

(3) Emergency stationary ICE may be operated for up to 50 hours per calendar year in non-emergency situations. The 50 hours of operation in non-emergency situations are counted as part of the 100 hours per calendar year for maintenance and testing and emergency demand response provided in paragraph (f)(2) of this section. Except as provided in paragraph (f)(3)(i) of this section, the 50 hours per calendar year for non-emergency situations cannot be used for peak shaving or non-emergency demand response, or to generate income for a facility to an electric grid or otherwise supply power as part of a financial arrangement with another entity.

(i) The 50 hours per year for non-emergency situations can be used to supply power as part of a financial arrangement with another entity if all of the following conditions are met:

(A) The engine is dispatched by the local balancing authority or local transmission and distribution system operator;

(B) The dispatch is intended to mitigate local transmission and/or distribution limitations so as to avert potential voltage collapse or line overloads that could lead to the interruption of power supply in a local area or region.

(C) The dispatch follows reliability, emergency operation or similar protocols that follow specific NERC, regional, state, public utility commission or local standards or guidelines.

(D) The power is provided only to the facility itself or to support the local transmission and distribution system.

(E) The owner or operator identifies and records the entity that dispatches the engine and the specific NERC, regional, state, public utility commission or local standards or guidelines that are being followed for dispatching the engine. The local balancing authority or local transmission and distribution system operator may keep these records on behalf of the engine owner or operator.

(ii) [Reserved]

(g) If you do not install, configure, operate, and maintain your engine and control device according to the manufacturer's emission-related written instructions, or you change emission-related settings in a way that is not permitted by the manufacturer, you must demonstrate compliance as follows:

(1) If you are an owner or operator of a stationary CI internal combustion engine with maximum engine power less than 100 HP, you must keep a maintenance plan and records of conducted maintenance to demonstrate compliance and must, to the extent practicable, maintain and operate the engine in a manner consistent with good air pollution control practice for minimizing emissions. In addition, if you do not install and configure the engine and control device according to the manufacturer's emission-related written instructions, or you change the emission-related settings in a way that is not permitted by the manufacturer, you must conduct an initial performance test to demonstrate compliance with the applicable emission standards within 1 year of such action.

(2) If you are an owner or operator of a stationary CI internal combustion engine greater than or equal to 100 HP and less than or equal to 500 HP, you must keep a maintenance plan and records of conducted maintenance and must, to the extent practicable, maintain and operate the engine in a manner consistent with good air pollution control practice for minimizing emissions. In addition, you must conduct an initial performance test to demonstrate compliance with the applicable emission standards within 1 year of startup, or within 1 year after an engine and control device is no longer installed, configured, operated, and maintained in accordance with the manufacturer's emission-related written instructions, or within 1 year after you change emission-related settings in a way that is not permitted by the manufacturer.

(3) If you are an owner or operator of a stationary CI internal combustion engine greater than 500 HP, you must keep a maintenance plan and records of conducted maintenance and must, to the extent practicable, maintain and operate the engine in a manner consistent with good air pollution control practice for minimizing emissions. In addition, you must conduct an initial performance test to demonstrate compliance with the applicable emission standards within 1 year of startup, or within 1 year after an engine and control device is no longer installed, configured, operated, and maintained in accordance with the manufacturer's emission-related written instructions, or within 1 year after you change emission-related settings in a way that is not permitted by the manufacturer. You must conduct subsequent performance testing every 8,760 hours of engine operation or 3 years, whichever comes first, thereafter to demonstrate compliance with the applicable emission standards.

(h) The requirements for operators and prohibited acts specified in 40 CFR 1039.665 apply to owners or operators of stationary CI ICE equipped with AECDs for qualified emergency situations as allowed by 40 CFR 1039.665.

[71 FR 39172, July 11, 2006, as amended at 76 FR 37970, June 28, 2011; 78 FR 6695, Jan. 30, 2013; 81 FR 44219, July 7, 2016]

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TESTING REQUIREMENTS FOR OWNERS AND OPERATORS

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§60.4212 What test methods and other procedures must I use if I am an owner or operator of a stationary CI internal combustion engine with a displacement of less than 30 liters per cylinder?

Owners and operators of stationary CI ICE with a displacement of less than 30 liters per cylinder who conduct performance tests pursuant to this subpart must do so according to paragraphs (a) through (e) of this section.

(a) The performance test must be conducted according to the in-use testing procedures in 40 CFR part 1039, subpart F, for stationary CI ICE with a displacement of less than 10 liters per cylinder, and according to 40 CFR part 1042, subpart F, for stationary CI ICE with a displacement of greater than or equal to 10 liters per cylinder and less than 30 liters per cylinder.

(b) Exhaust emissions from stationary CI ICE that are complying with the emission standards for new CI engines in 40 CFR part 1039 must not exceed the not-to-exceed (NTE) standards for the same model year and maximum engine power as required in 40 CFR 1039.101(e) and 40 CFR 1039.102(g)(1), except as specified in 40 CFR 1039.104(d). This requirement starts when NTE requirements take effect for nonroad diesel engines under 40 CFR part 1039.

(c) Exhaust emissions from stationary CI ICE that are complying with the emission standards for new CI engines in 40 CFR 89.112 or 40 CFR 94.8, as applicable, must not exceed the NTE numerical requirements, rounded to the same number of decimal places as the applicable standard in 40 CFR 89.112 or 40 CFR 94.8, as applicable, determined from the following equation:

NTE requirement for each pollutant = $1.25 \times \text{STD}$ (Eq. 1)

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Where:

STD = The standard specified for that pollutant in 40 CFR 89.112 or 40 CFR 94.8, as applicable.

Alternatively, stationary CI ICE that are complying with the emission standards for new CI engines in 40 CFR 89.112 or 40 CFR 94.8 may follow the testing procedures specified in §60.4213 of this subpart, as appropriate.

(d) Exhaust emissions from stationary CI ICE that are complying with the emission standards for pre-2007 model year engines in §60.4204(a), §60.4205(a), or §60.4205(c) must not exceed the NTE numerical requirements, rounded to the same number of decimal places as the applicable standard in §60.4204(a), §60.4205(a), or §60.4205(c), determined from the equation in paragraph (c) of this section.

Where:

STD = The standard specified for that pollutant in §60.4204(a), §60.4205(a), or §60.4205(c).

Alternatively, stationary CI ICE that are complying with the emission standards for pre-2007 model year engines in §60.4204(a), §60.4205(a), or §60.4205(c) may follow the testing procedures specified in §60.4213, as appropriate.

(e) Exhaust emissions from stationary CI ICE that are complying with the emission standards for new CI engines in 40 CFR part 1042 must not exceed the NTE standards for the same model year and maximum engine power as required in 40 CFR 1042.101(c).

[71 FR 39172, July 11, 2006, as amended at 76 FR 37971, June 28, 2011]

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§60.4213 What test methods and other procedures must I use if I am an owner or operator of a stationary CI internal combustion engine with a displacement of greater than or equal to 30 liters per cylinder?

Owners and operators of stationary CI ICE with a displacement of greater than or equal to 30 liters per cylinder must conduct performance tests according to paragraphs (a) through (f) of this section.

(a) Each performance test must be conducted according to the requirements in §60.8 and under the specific conditions that this subpart specifies in table 7. The test must be conducted within 10 percent of 100 percent peak (or the highest achievable) load.

(b) You may not conduct performance tests during periods of startup, shutdown, or malfunction, as specified in §60.8(c).

(c) You must conduct three separate test runs for each performance test required in this section, as specified in §60.8(f). Each test run must last at least 1 hour.

(d) To determine compliance with the percent reduction requirement, you must follow the requirements as specified in paragraphs (d)(1) through (3) of this section.

(1) You must use Equation 2 of this section to determine compliance with the percent reduction requirement:

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Where:

C_i = concentration of NO_x or PM at the control device inlet,

C_o = concentration of NO_x or PM at the control device outlet, and

R = percent reduction of NO_x or PM emissions.

(2) You must normalize the NO_x or PM concentrations at the inlet and outlet of the control device to a dry basis and to 15 percent oxygen (O_2) using Equation 3 of this section, or an equivalent percent carbon dioxide (CO_2) using the procedures described in paragraph (d)(3) of this section.

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Where:

C_{adj} = Calculated NO_x or PM concentration adjusted to 15 percent O_2 .

C_d = Measured concentration of NO_x or PM, uncorrected.

5.9 = 20.9 percent O_2 –15 percent O_2 , the defined O_2 correction value, percent.

% O_2 = Measured O_2 concentration, dry basis, percent.

(3) If pollutant concentrations are to be corrected to 15 percent O_2 and CO_2 concentration is measured in lieu of O_2 concentration measurement, a CO_2 correction factor is needed. Calculate the CO_2 correction factor as described in paragraphs (d)(3)(i) through (iii) of this section.

(i) Calculate the fuel-specific F_o value for the fuel burned during the test using values obtained from Method 19, Section 5.2, and the following equation:

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Where:

F_o = Fuel factor based on the ratio of O_2 volume to the ultimate CO_2 volume produced by the fuel at zero percent excess air.

0.209 = Fraction of air that is O_2 , percent/100.

F_d = Ratio of the volume of dry effluent gas to the gross calorific value of the fuel from Method 19, dsm^3/J (dscf/ 10^6 Btu).

F_c = Ratio of the volume of CO_2 produced to the gross calorific value of the fuel from Method 19, dsm^3/J (dscf/ 10^6 Btu).

(ii) Calculate the CO_2 correction factor for correcting measurement data to 15 percent O_2 , as follows:

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Where:

X_{CO_2} = CO_2 correction factor, percent.

5.9 = 20.9 percent O_2 - 15 percent O_2 , the defined O_2 correction value, percent.

(iii) Calculate the NO_x and PM gas concentrations adjusted to 15 percent O_2 using CO_2 as follows:

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Where:

C_{adj} = Calculated NO_x or PM concentration adjusted to 15 percent O_2 .

C_d = Measured concentration of NO_x or PM, uncorrected.

% CO_2 = Measured CO_2 concentration, dry basis, percent.

(e) To determine compliance with the NO_x mass per unit output emission limitation, convert the concentration of NO_x in the engine exhaust using Equation 7 of this section:

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Where:

ER = Emission rate in grams per KW-hour.

C_d = Measured NO_x concentration in ppm.

1.912×10^{-3} = Conversion constant for ppm NO_x to grams per standard cubic meter at 25 degrees Celsius.

Q = Stack gas volumetric flow rate, in standard cubic meter per hour.

T = Time of test run, in hours.

KW-hour = Brake work of the engine, in KW-hour.

(f) To determine compliance with the PM mass per unit output emission limitation, convert the concentration of PM in the engine exhaust using Equation 8 of this section:

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Where:

ER = Emission rate in grams per KW-hour.

C_{adj} = Calculated PM concentration in grams per standard cubic meter.

Q = Stack gas volumetric flow rate, in standard cubic meter per hour.

T = Time of test run, in hours.

KW-hour = Energy output of the engine, in KW.

[71 FR 39172, July 11, 2006, as amended at 76 FR 37971, June 28, 2011]

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NOTIFICATION, REPORTS, AND RECORDS FOR OWNERS AND OPERATORS

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§60.4214 What are my notification, reporting, and recordkeeping requirements if I am an owner or operator of a stationary CI internal combustion engine?

(a) Owners and operators of non-emergency stationary CI ICE that are greater than 2,237 KW (3,000 HP), or have a displacement of greater than or equal to 10 liters per cylinder, or are pre-2007 model year engines that are greater than 130 KW (175 HP) and not certified, must meet the requirements of paragraphs (a)(1) and (2) of this section.

(1) Submit an initial notification as required in §60.7(a)(1). The notification must include the information in paragraphs (a)(1)(i) through (v) of this section.

(i) Name and address of the owner or operator;

(ii) The address of the affected source;

(iii) Engine information including make, model, engine family, serial number, model year, maximum engine power, and engine displacement;

(iv) Emission control equipment; and

(v) Fuel used.

(2) Keep records of the information in paragraphs (a)(2)(i) through (iv) of this section.

(i) All notifications submitted to comply with this subpart and all documentation supporting any notification.

(ii) Maintenance conducted on the engine.

(iii) If the stationary CI internal combustion is a certified engine, documentation from the manufacturer that the engine is certified to meet the emission standards.

(iv) If the stationary CI internal combustion is not a certified engine, documentation that the engine meets the emission standards.

(b) If the stationary CI internal combustion engine is an emergency stationary internal combustion engine, the owner or operator is not required to submit an initial notification. Starting with the model years in table 5 to this subpart, if the emergency engine does not meet the standards applicable to non-emergency engines in the applicable model year, the owner or operator must keep records of the operation of the engine in emergency and non-emergency service that are recorded through the non-resettable hour meter. The owner must record the time of operation of the engine and the reason the engine was in operation during that time.

(c) If the stationary CI internal combustion engine is equipped with a diesel particulate filter, the owner or operator must keep records of any corrective action taken after the backpressure monitor has notified the owner or operator that the high backpressure limit of the engine is approached.

(d) If you own or operate an emergency stationary CI ICE with a maximum engine power more than 100 HP that operates or is contractually obligated to be available for more than 15 hours per calendar year for the purposes specified in §60.4211(f)(2)(ii) and (iii) or that operates for the purposes specified in §60.4211(f)(3)(i), you must submit an annual report according to the requirements in paragraphs (d)(1) through (3) of this section.

(1) The report must contain the following information:

(i) Company name and address where the engine is located.

(ii) Date of the report and beginning and ending dates of the reporting period.

(iii) Engine site rating and model year.

(iv) Latitude and longitude of the engine in decimal degrees reported to the fifth decimal place.

(v) Hours operated for the purposes specified in §60.4211(f)(2)(ii) and (iii), including the date, start time, and end time for engine operation for the purposes specified in §60.4211(f)(2)(ii) and (iii).

(vi) Number of hours the engine is contractually obligated to be available for the purposes specified in §60.4211(f)(2)(ii) and (iii).

(vii) Hours spent for operation for the purposes specified in §60.4211(f)(3)(i), including the date, start time, and end time for engine operation for the purposes specified in §60.4211(f)(3)(i). The report must also identify the entity that dispatched the engine and the situation that necessitated the dispatch of the engine.

(2) The first annual report must cover the calendar year 2015 and must be submitted no later than March 31, 2016. Subsequent annual reports for each calendar year must be submitted no later than March 31 of the following calendar year.

(3) The annual report must be submitted electronically using the subpart specific reporting form in the Compliance and Emissions Data Reporting Interface (CEDRI) that is accessed through 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, the written report must be submitted to the Administrator at the appropriate address listed in §60.4.

(e) Owners or operators of stationary CI ICE equipped with AECs pursuant to the requirements of 40 CFR 1039.665 must report the use of AECs as required by 40 CFR 1039.665(e).

[71 FR 39172, July 11, 2006, as amended at 78 FR 6696, Jan. 30, 2013; 81 FR 44219, July 7, 2016]

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SPECIAL REQUIREMENTS

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§60.4215 What requirements must I meet for engines used in Guam, American Samoa, or the Commonwealth of the Northern Mariana Islands?

(a) Stationary CI ICE with a displacement of less than 30 liters per cylinder that are used in Guam, American Samoa, or the Commonwealth of the Northern Mariana Islands are required to meet the applicable emission standards in §§60.4202 and 60.4205.

(b) Stationary CI ICE that are used in Guam, American Samoa, or the Commonwealth of the Northern Mariana Islands are not required to meet the fuel requirements in §60.4207.

(c) Stationary CI ICE with a displacement of greater than or equal to 30 liters per cylinder that are used in Guam, American Samoa, or the Commonwealth of the Northern Mariana Islands are required to meet the following emission standards:

(1) For engines installed prior to January 1, 2012, limit the emissions of NO_x in the stationary CI internal combustion engine exhaust to the following:

(i) 17.0 g/KW-hr (12.7 g/HP-hr) when maximum engine speed is less than 130 rpm;

(ii) $45 \cdot n^{-0.2}$ g/KW-hr ($34 \cdot n^{-0.2}$ g/HP-hr) when maximum engine speed is 130 or more but less than 2,000 rpm, where n is maximum engine speed; and

(iii) 9.8 g/KW-hr (7.3 g/HP-hr) when maximum engine speed is 2,000 rpm or more.

(2) For engines installed on or after January 1, 2012, limit the emissions of NO_x in the stationary CI internal combustion engine exhaust to the following:

(i) 14.4 g/KW-hr (10.7 g/HP-hr) when maximum engine speed is less than 130 rpm;

(ii) $44 \cdot n^{-0.23}$ g/KW-hr ($33 \cdot n^{-0.23}$ g/HP-hr) when maximum engine speed is greater than or equal to 130 but less than 2,000 rpm and where n is maximum engine speed; and

(iii) 7.7 g/KW-hr (5.7 g/HP-hr) when maximum engine speed is greater than or equal to 2,000 rpm.

(3) Limit the emissions of PM in the stationary CI internal combustion engine exhaust to 0.40 g/KW-hr (0.30 g/HP-hr).

[71 FR 39172, July 11, 2006, as amended at 76 FR 37971, June 28, 2011]

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§60.4216 What requirements must I meet for engines used in Alaska?

(a) Prior to December 1, 2010, owners and operators of stationary CI ICE with a displacement of less than 30 liters per cylinder located in areas of Alaska not accessible by the FAHS should refer to 40 CFR part 69 to determine the diesel fuel requirements applicable to such engines.

(b) Except as indicated in paragraph (c) of this section, manufacturers, owners and operators of stationary CI ICE with a displacement of less than 10 liters per cylinder located in remote areas of Alaska may meet the requirements of this subpart by manufacturing and installing engines meeting the requirements of 40 CFR parts 94 or 1042, as appropriate, rather than the otherwise applicable requirements of 40 CFR parts 89 and 1039, as indicated in §§60.4201(f) and 60.4202(g).

(c) Manufacturers, owners and operators of stationary CI ICE that are located in remote areas of Alaska may choose to meet the applicable emission standards for emergency engines in §§60.4202 and 60.4205, and not those for non-emergency engines in §§60.4201 and 60.4204, except that for 2014 model year and later non-emergency CI ICE, the owner or operator of any such engine that was not certified as meeting Tier 4 PM standards, must meet the applicable requirements for PM in §§60.4201 and 60.4204 or install a PM emission control device that achieves PM emission reductions of 85 percent, or 60 percent for engines with a displacement of greater than or equal to 30 liters per cylinder, compared to engine-out emissions.

(d) The provisions of §60.4207 do not apply to owners and operators of pre-2014 model year stationary CI ICE subject to this subpart that are located in remote areas of Alaska.

(e) The provisions of §60.4208(a) do not apply to owners and operators of stationary CI ICE subject to this subpart that are located in areas of Alaska not accessible by the FAHS until after December 31, 2009.

(f) The provisions of this section and §60.4207 do not prevent owners and operators of stationary CI ICE subject to this subpart that are located in remote areas of Alaska from using fuels mixed with used lubricating oil, in volumes of up to 1.75 percent of the total fuel. The sulfur content of the used lubricating oil must be less than 200 parts per million. The used lubricating oil must meet the on-specification levels and properties for used oil in 40 CFR 279.11.

[76 FR 37971, June 28, 2011, as amended at 81 FR 44219, July 7, 2016]

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§60.4217 What emission standards must I meet if I am an owner or operator of a stationary internal combustion engine using special fuels?

Owners and operators of stationary CI ICE that do not use diesel fuel may petition the Administrator for approval of alternative emission standards, if they can demonstrate that they use a fuel that is not the fuel on which the manufacturer of the engine certified the engine and that the engine cannot meet the applicable standards required in §60.4204 or §60.4205 using such fuels and that use of such fuel is appropriate and reasonably necessary, considering cost, energy, technical feasibility, human health and environmental, and other factors, for the operation of the engine.

[76 FR 37972, June 28, 2011]

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GENERAL PROVISIONS

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§60.4218 What parts of the General Provisions apply to me?

Table 8 to this subpart shows which parts of the General Provisions in §§60.1 through 60.19 apply to you.

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DEFINITIONS

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§60.4219 What definitions apply to this subpart?

As used in this subpart, all terms not defined herein shall have the meaning given them in the CAA and in subpart A of this part.

Alaska Railbelt Grid means the service areas of the six regulated public utilities that extend from Fairbanks to Anchorage and the Kenai Peninsula. These utilities are Golden Valley Electric Association; Chugach Electric Association; Matanuska Electric Association; Homer Electric Association; Anchorage Municipal Light & Power; and the City of Seward Electric System.

Certified emissions life means the period during which the engine is designed to properly function in terms of reliability and fuel consumption, without being remanufactured, specified as a number of hours of operation or calendar years, whichever comes first. The values for certified emissions life for stationary CI ICE with a displacement of less than 10 liters per cylinder are given in 40 CFR 1039.101(g). The values for certified emissions life for stationary CI ICE with a displacement of greater than or equal to 10 liters per cylinder and less than 30 liters per cylinder are given in 40 CFR 94.9(a).

Combustion turbine means all equipment, including but not limited to the turbine, the fuel, air, lubrication and exhaust gas systems, control systems (except emissions control equipment), and any ancillary components and sub-components comprising any simple cycle combustion turbine, any regenerative/recuperative cycle combustion turbine, the combustion turbine portion of any cogeneration cycle combustion system, or the combustion turbine portion of any combined cycle steam/electric generating system.

Compression ignition means relating to a type of stationary internal combustion engine that is not a spark ignition engine.

Date of manufacture means one of the following things:

(1) For freshly manufactured engines and modified engines, date of manufacture means the date the engine is originally produced.

(2) For reconstructed engines, date of manufacture means the date the engine was originally produced, except as specified in paragraph (3) of this definition.

(3) Reconstructed engines are assigned a new date of manufacture if the fixed capital cost of the new and refurbished components exceeds 75 percent of the fixed capital cost of a comparable entirely new facility. An engine that is produced from a previously used engine block does not retain the date of manufacture of the engine in which the engine block was previously used if the engine is produced using all new components except for the engine block. In these cases, the date of manufacture is the date of reconstruction or the date the new engine is produced.

Diesel fuel means any liquid obtained from the distillation of petroleum with a boiling point of approximately 150 to 360 degrees Celsius. One commonly used form is number 2 distillate oil.

Diesel particulate filter means an emission control technology that reduces PM emissions by trapping the particles in a flow filter substrate and periodically removes the collected particles by either physical action or by oxidizing (burning off) the particles in a process called regeneration.

Emergency stationary internal combustion engine means any stationary reciprocating internal combustion engine that meets all of the criteria in paragraphs (1) through (3) of this definition. All emergency stationary ICE must comply with the requirements specified in §60.4211(f) in order to be considered emergency stationary ICE. If the engine does not comply with the requirements specified in §60.4211(f), then it is not considered to be an emergency stationary ICE under this subpart.

