

January 29, 2009

Rick Maske, Plant Engineer Manager ConAgra Frozen Packaged Foods 3100 East Main Street Russellville, AR 72801

Dear Mr. Maske:

The enclosed Permit No. 1582-AR-6 is your authority to construct, operate, and maintain the equipment and/or control apparatus as set forth in your application initially received on 8/21/2008.

After considering the facts and requirements of A.C.A. §8-4-101 et seq., and implementing regulations, I have determined that Permit No. 1582-AR-6 for the construction, operation and maintenance of an air pollution control system for ConAgra Frozen Packaged Foods to be issued and effective on the date specified in the permit, unless a Commission review has been properly requested under §2.1.14 of Regulation No. 8, Arkansas Department of Pollution Control & Ecology Commission's Administrative Procedures, within thirty (30) days after service of this decision.

All persons submitting written comments during this thirty (30) day period, and all other persons entitled to do so, may request an adjudicatory hearing and Commission review on whether the decision of the Director should be reversed or modified. Such a request shall be in the form and manner required by §2.1.14 of Regulation No. 8.

Sincerely,

Mike Bates

Chief, Air Division

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RESPONSE TO COMMENTS

ConAgra Frozen Packaged Foods DRAFT PERMIT #[1582-AR-6] AFIN: [58-00263]

On November 25, 2008, the Director of the Arkansas Department of Environmental Quality gave notice of a draft permitting decision for the above referenced facility. During the comment period, ConAgra Frozen Packaged Foods (ConAgra) submitted comments, data, views or arguments on the draft permitting decision. The Department's response to these issues follows.

Issue 1:

"The draft permit references a new Fulton boiler to be installed at the facility (SN-43). This device is actually a thermal fluid heater, rather than a boiler, as it heats oil and does not create steam. ConAgra requests that the word "Fulton boiler" or "Fulton heater" be replaced with the words "thermal fluid heater.""

Response 1:

The source description has been changed as requested by the facility.

Issue 2:

"Page 6 of the draft permit contains a table of applicable regulations. For New Source Performance Standards, 40 CFR Part 60, Subpart Dc – Standards of Performance for Small Industrial-Commercial-Institutional Steam-Generating Units, the draft permit lists sources SN-35 and SN-37 as being subject to these standards. It should read "Sources SN-37, SN-41 and SN-42.""

Response 2

The permit has been corrected as requested by the facility.

Issue 3:

"Specific Conditions 1 and 2 continue to list certain sources that have been removed from service with this modification, yet (have) completely omitted others that were removed from services, also with this modification. ConAgra believes that it would be beneficial to Arkansas Department of Environmental Quality (ADEQ) inspectors to list all sources, noting which ones are removed from service. Also, in these same two specific conditions, Boilers #6 and #7 have been added with no Btu rating included. To ensure that there is no future confusion on boiler identities, ConAgra requests that the descriptions for SN-41 and SN-42 include a notation that they are each 101.341 mmBtu's per hour."

Response 3

Every source removed during this current modification (SN-4, SN-5, SN-6, SN-23, SN-24, SN-25, SN-26 and SN-35) was completely removed from the draft permit. However, as requested by the facility, these sources will be added back to permit and noted as having been "removed from service".

Issue 4

"Specific Condition 10 should be revised to remove sources SN-43, SN-44 and SN-45. These sources are not subject to the NSPS requirements of 40 CFR 60, Subpart Dc since they are not steam-generating units."

Response 4

In order to comply with NSPS Subpart Dc, the facility is allowed to prorate the amount of fuel (natural gas) used at the facility. The permit states "fuel usage shall be prorated based on the maximum Btu rating for each fuel consuming source when compared to the total of the Btu ratings (maximum) for *all* equipment using the same type of fuel." This calculation must include SN-43, SN-44 and SN-45. Therefore, Specific Condition 10 will remain as written.