(1) The stationary ICE is operated to provide electrical power or mechanical work during an emergency situation. Examples include stationary ICE used to produce power for critical networks or equipment (including power supplied to portions of a facility) when electric power from the local utility (or the normal power source, if the facility runs on its own power production) is interrupted, or stationary ICE used to pump water in the case of fire or flood, etc.

(2) The stationary ICE is operated under limited circumstances for situations not included in paragraph (1) of this definition, as specified in §60.4211(f).

(3) The stationary ICE operates as part of a financial arrangement with another entity in situations not included in paragraph (1) of this definition only as allowed in §60.4211(f)(2)(ii) or (iii) and §60.4211(f)(3)(i).

Engine manufacturer means the manufacturer of the engine. See the definition of “manufacturer” in this section.

Fire pump engine means an emergency stationary internal combustion engine certified to NFPA requirements that is used to provide power to pump water for fire suppression or protection.

Freshly manufactured engine means an engine that has not been placed into service. An engine becomes freshly manufactured when it is originally produced.

Installed means the engine is placed and secured at the location where it is intended to be operated.

Manufacturer has the meaning given in section 216(1) of the Act. In general, this term includes any person who manufactures a stationary engine for sale in the United States or otherwise introduces a new stationary engine into commerce in the United States. This includes importers who import stationary engines for sale or resale.

Maximum engine power means maximum engine power as defined in 40 CFR 1039.801.

Model year means the calendar year in which an engine is manufactured (see “date of manufacture”), except as follows:

(1) Model year means the annual new model production period of the engine manufacturer in which an engine is manufactured (see “date of manufacture”), if the annual new model production period is different than the calendar year and includes January 1 of the calendar year for which the model year is named. It may not begin before January 2 of the previous calendar year and it must end by December 31 of the named calendar year.

(2) For an engine that is converted to a stationary engine after being placed into service as a nonroad or other non-stationary engine, model year means the calendar year or new model production period in which the engine was manufactured (see “date of manufacture”).

Other internal combustion engine means any internal combustion engine, except combustion turbines, which is not a reciprocating internal combustion engine or rotary internal combustion engine.

Reciprocating internal combustion engine means any internal combustion engine which uses reciprocating motion to convert heat energy into mechanical work.

Remote areas of Alaska means areas of Alaska that meet either paragraph (1) or (2) of this definition.

(1) Areas of Alaska that are not accessible by the Federal Aid Highway System (FAHS).

(2) Areas of Alaska that meet all of the following criteria:

(i) The only connection to the FAHS is through the Alaska Marine Highway System, or the stationary CI ICE operation is within an isolated grid in Alaska that is not connected to the statewide electrical grid referred to as the Alaska Railbelt Grid.

(ii) At least 10 percent of the power generated by the stationary CI ICE on an annual basis is used for residential purposes.

(iii) The generating capacity of the source is less than 12 megawatts, or the stationary CI ICE is used exclusively for backup power for renewable energy.

Rotary internal combustion engine means any internal combustion engine which uses rotary motion to convert heat energy into mechanical work.

Spark ignition means relating to a gasoline, natural gas, or liquefied petroleum gas fueled engine or any other type of engine with a spark plug (or other sparking device) and with operating characteristics significantly similar to the theoretical Otto combustion cycle. Spark ignition engines usually use a throttle to regulate intake air flow to control power during normal operation. Dual-fuel engines in which a liquid fuel (typically diesel fuel) is used for CI and gaseous fuel (typically natural gas) is used as the primary fuel at an annual average ratio of less than 2 parts diesel fuel to 100 parts total fuel on an energy equivalent basis are spark ignition engines.

Stationary internal combustion engine means any internal combustion engine, except combustion turbines, that converts heat energy into mechanical work and is not mobile. Stationary ICE differ from mobile ICE in that a stationary internal combustion engine is not a nonroad engine as defined at 40 CFR 1068.30 (excluding paragraph (2)(ii) of that definition), and is not used to propel a motor vehicle, aircraft, or a vehicle used solely for competition. Stationary ICE include reciprocating ICE, rotary ICE, and other ICE, except combustion turbines.

Subpart means 40 CFR part 60, subpart IIII.

[71 FR 39172, July 11, 2006, as amended at 76 FR 37972, June 28, 2011; 78 FR 6696, Jan. 30, 2013; 81 FR 44219, July 7, 2016]

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Table 1 to Subpart IIII of Part 60—Emission Standards for Stationary Pre-2007 Model Year Engines With a Displacement of <10 Liters per Cylinder and 2007-2010 Model Year Engines >2,237 KW (3,000 HP) and With a Displacement of <10 Liters per Cylinder

[As stated in §§60.4201(b), 60.4202(b), 60.4204(a), and 60.4205(a), you must comply with the following emission standards]

Maximum engine power	Emission standards for stationary pre-2007 model year engines with a displacement of <10 liters per cylinder and 2007-2010 model year engines >2,237 KW (3,000 HP) and with a displacement of <10 liters per cylinder in g/KW-hr (g/HP-hr)				
	NMHC + NO _x	HC	NO _x	CO	PM
KW<8 (HP<11)	10.5 (7.8)			8.0 (6.0)	1.0 (0.75)
8≤KW<19 (11≤HP<25)	9.5 (7.1)			6.6 (4.9)	0.80 (0.60)
19≤KW<37 (25≤HP<50)	9.5 (7.1)			5.5 (4.1)	0.80 (0.60)
37≤KW<56 (50≤HP<75)			9.2 (6.9)		
56≤KW<75 (75≤HP<100)			9.2 (6.9)		
75≤KW<130 (100≤HP<175)			9.2 (6.9)		
130≤KW<225 (175≤HP<300)		1.3 (1.0)	9.2 (6.9)	11.4 (8.5)	0.54 (0.40)
225≤KW<450 (300≤HP<600)		1.3 (1.0)	9.2 (6.9)	11.4 (8.5)	0.54 (0.40)
450≤KW≤560 (600≤HP≤750)		1.3 (1.0)	9.2 (6.9)	11.4 (8.5)	0.54 (0.40)
KW>560 (HP>750)		1.3 (1.0)	9.2 (6.9)	11.4 (8.5)	0.54 (0.40)

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Table 2 to Subpart IIII of Part 60—Emission Standards for 2008 Model Year and Later Emergency Stationary CI ICE <37 KW (50 HP) With a Displacement of <10 Liters per Cylinder

[As stated in §60.4202(a)(1), you must comply with the following emission standards]

Engine power	Emission standards for 2008 model year and later emergency stationary CI ICE <37 KW (50 HP) with a displacement of <10 liters per cylinder in g/KW-hr (g/HP-hr)			
	Model year(s)	NO _x + NMHC	CO	PM
KW<8 (HP<11)	2008 +	7.5 (5.6)	8.0 (6.0)	0.40 (0.30)
8≤KW<19 (11≤HP<25)	2008 +	7.5 (5.6)	6.6 (4.9)	0.40 (0.30)
19≤KW<37 (25≤HP<50)	2008 +	7.5 (5.6)	5.5 (4.1)	0.30 (0.22)

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Table 3 to Subpart IIII of Part 60—Certification Requirements for Stationary Fire Pump Engines

As stated in §60.4202(d), you must certify new stationary fire pump engines beginning with the following model years:

Engine power	Starting model year engine manufacturers must certify new stationary fire pump engines according to §60.4202(d) ¹
KW<75 (HP<100)	2011
75≤KW<130 (100≤HP<175)	2010
130≤KW≤560 (175≤HP≤750)	2009
KW>560 (HP>750)	2008

¹Manufacturers of fire pump stationary CI ICE with a maximum engine power greater than or equal to 37 kW (50 HP) and less than 450 KW (600 HP) and a rated speed of greater than 2,650 revolutions per minute (rpm) are not required to certify such engines until three model years following the model year indicated in this Table 3 for engines in the applicable engine power category.

[71 FR 39172, July 11, 2006, as amended at 76 FR 37972, June 28, 2011]

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Table 4 to Subpart IIII of Part 60—Emission Standards for Stationary Fire Pump Engines

[As stated in §§60.4202(d) and 60.4205(c), you must comply with the following emission standards for stationary fire pump engines]

Maximum engine power	Model year(s)	NMHC + NO _x	CO	PM
KW<8 (HP<11)	2010 and earlier	10.5 (7.8)	8.0 (6.0)	1.0 (0.75)
	2011 +	7.5 (5.6)		0.40 (0.30)
8≤KW<19 (11≤HP<25)	2010 and earlier	9.5 (7.1)	6.6 (4.9)	0.80 (0.60)
	2011 +	7.5 (5.6)		0.40 (0.30)
19≤KW<37 (25≤HP<50)	2010 and earlier	9.5 (7.1)	5.5 (4.1)	0.80 (0.60)
	2011 +	7.5 (5.6)		0.30 (0.22)
37≤KW<56 (50≤HP<75)	2010 and earlier	10.5 (7.8)	5.0 (3.7)	0.80 (0.60)
	2011 + ¹	4.7 (3.5)		0.40 (0.30)
56≤KW<75 (75≤HP<100)	2010 and earlier	10.5 (7.8)	5.0 (3.7)	0.80 (0.60)
	2011 + ¹	4.7 (3.5)		0.40 (0.30)
75≤KW<130 (100≤HP<175)	2009 and earlier	10.5 (7.8)	5.0 (3.7)	0.80 (0.60)
	2010 + ²	4.0 (3.0)		0.30 (0.22)
130≤KW<225 (175≤HP<300)	2008 and earlier	10.5 (7.8)	3.5 (2.6)	0.54 (0.40)
	2009 + ³	4.0 (3.0)		0.20 (0.15)
225≤KW<450 (300≤HP<600)	2008 and earlier	10.5 (7.8)	3.5 (2.6)	0.54 (0.40)
	2009 + ³	4.0 (3.0)		0.20 (0.15)
450≤KW≤560 (600≤HP≤750)	2008 and earlier	10.5 (7.8)	3.5 (2.6)	0.54 (0.40)
	2009 +	4.0 (3.0)		0.20 (0.15)
KW>560 (HP>750)	2007 and earlier	10.5 (7.8)	3.5 (2.6)	0.54 (0.40)
	2008 +	6.4 (4.8)		0.20 (0.15)

¹For model years 2011-2013, manufacturers, owners and operators of fire pump stationary CI ICE in this engine power category with a rated speed of greater than 2,650 revolutions per minute (rpm) may comply with the emission limitations for 2010 model year engines.

²For model years 2010-2012, manufacturers, owners and operators of fire pump stationary CI ICE in this engine power category with a rated speed of greater than 2,650 rpm may comply with the emission limitations for 2009 model year engines.

³In model years 2009-2011, manufacturers of fire pump stationary CI ICE in this engine power category with a rated speed of greater than 2,650 rpm may comply with the emission limitations for 2008 model year engines.

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Table 5 to Subpart IIII of Part 60—Labeling and Recordkeeping Requirements for New Stationary Emergency Engines

[You must comply with the labeling requirements in §60.4210(f) and the recordkeeping requirements in §60.4214(b) for new emergency stationary CI ICE beginning in the following model years:]

Engine power	Starting model year
19≤KW<56 (25≤HP<75)	2013
56≤KW<130 (75≤HP<175)	2012
KW≥130 (HP≥175)	2011

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Table 6 to Subpart IIII of Part 60—Optional 3-Mode Test Cycle for Stationary Fire Pump Engines

[As stated in §60.4210(g), manufacturers of fire pump engines may use the following test cycle for testing fire pump engines:]

Mode No.	Engine speed ¹	Torque (percent) ²	Weighting factors
1	Rated	100	0.30
2	Rated	75	0.50
3	Rated	50	0.20

¹Engine speed: ±2 percent of point.

²Torque: NFPA certified nameplate HP for 100 percent point. All points should be ±2 percent of engine percent load value.

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Table 7 to Subpart IIII of Part 60—Requirements for Performance Tests for Stationary CI ICE With a Displacement of ≥30 Liters per Cylinder

As stated in §60.4213, you must comply with the following requirements for performance tests for stationary CI ICE with a displacement of ≥30 liters per cylinder:

Each	Complying with the requirement to	You must	Using	According to the following requirements
1. Stationary CI internal combustion engine with a displacement of ≥ 30 liters per cylinder	a. Reduce NO _x emissions by 90 percent or more;	i. Select the sampling port location and number/location of traverse points at the inlet and outlet of the control device;		(a) For NO _x , O ₂ , and moisture measurement, ducts ≤6 inches in diameter may be sampled at a single point located at the duct centroid and ducts >6 and ≤12 inches in diameter may be sampled at 3 traverse points located at 16.7, 50.0, and 83.3% of the measurement line ('3-point long line'). If the duct is >12 inches in diameter <i>and</i> the sampling port location meets the two and half-diameter criterion of Section 11.1.1 of Method 1 of 40 CFR part 60, appendix A-1, the duct may be sampled at '3-point long line'; otherwise, conduct the stratification testing and select sampling points according to Section 8.1.2 of Method 7E of 40 CFR part 60, appendix A-4.
		ii. Measure O ₂ at the inlet and outlet of the control device;	(1) Method 3, 3A, or 3B of 40 CFR part 60, appendix A-2	(b) Measurements to determine O ₂ concentration must be made at the same time as the measurements for NO _x concentration.
		iii. If necessary, measure moisture content at the inlet and outlet of the control device; and	(2) Method 4 of 40 CFR part 60, appendix A-3, Method 320 of 40 CFR part 63, appendix A, or ASTM D 6348-03 (incorporated by reference, see §60.17)	(c) Measurements to determine moisture content must be made at the same time as the measurements for NO _x concentration.
		iv. Measure NO _x at the inlet and outlet of the control device.	(3) Method 7E of 40 CFR part 60, appendix A-4, Method 320 of 40 CFR part 63, appendix A, or ASTM D 6348-03 (incorporated by reference, see §60.17)	(d) NO _x concentration must be at 15 percent O ₂ , dry basis. Results of this test consist of the average of the three 1-hour or longer runs.
	b. Limit the concentration of NO _x in the stationary CI internal combustion engine exhaust.	i. Select the sampling port location and number/location of traverse points at the exhaust of the stationary internal combustion engine;		(a) For NO _x , O ₂ , and moisture measurement, ducts ≤6 inches in diameter may be sampled at a single point located at the duct centroid and ducts >6 and ≤12 inches in diameter may be sampled at 3 traverse points located at 16.7, 50.0, and 83.3% of the measurement line ('3-point long line'). If the duct is >12 inches in diameter <i>and</i> the sampling port location meets the two and half-diameter criterion of Section 11.1.1 of Method 1 of 40 CFR part 60, appendix A-1, the duct may be sampled at '3-point long line'; otherwise, conduct the stratification testing and select sampling points according to Section 8.1.2 of Method 7E of 40 CFR part 60, appendix A-4.
		ii. Determine the O ₂ concentration of the stationary internal combustion engine exhaust at the sampling port location;	(1) Method 3, 3A, or 3B of 40 CFR part 60, appendix A-2	(b) Measurements to determine O ₂ concentration must be made at the same time as the measurement for NO _x concentration.
		iii. If necessary, measure moisture content of the stationary internal combustion engine exhaust at the sampling port location; and	(2) Method 4 of 40 CFR part 60, appendix A-3, Method 320 of 40 CFR part 63, appendix A, or ASTM D 6348-03 (incorporated by reference, see §60.17)	(c) Measurements to determine moisture content must be made at the same time as the measurement for NO _x concentration.
		iv. Measure NO _x at the exhaust of the stationary internal combustion engine; if using a control device, the sampling site must be located at the outlet of the control device.	(3) Method 7E of 40 CFR part 60, appendix A-4, Method 320 of 40 CFR part 63, appendix A, or ASTM D 6348-03 (incorporated by reference, see §60.17)	(d) NO _x concentration must be at 15 percent O ₂ , dry basis. Results of this test consist of the average of the three 1-hour or longer runs.
	c. Reduce PM emissions by 60 percent or more	i. Select the sampling port location and the number of traverse points;	(1) Method 1 or 1A of 40 CFR part 60, appendix A-1	(a) Sampling sites must be located at the inlet and outlet of the control device.
		ii. Measure O ₂ at the inlet and outlet of the	(2) Method 3, 3A, or 3B of 40 CFR part 60, appendix A-2	(b) Measurements to determine O ₂ concentration must be made at the same time as the measurements for PM concentration.

		control device;		
		iii. If necessary, measure moisture content at the inlet and outlet of the control device; and	(3) Method 4 of 40 CFR part 60, appendix A-3	(c) Measurements to determine and moisture content must be made at the same time as the measurements for PM concentration.
		iv. Measure PM at the inlet and outlet of the control device.	(4) Method 5 of 40 CFR part 60, appendix A-3	(d) PM concentration must be at 15 percent O ₂ , dry basis. Results of this test consist of the average of the three 1-hour or longer runs.
	d. Limit the concentration of PM in the stationary CI internal combustion engine exhaust	i. Select the sampling port location and the number of traverse points;	(1) Method 1 or 1A of 40 CFR part 60, appendix A-1	(a) If using a control device, the sampling site must be located at the outlet of the control device.
		ii. Determine the O ₂ concentration of the stationary internal combustion engine exhaust at the sampling port location;	(2) Method 3, 3A, or 3B of 40 CFR part 60, appendix A-2	(b) Measurements to determine O ₂ concentration must be made at the same time as the measurements for PM concentration.
		iii. If necessary, measure moisture content of the stationary internal combustion engine exhaust at the sampling port location; and	(3) Method 4 of 40 CFR part 60, appendix A-3	(c) Measurements to determine moisture content must be made at the same time as the measurements for PM concentration.
		iv. Measure PM at the exhaust of the stationary internal combustion engine.	(4) Method 5 of 40 CFR part 60, appendix A-3	(d) PM concentration must be at 15 percent O ₂ , dry basis. Results of this test consist of the average of the three 1-hour or longer runs.

[79 FR 11251, Feb. 27, 2014]

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Table 8 to Subpart IIII of Part 60—Applicability of General Provisions to Subpart IIII

[As stated in §60.4218, you must comply with the following applicable General Provisions:]

General Provisions citation	Subject of citation	Applies to subpart	Explanation
§60.1	General applicability of the General Provisions	Yes	
§60.2	Definitions	Yes	Additional terms defined in §60.4219.
§60.3	Units and abbreviations	Yes	
§60.4	Address	Yes	
§60.5	Determination of construction or modification	Yes	
§60.6	Review of plans	Yes	
§60.7	Notification and Recordkeeping	Yes	Except that §60.7 only applies as specified in §60.4214(a).
§60.8	Performance tests	Yes	Except that §60.8 only applies to stationary CI ICE with a displacement of (≥30 liters per cylinder and engines that are not certified).
§60.9	Availability of information	Yes	
§60.10	State Authority	Yes	
§60.11	Compliance with standards and maintenance requirements	No	Requirements are specified in subpart IIII.
§60.12	Circumvention	Yes	
§60.13	Monitoring requirements	Yes	Except that §60.13 only applies to stationary CI ICE with a displacement of (≥30 liters per cylinder).
§60.14	Modification	Yes	
§60.15	Reconstruction	Yes	
§60.16	Priority list	Yes	
§60.17	Incorporations by reference	Yes	
§60.18	General control device requirements	No	
§60.19	General notification and reporting requirements	Yes	

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Need assistance?

Appendix E

40 CFR Part 63, Subpart DDDD – *National Emission Standards for Hazardous Air Pollutants:
Plywood and Composite Wood Products*

ELECTRONIC CODE OF FEDERAL REGULATIONS

e-CFR data is current as of April 11, 2019

Title 40 → Chapter I → Subchapter C → Part 63 → Subpart DDDD

Title 40: Protection of Environment

PART 63—NATIONAL EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS FOR SOURCE CATEGORIES
(CONTINUED)

Subpart DDDD—National Emission Standards for Hazardous Air Pollutants: Plywood and Composite Wood Products

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WHAT THIS SUBPART COVERS

SOURCE: 69 FR 46011, July 30, 2004, unless otherwise noted.

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§63.2230 What is the purpose of this subpart?

This subpart establishes national compliance options, operating requirements, and work practice requirements for hazardous air pollutants (HAP) emitted from plywood and composite wood products (PCWP) manufacturing facilities. This subpart also establishes requirements to demonstrate initial and continuous compliance with the compliance options, operating requirements, and work practice requirements.

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§63.2231 Does this subpart apply to me?

This subpart applies to you if you meet the criteria in paragraphs (a) and (b) of this section.

(a) You own or operate a PCWP manufacturing facility. A PCWP manufacturing facility is a facility that manufactures plywood and/or composite wood products by bonding wood material (fibers, particles, strands, veneers, etc.) or agricultural fiber, generally with resin under heat and pressure, to form a structural panel or engineered wood product. Plywood and composite wood products manufacturing facilities also include facilities that manufacture dry veneer and lumber kilns located at any facility. Plywood and composite wood products include, but are not limited to, plywood, veneer, particleboard, oriented strandboard, hardboard, fiberboard, medium density fiberboard, laminated strand lumber, laminated veneer lumber, wood I-joists, kiln-dried lumber, and glue-laminated beams.

(b) The PCWP manufacturing facility is located at a major source of HAP emissions. A major source of HAP emissions is any stationary source or group of stationary sources within a contiguous area and under common control that emits or has the potential to emit any single HAP at a rate of 9.07 megagrams (10 tons) or more per year or any combination of HAP at a rate of 22.68 megagrams (25 tons) or more per year.

[69 FR 46011, July 30, 2004, as amended at 72 FR 61062, Oct. 29, 2007]

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§63.2232 What parts of my plant does this subpart cover?

(a) This subpart applies to each new, reconstructed, or existing affected source at a PCWP manufacturing facility.

(b) The affected source is the collection of dryers, refiners, blenders, formers, presses, board coolers, and other process units associated with the manufacturing of plywood and composite wood products. The affected source includes, but is not limited to, green end operations, refining, drying operations (including any combustion unit exhaust stream routinely used to direct fire process unit(s)), resin preparation, blending and forming operations, pressing and board cooling operations, and miscellaneous finishing operations (such as sanding, sawing, patching, edge sealing, and other finishing operations not subject

to other national emission standards for hazardous air pollutants (NESHAP)). The affected source also includes onsite storage and preparation of raw materials used in the manufacture of plywood and/or composite wood products, such as resins; onsite wastewater treatment operations specifically associated with plywood and composite wood products manufacturing; and miscellaneous coating operations (§63.2292). The affected source includes lumber kilns at PCWP manufacturing facilities and at any other kind of facility.

(c) An affected source is a new affected source if you commenced construction of the affected source after January 9, 2003, and you meet the applicability criteria at the time you commenced construction.

(d) An affected source is reconstructed if you meet the criteria as defined in §63.2.

(e) An affected source is existing if it is not new or reconstructed.

[69 FR 46011, July 30, 2004, as amended at 71 FR 8371, Feb. 16, 2006]

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§63.2233 When do I have to comply with this subpart?

(a) If you have a new or reconstructed affected source, you must comply with this subpart according to paragraph (a)(1) or (2) of this section, whichever is applicable.

(1) If the initial startup of your affected source is before September 28, 2004, then you must comply with the compliance options, operating requirements, and work practice requirements for new and reconstructed sources in this subpart no later than September 28, 2004.

(2) If the initial startup of your affected source is after September 28, 2004, then you must comply with the compliance options, operating requirements, and work practice requirements for new and reconstructed sources in this subpart upon initial startup of your affected source.

(b) If you have an existing affected source, you must comply with the compliance options, operating requirements, and work practice requirements for existing sources no later than October 1, 2007.

(c) If you have an area source that increases its emissions or its potential to emit such that it becomes a major source of HAP, you must be in compliance with this subpart by October 1, 2007 or upon initial startup of your affected source as a major source, whichever is later.

(d) You must meet the notification requirements according to the schedule in §63.2280 and according to 40 CFR part 63, subpart A. Some of the notifications must be submitted before you are required to comply with the compliance options, operating requirements, and work practice requirements in this subpart.

[69 FR 46011, July 30, 2004, as amended at 71 FR 8372, Feb. 16, 2006; 72 FR 61062, Oct. 29, 2007]

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COMPLIANCE OPTIONS, OPERATING REQUIREMENTS, AND WORK PRACTICE REQUIREMENTS

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§63.2240 What are the compliance options and operating requirements and how must I meet them?

You must meet the compliance options and operating requirements described in Tables 1A, 1B, and 2 to this subpart and in paragraph (c) of this section by using one or more of the compliance options listed in paragraphs (a), (b), and (c) of this section. The process units subject to the compliance options are listed in Tables 1A and 1B to this subpart and are defined in §63.2292. You need only to meet one of the compliance options outlined in paragraphs (a) through (c) of this section for each process unit. You cannot combine compliance options in paragraph (a), (b), or (c) for a single process unit. (For example, you cannot use a production-based compliance option in paragraph (a) for one vent of a veneer dryer and an add-on control system compliance option in paragraph (b) for another vent on the same veneer dryer. You must use either the production-based compliance option or an add-on control system compliance option for the entire dryer.)

(a) *Production-based compliance options.* You must meet the production-based total HAP compliance options in Table 1A to this subpart and the applicable operating requirements in Table 2 to this subpart. You may not use an add-on control system or wet control device to meet the production-based compliance options.

(b) *Compliance options for add-on control systems.* You must use an emissions control system and demonstrate that the resulting emissions meet the compliance options and operating requirements in Tables 1B and 2 to this subpart. If you own or

operate a reconstituted wood product press at a new or existing affected source or a reconstituted wood product board cooler at a new affected source, and you choose to comply with one of the concentration-based compliance options for a control system outlet (presented as option numbers 2, 4, and 6 in Table 1B to this subpart), you must have a capture device that either meets the definition of wood products enclosure in §63.2292 or achieves a capture efficiency of greater than or equal to 95 percent.

(c) *Emissions averaging compliance option (for existing sources only)*. Using the procedures in paragraphs (c)(1) through (3) of this section, you must demonstrate that emissions included in the emissions average meet the compliance options and operating requirements. New sources may not use emissions averaging to comply with this subpart.

(1) *Calculation of required and actual mass removal*. Limit emissions of total HAP, as defined in §63.2292, to include acetaldehyde, acrolein, formaldehyde, methanol, phenol, and propionaldehyde from your affected source to the standard specified by Equations 1, 2, and 3 of this section.

$$RMR = 0.90 \times \left(\sum_{i=1}^n UCEP_i \times OH_i \right) \quad (Eq. 1)$$

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$$AMR = \left(\sum_{i=1}^n CD_i \times OCEP_i \times OH_i \right) \quad (Eq. 2)$$

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$$AMR \geq RMR \quad (Eq. 3)$$

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Where:

RMR = required mass removal of total HAP from all process units generating debits (*i.e.*, all process units that are subject to the compliance options in Tables 1A and 1B to this subpart and that are either uncontrolled or under-controlled), pounds per semiannual period;

AMR = actual mass removal of total HAP from all process units generating credits (*i.e.*, all process units that are controlled as part of the Emissions Averaging Plan including credits from debit-generating process units that are under-controlled), pounds per semiannual period;

UCEP_i = mass of total HAP from an uncontrolled or under-controlled process unit (i) that generates debits, pounds per hour;

OH_i = number of hours a process unit (i) is operated during the semiannual period, hours per 6-month period;

CD_i = control system efficiency for the emission point (i) for total HAP, expressed as a fraction, and not to exceed 90 percent, unitless (Note: To calculate the control system efficiency of biological treatment units that do not meet the definition of biofilter in §63.2292, you must use 40 CFR part 63, appendix C, Determination of the Fraction Biodegraded (F_{bio}) in a Biological Treatment Unit.);

OCEP_i = mass of total HAP from a process unit (i) that generates credits (including credits from debit-generating process units that are under-controlled), pounds per hour;

0.90 = required control system efficiency of 90 percent multiplied, unitless.

(2) *Requirements for debits and credits*. You must calculate debits and credits as specified in paragraphs (c)(2)(i) through (vi) of this section.

(i) You must limit process units in the emissions average to those process units located at the existing affected source as defined in §63.2292.

(ii) You cannot use nonoperating process units to generate emissions averaging credits. You cannot use process units that are shut down to generate emissions averaging debits or credits.

(iii) You may not include in your emissions average process units controlled to comply with a State, Tribal, or Federal rule other than this subpart.

(iv) You must use actual measurements of total HAP emissions from process units to calculate your required mass removal (RMR) and actual mass removal (AMR). The total HAP measurements must be obtained according to §63.2262(b) through (d), (g), and (h), using the methods specified in Table 4 to this subpart.

(v) Your initial demonstration that the credit-generating process units will be capable of generating enough credits to offset the debits from the debit-generating process units must be made under representative operating conditions. After the compliance date, you must use actual operating data for all debit and credit calculations.

(vi) Do not include emissions from the following time periods in your emissions averaging calculations:

(A) Emissions during periods of startup, shutdown, and malfunction as described in the startup, shutdown, and malfunction plan (SSMP).

(B) Emissions during periods of monitoring malfunctions, associated repairs, and required quality assurance or control activities or during periods of control device maintenance covered in your routine control device maintenance exemption. No credits may be assigned to credit-generating process units, and maximum debits must be assigned to debit-generating process units during these periods.

(3) *Operating requirements.* You must meet the operating requirements in Table 2 to this subpart for each process unit or control device used in calculation of emissions averaging credits.

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§63.2241 What are the work practice requirements and how must I meet them?

(a) You must meet each work practice requirement in Table 3 to this subpart that applies to you.

(b) As provided in §63.6(g), we, the EPA, may choose to grant you permission to use an alternative to the work practice requirements in this section.

(c) If you have a dry rotary dryer, you may choose to designate your dry rotary dryer as a green rotary dryer and meet the more stringent compliance options and operating requirements in §63.2240 for green rotary dryers instead of the work practices for dry rotary dryers. If you have a hardwood veneer dryer or veneer redryer, you may choose to designate your hardwood veneer dryer or veneer redryer as a softwood veneer dryer and meet the more stringent compliance options and operating requirements in §63.2240 for softwood veneer dryer heated zones instead of the work practices for hardwood veneer dryers or veneer redryers.

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GENERAL COMPLIANCE REQUIREMENTS

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§63.2250 What are the general requirements?

(a) You must be in compliance with the compliance options, operating requirements, and the work practice requirements in this subpart at all times, except during periods of process unit or control device startup, shutdown, and malfunction; prior to process unit initial startup; and during the routine control device maintenance exemption specified in §63.2251. The compliance options, operating requirements, and work practice requirements do not apply during times when the process unit(s) subject to the compliance options, operating requirements, and work practice requirements are not operating, or during periods of startup, shutdown, and malfunction. Startup and shutdown periods must not exceed the minimum amount of time necessary for these events.

(b) You must always operate and maintain your affected source, including air pollution control and monitoring equipment, according to the provisions in §63.6(e)(1)(i).

(c) You must develop a written SSMP according to the provisions in §63.6(e)(3).

(d) Shutoff of direct-fired burners resulting from partial and full production stoppages of direct-fired softwood veneer dryers or over-temperature events shall be deemed shutdowns and not malfunctions. Lighting or re-lighting any one or all gas burners in direct-fired softwood veneer dryers shall be deemed startups and not malfunctions.

[69 FR 46011, July 30, 2004, as amended at 71 FR 8372, Feb. 16, 2006; 71 FR 20463, Apr. 20, 2006]

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§63.2251 What are the requirements for the routine control device maintenance exemption?

(a) You may request a routine control device maintenance exemption from the EPA Administrator for routine maintenance events such as control device bakeouts, washouts, media replacement, and replacement of corroded parts. Your request must justify the need for the routine maintenance on the control device and the time required to accomplish the maintenance activities, describe the maintenance activities and the frequency of the maintenance activities, explain why the maintenance cannot be accomplished during process shutdowns, describe how you plan to make reasonable efforts to minimize emissions during the maintenance, and provide any other documentation required by the EPA Administrator.

(b) The routine control device maintenance exemption must not exceed the percentages of process unit operating uptime in paragraphs (b)(1) and (2) of this section.

(1) If the control device is used to control a green rotary dryer, tube dryer, rotary strand dryer, or pressurized refiner, then the routine control device maintenance exemption must not exceed 3 percent of annual operating uptime for each process unit controlled.

(2) If the control device is used to control a softwood veneer dryer, reconstituted wood product press, reconstituted wood product board cooler, hardboard oven, press predryer, conveyor strand dryer, or fiberboard mat dryer, then the routine control device maintenance exemption must not exceed 0.5 percent of annual operating uptime for each process unit controlled.

(3) If the control device is used to control a combination of equipment listed in both paragraphs (b)(1) and (2) of this section, such as a tube dryer and a reconstituted wood product press, then the routine control device maintenance exemption must not exceed 3 percent of annual operating uptime for each process unit controlled.

(c) The request for the routine control device maintenance exemption, if approved by the EPA Administrator, must be IBR in and attached to the affected source's title V permit.

(d) The compliance options and operating requirements do not apply during times when control device maintenance covered under your approved routine control device maintenance exemption is performed. You must minimize emissions to the greatest extent possible during these routine control device maintenance periods.

(e) To the extent practical, startup and shutdown of emission control systems must be scheduled during times when process equipment is also shut down.

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§63.2252 What are the requirements for process units that have no control or work practice requirements?

For process units not subject to the compliance options or work practice requirements specified in §63.2240 (including, but not limited to, lumber kilns), you are not required to comply with the compliance options, work practice requirements, performance testing, monitoring, SSM plans, and recordkeeping or reporting requirements of this subpart, or any other requirements in subpart A of this part, except for the initial notification requirements in §63.9(b).

[71 FR 8372, Feb. 16, 2006]

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INITIAL COMPLIANCE REQUIREMENTS

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§63.2260 How do I demonstrate initial compliance with the compliance options, operating requirements, and work practice requirements?

(a) To demonstrate initial compliance with the compliance options and operating requirements, you must conduct performance tests and establish each site-specific operating requirement in Table 2 to this subpart according to the requirements in §63.2262 and Table 4 to this subpart. Combustion units that accept process exhausts into the flame zone are exempt from the initial performance testing and operating requirements for thermal oxidizers.

(b) You must demonstrate initial compliance with each compliance option, operating requirement, and work practice requirement that applies to you according to Tables 5 and 6 to this subpart and according to §§63.2260 through 63.2269 of this subpart.

(c) You must submit the Notification of Compliance Status containing the results of the initial compliance demonstration according to the requirements in §63.2280(d).

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§63.2261 By what date must I conduct performance tests or other initial compliance demonstrations?

(a) You must conduct performance tests upon initial startup or no later than 180 calendar days after the compliance date that is specified for your source in §63.2233 and according to §63.7(a)(2), whichever is later.

(b) You must conduct initial compliance demonstrations that do not require performance tests upon initial startup or no later than 30 calendar days after the compliance date that is specified for your source in §63.2233, whichever is later.

§63.2262 How do I conduct performance tests and establish operating requirements?

(a) You must conduct each performance test according to the requirements in §63.7(e)(1), the requirements in paragraphs (b) through (o) of this section, and according to the methods specified in Table 4 to this subpart.

(b) *Periods when performance tests must be conducted.* (1) You must not conduct performance tests during periods of startup, shutdown, or malfunction, as specified in §63.7(e)(1).

(2) You must test under representative operating conditions as defined in §63.2292. You must describe representative operating conditions in your performance test report for the process and control systems and explain why they are representative.

(c) *Number of test runs.* You must conduct three separate test runs for each performance test required in this section as specified in §63.7(e)(3). Each test run must last at least 1 hour except for: testing of a temporary total enclosure (TTE) conducted using Methods 204A through 204F of 40 CFR part 51, appendix M, which require three separate test runs of at least 3 hours each; and testing of an enclosure conducted using the alternative tracer gas method in appendix A to this subpart, which requires a minimum of three separate runs of at least 20 minutes each.

(d) *Location of sampling sites.* (1) Sampling sites must be located at the inlet (if emission reduction testing or documentation of inlet methanol or formaldehyde concentration is required) and outlet of the control device (defined in §63.2292) and prior to any releases to the atmosphere. For control sequences with wet control devices (defined in §63.2292) followed by control devices (defined in §63.2292), sampling sites may be located at the inlet and outlet of the control sequence and prior to any releases to the atmosphere.

(2) Sampling sites for process units meeting compliance options without a control device must be located prior to any releases to the atmosphere. Facilities demonstrating compliance with a production-based compliance option for a process unit equipped with a wet control device must locate sampling sites prior to the wet control device.

(e) *Collection of monitoring data.* You must collect operating parameter monitoring system or continuous emissions monitoring system (CEMS) data at least every 15 minutes during the entire performance test and determine the parameter or concentration value for the operating requirement during the performance test using the methods specified in paragraphs (k) through (o) of this section.

(f) *Collection of production data.* To comply with any of the production-based compliance options, you must measure and record the process unit throughput during each performance test.

(g) *Nondetect data.* (1) Except as specified in paragraph (g)(2) of this section, all nondetect data (§63.2292) must be treated as one-half of the method detection limit when determining total HAP, formaldehyde, methanol, or total hydrocarbon (THC) emission rates.

(2) When showing compliance with the production-based compliance options in Table 1A to this subpart, you may treat emissions of an individual HAP as zero if all three of the performance test runs result in a nondetect measurement, and the method detection limit is less than or equal to 1 parts per million by volume, dry basis (ppmvd). Otherwise, nondetect data for individual HAP must be treated as one-half of the method detection limit.

(h) *Calculation of percent reduction across a control system.* When determining the control system efficiency for any control system included in your emissions averaging plan (not to exceed 90 percent) and when complying with any of the compliance options based on percent reduction across a control system in Table 1B to this subpart, as part of the performance test, you must calculate the percent reduction using Equation 1 of this section:

$$PR = CE \times \frac{ER_{in} - ER_{out}}{ER_{in}} (100) \quad (Eq. 1)$$

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Where:

PR = percent reduction, percent;

CE = capture efficiency, percent (determined for reconstituted wood product presses and board coolers as required in Table 4 to this subpart);

ER_{in} = emission rate of total HAP (calculated as the sum of the emission rates of acetaldehyde, acrolein, formaldehyde, methanol, phenol, and propionaldehyde), THC, formaldehyde, or methanol in the inlet vent stream of the control device, pounds per hour;

ER_{out} = emission rate of total HAP (calculated as the sum of the emission rates of acetaldehyde, acrolein, formaldehyde, methanol, phenol, and propionaldehyde), THC, formaldehyde, or methanol in the outlet vent stream of the control device, pounds per hour.

(i) *Calculation of mass per unit production.* To comply with any of the production-based compliance options in Table 1A to this subpart, you must calculate your mass per unit production emissions for each performance test run using Equation 2 of this section:

$$MP = \frac{ER_{HAP}}{P \times CE} \quad (\text{Eq. 2})$$

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Where:

MP = mass per unit production, pounds per oven dried ton OR pounds per thousand square feet on a specified thickness basis (see paragraph (j) of this section if you need to convert from one thickness basis to another);

ER_{HAP} = emission rate of total HAP (calculated as the sum of the emission rates of acetaldehyde, acrolein, formaldehyde, methanol, phenol, and propionaldehyde) in the stack, pounds per hour;

P = process unit production rate (throughput), oven dried tons per hour OR thousand square feet per hour on a specified thickness basis;

CE = capture efficiency, percent (determined for reconstituted wood product presses and board coolers as required in Table 4 to this subpart).

(j) *Thickness basis conversion.* Use Equation 3 of this section to convert from one thickness basis to another:

$$MSF_B = MSF_A \times \frac{A}{B} \quad (\text{Eq. 3})$$

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Where:

MSF_A = thousand square feet on an A-inch basis;

MSF_B = thousand square feet on a B-inch basis;

A = old thickness you are converting from, inches;

B = new thickness you are converting to, inches.

(k) *Establishing thermal oxidizer operating requirements.* If you operate a thermal oxidizer, you must establish your thermal oxidizer operating parameters according to paragraphs (k)(1) through (3) of this section.

(1) During the performance test, you must continuously monitor the firebox temperature during each of the required 1-hour test runs. For regenerative thermal oxidizers, you may measure the temperature in multiple locations (e.g., one location per burner) in the combustion chamber and calculate the average of the temperature measurements prior to reducing the temperature data to 15-minute averages for purposes of establishing your minimum firebox temperature. The minimum firebox temperature must then be established as the average of the three minimum 15-minute firebox temperatures monitored during the three test runs. Multiple three-run performance tests may be conducted to establish a range of parameter values under different operating conditions.

(2) You may establish a different minimum firebox temperature for your thermal oxidizer by submitting the notification specified in §63.2280(g) and conducting a repeat performance test as specified in paragraph (k)(1) of this section that demonstrates compliance with the applicable compliance options of this subpart.

(3) If your thermal oxidizer is a combustion unit that accepts process exhaust into the flame zone, then you are exempt from the performance testing and monitoring requirements specified in paragraphs (k)(1) and (2) of this section. To demonstrate initial compliance, you must submit documentation with your Notification of Compliance Status showing that process exhausts controlled by the combustion unit enter into the flame zone.

(l) *Establishing catalytic oxidizer operating requirements.* If you operate a catalytic oxidizer, you must establish your catalytic oxidizer operating parameters according to paragraphs (l)(1) and (2) of this section.

(1) During the performance test, you must continuously monitor during the required 1-hour test runs either the temperature at the inlet to each catalyst bed or the temperature in the combustion chamber. For regenerative catalytic oxidizers, you must calculate the average of the temperature measurements from each catalyst bed inlet or within the combustion chamber prior to reducing the temperature data to 15-minute averages for purposes of establishing your minimum catalytic oxidizer temperature. The minimum catalytic oxidizer temperature must then be established as the average of the three minimum 15-minute

temperatures monitored during the three test runs. Multiple three-run performance tests may be conducted to establish a range of parameter values under different operating conditions.

(2) You may establish a different minimum catalytic oxidizer temperature by submitting the notification specified in §63.2280(g) and conducting a repeat performance test as specified in paragraphs (l)(1) and (2) of this section that demonstrates compliance with the applicable compliance options of this subpart.

(m) *Establishing biofilter operating requirements.* If you operate a biofilter, you must establish your biofilter operating requirements according to paragraphs (m)(1) through (3) of this section.

(1) During the performance test, you must continuously monitor the biofilter bed temperature during each of the required 1-hour test runs. To monitor biofilter bed temperature, you may use multiple thermocouples in representative locations throughout the biofilter bed and calculate the average biofilter bed temperature across these thermocouples prior to reducing the temperature data to 15-minute averages for purposes of establishing biofilter bed temperature limits. The biofilter bed temperature range must be established as the minimum and maximum 15-minute biofilter bed temperatures monitored during the three test runs. You may base your biofilter bed temperature range on values recorded during previous performance tests provided that the data used to establish the temperature ranges have been obtained using the test methods required in this subpart. If you use data from previous performance tests, you must certify that the biofilter and associated process unit(s) have not been modified subsequent to the date of the performance tests. Replacement of the biofilter media with the same type of material is not considered a modification of the biofilter for purposes of this section.

(2) For a new biofilter installation, you will be allowed up to 180 days following the compliance date or 180 days following initial startup of the biofilter to complete the requirements in paragraph (m)(1) of this section.

(3) You may expand your biofilter bed temperature operating range by submitting the notification specified in §63.2280(g) and conducting a repeat performance test as specified in paragraph (m)(1) of this section that demonstrates compliance with the applicable compliance options of this subpart.

(n) *Establishing operating requirements for process units meeting compliance options without a control device.* If you operate a process unit that meets a compliance option in Table 1A to this subpart, or is a process unit that generates debits in an emissions average without the use of a control device, you must establish your process unit operating parameters according to paragraphs (n)(1) through (2) of this section.

(1) During the performance test, you must identify and document the process unit controlling parameter(s) that affect total HAP emissions during the three-run performance test. The controlling parameters you identify must coincide with the representative operating conditions you describe according to §63.2262(b)(2). For each parameter, you must specify appropriate monitoring methods, monitoring frequencies, and for continuously monitored parameters, averaging times not to exceed 24 hours. The operating limit for each controlling parameter must then be established as the minimum, maximum, range, or average (as appropriate depending on the parameter) recorded during the performance test. Multiple three-run performance tests may be conducted to establish a range of parameter values under different operating conditions.

(2) You may establish different controlling parameter limits for your process unit by submitting the notification specified in §63.2280(g) and conducting a repeat performance test as specified in paragraph (n)(1) of this section that demonstrates compliance with the compliance options in Table 1A to this subpart or is used to establish emission averaging debits for an uncontrolled process unit.

(o) *Establishing operating requirements using THC CEMS.* If you choose to meet the operating requirements by monitoring THC concentration instead of monitoring control device or process operating parameters, you must establish your THC concentration operating requirement according to paragraphs (o)(1) through (2) of this section.

(1) During the performance test, you must continuously monitor THC concentration using your CEMS during each of the required 1-hour test runs. The maximum THC concentration must then be established as the average of the three maximum 15-minute THC concentrations monitored during the three test runs. Multiple three-run performance tests may be conducted to establish a range of THC concentration values under different operating conditions.

(2) You may establish a different maximum THC concentration by submitting the notification specified in §63.2280(g) and conducting a repeat performance test as specified in paragraph (o)(1) of this section that demonstrates compliance with the compliance options in Tables 1A and 1B to this subpart.

[69 FR 46011, July 30, 2004, as amended at 71 FR 8372, Feb. 16, 2006]

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§63.2263 Initial compliance demonstration for a dry rotary dryer.