Issue 5

"Specific Conditions 12 and 13 relate to sulfur limits in fuels. Since this permit removes the fuel oil option, these requirements are no longer applicable. ConAgra requests that they both be removed from the permit."

Response 5

Specific Conditions 12 and 13 have been removed as requested by the facility.

Issue 6

"The list of insignificant activities references a permit application dated February 23, 2005. This should be modified to also include a permit application dated August 20, 2008. Also in the list of insignificant activities, ConAgra requests removal of the two 0.5 mmBtu per hour rotary branding wheels, and the 3.0 mmBtu per hour rotary branding wheel. These have been removed from service."

Response 6

The permit application date in the Insignificant Activities section of the permit has been corrected to reflect the date this modification was received by the Department which was August 21, 2008. Also, the rotary branding wheels have been removed from the Insignificant Activities Table as requested by the facility.

ADEQ MINOR SOURCE AIR PERMIT

Permit No.: 1582-AR-6

IS ISSUED TO:

ConAgra Frozen Packaged Foods 3100 East Main Street Russellville, AR 72801 Pope County AFIN: 58-00263

THIS PERMIT IS THE ABOVE REFERENCED PERMITTEE'S AUTHORITY TO CONSTRUCT, MODIFY, OPERATE, AND/OR MAINTAIN THE EQUIPMENT AND/OR FACILITY IN THE MANNER AS SET FORTH IN THE DEPARTMENT'S MINOR SOURCE AIR PERMIT AND THE APPLICATION. THIS PERMIT IS ISSUED PURSUANT TO THE PROVISIONS OF THE ARKANSAS WATER AND AIR POLLUTION CONTROL ACT (ARK. CODE ANN. SEC. 8-4-101 *ET SEQ.*) AND THE REGULATIONS PROMULGATED THEREUNDER, AND IS SUBJECT TO ALL LIMITS AND CONDITIONS CONTAINED HEREIN.

Signed:

Mike Bates

Chief, Air Division

January 29, 2009

Date

ConAgra Frozen Packaged Foods Permit #: 1582-AR-6 AFIN: 58-00263

Table of Contents

Section I: FACILITY INFORMATION	4
Section II: INTRODUCTION	5
Summary of Permit Activity	5
Process Description	
Regulations	
Total Allowable Emissions	6
Section III: PERMIT HISTORY	8
Section V: INSIGNIFICANT ACTIVITIES	14
Section VI: GENERAL CONDITIONS	15
APPENDIX A	20
40 CFR 60, Subpart Dc	20

Permit #: 1582-AR-6 AFIN: 58-00263

List of Acronyms and Abbreviations

A.C.A. Arkansas Code Annotated

AFIN ADEQ Facility Identification Number

CFR Code of Federal Regulations

CO Carbon Monoxide

HAP Hazardous Air Pollutant

lb/hr Pound Per Hour

No. Number

NO_x Nitrogen Oxide

PM Particulate Matter

PM₁₀ Particulate Matter Smaller Than Ten Microns

SO₂ Sulfur Dioxide

Tpy Tons Per Year

UTM Universal Transverse Mercator

VOC Volatile Organic Compound

Permit #: 1582-AR-6 AFIN: 58-00263

Section I: FACILITY INFORMATION

PERMITTEE: ConAgra Frozen Packaged Foods

AFIN: 58-00263

PERMIT NUMBER: 1582-AR-6

FACILITY ADDRESS: 3100 East Main Street

Russellville, AR 72801

MAILING ADDRESS: 3100 East Main Street

Russellville, AR 72801

COUNTY: Pope County

CONTACT NAME: Rick Maske

CONTACT POSITION: Plant Engineer Manager

TELEPHONE NUMBER: 479-964-8205

REVIEWING ENGINEER: Melisha Griffin

UTM North South (Y): Zone 15: 3903708.68 m

UTM East West (X): Zone 15: 491582.75 m

Permit #: 1582-AR-6 AFIN: 58-00263

Section II: INTRODUCTION

Summary of Permit Activity

ConAgra Frozen Foods owns and operates a frozen food manufacturing and packaging facility located at 3100 East Main Street in Russellville, AR 72801.