If you operate a dry rotary dryer, you must demonstrate that your dryer processes furnish with an inlet moisture content of less than or equal to 30 percent (by weight, dry basis) and operates with a dryer inlet temperature of less than or equal to 600 °F. You must designate and clearly identify each dry rotary dryer. You must record the inlet furnish moisture content (dry basis) and inlet dryer operating temperature according to §§63.2269(a), (b), and (c) and 63.2270 for a minimum of 30 calendar days. You must submit the highest recorded 24-hour average inlet furnish moisture content and the highest recorded 24-hour average dryer inlet temperature with your Notification of Compliance Status. In addition, you must submit with the Notification of Compliance Status a signed statement by a responsible official that certifies with truth, accuracy, and completeness that the dry rotary dryer will dry furnish with a maximum inlet moisture content less than or equal to 30 percent (by weight, dry basis) and will operate with a maximum inlet temperature of less than or equal to 600 °F in the future.

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§63.2264 Initial compliance demonstration for a hardwood veneer dryer.

If you operate a hardwood veneer dryer, you must record the annual volume percentage of softwood veneer species processed in the dryer as follows:

(a) Use Equation 1 of this section to calculate the annual volume percentage of softwood species dried:

$$SW\% = \frac{SW}{T} (100) \quad (Eq. 1)$$

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Where:

SW% = annual volume percent softwood species dried;

SW = softwood veneer dried during the previous 12 months, thousand square feet ($\frac{3}{8}$ -inch basis);

T = total softwood and hardwood veneer dried during the previous 12 months, thousand square feet ($\frac{3}{8}$ -inch basis).

(b) You must designate and clearly identify each hardwood veneer dryer. Submit with the Notification of Compliance Status the annual volume percentage of softwood species dried in the dryer based on your dryer production for the 12 months prior to the compliance date specified for your source in §63.2233. If you did not dry any softwood species in the dryer during the 12 months prior to the compliance date, then you need only to submit a statement indicating that no softwood species were dried. In addition, submit with the Notification of Compliance Status a signed statement by a responsible official that certifies with truth, accuracy, and completeness that the veneer dryer will be used to process less than 30 volume percent softwood species in the future.

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§63.2265 Initial compliance demonstration for a softwood veneer dryer.

If you operate a softwood veneer dryer, you must develop a plan for review and approval for minimizing fugitive emissions from the veneer dryer heated zones, and you must submit the plan with your Notification of Compliance Status.

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§63.2266 Initial compliance demonstration for a veneer redryer.

If you operate a veneer redryer, you must record the inlet moisture content of the veneer processed in the redryer according to §§63.2269(a) and (c) and 63.2270 for a minimum of 30 calendar days. You must designate and clearly identify each veneer redryer. You must submit the highest recorded 24-hour average inlet veneer moisture content with your Notification of Compliance Status to show that your veneer redryer processes veneer with an inlet moisture content of less than or equal to 25 percent (by weight, dry basis). In addition, submit with the Notification of Compliance Status a signed statement by a responsible official that certifies with truth, accuracy, and completeness that the veneer redryer will dry veneer with a moisture content less than 25 percent (by weight, dry basis) in the future.

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§63.2267 Initial compliance demonstration for a reconstituted wood product press or board cooler.

If you operate a reconstituted wood product press at a new or existing affected source or a reconstituted wood product board cooler at a new affected source, then you must either use a wood products enclosure as defined in §63.2292 or measure the capture efficiency of the capture device for the press or board cooler using Methods 204 and 204A through 204F of 40 CFR

part 51, appendix M (as appropriate), or using the alternative tracer gas method contained in appendix A to this subpart. You must submit documentation that the wood products enclosure meets the press enclosure design criteria in §63.2292 or the results of the capture efficiency verification with your Notification of Compliance Status.

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§63.2268 Initial compliance demonstration for a wet control device.

If you use a wet control device as the sole means of reducing HAP emissions, you must develop and implement a plan for review and approval to address how organic HAP captured in the wastewater from the wet control device is contained or destroyed to minimize re-release to the atmosphere such that the desired emissions reductions are obtained. You must submit the plan with your Notification of Compliance Status.

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§63.2269 What are my monitoring installation, operation, and maintenance requirements?

(a) *General continuous parameter monitoring requirements.* You must install, operate, and maintain each continuous parameter monitoring system (CPMS) according to paragraphs (a)(1) through (3) of this section.

(1) The CPMS must be capable of completing a minimum of one cycle of operation (sampling, analyzing, and recording) for each successive 15-minute period.

(2) At all times, you must maintain the monitoring equipment including, but not limited to, maintaining necessary parts for routine repairs of the monitoring equipment.

(3) Record the results of each inspection, calibration, and validation check.

(b) *Temperature monitoring.* For each temperature monitoring device, you must meet the requirements in paragraphs (a) and (b)(1) through (6) of this section.

(1) Locate the temperature sensor in a position that provides a representative temperature.

(2) Use a temperature sensor with a minimum accuracy of 4 °F or 0.75 percent of the temperature value, whichever is larger.

(3) If a chart recorder is used, it must have a sensitivity with minor divisions not more than 20 °F.

(4) Perform an electronic calibration at least semiannually according to the procedures in the manufacturer's owners manual. Following the electronic calibration, you must conduct a temperature sensor validation check in which a second or redundant temperature sensor placed nearby the process temperature sensor must yield a reading within 30 °F of the process temperature sensor's reading.

(5) Conduct calibration and validation checks any time the sensor exceeds the manufacturer's specified maximum operating temperature range or install a new temperature sensor.

(6) At least quarterly, inspect all components for integrity and all electrical connections for continuity, oxidation, and galvanic corrosion.

(c) *Wood moisture monitoring.* For each furnish or veneer moisture meter, you must meet the requirements in paragraphs (a)(1) through (3) and paragraphs (c)(1) through (5) of this section.

(1) For dry rotary dryers, use a continuous moisture monitor with a minimum accuracy of 1 percent (dry basis) moisture or better in the 25 to 35 percent (dry basis) moisture content range. For veneer redryers, use a continuous moisture monitor with a minimum accuracy of 3 percent (dry basis) moisture or better in the 15 to 25 percent (dry basis) moisture content range. Alternatively, you may use a continuous moisture monitor with a minimum accuracy of 5 percent (dry basis) moisture or better for dry rotary dryers used to dry furnish with less than 25 percent (dry basis) moisture or for veneer redryers used to redry veneer with less than 20 percent (dry basis) moisture.

(2) Locate the moisture monitor in a position that provides a representative measure of furnish or veneer moisture.

(3) Calibrate the moisture monitor based on the procedures specified by the moisture monitor manufacturer at least once per semiannual compliance period (or more frequently if recommended by the moisture monitor manufacturer).

(4) At least quarterly, inspect all components of the moisture monitor for integrity and all electrical connections for continuity.

(5) Use Equation 1 of this section to convert percent moisture measurements wet basis to a dry basis:

$$MC_{dry} = \frac{MC_{wet}/100}{1 - (MC_{wet}/100)} (100) \quad (Eq. 1)$$

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Where:

MC_{dry} = percent moisture content of wood material (weight percent, dry basis);

MC_{wet} = percent moisture content of wood material (weight percent, wet basis).

(d) *Continuous emission monitoring system(s)*. Each CEMS must be installed, operated, and maintained according to paragraphs (d)(1) through (4) of this section.

(1) Each CEMS for monitoring THC concentration must be installed, operated, and maintained according to Performance Specification 8 of 40 CFR part 60, appendix B. You must also comply with Procedure 1 of 40 CFR part 60, appendix F.

(2) You must conduct a performance evaluation of each CEMS according to the requirements in §63.8 and according to Performance Specification 8 of 40 CFR part 60, appendix B.

(3) As specified in §63.8(c)(4)(ii), each CEMS must complete a minimum of one cycle of operation (sampling, analyzing, and data recording) for each successive 15-minute period.

(4) The CEMS data must be reduced as specified in §§63.8(g)(2) and 63.2270(d) and (e).

[69 FR 46011, July 30, 2004, as amended at 71 FR 8372, Feb. 16, 2006]

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CONTINUOUS COMPLIANCE REQUIREMENTS

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§63.2270 How do I monitor and collect data to demonstrate continuous compliance?

(a) You must monitor and collect data according to this section.

(b) Except for, as appropriate, monitor malfunctions, associated repairs, and required quality assurance or control activities (including, as applicable, calibration checks and required zero and span adjustments), you must conduct all monitoring in continuous operation at all times that the process unit is operating. For purposes of calculating data averages, you must not use data recorded during monitoring malfunctions, associated repairs, out-of-control periods, or required quality assurance or control activities. You must use all the data collected during all other periods in assessing compliance. A monitoring malfunction is any sudden, infrequent, not reasonably preventable failure of the monitoring to provide valid data. Monitoring failures that are caused in part by poor maintenance or careless operation are not malfunctions. Any period for which the monitoring system is out-of-control and data are not available for required calculations constitutes a deviation from the monitoring requirements.

(c) You may not use data recorded during monitoring malfunctions, associated repairs, and required quality assurance or control activities; data recorded during periods of startup, shutdown, and malfunction; or data recorded during periods of control device downtime covered in any approved routine control device maintenance exemption in data averages and calculations used to report emission or operating levels, nor may such data be used in fulfilling a minimum data availability requirement, if applicable. You must use all the data collected during all other periods in assessing the operation of the control system.

(d) Except as provided in paragraph (e) of this section, determine the 3-hour block average of all recorded readings, calculated after every 3 hours of operation as the average of the evenly spaced recorded readings in the previous 3 operating hours (excluding periods described in paragraphs (b) and (c) of this section).

(e) For dry rotary dryer and veneer redryer wood moisture monitoring, dry rotary dryer temperature monitoring, biofilter bed temperature monitoring, and biofilter outlet THC monitoring, determine the 24-hour block average of all recorded readings, calculated after every 24 hours of operation as the average of the evenly spaced recorded readings in the previous 24 operating hours (excluding periods described in paragraphs (b) and (c) of this section).

(f) To calculate the data averages for each 3-hour or 24-hour averaging period, you must have at least 75 percent of the required recorded readings for that period using only recorded readings that are based on valid data (*i.e.*, not from periods described in paragraphs (b) and (c) of this section).

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§63.2271 How do I demonstrate continuous compliance with the compliance options, operating requirements, and work practice requirements?

(a) You must demonstrate continuous compliance with the compliance options, operating requirements, and work practice requirements in §§63.2240 and 63.2241 that apply to you according to the methods specified in Tables 7 and 8 to this subpart.

(b) You must report each instance in which you did not meet each compliance option, operating requirement, and work practice requirement in Tables 7 and 8 to this subpart that applies to you. This includes periods of startup, shutdown, and malfunction and periods of control device maintenance specified in paragraphs (b)(1) through (3) of this section. These instances are deviations from the compliance options, operating requirements, and work practice requirements in this subpart. These deviations must be reported according to the requirements in §63.2281.

(1) [Reserved]

(2) Consistent with §§63.6(e) and 63.7(e)(1), deviations that occur during a period of startup, shutdown, or malfunction are not violations if you demonstrate to the EPA Administrator's satisfaction that you were operating in accordance with §63.6(e)(1). The EPA Administrator will determine whether deviations that occur during a period of startup, shutdown, or malfunction are violations, according to the provisions in §63.6(e).

(3) Deviations that occur during periods of control device maintenance covered by any approved routine control device maintenance exemption are not violations if you demonstrate to the EPA Administrator's satisfaction that you were operating in accordance with the approved routine control device maintenance exemption.

[69 FR 46011, July 30, 2004, as amended at 71 FR 20463, Apr. 20, 2006]

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NOTIFICATIONS, REPORTS, AND RECORDS

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§63.2280 What notifications must I submit and when?

(a) You must submit all of the notifications in §§63.7(b) and (c), 63.8(e), (f)(4) and (f)(6), 63.9 (b) through (e), and (g) and (h) by the dates specified.

(b) You must submit an Initial Notification no later than 120 calendar days after September 28, 2004, or after initial startup, whichever is later, as specified in §63.9(b)(2).

(c) If you are required to conduct a performance test, you must submit a written notification of intent to conduct a performance test at least 60 calendar days before the performance test is scheduled to begin as specified in §63.7(b)(1).

(d) If you are required to conduct a performance test, design evaluation, or other initial compliance demonstration as specified in Tables 4, 5, and 6 to this subpart, you must submit a Notification of Compliance Status as specified in §63.9(h)(2) (ii).

(1) For each initial compliance demonstration required in Table 5 or 6 to this subpart that does not include a performance test, you must submit the Notification of Compliance Status before the close of business on the 30th calendar day following the completion of the initial compliance demonstration.

(2) For each initial compliance demonstration required in Tables 5 and 6 to this subpart that includes a performance test conducted according to the requirements in Table 4 to this subpart, you must submit the Notification of Compliance Status, including the performance test results, before the close of business on the 60th calendar day following the completion of the performance test according to §63.10(d)(2).

(e) If you request a routine control device maintenance exemption according to §63.2251, you must submit your request for the exemption no later than 30 days before the compliance date.

(f) If you use the emissions averaging compliance option in §63.2240(c), you must submit an Emissions Averaging Plan to the EPA Administrator for approval no later than 1 year before the compliance date or no later than 1 year before the date you would begin using an emissions average, whichever is later. The Emissions Averaging Plan must include the information in paragraphs (f)(1) through (6) of this section.

(1) Identification of all the process units to be included in the emissions average indicating which process units will be used to generate credits, and which process units that are subject to compliance options in Tables 1A and 1B to this subpart will be uncontrolled (used to generate debits) or under-controlled (used to generate debits and credits).

(2) Description of the control system used to generate emission credits for each process unit used to generate credits.

(3) Determination of the total HAP control efficiency for the control system used to generate emission credits for each credit-generating process unit.

(4) Calculation of the RMR and AMR, as calculated using Equations 1 through 3 of §63.2240(c)(1).

(5) Documentation of total HAP measurements made according to §63.2240(c)(2)(iv) and other relevant documentation to support calculation of the RMR and AMR.

(6) A summary of the operating parameters you will monitor and monitoring methods for each debit-generating and credit-generating process unit.

(g) You must notify the EPA Administrator within 30 days before you take any of the actions specified in paragraphs (g)(1) through (3) of this section.

(1) You modify or replace the control system for any process unit subject to the compliance options and operating requirements in this subpart.

(2) You shut down any process unit included in your Emissions Averaging Plan.

(3) You change a continuous monitoring parameter or the value or range of values of a continuous monitoring parameter for any process unit or control device.

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§63.2281 What reports must I submit and when?

(a) You must submit each report in Table 9 to this subpart that applies to you.

(b) Unless the EPA Administrator has approved a different schedule for submission of reports under §63.10(a), you must submit each report by the date in Table 9 to this subpart and as specified in paragraphs (b)(1) through (5) of this section.

(1) The first compliance report must cover the period beginning on the compliance date that is specified for your affected source in §63.2233 ending on June 30 or December 31, and lasting at least 6 months, but less than 12 months. For example, if your compliance date is March 1, then the first semiannual reporting period would begin on March 1 and end on December 31.

(2) The first compliance report must be postmarked or delivered no later than July 31 or January 31 for compliance periods ending on June 30 and December 31, respectively.

(3) Each subsequent compliance report must cover the semiannual reporting period from January 1 through June 30 or the semiannual reporting period from July 1 through December 31.

(4) Each subsequent compliance report must be postmarked or delivered no later than July 31 or January 31 for the semiannual reporting period ending on June 30 and December 31, respectively.

(5) For each affected source that is subject to permitting regulations pursuant to 40 CFR part 70 or 40 CFR part 71, and if the permitting authority has established dates for submitting semiannual reports pursuant to §70.6(a)(3)(iii)(A) or §71.6(a)(3)(iii)(A), you may submit the first and subsequent compliance reports according to the dates the permitting authority has established instead of according to the dates in paragraphs (b)(1) through (4) of this section.

(c) The compliance report must contain the information in paragraphs (c)(1) through (8) of this section.

(1) Company name and address.

(2) Statement by a responsible official with that official's name, title, and signature, certifying the truth, accuracy, and completeness of the content of the report.

(3) Date of report and beginning and ending dates of the reporting period.

(4) If you had a startup, shutdown, or malfunction during the reporting period and you took actions consistent with your SSMP, the compliance report must include the information specified in §63.10(d)(5)(i).

(5) A description of control device maintenance performed while the control device was offline and one or more of the process units controlled by the control device was operating, including the information specified in paragraphs (c)(5)(i) through (iii) of this section.

(i) The date and time when the control device was shut down and restarted.

(ii) Identification of the process units that were operating and the number of hours that each process unit operated while the control device was offline.

(iii) A statement of whether or not the control device maintenance was included in your approved routine control device maintenance exemption developed pursuant to §63.2251. If the control device maintenance was included in your approved routine control device maintenance exemption, then you must report the information in paragraphs (c)(5)(iii)(A) through (C) of this section.

(A) The total amount of time that each process unit controlled by the control device operated during the semiannual compliance period and during the previous semiannual compliance period.

(B) The amount of time that each process unit controlled by the control device operated while the control device was down for maintenance covered under the routine control device maintenance exemption during the semiannual compliance period and during the previous semiannual compliance period.

(C) Based on the information recorded under paragraphs (c)(5)(iii)(A) and (B) of this section for each process unit, compute the annual percent of process unit operating uptime during which the control device was offline for routine maintenance using Equation 1 of this section.

$$RM = \frac{DT_p + DT_c}{PU_p + PU_c} \quad (\text{Eq. 1})$$

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Where:

RM = Annual percentage of process unit uptime during which control device is down for routine control device maintenance;

PU_p = Process unit uptime for the previous semiannual compliance period;

PU_c = Process unit uptime for the current semiannual compliance period;

DT_p = Control device downtime claimed under the routine control device maintenance exemption for the previous semiannual compliance period;

DT_c = Control device downtime claimed under the routine control device maintenance exemption for the current semiannual compliance period.

(6) The results of any performance tests conducted during the semiannual reporting period.

(7) If there are no deviations from any applicable compliance option or operating requirement, and there are no deviations from the requirements for work practice requirements in Table 8 to this subpart, a statement that there were no deviations from the compliance options, operating requirements, or work practice requirements during the reporting period.

(8) If there were no periods during which the continuous monitoring system (CMS), including CEMS and CPMS, was out-of-control as specified in §63.8(c)(7), a statement that there were no periods during which the CMS was out-of-control during the reporting period.

(d) For each deviation from a compliance option or operating requirement and for each deviation from the work practice requirements in Table 8 to this subpart that occurs at an affected source where you are not using a CMS to comply with the compliance options, operating requirements, or work practice requirements in this subpart, the compliance report must contain the information in paragraphs (c)(1) through (6) of this section and in paragraphs (d)(1) and (2) of this section. This includes periods of startup, shutdown, and malfunction and routine control device maintenance.

(1) The total operating time of each affected source during the reporting period.

(2) Information on the number, duration, and cause of deviations (including unknown cause, if applicable), as applicable, and the corrective action taken.

(e) For each deviation from a compliance option or operating requirement occurring at an affected source where you are using a CMS to comply with the compliance options and operating requirements in this subpart, you must include the information in paragraphs (c)(1) through (6) and paragraphs (e)(1) through (11) of this section. This includes periods of startup, shutdown, and malfunction and routine control device maintenance.

(1) The date and time that each malfunction started and stopped.

(2) The date and time that each CMS was inoperative, except for zero (low-level) and high-level checks.

(3) The date, time, and duration that each CMS was out-of-control, including the information in §63.8(c)(8).

(4) The date and time that each deviation started and stopped, and whether each deviation occurred during a period of startup, shutdown, or malfunction; during a period of control device maintenance covered in your approved routine control device maintenance exemption; or during another period.

(5) A summary of the total duration of the deviation during the reporting period and the total duration as a percent of the total source operating time during that reporting period.

(6) A breakdown of the total duration of the deviations during the reporting period into those that are due to startup, shutdown, control system problems, control device maintenance, process problems, other known causes, and other unknown causes.

(7) A summary of the total duration of CMS downtime during the reporting period and the total duration of CMS downtime as a percent of the total source operating time during that reporting period.

(8) A brief description of the process units.

(9) A brief description of the CMS.

(10) The date of the latest CMS certification or audit.

(11) A description of any changes in CMS, processes, or controls since the last reporting period.

(f) If you comply with the emissions averaging compliance option in §63.2240(c), you must include in your semiannual compliance report calculations based on operating data from the semiannual reporting period that demonstrate that actual mass removal equals or exceeds the required mass removal.

(g) Each affected source that has obtained a title V operating permit pursuant to 40 CFR part 70 or 40 CFR part 71 must report all deviations as defined in this subpart in the semiannual monitoring report required by §70.6(a)(3)(iii)(A) or §71.6(a)(3)(iii)(A). If an affected source submits a compliance report pursuant to Table 9 to this subpart along with, or as part of, the semiannual monitoring report required by §70.6(a)(3)(iii)(A) or §71.6(a)(3)(iii)(A), and the compliance report includes all required information concerning deviations from any compliance option, operating requirement, or work practice requirement in this subpart, submission of the compliance report shall be deemed to satisfy any obligation to report the same deviations in the semiannual monitoring report. However, submission of a compliance report shall not otherwise affect any obligation the affected source may have to report deviations from permit requirements to the permitting authority.

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§63.2282 What records must I keep?

(a) You must keep the records listed in paragraphs (a)(1) through (4) of this section.

(1) A copy of each notification and report that you submitted to comply with this subpart, including all documentation supporting any Initial Notification or Notification of Compliance Status that you submitted, according to the requirements in §63.10(b)(2)(xiv).

(2) The records in §63.6(e)(3)(iii) through (v) related to startup, shutdown, and malfunction.

(3) Documentation of your approved routine control device maintenance exemption, if you request such an exemption under §63.2251.

(4) Records of performance tests and performance evaluations as required in §63.10(b)(2)(viii).

(b) You must keep the records required in Tables 7 and 8 to this subpart to show continuous compliance with each compliance option, operating requirement, and work practice requirement that applies to you.

(c) For each CEMS, you must keep the following records.

(1) Records described in §63.10(b)(2)(vi) through (xi).

(2) Previous (i.e., superseded) versions of the performance evaluation plan as required in §63.8(d)(3).

(3) Request for alternatives to relative accuracy testing for CEMS as required in §63.8(f)(6)(i).

(4) Records of the date and time that each deviation started and stopped, and whether the deviation occurred during a period of startup, shutdown, or malfunction or during another period.

(d) If you comply with the emissions averaging compliance option in §63.2240(c), you must keep records of all information required to calculate emission debits and credits.

(e) If you operate a catalytic oxidizer, you must keep records of annual catalyst activity checks and subsequent corrective actions.

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§63.2283 In what form and how long must I keep my records?

(a) Your records must be in a form suitable and readily available for expeditious review as specified in §63.10(b)(1).

(b) As specified in §63.10(b)(1), you must keep each record for 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record.

(c) You must keep each record on site for at least 2 years after the date of each occurrence, measurement, maintenance, corrective action, report, or record according to §63.10(b)(1). You can keep the records offsite for the remaining 3 years.

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OTHER REQUIREMENTS AND INFORMATION

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§63.2290 What parts of the General Provisions apply to me?

Table 10 to this subpart shows which parts of the General Provisions in §§63.1 through 63.13 apply to you.

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§63.2291 Who implements and enforces this subpart?

(a) This subpart can be implemented and enforced by the U.S. EPA or a delegated authority such as your State, local, or tribal agency. If the EPA Administrator has delegated authority to your State, local, or tribal agency, then that agency has the authority to implement and enforce this subpart. You should contact your EPA Regional Office to find out if this subpart is delegated to your State, local, or tribal agency.

(b) In delegating implementation and enforcement authority of this subpart to a State, local, or tribal agency under 40 CFR part 63, subpart E, the authorities contained in paragraph (c) of this section are retained by the EPA Administrator and are not transferred to the State, local, or tribal agency.

(c) The authorities that will not be delegated to State, local, or tribal agencies are listed in paragraphs (c)(1) through (4) of this section.

(1) Approval of alternatives to the compliance options, operating requirements, and work practice requirements in §§63.2240 and 63.2241 as specified in §63.6(g). For the purposes of delegation authority under 40 CFR part 63, subpart E, “compliance options” represent “emission limits”; “operating requirements” represent “operating limits”; and “work practice requirements” represent “work practice standards.”

(2) Approval of major alternatives to test methods as specified in §63.7(e)(2)(ii) and (f) and as defined in §63.90.

(3) Approval of major alternatives to monitoring as specified in §63.8(f) and as defined in §63.90.

(4) Approval of major alternatives to recordkeeping and reporting as specified in §63.10(f) and as defined in §63.90.

[69 FR 46011, July 30, 2004, as amended at 72 FR 61063, Oct. 29, 2007]

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§63.2292 What definitions apply to this subpart?

Terms used in this subpart are defined in the Clean Air Act (CAA), in 40 CFR 63.2, the General Provisions, and in this section as follows:

Affected source means the collection of dryers, refiners, blenders, formers, presses, board coolers, and other process units associated with the manufacturing of plywood and composite wood products. The affected source includes, but is not limited to, green end operations, refining, drying operations (including any combustion unit exhaust stream routinely used to direct fire process unit(s)), resin preparation, blending and forming operations, pressing and board cooling operations, and miscellaneous finishing operations (such as sanding, sawing, patching, edge sealing, and other finishing operations not subject to other NESHAP). The affected source also includes onsite storage of raw materials used in the manufacture of plywood and/or composite wood products, such as resins; onsite wastewater treatment operations specifically associated with plywood and composite wood products manufacturing; and miscellaneous coating operations (defined elsewhere in this section). The affected source includes lumber kilns at PCWP manufacturing facilities and at any other kind of facility.

Agricultural fiber means the fiber of an annual agricultural crop. Examples of agricultural fibers include, but are not limited to, wheat straw, rice straw, and bagasse.

Biofilter means an enclosed control system such as a tank or series of tanks with a fixed roof that contact emissions with a solid media (such as bark) and use microbiological activity to transform organic pollutants in a process exhaust stream to innocuous compounds such as carbon dioxide, water, and inorganic salts. Wastewater treatment systems such as aeration lagoons or activated sludge systems are not considered to be biofilters.

Capture device means a hood, enclosure, or other means of collecting emissions into a duct so that the emissions can be measured.

Capture efficiency means the fraction (expressed as a percentage) of the pollutants from an emission source that are collected by a capture device.

Catalytic oxidizer means a control system that combusts or oxidizes, in the presence of a catalyst, exhaust gas from a process unit. Catalytic oxidizers include regenerative catalytic oxidizers and thermal catalytic oxidizers.

Combustion unit means a dryer burner, process heater, or boiler. Combustion units may be used for combustion of organic HAP emissions.

Control device means any equipment that reduces the quantity of HAP emitted to the air. The device may destroy the HAP or secure the HAP for subsequent recovery. Control devices include, but are not limited to, thermal or catalytic oxidizers, combustion units that incinerate process exhausts, biofilters, and condensers.

Control system or add-on control system means the combination of capture and control devices used to reduce HAP emissions to the atmosphere.

Conveyor strand dryer means a conveyor dryer used to reduce the moisture of wood strands used in the manufacture of oriented strandboard, laminated strand lumber, or other wood strand-based products. A *conveyor strand dryer* is a process unit.

Conveyor strand dryer zone means each portion of a conveyor strand dryer with a separate heat exchange system and exhaust vent(s). Conveyor strand dryers contain multiple zones (e.g., three zones), which may be divided into multiple sections.

Deviation means any instance in which an affected source subject to this subpart, or an owner or operator of such a source:

(1) Fails to meet any requirement or obligation established by this subpart including, but not limited to, any compliance option, operating requirement, or work practice requirement;

(2) Fails to meet any term or condition that is adopted to implement an applicable requirement in this subpart, and that is included in the operating permit for any affected source required to obtain such a permit; or

(3) Fails to meet any compliance option, operating requirement, or work practice requirement in this subpart during startup, shutdown, or malfunction, regardless of whether or not such failure is permitted by this subpart. A deviation is not always a violation. The determination of whether a deviation constitutes a violation of the standard is up to the discretion of the entity responsible for enforcement of the standards.

Direct-fired process unit means a process unit that is heated by the passing of combustion exhaust through the process unit such that the process material is contacted by the combustion exhaust.

Dryer heated zones means the zones of a softwood veneer dryer or fiberboard mat dryer that are equipped with heating and hot air circulation units. The cooling zone(s) of the dryer through which ambient air is blown are not part of the dryer heated

zones.

Dry forming means the process of making a mat of resinated fiber to be compressed into a reconstituted wood product such as particleboard, oriented strandboard, medium density fiberboard, or hardboard.

Dry rotary dryer means a rotary dryer that dries wood particles or fibers with a maximum inlet moisture content of less than or equal to 30 percent (by weight, dry basis) and operates with a maximum inlet temperature of less than or equal to 600 °F. A dry rotary dryer is a process unit.

Engineered wood product means a product made with lumber, veneers, strands of wood, or from other small wood elements that are bound together with resin. Engineered wood products include, but are not limited to, laminated strand lumber, laminated veneer lumber, parallel strand lumber, wood I-joists, and glue-laminated beams.

Fiber means the discrete elements of wood or similar cellulosic material, which are separated by mechanical means, as in refining, that can be formed into boards.

Fiberboard means a composite panel composed of cellulosic fibers (usually wood or agricultural material) made by wet forming and compacting a mat of fibers. Fiberboard density generally is less than 0.50 grams per cubic centimeter (31.5 pounds per cubic foot).

Fiberboard mat dryer means a dryer used to reduce the moisture of wet-formed wood fiber mats by applying heat. A *fiberboard mat dryer* is a process unit.

Flame zone means the portion of the combustion chamber in a combustion unit that is occupied by the flame envelope.

Furnish means the fibers, particles, or strands used for making boards.

Glue-laminated beam means a structural wood beam made by bonding lumber together along its faces with resin.

Green rotary dryer means a rotary dryer that dries wood particles or fibers with an inlet moisture content of greater than 30 percent (by weight, dry basis) at any dryer inlet temperature or operates with an inlet temperature of greater than 600 °F with any inlet moisture content. A *green rotary dryer* is a process unit.

Group 1 miscellaneous coating operations means application of edge seals, nail lines, logo (or other information) paint, shelving edge fillers, trademark/gradestamp inks, and wood putty patches to plywood and composite wood products (except kiln-dried lumber) on the same site where the plywood and composite wood products are manufactured. Group 1 miscellaneous coating operations also include application of synthetic patches to plywood at new affected sources.

Hardboard means a composite panel composed of inter-felted cellulosic fibers made by dry or wet forming and pressing of a resinated fiber mat. Hardboard generally has a density of 0.50 grams per cubic centimeter (31.5 pounds per cubic foot) or greater.

Hardboard oven means an oven used to heat treat or temper hardboard after hot pressing. Humidification chambers are not considered as part of hardboard ovens. A *hardboard oven* is a process unit.

Hardwood means the wood of a broad-leafed tree, either deciduous or evergreen. Examples of hardwoods include, but are not limited to, aspen, birch, poplar, and oak.

Hardwood veneer dryer means a dryer that removes excess moisture from veneer by conveying the veneer through a heated medium on rollers, belts, cables, or wire mesh. Hardwood veneer dryers are used to dry veneer with less than 30 percent softwood species on an annual volume basis. Veneer kilns that operate as batch units, veneer dryers heated by radio frequency or microwaves that are used to redry veneer, and veneer redryers (defined elsewhere in this section) that are heated by conventional means are not considered to be hardwood veneer dryers. A *hardwood veneer dryer* is a process unit.

Kiln-dried lumber means solid wood lumber that has been dried in a lumber kiln.

Laminated strand lumber (LSL) means a composite product formed into a billet made of thin wood strands cut from whole logs, resinated, and pressed together with the grain of each strand oriented parallel to the length of the finished product.

Laminated veneer lumber (LVL) means a composite product formed into a billet made from layers of resinated wood veneer sheets or pieces pressed together with the grain of each veneer aligned primarily along the length of the finished product. *Laminated veneer lumber* is also known as parallel strand lumber (PSL).

Lumber means boards or planks sawed or split from logs or timber, including logs or timber processed for use as utility poles or other wood components. Lumber can be either green (non-dried) or dried. Lumber is typically either air-dried or kiln-

dried.

Lumber kiln means an enclosed dryer operated by applying heat to reduce the moisture content of lumber.

Medium density fiberboard (MDF) means a composite panel composed of cellulosic fibers (usually wood or agricultural fiber) made by dry forming and pressing of a resinated fiber mat.

Method detection limit means the minimum concentration of an analyte that can be determined with 99 percent confidence that the true value is greater than zero.

Miscellaneous coating operations means application of any of the following to plywood or composite wood products: edge seals, moisture sealants, anti-skid coatings, company logos, trademark or grade stamps, nail lines, synthetic patches, wood patches, wood putty, concrete forming oils, glues for veneer composing, and shelving edge fillers. Miscellaneous coating operations also include the application of primer to oriented strandboard siding that occurs at the same site as oriented strandboard manufacture and application of asphalt, clay slurry, or titanium dioxide coatings to fiberboard at the same site of fiberboard manufacture.

Molded particleboard means a shaped composite product (other than a composite panel) composed primarily of cellulosic materials (usually wood or agricultural fiber) generally in the form of discrete pieces or particles, as distinguished from fibers, which are pressed together with resin.

MSF means thousand square feet (92.9 square meters). Square footage of panels is usually measured on a thickness basis, such as $\frac{3}{8}$ -inch, to define the total volume of panels. Equation 6 of §63.2262(j) shows how to convert from one thickness basis to another.

Nondetect data means, for the purposes of this subpart, any value that is below the method detection limit.

Non-HAP coating means a coating with HAP contents below 0.1 percent by mass for Occupational Safety and Health Administration-defined carcinogens as specified in 29 CFR 1910.1200(d)(4), and below 1.0 percent by mass for other HAP compounds.

1-hour period means a 60-minute period.

Oriented strandboard (OSB) means a composite panel produced from thin wood strands cut from whole logs, formed into resinated layers (with the grain of strands in one layer oriented perpendicular to the strands in adjacent layers), and pressed.

Oven-dried ton(s) (ODT) means tons of wood dried until all of the moisture in the wood is removed. One oven-dried ton equals 907 oven-dried kilograms.

Parallel strand lumber (PSL) means a composite product formed into a billet made from layers of resinated wood veneer sheets or pieces pressed together with the grain of each veneer aligned primarily along the length of the finished product. *Parallel strand lumber* is also known as laminated veneer lumber (LVL).

Partial wood products enclosure means an enclosure that does not meet the design criteria for a wood products enclosure as defined in this subpart.

Particle means a discrete, small piece of cellulosic material (usually wood or agricultural fiber) produced mechanically and used as the aggregate for a particleboard.

Particleboard means a composite panel composed primarily of cellulosic materials (usually wood or agricultural fiber) generally in the form of discrete pieces or particles, as distinguished from fibers, which are pressed together with resin.

Plywood means a panel product consisting of layers of wood veneers hot pressed together with resin. Plywood includes panel products made by hot pressing (with resin) veneers to a substrate such as particleboard, medium density fiberboard, or lumber. Plywood products may be flat or curved.

Plywood and composite wood products (PCWP) manufacturing facility means a facility that manufactures plywood and/or composite wood products by bonding wood material (fibers, particles, strands, veneers, etc.) or agricultural fiber, generally with resin under heat and pressure, to form a panel, engineered wood product, or other product defined in §63.2292. Plywood and composite wood products manufacturing facilities also include facilities that manufacture dry veneer and lumber kilns located at any facility. Plywood and composite wood products include, but are not limited to, plywood, veneer, particleboard, molded particleboard, oriented strandboard, hardboard, fiberboard, medium density fiberboard, laminated strand lumber, laminated veneer lumber, wood I-joists, kiln-dried lumber, and glue-laminated beams.

Press predryer means a dryer used to reduce the moisture and elevate the temperature by applying heat to a wet-formed fiber mat before the mat enters a hot press. A *press predryer* is a process unit.

Pressurized refiner means a piece of equipment operated under pressure for preheating (usually by steaming) wood material and refining (rubbing or grinding) the wood material into fibers. Pressurized refineries are operated with continuous infeed and outfeed of wood material and maintain elevated internal pressures (*i.e.*, there is no pressure release) throughout the preheating and refining process. A *pressurized refiner* is a process unit.

Primary tube dryer means a single-stage tube dryer or the first stage of a multi-stage tube dryer. Tube dryer stages are separated by vents for removal of moist gases between stages (*e.g.*, a product cyclone at the end of a single-stage dryer or between the first and second stages of a multi-stage tube dryer). The first stage of a multi-stage tube dryer is used to remove the majority of the moisture from the wood furnish (compared to the moisture reduction in subsequent stages of the tube dryer). Blow-lines used to apply resin are considered part of the primary tube dryer. A *primary tube dryer* is a process unit.

Process unit means equipment classified according to its function such as a blender, dryer, press, former, or board cooler.

Reconstituted wood product board cooler means a piece of equipment designed to reduce the temperature of a board by means of forced air or convection within a controlled time period after the board exits the reconstituted wood product press unloader. Board coolers include wicket and star type coolers commonly found at medium density fiberboard and particleboard plants. Board coolers do not include cooling sections of dryers (*e.g.*, veneer dryers or fiberboard mat dryers) or coolers integrated into or following hardboard bake ovens or humidifiers. A *reconstituted wood product board cooler* is a process unit.

Reconstituted wood product press means a press, including (if applicable) the press unloader, that presses a resinated mat of wood fibers, particles, or strands between hot platens or hot rollers to compact and set the mat into a panel by simultaneous application of heat and pressure. Reconstituted wood product presses are used in the manufacture of hardboard, medium density fiberboard, particleboard, and oriented strandboard. Extruders are not considered to be reconstituted wood product presses. A *reconstituted wood product press* is a process unit.

Representative operating conditions means operation of a process unit during performance testing under the conditions that the process unit will typically be operating in the future, including use of a representative range of materials (*e.g.*, wood material of a typical species mix and moisture content or typical resin formulation) and representative operating temperature range.

Resin means the synthetic adhesive (including glue) or natural binder, including additives, used to bond wood or other cellulosic materials together to produce plywood and composite wood products.

Responsible official means responsible official as defined in 40 CFR 70.2 and 40 CFR 71.2.

Rotary strand dryer means a rotary dryer operated by applying heat and used to reduce the moisture of wood strands used in the manufacture of oriented strandboard, laminated strand lumber, or other wood strand-based products. A *rotary strand dryer* is a process unit.

Secondary tube dryer means the second stage and subsequent stages following the primary stage of a multi-stage tube dryer. Secondary tube dryers, also referred to as relay dryers, operate at lower temperatures than the primary tube dryer they follow. Secondary tube dryers are used to remove only a small amount of the furnish moisture compared to the furnish moisture reduction across the primary tube dryer. A *secondary tube dryer* is a process unit.

Softwood means the wood of a coniferous tree. Examples of softwoods include, but are not limited to, Southern yellow pine, Douglas fir, and White spruce.

Softwood veneer dryer means a dryer that removes excess moisture from veneer by conveying the veneer through a heated medium, generally on rollers, belts, cables, or wire mesh. Softwood veneer dryers are used to dry veneer with greater than or equal to 30 percent softwood species on an annual volume basis. Veneer kilns that operate as batch units, veneer dryers heated by radio frequency or microwaves that are used to redry veneer, and veneer redryers (defined elsewhere in this section) that are heated by conventional means are not considered to be softwood veneer dryers. A *softwood veneer dryer* is a process unit.

Startup means bringing equipment online and starting the production process.

Startup, initial means the first time equipment is put into operation. Initial startup does not include operation solely for testing equipment. Initial startup does not include subsequent startups (as defined in this section) following malfunction or shutdowns or following changes in product or between batch operations. Initial startup does not include startup of equipment that occurred when the source was an area source.

Startup, shutdown, and malfunction plan (SSMP) means a plan developed according to the provisions of §63.6(e)(3).

Strand means a long (with respect to thickness and width), flat wood piece specially cut from a log for use in oriented strandboard, laminated strand lumber, or other wood strand-based product.

Temporary total enclosure (TTE) means an enclosure constructed for the purpose of measuring the capture efficiency of pollutants emitted from a given source, as defined in Method 204 of 40 CFR part 51, appendix M.

Thermal oxidizer means a control system that combusts or oxidizes exhaust gas from a process unit. Thermal oxidizers include regenerative thermal oxidizers and combustion units.

Total hazardous air pollutant emissions means, for purposes of this subpart, the sum of the emissions of the following six compounds: acetaldehyde, acrolein, formaldehyde, methanol, phenol, and propionaldehyde.

Tube dryer means a single-stage or multi-stage dryer operated by applying heat to reduce the moisture of wood fibers or particles as they are conveyed (usually pneumatically) through the dryer. Resin may or may not be applied to the wood material before it enters the tube dryer. Tube dryers do not include pneumatic fiber transport systems that use temperature and humidity conditioned pneumatic system supply air in order to prevent cooling of the wood fiber as it is moved through the process. A *tube dryer* is a process unit.

Veneer means thin sheets of wood peeled or sliced from logs for use in the manufacture of wood products such as plywood, laminated veneer lumber, or other products.

Veneer redryer means a dryer heated by conventional means, such as direct wood-fired, direct-gas-fired, or steam heated, that is used to redry veneer that has been previously dried. Because the veneer dried in a veneer redryer has been previously dried, the inlet moisture content of the veneer entering the redryer is less than 25 percent (by weight, dry basis). Batch units used to redry veneer (such as redry cookers) are not considered to be veneer redryers. A *veneer redryer* is a process unit.

Wet control device means any equipment that uses water as a means of collecting an air pollutant. Wet control devices include scrubbers, wet electrostatic precipitators, and electrified filter beds. Wet control devices do not include biofilters or other equipment that destroys or degrades HAP.

Wet forming means the process of making a slurry of water, fiber, and additives into a mat of fibers to be compressed into a fiberboard or hardboard product.

Wood I-joists means a structural wood beam with an I-shaped cross section formed by bonding (with resin) wood or laminated veneer lumber flanges onto a web cut from a panel such as plywood or oriented strandboard.

Wood products enclosure means a permanently installed containment that was designed to meet the following physical design criteria:

- (1) Any natural draft opening shall be at least four equivalent opening diameters from each HAP-emitting point, except for where board enters and exits the enclosure, unless otherwise specified by the EPA Administrator.
- (2) The total area of all natural draft openings shall not exceed 5 percent of the surface area of the enclosure's four walls, floor, and ceiling.
- (3) The average facial velocity of air through all natural draft openings shall be at least 3,600 meters per hour (200 feet per minute). The direction of airflow through all natural draft openings shall be into the enclosure.
- (4) All access doors and windows whose areas are not included in item 2 of this definition and are not included in the calculation of facial velocity in item 3 of this definition shall be closed during routine operation of the process.
- (5) The enclosure is designed and maintained to capture all emissions for discharge through a control device.

Work practice requirement means any design, equipment, work practice, or operational standard, or combination thereof, that is promulgated pursuant to section 112(h) of the CAA.

[69 FR 46011, July 30, 2004, as amended at 71 FR 8372, Feb. 16, 2006]

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Table 1A to Subpart DDDD of Part 63—Production-Based Compliance Options

For the following process units . . .	You must meet the following production-based compliance option (total HAP ^a basis)
(1) Fiberboard mat dryer heated zones (at new affected sources only)	0.022 lb/MSF ½ ".
(2) Green rotary dryers	0.058 lb/ODT.
(3) Hardboard ovens	0.022 lb/MSF ⅛ ".

(4) Press predryers (at new affected sources only)	0.037 lb/MSF ½ ".
(5) Pressurized refiners	0.039 lb/ODT.
(6) Primary tube dryers	0.26 lb/ODT.
(7) Reconstituted wood product board coolers (at new affected sources only)	0.014 lb/MSF ¾ ".
(8) Reconstituted wood product presses	0.30 lb/MSF ¾ ".
(9) Softwood veneer dryer heated zones	0.022 lb/MSF ¾ ".
(10) Rotary strand dryers	0.18 lb/ODT.
(11) Secondary tube dryers	0.010 lb/ODT.

^aTotal HAP, as defined in §63.2292, includes acetaldehyde, acrolein, formaldehyde, methanol, phenol, and propionaldehyde. lb/ODT = pounds per oven-dried ton; lb/MSF = pounds per thousand square feet with a specified thickness basis (inches). Section 63.2262(j) shows how to convert from one thickness basis to another.

NOTE: There is no production-based compliance option for conveyor strand dryers.

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Table 1B to Subpart DDDD of Part 63—Add-on Control Systems Compliance Options

For each of the following process units . . .	You must comply with one of the following six compliance options by using an emissions control system . . .
Fiberboard mat dryer heated zones (at new affected sources only); green rotary dryers; hardboard ovens; press predryers (at new affected sources only); pressurized refiners; primary tube dryers; secondary tube dryers; reconstituted wood product board coolers (at new affected sources only); reconstituted wood product presses; softwood veneer dryer heated zones; rotary strand dryers; conveyor strand dryer zone one (at existing affected sources); and conveyor strand dryer zones one and two (at new affected sources)	(1) Reduce emissions of total HAP, measured as THC (as carbon) ^a , by 90 percent; or (2) Limit emissions of total HAP, measured as THC (as carbon) ^a , to 20 ppmvd; or (3) Reduce methanol emissions by 90 percent; or (4) Limit methanol emissions to less than or equal to 1 ppmvd if uncontrolled methanol emissions entering the control device are greater than or equal to 10 ppmvd; or (5) Reduce formaldehyde emissions by 90 percent; or (6) Limit formaldehyde emissions to less than or equal to 1 ppmvd if uncontrolled formaldehyde emissions entering the control device are greater than or equal to 10 ppmvd.

^aYou may choose to subtract methane from THC as carbon measurements.

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Table 2 to Subpart DDDD of Part 63—Operating Requirements

If you operate a(n) . . .	You must . . .	Or you must . . .
(1) Thermal oxidizer	Maintain the 3-hour block average firebox temperature above the minimum temperature established during the performance test	Maintain the 3-hour block average THC concentration ^a in the thermal oxidizer exhaust below the maximum concentration established during the performance test.
(2) Catalytic oxidizer	Maintain the 3-hour block average catalytic oxidizer temperature above the minimum temperature established during the performance test; AND check the activity level of a representative sample of the catalyst at least every 12 months	Maintain the 3-hour block average THC concentration ^a in the catalytic oxidizer exhaust below the maximum concentration established during the performance test.
(3) Biofilter	Maintain the 24-hour block biofilter bed temperature within the range established according to §63.2262(m)	Maintain the 24-hour block average THC concentration ^a in the biofilter exhaust below the maximum concentration established during the performance test.
(4) Control device other than a thermal oxidizer, catalytic oxidizer, or biofilter	Petition the EPA Administrator for site-specific operating parameter(s) to be established during the performance test and maintain the average operating parameter(s) within the range(s) established during the performance test	Maintain the 3-hour block average THC concentration ^a in the control device exhaust below the maximum concentration established during the performance test.
(5) Process unit that meets a compliance option in Table 1A of this subpart, or a process unit that generates debits in an emissions average without the use of a control device	Maintain on a daily basis the process unit controlling operating parameter(s) within the ranges established during the performance test according to §63.2262(n)	Maintain the 3-hour block average THC concentration ^a in the process unit exhaust below the maximum concentration established during the performance test.

^aYou may choose to subtract methane from THC measurements.

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Table 3 to Subpart DDDD of Part 63—Work Practice Requirements

For the following process units at existing or new affected sources . . .	You must . . .
(1) Dry rotary dryers	Process furnish with a 24-hour block average inlet moisture content of less than or equal to 30 percent (by weight, dry basis); AND operate with a 24-hour block average inlet dryer temperature of less than or equal to 600 °F.
(2) Hardwood veneer dryers	Process less than 30 volume percent softwood species on an annual basis.
(3) Softwood veneer dryers	Minimize fugitive emissions from the dryer doors through (proper maintenance procedures) and the green end of the dryers (through proper balancing of the heated zone exhausts).
(4) Veneer redryers	Process veneer that has been previously dried, such that the 24-hour block average inlet moisture content of the veneer is less than or equal to 25 percent (by weight, dry basis).
(5) Group 1 miscellaneous coating operations	Use non-HAP coatings as defined in §63.2292.

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Table 4 to Subpart DDDD of Part 63—Requirements for Performance Tests

For . . .	You must . . .	Using . . .
(1) each process unit subject to a compliance option in table 1A or 1B to this subpart or used in calculation of an emissions average under §63.2240(c)	select sampling port's location and the number of traverse ports	Method 1 or 1A of 40 CFR part 60, appendix A (as appropriate).
(2) each process unit subject to a compliance option in table 1A or 1B to this subpart or used in calculation of an emissions average under §63.2240(c)	determine velocity and volumetric flow rate	Method 2 in addition to Method 2A, 2C, 2D, 2F, or 2G in appendix A to 40 CFR part 60 (as appropriate).
(3) each process unit subject to a compliance option in table 1A or 1B to this subpart or used in calculation of an emissions average under §63.2240(c)	conduct gas molecular weight analysis	Method 3, 3A, or 3B in appendix A to 40 CFR part 60 (as appropriate).
(4) each process unit subject to a compliance option in table 1A or 1B to this subpart or used in calculation of an emissions average under §63.2240(c)	measure moisture content of the stack gas	Method 4 in appendix A to 40 CFR part 60; OR Method 320 in appendix A to 40 CFR part 63; OR ASTM D6348-03 (IBR, see §63.14(b)).
(5) each process unit subject to a compliance option in table 1B to this subpart for which you choose to demonstrate compliance using a total HAP as THC compliance option	measure emissions of total HAP as THC	Method 25A in appendix A to 40 CFR part 60. You may measure emissions of methane using EPA Method 18 in appendix A to 40 CFR part 60 and subtract the methane emissions from the emissions of total HAP as THC.
(6) each process unit subject to a compliance option in table 1A to this subpart; OR for each process unit used in calculation of an emissions average under §63.2240(c)	measure emissions of total HAP (as defined in §63.2292)	Method 320 in appendix A to 40 CFR part 63; OR the NCASI Method IM/CAN/WP-99.02 (IBR, see §63.14(f)); OR the NCASI Method ISS/FP-A105.01 (IBR, see §63.14(f)); OR ASTM D6348-03 (IBR, see §63.14(b)) provided that percent R as determined in Annex A5 of ASTM D6348-03 is equal or greater than 70 percent and less than or equal to 130 percent.
(7) each process unit subject to a compliance option in table 1B to this subpart for which you choose to demonstrate compliance using a methanol compliance option	measure emissions of methanol	Method 308 in appendix A to 40 CFR part 63; OR Method 320 in appendix A to 40 CFR part 63; OR the NCASI Method CI/WP-98.01 (IBR, see §63.14(f)); OR the NCASI Method IM/CAN/WP-99.02 (IBR, see §63.14(f)); OR the NCASI Method ISS/FP-A105.01 (IBR, see §63.14(f)).
(8) each process unit subject to a compliance option in table 1B to this subpart for which you choose to demonstrate compliance using a formaldehyde compliance option	measure emissions of formaldehyde	Method 316 in appendix A to 40 CFR part 63; OR Method 320 in appendix A to 40 CFR part 63; OR Method 0011 in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods" (EPA Publication No. SW-846) for formaldehyde; OR the NCASI Method CI/WP-98.01 (IBR, see §63.14(f)); OR the NCASI Method IM/CAN/WP-99.02 (IBR, see §63.14(f)); OR the NCASI Method ISS/FP-A105.01 (IBR, see §63.14(f)).
(9) each reconstituted wood product press at a new or existing affected source or reconstituted wood product board cooler at a new affected source subject to a compliance option in table 1B to this subpart or used in calculation of an emissions average under §63.2240(c)	meet the design specifications included in the definition of wood products enclosure in §63.2292; or determine the percent capture efficiency of the enclosure directing emissions to an add-on control device	Methods 204 and 204A through 204F of 40 CFR part 51, appendix M, to determine capture efficiency (except for wood products enclosures as defined in §63.2292). Enclosures that meet the definition of wood products enclosure or that meet Method 204 requirements for a permanent total enclosure (PTE) are assumed to have a capture efficiency of 100 percent. Enclosures that do not meet either the PTE requirements or design criteria for a wood products enclosure must determine the capture efficiency by constructing a TTE according to the requirements of Method 204 and applying Methods 204A through 204F (as appropriate). As an alternative to Methods 204 and 204A through 204F, you may use the tracer gas method contained in appendix A to this subpart.
(10) each reconstituted wood product press at a new or existing affected source or reconstituted wood product board cooler at a new affected source subject to a compliance option in table 1A to this subpart	determine the percent capture efficiency	a TTE and Methods 204 and 204A through 204F (as appropriate) of 40 CFR part 51, appendix M. As an alternative to installing a TTE and using Methods 204 and 204A through 204F, you may use the tracer gas method contained in appendix A to this subpart. Enclosures that meet the design criteria (1) through (4) in the definition of wood products enclosure, or that meet Method 204 requirements for a PTE (except for the criteria specified in section 6.2 of Method 204) are assumed to have a capture efficiency of 100 percent. Measured emissions divided by the capture efficiency provides the emission rate.
(11) each process unit subject to a compliance option in tables 1A and 1B to this subpart or used in	establish the site-specific operating requirements	data from the parameter monitoring system or THC CEMS and the applicable performance test method(s).

calculation of an emissions average under §63.2240(c)	(including the parameter limits or THC concentration limits) in table 2 to this subpart
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Table 5 to Subpart DDDD of Part 63—Performance Testing and Initial Compliance Demonstrations for the Compliance Options and Operating Requirements

For each . . .	For the following compliance options and operating requirements . . .	You have demonstrated initial compliance if . . .
(1) Process unit listed in Table 1A to this subpart	Meet the production-based compliance options listed in Table 1A to this subpart	The average total HAP emissions measured using the methods in Table 4 to this subpart over the 3-hour performance test are no greater than the compliance option in Table 1A to this subpart; AND you have a record of the operating requirement(s) listed in Table 2 to this subpart for the process unit over the performance test during which emissions did not exceed the compliance option value.
(2) Process unit listed in Table 1B to this subpart	Reduce emissions of total HAP, measured as THC, by 90 percent	Total HAP emissions, measured using the methods in Table 4 to this subpart over the 3-hour performance test, are reduced by at least 90 percent, as calculated using the procedures in §63.2262; AND you have a record of the operating requirement(s) listed in Table 2 to this subpart for the process unit over the performance test during which emissions were reduced by at least 90 percent.
(3) Process unit listed in Table 1B to this subpart	Limit emissions of total HAP, measured as THC, to 20 ppmvd	The average total HAP emissions, measured using the methods in Table 4 to this subpart over the 3-hour performance test, do not exceed 20 ppmvd; AND you have a record of the operating requirement(s) listed in Table 2 to this subpart for the process unit over the performance test during which emissions did not exceed 20 ppmvd.
(4) Process unit listed in Table 1B to this subpart	Reduce methanol or formaldehyde emissions by 90 percent	The methanol or formaldehyde emissions measured using the methods in Table 4 to this subpart over the 3-hour performance test, are reduced by at least 90 percent, as calculated using the procedures in §63.2262; AND you have a record of the operating requirement(s) listed in Table 2 to this subpart for the process unit over the performance test during which emissions were reduced by at least 90 percent.
(5) Process unit listed in Table 1B to this subpart	Limit methanol or formaldehyde emissions to less than or equal to 1 ppmvd (if uncontrolled emissions are greater than or equal to 10 ppmvd)	The average methanol or formaldehyde emissions, measured using the methods in Table 4 to this subpart over the 3-hour performance test, do not exceed 1 ppmvd; AND you have a record of the operating requirement(s) listed in Table 2 to this subpart for the process unit over the performance test during which emissions did not exceed 1 ppmvd. If the process unit is a reconstituted wood product press or a reconstituted wood product board cooler, your capture device either meets the EPA Method 204 criteria for a PTE or achieves a capture efficiency of greater than or equal to 95 percent.
(6) Reconstituted wood product press at a new or existing affected source, or reconstituted wood product board cooler at a new affected source	Compliance options in Tables 1A and 1B to this subpart or the emissions averaging compliance option in §63.2240(c)	You submit the results of capture efficiency verification using the methods in Table 4 to this subpart with your Notification of Compliance Status.
(7) Process unit listed in Table 1B to this subpart controlled by routing exhaust to a combustion unit	Compliance options in Table 1B to this subpart or the emissions averaging compliance option in §63.2240(c)	You submit with your Notification of Compliance Status documentation showing that the process exhausts controlled enter into the flame zone of your combustion unit.
(8) Process unit listed in Table 1B to this subpart using a wet control device as the sole means of reducing HAP emissions	Compliance options in Table 1B to this subpart or the emissions averaging compliance option in §63.2240(c)	You submit with your Notification of Compliance Status your plan to address how organic HAP captured in the wastewater from the wet control device is contained or destroyed to minimize re-release to the atmosphere.

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Table 6 to Subpart DDDD of Part 63—Initial Compliance Demonstrations for Work Practice Requirements

For each . . .	For the following work practice requirements . . .	You have demonstrated initial compliance if . . .
(1) Dry rotary dryer	Process furnish with an inlet moisture content less than or equal to 30 percent (by weight, dry basis) AND operate with an inlet dryer temperature of less than or equal to 600 °F	You meet the work practice requirement AND you submit a signed statement with the Notification of Compliance Status that the dryer meets the criteria of a “dry rotary dryer” AND you have a record of the inlet moisture content and inlet dryer temperature (as required in §63.2263).
(2) Hardwood veneer dryer	Process less than 30 volume percent softwood species	You meet the work practice requirement AND you submit a signed statement with the Notification of Compliance Status that the dryer meets the criteria of a “hardwood veneer dryer” AND you have a record of the percentage of softwoods processed in the dryer (as required in §63.2264).
(3) Softwood veneer dryer	Minimize fugitive emissions from the dryer doors and the green end	You meet the work practice requirement AND you submit with the Notification of Compliance Status a copy of your plan for minimizing fugitive emissions from the veneer dryer heated zones (as required in §63.2265).
(4) Veneer redryers	Process veneer with an inlet moisture content of less than or equal to 25 percent (by weight, dry basis)	You meet the work practice requirement AND you submit a signed statement with the Notification of Compliance Status that the dryer operates only as a redryer AND you have a record of the veneer inlet moisture content of the veneer processed in the redryer (as required in §63.2266).
(5) Group 1 miscellaneous coating operations	Use non-HAP coatings as defined in §63.2292	You meet the work practice requirement AND you submit a signed statement with the Notification of Compliance Status that you are using non-HAP coatings AND you have a record showing that you are using non-HAP coatings.

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Table 7 to Subpart DDDD of Part 63—Continuous Compliance With the Compliance Options and Operating Requirements

For . . .	For the following compliance options and operating requirements . . .	You must demonstrate continuous compliance by . . .
(1) Each process unit listed in Table 1B to this subpart or used in calculation of an emissions average under §63.2240(c)	Compliance options in Table 1B to this subpart or the emissions averaging compliance option in §63.2240(c) and the operating requirements in Table 2 to this subpart based on monitoring of operating parameters	Collecting and recording the operating parameter monitoring system data listed in Table 2 to this subpart for the process unit according to §§63.2269(a) through (b) and 63.2270; AND reducing the operating parameter monitoring system data to the specified averages in units of the applicable requirement according to calculations in §63.2270; AND maintaining the average operating parameter at or above the minimum, at or below the maximum, or within the range (whichever applies) established according to §63.2262.
(2) Each process unit listed in Tables 1A and 1B to this subpart or used in calculation of an emissions average under §63.2240(c)	Compliance options in Tables 1A and 1B to this subpart or the emissions averaging compliance option in §63.2240(c) and the operating requirements in Table 2 of this subpart based on THC CEMS data	Collecting and recording the THC monitoring data listed in Table 2 to this subpart for the process unit according to §63.2269(d); AND reducing the CEMS data to 3-hour block averages according to calculations in §63.2269(d); AND maintaining the 3-hour block average THC concentration in the exhaust gases less than or equal to the THC concentration established according to §63.2262.
(3) Each process unit using a biofilter	Compliance options in Tables 1B to this subpart or the emissions averaging compliance option in §63.2240(c)	Conducting a repeat performance test using the applicable method(s) specified in Table 4 to this subpart within 2 years following the previous performance test and within 180 days after each replacement of any portion of the biofilter bed media with a different type of media or each replacement of more than 50 percent (by volume) of the biofilter bed media with the same type of media.
(4) Each process unit using a catalytic oxidizer	Compliance options in Table 1B to this subpart or the emissions averaging compliance option in §63.2240(c)	Checking the activity level of a representative sample of the catalyst at least every 12 months and taking any necessary corrective action to ensure that the catalyst is performing within its design range.
(5) Each process unit listed in Table 1A to this subpart, or each process unit without a control device used in calculation of an emissions averaging debit under §63.2240(c)	Compliance options in Table 1A to this subpart or the emissions averaging compliance option in §63.2240(c) and the operating requirements in Table 2 to this subpart based on monitoring of process unit controlling operating parameters	Collecting and recording on a daily basis process unit controlling operating parameter data; AND maintaining the operating parameter at or above the minimum, at or below the maximum, or within the range (whichever applies) established according to §63.2262.
(6) Each Process unit listed in Table 1B to this subpart using a wet control device as the sole means of reducing HAP emissions	Compliance options in Table 1B to this subpart or the emissions averaging compliance option in §63.2240(c)	Implementing your plan to address how organic HAP captured in the wastewater from the wet control device is contained or destroyed to minimize re-release to the atmosphere.

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Table 8 to Subpart DDDD of Part 63—Continuous Compliance With the Work Practice Requirements

For . . .	For the following work practice requirements . . .	You must demonstrate continuous compliance by . . .
(1) Dry rotary dryer	Process furnish with an inlet moisture content less than or equal to 30 percent (by weight, dry basis) AND operate with an inlet dryer temperature of less than or equal to 600 °F	Maintaining the 24-hour block average inlet furnish moisture content at less than or equal to 30 percent (by weight, dry basis) AND maintaining the 24-hour block average inlet dryer temperature at less than or equal to 600 °F; AND keeping records of the inlet temperature of furnish moisture content and inlet dryer temperature.
(2) Hardwood veneer dryer	Process less than 30 volume percent softwood species	Maintaining the volume percent softwood species processed below 30 percent AND keeping records of the volume percent softwood species processed.
(3) Softwood veneer dryer	Minimize fugitive emissions from the dryer doors and the green end	Following (and documenting that you are following) your plan for minimizing fugitive emissions.
(4) Veneer redryers	Process veneer with an inlet moisture content of less than or equal to 25 percent (by weight, dry basis)	Maintaining the 24-hour block average inlet moisture content of the veneer processed at or below of less than or 25 percent AND keeping records of the inlet moisture content of the veneer processed.
(5) Group 1 miscellaneous coating operations	Use non-HAP coatings as defined in §63.2292	Continuing to use non-HAP coatings AND keeping records showing that you are using non-HAP coatings.

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Table 9 to Subpart DDDD of Part 63—Requirements for Reports

You must submit a(n) . . .	The report must contain . . .	You must submit the report . . .
(1) Compliance report	The information in §63.2281(c) through (g)	Semiannually according to the requirements in §63.2281(b).
(2) immediate startup, shutdown, and malfunction report if you had a startup, shutdown, or malfunction during the reporting period that is not consistent with your SSMP	(i) Actions taken for the event (ii) The information in §63.10(d)(5)(ii)	By fax or telephone within 2 working days after starting actions inconsistent with the plan. By letter within 7 working days after the end of the event unless you have made alternative arrangements with the permitting authority.

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Table 10 to Subpart DDDD of Part 63—Applicability of General Provisions to Subpart DDDD

Citation	Subject	Brief description	Applies to subpart DDDD
§63.1	Applicability	Initial applicability determination; applicability after standard established; permit requirements; extensions, notifications	Yes.
§63.2	Definitions	Definitions for part 63 standards	Yes.
§63.3	Units and Abbreviations	Units and abbreviations for part 63 standards	Yes.
§63.4	Prohibited Activities	Prohibited activities; compliance date; circumvention, fragmentation	Yes.
§63.5	Construction/Reconstruction	Applicability; applications; approvals	Yes.
§63.6(a)	Applicability	GP apply unless compliance extension; GP apply to area sources that become major	Yes.
§63.6(b)(1)-(4)	Compliance Dates for New and Reconstructed Sources	Standards apply at effective date; 3 years after effective date; upon startup; 10 years after construction or reconstruction commences for section 112(f)	Yes.
§63.6(b)(5)	Notification	Must notify if commenced construction or reconstruction after proposal	Yes.
§63.6(b)(6)	[Reserved]		
§63.6(b)(7)	Compliance Dates for New and Reconstructed Area Sources that Become Major	Area sources that become major must comply with major source standards immediately upon becoming major, regardless of whether required to comply when they were an area source	Yes.
§63.6(c)(1)-(2)	Compliance Dates for Existing Sources	Comply according to date in subpart, which must be no later than 3 years after effective date; for section 112(f) standards, comply within 90 days of effective date unless compliance extension	Yes.
§63.6(c)(3)-(4)	[Reserved]		
§63.6(c)(5)	Compliance Dates for Existing Area Sources that Become Major	Area sources that become major must comply with major source standards by date indicated in subpart or by equivalent time period (e.g., 3 years)	Yes.
§63.6(d)	[Reserved]		
§63.6(e)(1)-(2)	Operation & Maintenance	Operate to minimize emissions at all times; correct malfunctions as soon as practicable; operation and maintenance requirements independently enforceable; information Administrator will use to determine if operation and maintenance requirements were met	Yes.
§63.6(e)(3)	Startup, Shutdown, and Malfunction Plan (SSMP)	Requirement for SSM and SSMP; content of SSMP	Yes.
§63.6(f)(1)	Compliance Except During SSM	You must comply with emission standards at all times except during SSM	Yes.
§63.6(f)(2)-(3)	Methods for Determining Compliance	Compliance based on performance test, operation and maintenance plans, records, inspection	Yes.
§63.6(g)(1)-(3)	Alternative Standard	Procedures for getting an alternative standard	Yes.
§63.6(h)(1)-(9)	Opacity/Visible Emission (VE) Standards	Requirements for opacity and visible emission standards	NA.
§63.6(i)(1)-(14)	Compliance Extension	Procedures and criteria for Administrator to grant compliance extension	Yes.
§63.6(i)(15)	[Reserved]		
§63.6(i)(16)	Compliance Extension	Compliance extension and Administrator's authority	Yes.
§63.6(j)	Presidential Compliance Exemption	President may exempt source category from requirement to comply with rule	Yes.
§63.7(a)(1)-(2)	Performance Test Dates	Dates for conducting initial performance testing and other compliance demonstrations; must conduct 180 days after first subject to rule	Yes.
§63.7(a)(3)	Section 114 Authority	Administrator may require a performance test under CAA section 114 at any time	Yes.
§63.7(b)(1)	Notification of Performance Test	Must notify Administrator 60 days before the test	Yes.
§63.7(b)(2)	Notification of Rescheduling	If have to reschedule performance test, must notify Administrator as soon as practicable	Yes.
§63.7(c)	Quality Assurance/Test Plan	Requirement to submit site-specific test plan 60 days before the test or on date Administrator agrees with; test plan approval procedures; performance audit requirements; internal and external QA procedures for testing	Yes.
§63.7(d)	Testing Facilities	Requirements for testing facilities	Yes.
§63.7(e)(1)	Conditions for Conducting Performance Tests	Performance tests must be conducted under representative conditions; cannot conduct performance tests during SSM; not a violation to exceed standard during SSM	Yes.
§63.7(e)(2)	Conditions for Conducting Performance Tests	Must conduct according to rule and EPA test methods unless Administrator approves alternative	Yes.
§63.7(e)(3)	Test Run Duration	Must have three test runs for at least the time specified in the relevant standard; compliance is based on arithmetic mean of three runs; specifies conditions when data from an additional test run can be used	Yes.
§63.7(f)	Alternative Test Method	Procedures by which Administrator can grant approval to use an alternative test method	Yes.
§63.7(g)	Performance Test Data Analysis	Must include raw data in performance test report; must submit performance test data 60 days after end of test with the notification of compliance status; keep data for 5 years	Yes.
§63.7(h)	Waiver of Tests	Procedures for Administrator to waive performance test	Yes.
§63.8(a)(1)	Applicability of Monitoring Requirements	Subject to all monitoring requirements in standard	Yes.
§63.8(a)(2)	Performance Specifications	Performance specifications in appendix B of part 60 apply	Yes.
§63.8(a)(3)	[Reserved]		
§63.8(a)(4)	Monitoring with Flares	Requirements for flares in §63.11 apply	NA.
§63.8(b)	Monitoring	Must conduct monitoring according to standard unless Administrator approves alternative	Yes.

(1)			
§63.8(b)(2)-(3)	Multiple Effluents and Multiple Monitoring Systems	Specific requirements for installing monitoring systems; must install on each effluent before it is combined and before it is released to the atmosphere unless Administrator approves otherwise; if more than one monitoring system on an emission point, must report all monitoring system results, unless one monitoring system is a backup	Yes.
§63.8(c)(1)	Monitoring System Operation and Maintenance	Maintain monitoring system in a manner consistent with and good air pollution control practices	Yes.
§63.8(c)(1)(i)	Operation and Maintenance of CMS	Must maintain and operate CMS in accordance with §63.6(e)(1)	Yes.
§63.8(c)(1)(ii)	Spare Parts for CMS	Must maintain spare parts for routine CMS repairs	Yes.
§63.8(c)(1)(iii)	SSMP for CMS	Must develop and implement SSMP for CMS	Yes.
§63.8(c)(2)-(3)	Monitoring System Installation	Must install to get representative emission of parameter measurements; must verify operational status before or at performance test	Yes.
§63.8(c)(4)	Continuous Monitoring System (CMS) Requirements	CMS must be operating except during breakdown, out-of-control, repair, maintenance, and high-level calibration drifts; COMS must have a minimum of one cycle of sampling and analysis for each successive 10-second period and one cycle of data recording for each successive 6-minute period; CEMS must have a minimum of one cycle of operation for each successive 15-minute period	Yes.
§63.8(c)(5)	Continuous Opacity Monitoring System (COMS) Minimum Procedures	COMS minimum procedures	NA.
§63.8(c)(6)-(8)	CMS Requirements	Zero and high-level calibration check requirements; out-of-control periods	Yes.
§63.8(d)	CMS Quality Control	Requirements for CMS quality control, including calibration, etc.; must keep quality control plan on record for 5 years. Keep old versions for 5 years after revisions	Yes.
§63.8(e)	CMS Performance Evaluation	Notification, performance evaluation test plan, reports	Yes.
§63.8(f)(1)-(5)	Alternative Monitoring Method	Procedures for Administrator to approve alternative monitoring	Yes.
§63.8(f)(6)	Alternative to Relative Accuracy Test	Procedures for Administrator to approve alternative relative accuracy tests for CEMS	Yes.
§63.8(g)	Data Reduction	COMS 6-minute averages calculated over at least 36 evenly spaced data points; CEMS 1 hour averages computed over at least 4 equally spaced data points; data that can't be used in average; rounding of data	Yes.
§63.9(a)	Notification Requirements	Applicability and State delegation	Yes.
§63.9(b)(1)-(2)	Initial Notifications	Submit notification 120 days after effective date; contents of notification	Yes.
§63.9(b)(3)	[Reserved]		
§63.9(b)(4)-(5)	Initial Notifications	Submit notification 120 days after effective date; notification of intent to construct/reconstruct; notification of commencement of construct/reconstruct; notification of startup; contents of each	Yes.
§63.9(c)	Request for Compliance Extension	Can request if cannot comply by date or if installed best available control technology/lowest achievable emission rate	Yes.
§63.9(d)	Notification of Special Compliance Requirements for New Source	For sources that commence construction between proposal and promulgation and want to comply 3 years after effective date	Yes.
§63.9(e)	Notification of Performance Test	Notify EPA Administrator 60 days prior	Yes.
§63.9(f)	Notification of Visible Emissions/Opacity Test	Notify EPA Administrator 30 days prior	No.
§63.9(g)	Additional Notifications When Using CMS	Notification of performance evaluation; notification using COMS data; notification that exceeded criterion for relative accuracy	Yes.
§63.9(h)(1)-(6)	Notification of Compliance Status	Contents; due 60 days after end of performance test or other compliance demonstration, except for opacity/VE, which are due 30 days after; when to submit to Federal vs. State authority	Yes.
§63.9(i)	Adjustment of Submittal Deadlines	Procedures for Administrator to approve change in when notifications must be submitted	Yes.
§63.9(j)	Change in Previous Information	Must submit within 15 days after the change	Yes.
§63.10(a)	Recordkeeping/Reporting	Applies to all, unless compliance extension; when to submit to Federal vs. State authority; procedures for owners of more than one source	Yes.
§63.10(b)(1)	Recordkeeping/Reporting	General Requirements; keep all records readily available; keep for 5 years	Yes.
§63.10(b)(2)(i)-(iv)	Records Related to Startup, Shutdown, and Malfunction	Occurrence of each of operation (process equipment); occurrence of each malfunction of air pollution equipment; maintenance on air pollution control equipment; actions during startup, shutdown, and malfunction	Yes.
§63.10(b)(2)(vi) and (x)-(xi)	CMS Records	Malfunctions, inoperative, out-of-control	Yes.
§63.10(b)(2)(vii)-(ix)	Records	Measurements to demonstrate compliance with compliance options and operating requirements; performance test, performance evaluation, and visible emission observation results; measurements to determine conditions of performance tests and performance evaluations	Yes.
§63.10(b)(2)(xii)	Records	Records when under waiver	Yes.
§63.10(b)(2)(xiii)	Records	Records when using alternative to relative accuracy test	Yes.
§63.10(b)(2)(xiv)	Records	All documentation supporting initial notification and notification of compliance status	Yes.
§63.10(b)(3)	Records	Applicability determinations	Yes.
§63.10(c)(1)-(6)	Records	Additional records for CMS	Yes.

(9)-(15)			
§63.10(c)(7)-(8)	Records	Records of excess emissions and parameter monitoring exceedances for CMS	No.
§63.10(d)(1)	General Reporting Requirements	Requirement to report	Yes.
§63.10(d)(2)	Report of Performance Test Results	When to submit to Federal or State authority	Yes.
§63.10(d)(3)	Reporting Opacity or VE Observations	What to report and when	NA.
§63.10(d)(4)	Progress Reports	Must submit progress reports on schedule if under compliance extension	Yes.
§63.10(d)(5)	Startup, Shutdown, and Malfunction Reports	Contents and submission	Yes.
§63.10(e)(1)-(2)	Additional CMS Reports	Must report results for each CEM on a unit; written copy of performance evaluation; 3 copies of COMS performance evaluation	Yes.
§63.10(e)(3)	Reports	Excess emission reports	No.
§63.10(e)(4)	Reporting COMS data	Must submit COMS data with performance test data	NA.
§63.10(f)	Waiver for Recordkeeping/Reporting	Procedures for EPA Administrator to waive	Yes.
§63.11	Flares	Requirements for flares	NA.
§63.12	Delegation	State authority to enforce standards	Yes.
§63.13	Addresses	Addresses where reports, notifications, and requests are send	Yes.
§63.14	Incorporation by Reference	Test methods incorporated by reference	Yes.
§63.15	Availability of Information	Public and confidential information	Yes.

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Appendix A to Subpart DDDD of Part 63—Alternative Procedure To Determine Capture Efficiency From Enclosures Around Hot Presses in the Plywood and Composite Wood Products Industry Using Sulfur Hexafluoride Tracer Gas

1.0 SCOPE AND APPLICATION

This procedure has been developed specifically for the rule for the plywood and composite wood products (PCWP) industry and is used to determine the capture efficiency of a partial hot press enclosure in that industry. This procedure is applicable for the determination of capture efficiency for enclosures around hot presses and is an alternative to the construction of temporary total enclosures (TTE). Sulfur hexafluoride (SF₆) is used as a tracer gas (other tracer gases may be used if approved by the EPA Administrator). This gas is not indigenous to the ambient atmosphere and is nonreactive.

This procedure uses infrared spectrometry (IR) as the analytical technique. When the infrared spectrometer used is a Fourier-Transform Infrared spectrometer (FTIR), an alternate instrument calibration procedure may be used; the alternate calibration procedure is the calibration transfer standard (CTS) procedure of EPA Method 320 (appendix A to 40 CFR part 63). Other analytical techniques which are capable of equivalent Method Performance (Section 13.0) also may be used. Specifically, gas chromatography with electron capture detection (GC/ECD) is an applicable technique for analysis of SF₆.

2.0 SUMMARY OF METHOD

A constant mass flow rate of SF₆ tracer gas is released through manifolds at multiple locations within the enclosure to mimic the release of hazardous air pollutants during the press process. This test method requires a minimum of three SF₆ injection points (two at the press unloader and one at the press) and provides details about considerations for locating the injection points. A GC/ECD is used to measure the concentration of SF₆ at the inlet duct to the control device (outlet duct from enclosure). Simultaneously, EPA Method 2 (appendix A to 40 CFR part 60) is used to measure the flow rate at the inlet duct to the control device. The concentration and flow rate measurements are used to calculate the mass emission rate of SF₆ at the control device inlet. Through calculation of the mass of SF₆ released through the manifolds and the mass of SF₆ measured at the inlet to the control device, the capture efficiency of the enclosure is calculated.

In addition, optional samples of the ambient air may be taken at locations around the perimeter of the enclosure to quantify the ambient concentration of SF₆ and to identify those areas of the enclosure that may be performing less efficiently; these samples would be taken using disposable syringes and would be analyzed using a GC/ECD.

Finally, in addition to the requirements specified in this procedure, the data quality objectives (DQO) or lower confidence limit (LCL) criteria specified in appendix A to 40 CFR part 63, subpart KK, Data Quality Objective and Lower Confidence Limit Approaches for Alternative Capture Efficiency Protocols and Test Methods, must also be satisfied. A minimum of three test runs are required for this procedure; however, additional test runs may be required based on the results of the DQO or LCL analysis.

3.0 DEFINITIONS

3.1 Capture efficiency (CE). The weight per unit time of SF₆ entering the control device divided by the weight per unit time of SF₆ released through manifolds at multiple locations within the enclosure.

3.2 Control device (CD). The equipment used to reduce, by destruction or removal, press exhaust air pollutants prior to discharge to the ambient air.

3.3 Control/destruction efficiency (DE). The volatile organic compound or HAP removal efficiency of the control device.

3.4 Data Quality Objective (DQO) Approach. A statistical procedure to determine the precision of the data from a test series and to qualify the data in the determination of capture efficiency for compliance purposes. If the results of the DQO analysis of the initial three test runs do not satisfy the DQO criterion, the LCL approach can be used or additional test runs must be conducted. If additional test runs are conducted, then the DQO or LCL analysis is conducted using the data from both the initial test runs and all additional test runs.

3.5 Lower Confidence Limit (LCL) Approach. An alternative statistical procedure that can be used to qualify data in the determination of capture efficiency for compliance purposes. If the results of the LCL approach produce a CE that is too low for demonstrating compliance, then additional test runs must be conducted until the LCL or DQO is met. As with the DQO, data from all valid test runs must be used in the calculation.

3.6 Minimum Measurement Level (MML). The minimum tracer gas concentration expected to be measured during the test series. This value is selected by the tester based on the capabilities of the IR spectrometer (or GC/ECD) and the other known or measured parameters of the hot press enclosure to be tested. The selected MML must be above the low-level calibration standard and preferably below the mid-level calibration standard.

3.7 Method 204. The U.S. EPA Method 204, "Criteria For and Verification of a Permanent or Temporary Total Enclosure" (40 CFR part 51, appendix M).

3.8 Method 205. The U.S. EPA Method 205, "Verification of Gas Dilution Systems for Field Instrument Calibrations" (40 CFR part 51, appendix M).

3.9 Method 320. The U.S. EPA Method 320, "Measurement of Vapor Phase Organic and Inorganic Emissions by Extractive Fourier Transform Infrared (FTIR) Spectroscopy" (40 CFR part 63, appendix A).

3.10 Overall capture and control efficiency (CCE). The collection and control/destruction efficiency of both the PPE and CD combined. The CCE is calculated as the product of the CE and DE.

3.11 Partial press enclosure (PPE). The physical barrier that "partially" encloses the press equipment, captures a significant amount of the associated emissions, and transports those emissions to the CD.

3.12 Test series. A minimum of three test runs or, when more than three runs are conducted, all of the test runs conducted.

4.0 INTERFERENCES

There are no known interferences.

5.0 SAFETY

Sulfur hexafluoride is a colorless, odorless, nonflammable liquefied gas. It is stable and nonreactive and, because it is noncorrosive, most structural materials are compatible with it. The Occupational Safety and Health Administration Permissible Emission Limit-Time Weighted Average (PEL-TWA) and Threshold Limit Value-Time Weighted Average (TLV-TWA) concentrations are 1,000 parts per million. Sulfur hexafluoride is an asphyxiant. Exposure to an oxygen-deficient atmosphere (less than 19.5 percent oxygen) may cause dizziness, drowsiness, nausea, vomiting, excess salivation, diminished mental alertness, loss of consciousness, and death. Exposure to atmospheres containing less than 12 percent oxygen will bring about unconsciousness without warning and so quickly that the individuals cannot help themselves. Contact with liquid or cold vapor may cause frostbite. Avoid breathing sulfur hexafluoride gas. Self-contained breathing apparatus may be required by rescue workers. Sulfur hexafluoride is not listed as a carcinogen or a potential carcinogen.

6.0 EQUIPMENT AND SUPPLIES

This method requires equipment and supplies for: (a) the injection of tracer gas into the enclosure, (b) the measurement of the tracer gas concentration in the exhaust gas entering the control device, and (c) the measurement of the volumetric flow rate of the exhaust gas entering the control device. In addition, the requisite equipment needed for EPA Methods 1-4 in appendix A to 40 CFR part 60 will be required. Equipment and supplies for optional ambient air sampling are discussed in Section 8.6.

6.1 Tracer Gas Injection.

6.1.1 Manifolds. This method requires the use of tracer gas supply cylinder(s) along with the appropriate flow control elements. Figure 1 shows a schematic drawing of the injection system showing potential locations for the tracer gas manifolds. Figure 2 shows a schematic drawing of the recommended configuration of the injection manifold. Three tracer gas discharge manifolds are required at a minimum.

6.1.2 Flow Control Meter. Flow control and measurement meter for measuring the quantity of tracer gas injected. A mass flow, volumetric flow, or critical orifice control meter can be used for this method. The meter must be accurate to within ± 5 percent at the flow rate used. This means that the flow meter must be calibrated against a primary standard for flow measurement at the appropriate flow rate.

6.2 Measurement of Tracer Gas Concentration.

6.2.1 Sampling Probes. Use Pyrex or stainless steel sampling probes of sufficient length to reach the traverse points calculated according to EPA Method 1 (appendix A to 40 CFR part 60).

6.2.2 Sampling Line. Use a heated Teflon sampling line to transport the sample to the analytical instrument.

6.2.3 Sampling Pump. Use a sampling pump capable of extracting sufficient sample from the duct and transporting to the analytical instrument.

6.2.4 Sample Conditioning System. Use a particulate filter sufficient to protect the sampling pump and analytical instrument. At the discretion of the tester and depending on the equipment used and the moisture content of the exhaust gas, it may be necessary to further condition the sample by removing moisture using a condenser.

6.2.5 Analytical Instrument. Use one of the following analytical instruments.

6.2.5.1 Spectrometer. Use an infrared spectrometer designed to measuring SF₆ tracer gas and capable of meeting or exceeding the specifications of this procedure. An FTIR meeting the specifications of Method 320 in appendix A to 40 CFR part 63 may be used.

6.2.5.2 GC/ECD. Use a GC/ECD designed to measure SF₆ tracer gas and capable of meeting or exceeding the specifications of this procedure.

6.2.6 Recorder. At a minimum, use a recorder with linear strip chart. An automated data acquisition system (DAS) is recommended.

6.3 Exhaust Gas Flow Rate Measurement. Use equipment specified for EPA Methods 2, 3, and 4 in appendix A to 40 CFR part 60 for measuring flow rate of exhaust gas at the inlet to the control device.

7.0 REAGENTS AND STANDARDS

7.1 Tracer Gas. Use SF₆ as the tracer gas. The manufacturer of the SF₆ tracer gas should provide a recommended shelf life for the tracer gas cylinder over which the concentration does not change more than ± 2 percent from the certified value. A gas mixture of SF₆ diluted with nitrogen should be used; based on experience and calculations, pure SF₆ gas is not necessary to conduct tracer gas testing. Select a concentration and flow rate that is appropriate for the analytical instrument's detection limit, the MML, and the exhaust gas flow rate from the enclosure (see section 8.1.1). You may use a tracer gas other than SF₆ with the prior approval of the EPA Administrator. If you use an approved tracer gas other than SF₆, all references to SF₆ in this protocol instead refer to the approved tracer gas.

7.2 Calibration Gases. The SF₆ calibration gases required will be dependent on the selected MML and the appropriate span selected for the test. Commercial cylinder gases certified by the manufacturer to be accurate to within 1 percent of the certified label value are preferable, although cylinder gases certified by the manufacturer to 2 percent accuracy are allowed. Additionally, the manufacturer of the SF₆ calibration gases should provide a recommended shelf life for each calibration gas cylinder over which the concentration does not change more than ± 2 percent from the certified value. Another option allowed by this method is for the tester to obtain high concentration certified cylinder gases and then use a dilution system meeting the requirements of EPA Method 205, 40 CFR part 51, appendix M, to make multi-level calibration gas standards. Low-level, mid-level, and high-level calibration gases will be required. The MML must be above the low-level standard, the high-level standard must be no more than four times the low-level standard, and the mid-level standard must be approximately halfway between the high- and low-level standards. See section 12.1 for an example calculation of this procedure.

NOTE: If using an FTIR as the analytical instrument, the tester has the option of following the CTS procedures of Method 320 in appendix A to 40 CFR part 63; the calibration standards (and procedures) specified in Method 320 may be used in lieu of the calibration standards and procedures in this protocol.

7.2.1 Zero Gas. High purity nitrogen.

7.2.2 Low-Level Calibration Gas. An SF₆ calibration gas in nitrogen with a concentration equivalent to 20 to 30 percent of the applicable span value.

7.2.3 Mid-Level Calibration Gas. An SF₆ calibration gas in nitrogen with a concentration equivalent to 45 to 55 percent of the applicable span value.

7.2.4 High-Level Calibration Gas. An SF₆ calibration gas in nitrogen with a concentration equivalent to 80 to 90 percent of the applicable span value.

8.0 SAMPLE COLLECTION, PRESERVATION, STORAGE, AND TRANSPORT

8.1 Test Design.

8.1.1 Determination of Minimum Tracer Gas Flow Rate.

8.1.1.1 Determine (via design calculations or measurements) the approximate flow rate of the exhaust gas through the enclosure, actual cubic feet per minute (acfm).

8.1.1.2 Calculate the minimum tracer gas injection rate necessary to assure a detectable SF₆ concentration at the exhaust gas measurement point (see section 12.1 for calculation).

8.1.1.3 Select a flow meter for the injection system with an operating range appropriate for the injection rate selected.

8.1.2 Determination of the Approximate Time to Reach Equilibrium.

8.1.2.1 Determine the volume of the enclosure.

8.1.2.2 Calculate the air changes per minute of the enclosure by dividing the approximate exhaust flow rate (8.1.1.1 above) by the enclosed volume (8.1.2.1 above).

8.1.2.3 Calculate the time at which the tracer concentration in the enclosure will achieve approximate equilibrium. Divide 3 by the air changes per minute (8.1.2.2 above) to establish this time. This is the approximate length of time for the system to come to equilibrium. Concentration equilibrium occurs when the tracer concentration in the enclosure stops changing as a function of time for a constant tracer release rate. Because the press is continuously cycling, equilibrium may be exhibited by a repeating, but stable, cyclic pattern rather than a single constant concentration value. Assure sufficient tracer gas is available to allow the system to come to equilibrium, and to sample for a minimum of 20 minutes and repeat the procedure for a minimum of three test runs. Additional test runs may be required based on the results of the DQO and LCL analyses described in 40 CFR part 63, subpart KK, appendix A.

8.1.3 Location of Injection Points. This method requires a minimum of three tracer gas injection points. The injection points should be located within leak prone, volatile organic compound/hazardous air pollutant (VOC/HAP) producing areas around the press, or horizontally within 12 inches of the defined equipment. One potential configuration of the injection points is depicted in Figure 1. The effect of wind, exfiltration through the building envelope, and air flowing through open building doors should be considered when locating tracer gas injection points within the enclosure. The injection points should also be located at a vertical elevation equal to the VOC/HAP generating zones. The injection points should not be located beneath obstructions that would prevent a natural dispersion of the gas. Document the selected injection points in a drawing(s).

8.1.4 Location of Flow Measurement and Tracer Sampling. Accurate CD inlet gas flow rate measurements are critical to the success of this procedure. Select a measurement location meeting the criteria of EPA Method 1 (40 CFR part 60, appendix A), Sampling and Velocity Traverses for Stationary Sources. Also, when selecting the measurement location, consider whether stratification of the tracer gas is likely at the location (e.g., do not select a location immediately after a point of air in-leakage to the duct).

8.2 Tracer Gas Release. Release the tracer gas at a calculated flow rate (see section 12.1 for calculation) through a minimum of three injection manifolds located as described above in 8.1.3. The tracer gas delivery lines must be routed into the enclosure and attached to the manifolds without violating the integrity of the enclosure.

8.3 Pretest Measurements.

8.3.1 Location of Sampling Point(s). If stratification is not suspected at the measurement location, select a single sample point located at the centroid of the CD inlet duct or at a point no closer to the CD inlet duct walls than 1 meter. If stratification is suspected, establish a "measurement line" that passes through the centroidal area and in the direction of any expected

stratification. Locate three traverse points at 16.7, 50.0 and 83.3 percent of the measurement line and sample from each of these three points during each run, or follow the procedure in section 8.3.2 to verify whether stratification does or does not exist.

8.3.2 Stratification Verification. The presence or absence of stratification can be verified by using the following procedure. While the facility is operating normally, initiate tracer gas release into the enclosure. For rectangular ducts, locate at least nine sample points in the cross section such that the sample points are the centroids of similarly-shaped, equal area divisions of the cross section. Measure the tracer gas concentration at each point. Calculate the mean value for all sample points. For circular ducts, conduct a 12-point traverse (*i.e.*, six points on each of the two perpendicular diameters) locating the sample points as described in 40 CFR part 60, appendix A, Method 1. Perform the measurements and calculations as described above. Determine if the mean pollutant concentration is more than 10 percent different from any single point. If so, the cross section is considered to be stratified, and the tester may not use a single sample point location, but must use the three traverse points at 16.7, 50.0, and 83.3 percent of the entire measurement line. Other traverse points may be selected, provided that they can be shown to the satisfaction of the Administrator to provide a representative sample over the stack or duct cross section.

8.4 CD Inlet Gas Flow Rate Measurements. The procedures of EPA Methods 1-4 (40 CFR part 60, appendix A) are used to determine the CD inlet gas flow rate. Molecular weight (Method 3) and moisture (Method 4) determinations are only required once for each test series. However, if the test series is not completed within 24 hours, then the molecular weight and moisture measurements should be repeated daily. As a minimum, velocity measurements are conducted according to the procedures of Methods 1 and 2 before and after each test run, as close to the start and end of the run as practicable. A velocity measurement between two runs satisfies both the criterion of "after" the run just completed and "before" the run to be initiated. Accurate exhaust gas flow rate measurements are critical to the success of this procedure. If significant temporal variations of flow rate are anticipated during the test run under normal process operating conditions, take appropriate steps to accurately measure the flow rate during the test. Examples of steps that might be taken include: (1) conducting additional velocity traverses during the test run; or (2) continuously monitoring a single point of average velocity during the run and using these data, in conjunction with the pre- and post-test traverses, to calculate an average velocity for the test run.

8.5 Tracer Gas Measurement Procedure.

8.5.1 Calibration Error Test. Immediately prior to the emission test (within 2 hours of the start of the test), introduce zero gas and high-level calibration gas at the calibration valve assembly. Zero and calibrate the analyzer according to the manufacturer's procedures using, respectively, nitrogen and the calibration gases. Calculate the predicted response for the low-level and mid-level gases based on a linear response line between the zero and high-level response. Then introduce the low-level and mid-level calibration gases successively to the measurement system. Record the analyzer responses for the low-level and mid-level calibration gases and determine the differences between the measurement system responses and the predicted responses using the equation in section 12.3. These differences must be less than 5 percent of the respective calibration gas value. If not, the measurement system must be replaced or repaired prior to testing. No adjustments to the measurement system shall be conducted after the calibration and before the drift determination (section 8.5.4). If adjustments are necessary before the completion of the test series, perform the drift checks prior to the required adjustments and repeat the calibration following the adjustments. If multiple electronic ranges are to be used, each additional range must be checked with a mid-level calibration gas to verify the multiplication factor.

NOTE: If using an FTIR for the analytical instrument, you may choose to follow the pretest preparation, evaluation, and calibration procedures of Method 320 (section 8.0) (40 CFR part 63, appendix A) in lieu of the above procedure.

8.5.2 Response Time Test. Conduct this test once prior to each test series. Introduce zero gas into the measurement system at the calibration valve assembly. When the system output has stabilized, switch quickly to the high-level calibration gas. Record the time from the concentration change to the measurement system response equivalent to 95 percent of the step change. Repeat the test three times and average the results.

8.5.3 SF₆ Measurement. Sampling of the enclosure exhaust gas at the inlet to the CD should begin at the onset of tracer gas release. If necessary, adjust the tracer gas injection rate such that the measured tracer gas concentration at the CD inlet is within the spectrometer's calibration range (*i.e.*, between the MML and the span value). Once the tracer gas concentration reaches equilibrium, the SF₆ concentration should be measured using the infrared spectrometer continuously for at least 20 minutes per run. Continuously record (*i.e.*, record at least once per minute) the concentration. Conduct at least three test runs. On the recording chart, in the data acquisition system, or in a log book, make a note of periods of process interruption or cyclic operation such as the cycles of the hot press operation. Table 1 to this appendix summarizes the physical measurements required for the enclosure testing.

NOTE: If a GC/ECD is used as the analytical instrument, a continuous record (at least once per minute) likely will not be possible; make a minimum of five injections during each test run. Also, the minimum test run duration criterion of 20 minutes applies.

8.5.4 Drift Determination. Immediately following the completion of the test run, reintroduce the zero and mid-level calibration gases, one at a time, to the measurement system at the calibration valve assembly. (Make no adjustments to the measurement system until both the zero and calibration drift checks are made.) Record the analyzer responses for the zero and

mid-level calibration gases and determine the difference between the instrument responses for each gas prior to and after the emission test run using the equation in section 12.4. If the drift values exceed the specified limits (section 13), invalidate the test results preceding the check and repeat the test following corrections to the measurement system. Alternatively, recalibrate the test measurement system as in section 8.5.1 and report the results using both sets of calibration data (*i.e.*, data determined prior to the test period and data determined following the test period). Note: If using an FTIR for the analytical instrument, you may choose to follow the post-test calibration procedures of Method 320 in appendix A to 40 CFR part 63 (section 8.11.2) in lieu of the above procedures.

8.6 Ambient Air Sampling (Optional). Sampling the ambient air surrounding the enclosure is optional. However, taking these samples during the capture efficiency testing will identify those areas of the enclosure that may be performing less efficiently.

8.6.1 Location of Ambient Samples Outside the Enclosure (Optional). In selecting the sampling locations for collecting samples of the ambient air surrounding the enclosure, consider potential leak points, the direction of the release, and laminar flow characteristics in the area surrounding the enclosure. Samples should be collected from all sides of the enclosure, downstream in the prevailing room air flow, and in the operating personnel occupancy areas.

8.6.2 Collection of Ambient Samples (Optional). During the tracer gas release, collect ambient samples from the area surrounding the enclosure perimeter at predetermined location using disposable syringes or some other type of containers that are non-absorbent, inert, and that have low permeability (*i.e.*, polyvinyl fluoride film or polyester film sample bags or polyethylene, polypropylene, nylon or glass bottles). The use of disposable syringes allows samples to be injected directly into a gas chromatograph. Concentration measurements taken around the perimeter of the enclosure provide evidence of capture performance and will assist in the identification of those areas of the enclosure that are performing less efficiently.

8.6.3 Analysis and Storage of Ambient Samples (Optional). Analyze the ambient samples using an analytical instrument calibrated and operated according to the procedures in this appendix or ASTM E 260 and ASTM E 697. Samples may be analyzed immediately after a sample is taken, or they may be stored for future analysis. Experience has shown no degradation of concentration in polypropylene syringes when stored for several months as long as the needle or syringe is plugged. Polypropylene syringes should be discarded after one use to eliminate the possibility of cross contamination of samples.

9.0 QUALITY CONTROL

9.1 Sampling, System Leak Check. A sampling system leak check should be conducted prior to and after each test run to ensure the integrity of the sampling system.

9.2 Zero and Calibration Drift Tests.

Section	Quality control measure	Effect
8.5.4	Zero and calibration drift tests	Ensures that bias introduced by drift in the measurement system output during the run is no greater than 3 percent of span.

10.0 CALIBRATION AND STANDARDIZATION

10.1 Control Device Inlet Air Flow Rate Measurement Equipment. Follow the equipment calibration requirements specified in Methods 2, 3, and 4 (appendix A to 40 CFR part 60) for measuring the velocity, molecular weight, and moisture of the control device inlet air.

10.2 Tracer Gas Injection Rate. A dry gas volume flow meter, mass flow meter, or orifice can be used to measure the tracer gas injection flow rate. The selected flow measurement device must have an accuracy of greater than ± 5 percent at the field operating range. Prior to the test, verify the calibration of the selected flow measurement device using either a wet test meter, spirometer, or liquid displacement meter as the calibration device. Select a minimum of two flow rates to bracket the expected field operating range of the flow meter. Conduct three calibration runs at each of the two selected flow rates. For each run, note the exact quantity of gas as determined by the calibration standard and the gas volume indicated by the flow meter. For each flow rate, calculate the average percent difference of the indicated flow compared to the calibration standard.

10.3 Spectrometer. Follow the calibration requirements specified by the equipment manufacturer for infrared spectrometer measurements and conduct the pretest calibration error test specified in section 8.5.1. Note: if using an FTIR analytical instrument see Method 320, section 10 (appendix A to 40 CFR part 63).

10.4 Gas Chromatograph. Follow the pre-test calibration requirements specified in section 8.5.1.

10.5 Gas Chromatograph for Ambient Sampling (Optional). For the optional ambient sampling, follow the calibration requirements specified in section 8.5.1 or ASTM E 260 and E 697 and by the equipment manufacturer for gas chromatograph measurements.

11.0 ANALYTICAL PROCEDURES

The sample collection and analysis are concurrent for this method (see section 8.0).

12.0 CALCULATIONS AND DATA ANALYSIS

12.1 Estimate MML and Span. The MML is the minimum measurement level. The selection of this level is at the discretion of the tester. However, the MML must be higher than the low-level calibration standard, and the tester must be able to measure at this level with a precision of ≤ 10 percent. As an example, select the MML as 10 times the instrument's published detection limit. The detection limit of one instrument is 0.01 parts per million by volume (ppmv). Therefore, the MML would be 0.10 ppmv. Select the low-level calibration standard as 0.08 ppmv. The high-level standard would be four times the low-level standard or 0.32 ppmv. A reasonable mid-level standard would then be 0.20 ppmv (halfway between the low-level standard and the high-level standard). Finally, the span value would be approximately 0.40 ppmv (the high-level value is 80 percent of the span). In this example, the following MML, calibration standards, and span values would apply:

MML = 0.10 ppmv

Low-level standard = 0.08 ppmv

Mid-level standard = 0.20 ppmv

High-level standard = 0.32 ppmv

Span value = 0.40 ppmv

12.2 Estimate Tracer Gas Injection Rate for the Given Span. To estimate the minimum and maximum tracer gas injection rate, assume a worst case capture efficiency of 80 percent, and calculate the tracer gas flow rate based on known or measured parameters. To estimate the minimum tracer gas injection rate, assume that the MML concentration (10 times the IR detection limit in this example) is desired at the measurement location. The following equation can be used to estimate the minimum tracer gas injection rate:

$$((Q_{T-MIN} \times 0.8)/Q_E) \times (C_T \div 100) \times 10^6 = \text{MML}$$

$$Q_{T-MIN} = 1.25 \times \text{MML} \times (Q_E/C_T) \times 10^{-4}$$

Where:

Q_{T-MIN} = minimum volumetric flow rate of tracer gas injected, standard cubic feet per minute (scfm);

Q_E = volumetric flow rate of exhaust gas, scfm;

C_T = Tracer gas (SF_6) concentration in gas blend, percent by volume;

MML = minimum measured level, ppmv = $10 \times \text{IR}_{DL}$ (for this example);

IR_{DL} = IR detection limit, ppmv.

Standard conditions: 20 °C, 760 millimeters of mercury (mm Hg).

To estimate the maximum tracer gas injection rate, assume that the span value is desired at the measurement location. The following equation can be used to estimate the maximum tracer gas injection rate:

$$((Q_{T-MAX} \times 0.8)/Q_E) \times (C_T \div 100) \times 10^6 = \text{span value}$$

$$Q_{T-MAX} = 1.25 \times \text{span value} \times (Q_E/C_T) \times 10^{-4}$$

Where:

Q_{T-MAX} = maximum volumetric flow rate of tracer gas injected, scfm;

Span value = instrument span value, ppmv.

The following example illustrates this calculation procedure:

Find the range of volumetric flow rate of tracer gas to be injected when the following parameters are known:

Q_E = 60,000 scfm (typical exhaust gas flow rate from an enclosure);

C_T = 2 percent SF_6 in nitrogen;

$IR_{DL} = 0.01$ ppmv (per manufacturer's specifications);

$MML = 10 \times IR_{DL} = 0.10$ ppmv;

Span value = 0.40 ppmv;

$Q_T = ?$

Minimum tracer gas volumetric flow rate:

$$Q_{T-MIN} = 1.25 \times MML \times (Q_E/C_T) \times 10^{-4}$$

$$Q_{T-MIN} = 1.25 \times 0.10 \times (60,000/2) \times 10^{-4} = 0.375 \text{ scfm}$$

Maximum tracer gas volumetric flow rate:

$$Q_{T-MAX} = 1.25 \times \text{span value} \times (Q_E/C_T) \times 10^{-4}$$

$$Q_{T-MAX} = 1.25 \times 0.40 \times (60,000/2) \times 10^{-4} = 1.5 \text{ scfm}$$

In this example, the estimated total volumetric flow rate of the two percent SF₆ tracer gas injected through the manifolds in the enclosure lies between 0.375 and 1.5 scfm.

12.3 Calibration Error. Calculate the calibration error for the low-level and mid-level calibration gases using the following equation:

$$\text{Err} = |C_{std} - C_{meas}| \div C_{std} \times 100$$

Where:

Err = calibration error, percent;

C_{std} = low-level or mid-level calibration gas value, ppmv;

C_{meas} = measured response to low-level or mid-level concentration gas, ppmv.

12.4 Calibration Drift. Calculate the calibration drift for the zero and low-level calibration gases using the following equation:

$$D = ||C_{initial} - C_{final}|| \div C_{span} \times 100$$

Where:

D = calibration drift, percent;

$C_{initial}$ = low-level or mid-level calibration gas value measured before test run, ppmv;

C_{final} = low-level or mid-level calibration gas value measured after test run, ppmv;

C_{span} = span value, ppmv.

12.5 Calculate Capture Efficiency. The equation to calculate enclosure capture efficiency is provided below:

$$CE = (SF_{6-CD} \div SF_{6-INJ}) \times 100$$

Where:

CE = capture efficiency;

SF_{6-CD} = mass of SF₆ measured at the inlet to the CD;

SF_{6-INJ} = mass of SF₆ injected from the tracer source into the enclosure.

Calculate the CE for each of the initial three test runs. Then follow the procedures outlined in section 12.6 to calculate the overall capture efficiency.

12.6 Calculate Overall Capture Efficiency. After calculating the capture efficiency for each of the initial three test runs, follow the procedures in 40 CFR part 63, subpart KK, appendix A, to determine if the results of the testing can be used in determining compliance with the requirements of the rule. There are two methods that can be used: the DQO and LCL

methods. The DQO method is described in section 3 of 40 CFR part 63, subpart KK, appendix A, and provides a measure of the precision of the capture efficiency testing conducted. Section 3 of 40 CFR part 63, subpart KK, appendix A, provides an example calculation using results from a facility. If the DQO criteria are met using the first set of three test runs, then the facility can use the average capture efficiency of these test results to determine the capture efficiency of the enclosure. If the DQO criteria are not met, then the facility can conduct another set of three runs and run the DQO analysis again using the results from the six runs *OR* the facility can elect to use the LCL approach.

The LCL method is described in section 4 of 40 CFR part 63, subpart KK, appendix A, and provides sources that may be performing much better than their regulatory requirement, a screening option by which they can demonstrate compliance. The LCL approach compares the 80 percent lower confidence limit for the mean measured CE value to the applicable regulatory requirement. If the LCL capture efficiency is higher than the applicable limit, then the facility is in initial compliance and would use the LCL capture efficiency as the capture efficiency to determine compliance. If the LCL capture efficiency is lower than the applicable limit, then the facility must perform additional test runs and re-run the DQO or LCL analysis.

13.0 METHOD PERFORMANCE

13.1 Measurement System Performance Specifications.

13.1.1 Zero Drift. Less than ± 3 percent of the span value.

13.1.2 Calibration Drift. Less than ± 3 percent of the span value.

13.1.3 Calibration Error. Less than ± 5 percent of the calibration gas value.

13.2 Flow Measurement Specifications. The mass flow, volumetric flow, or critical orifice control meter used should have an accuracy of greater than ± 5 percent at the flow rate used.

13.3 Calibration and Tracer Gas Specifications. The manufacturer of the calibration and tracer gases should provide a recommended shelf life for each calibration gas cylinder over which the concentration does not change more than ± 2 percent from the certified value.

14.0 POLLUTION PREVENTION [RESERVED]

15.0 Waste Management [Reserved]

16.0 References

1. 40 CFR part 60, appendix A, EPA Method 1—Sample and velocity traverses for stationary sources.
2. 40 CFR part 60, appendix A, EPA Method 2—Determination of stack gas velocity and volumetric flow rate.
3. 40 CFR part 60, appendix A, EPA Method 3—Gas analysis for the determination of dry molecular weight.
4. 40 CFR part 60, appendix A, EPA Method 4—Determination of moisture content in stack gases.
5. SEMI F15-93 Test Method for Enclosures Using Sulfur Hexafluoride Tracer Gas and Gas Chromatography.
6. Memorandum from John S. Seitz, Director, Office of Air Quality Planning and Standards, to EPA Regional Directors, Revised Capture Efficiency Guidance for Control of Volatile Organic Compound Emissions, February 7, 1995. (That memorandum contains an attached technical document from Candace Sorrell, Emission Monitoring and Analysis Division, "Guidelines for Determining Capture Efficiency," January 9, 1994).
7. Technical Systems Audit of Testing at Plant "C," EPA-454/R-00-26, May 2000.
8. Material Safety Data Sheet for SF₆ Air Products and Chemicals, Inc. Website: www3.airproducts.com. October 2001.

17.0 TABLES, DIAGRAMS, FLOWCHARTS, AND VALIDATION DATA

TABLE 1 TO APPENDIX A—SUMMARY OF CRITICAL PHYSICAL MEASUREMENTS FOR ENCLOSURE TESTING

Measurement	Measurement instrumentation	Measurement frequency	Measurement site
Tracer gas injection rate	Mass flow meter, volumetric flow meter or critical orifice	Continuous	Injection manifolds (cylinder gas).
Tracer gas concentration at control device inlet	Infrared Spectrometer or GC/ECD	Continuous (at least one reading per minute) for a minimum of 20 minutes	Inlet duct to the control device (outlet duct of enclosure).
Volumetric air flow rate	EPA Methods 1, 2, 3, 4 (40 CFR part 60, appendix A) • Velocity sensor (Manometer/Pitot	Each test run for velocity (minimum); Daily for moisture and molecular weight	Inlet duct to the control device (outlet duct of enclosure).

(tube)

- Thermocouple
- Midget Impinger sampler
- Orsat or Fyrite

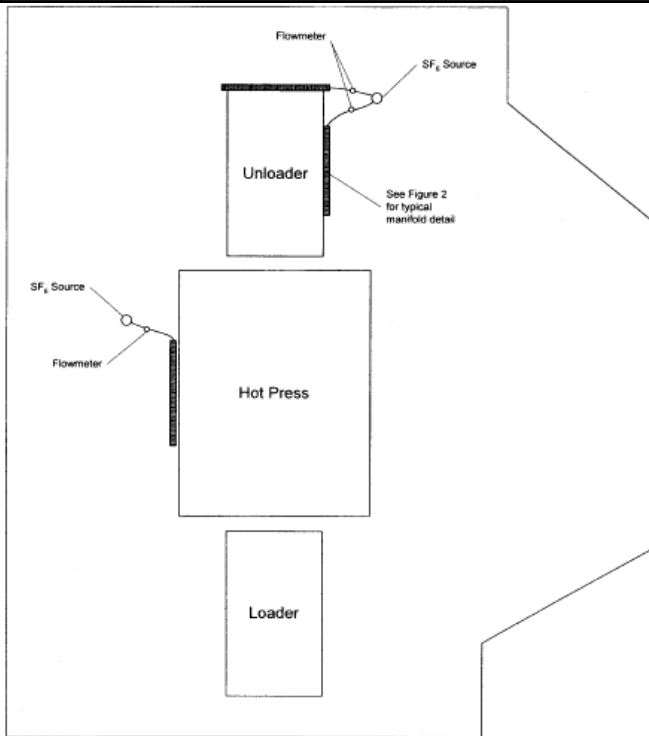


Figure 1. Plan view schematic of hot press and enclosure showing SF₆ manifold locations.

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[69 FR 46011, July 30, 2004, as amended at 71 FR 8375, Feb. 16, 2006]

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Appendix F

CAM Plan

GENERAL CRITERIA FOR CAM PLAN [PER §64.3(A)]

<u>Criteria</u>	<u>Description</u>
Emission Sources:	SN-02
Pollutants:	Particulates
Applicable Permit Requirements:	Pressure drop and liquid flow rate
Control Technology:	Scrubber
Control Efficiency:	> 70%
General Monitoring Approach:	Record keeping of pressure drop and liquid flow rate
Rationale for Monitoring Approach:	Pressure drop and liquid flow rate are corelated with the effectiveness of control device.
Indicator Monitored:	Pressure drop and liquid flow rate
Indicator Range:	Site specific minimum pressure drop and flow rate is established during the performance test required via 40 CFR Part 63 Subpart DDDDD.

PERFORMANCE CRITERIA FOR CAM PLAN [PER §64.3(B)]

<u>Criteria</u>	<u>Description</u>
Specifications for Obtaining Representative Data:	Monitoring of pressure drop and liquid flow rate will be performed at the control device.
Monitoring Frequency:	One hour average required via 40 CFR Part 63 Subpart DDDDD.
Data Collection Procedures:	Continuous parameter monitoring system to monitor pressure drop and liquid flow rate
Data Averaging Period:	30-day rolling average via 40 CFR Part 63 Subpart DDDDD.
Recordkeeping:	30-day rolling average via 40 CFR Part 63 Subpart DDDDD.
Verification Procedures to Confirm Oper. Status:	The performance test required via 40 CFR Part 63 Subpart DDDDD.
QA/QC Practices:	Maintenance and repair of equipment will be performed in accordance with the manufacturer's specifications.

GENERAL CRITERIA FOR CAM PLAN [PER §64.3(A)]

<u>Criteria</u>	<u>Description</u>
Emission Sources:	SN-01, SN-22
Pollutants:	Particulate Matter less than 10 microns (PM10)
Applicable Permit Requirements:	Opacity and PM10 Limits
Control Technology:	Multicyclones (Fly Ash Collectors)
Control Efficiency:	95% (estimated)
General Monitoring Approach:	Daily visible emission readings will be performed at each boiler stack.
Rationale for Monitoring Approach:	The absence of visible emissions is a good indicator of low PM10 emissions. If high visible emissions are observed, the facility will immediately take actions in order to bring the affected source into compliance.
Indicator Monitored:	Opacity
Indicator Range:	Less than twenty percent (20%) opacity.

PERFORMANCE CRITERIA FOR CAM PLAN [PER §64.3(B)]

<u>Criteria</u>	<u>Description</u>
Specifications for Obtaining Representative Data:	Visible emission readings and opacity observations will be performed at each exhaust while the control device is in operation.
Monitoring Frequency:	Visible emission readings will be conducted <u>daily</u> at each exhaust.
Data Collection Procedures:	Trained plant operators will perform the daily visible emission readings. Trained maintenance personnel will service and repair the systems on an as-needed basis.
Data Averaging Period:	Not applicable – Visible emission readings.
Recordkeeping:	Records will be kept of all daily visible emission readings.
Verification Procedures to Confirm Oper. Status:	Not applicable.
QA/QC Practices:	Plant operators will receive annual training in visible emission readings. Plant operators and maintenance personnel will be adequately trained. Maintenance and repair of systems will be performed in accordance with the manufacturer’s specifications.