In this modification, ConAgra is expanding their facility and removing four existing boilers (SN-23, 24, 25 and 26), removing one hot water heater (SN-35), removing three emission sources (SN-04, SN-05, SN-06) associated with the existing two ovens, adding two new boilers (SN-41 and SN-42), adding two new ovens, adding a thermal fluid heater (SN-43), adding two hot water heaters (SN-44 and SN-45), and adding two new rotary branders (SN-46 and SN47). Fuel types for all new sources are natural gas. The Russellville facility will not maintain the existing duel fuel (natural gas and diesel fuel) capability for the boilers. Existing boiler SN-37 is being relocated on-site and kept for use during lower steam demand periods (i.e., summer months). Typically, only one of these two boilers (SN-41 and SN-42) will operate at a time; the exception will be when transitioning between these boilers.

Process Description

ConAgra Frozen Packaged Foods (ConAgra) manufactures and/or packages frozen food entrees, egg rolls, and pasta products at its Russellville facility. Emissions from the facility include natural gas combustion products, particulate emissions from deep fat frying and pneumatic flour transfer, and non-point source emissions from the ammonia refrigeration systems.

Ingredients are received by truck and railcar and stored in freezers, coolers, spice rooms, warehouse space, etc. A flour silo facilitates the transfer of flour to storage. This silo has an associated fabric filter, with vent designation SN-34.

As needed, the ingredients are brought to the food preparation areas. Food preparation may include chopping, blending, extruding, forming, filling, baking, frying, steam cooking, branding, etc. Products of natural gas combustion from a number of small natural gas-fired ovens, branders, and deep fat fryers have been designated insignificant. Particulate emissions from the deep fat frying process are permitted as SN-31. There are also several natural gas ovens at the facility. The Armor ovens (two ovens with three vents) are designated SN-01, SN-02, and SN-03.

After preparation, food is chilled, frozen, and/or dispensed in the lines. After dispensing, the food is frozen and packaged. It is then stored in the finished goods freezer prior to shipping.

The ammonia emissions from the Refrigeration System (SN-36) are non-point source only. The throughput limits in Specific Condition #6 are for the ammonia losses from the system. The amount of ammonia used in the initial charges of new equipment is not included in this throughput amount. Also, the loss of ammonia from the removal of equipment has not been

Permit #: 1582-AR-6 AFIN: 58-00263

included in this throughput amount because the facility uses a vacuum system to remove ammonia from the equipment before disconnecting it from the system.

The facility has three (3) natural gas-fired boilers. These are sources SN-37, SN41, and SN-42. Typically, only one of these two boilers will operate at a time.

Source Number 44 and 45 are natural gas-fired hot water heaters.

The fry-bake oven No.1 (SN-38) and the fry-bake fryer (SN-39) are situated in series, but the facility may process the meat through either individually, or both in series. The natural gas fired Fulton Heater No. 1 (SN-40) supplies heat to the oven and fryer via heat exchangers. A second natural gas fired thermal fluid heater (SN-43) supplies heat to the red meat ovens.

Regulations

The following table contains the regulations applicable to this permit.

Regulations
Arkansas Air Pollution Control Code, Regulation 18, effective February 15, 1999
Regulations of the Arkansas Plan of Implementation for Air Pollution Control, Regulation 19, effective October 15, 2007
New Source Performance Standards, 40 CFR Part 60, Subpart Dc-Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units (SN-37, SN-41 and SN-42)

Total Allowable Emissions

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

TOTAL A	ALLOWABLE EMI	SSIONS
D-11-44	Emission Rates	
Pollutant	lb/hr	tpy
PM	5.2	22.0
PM ₁₀	5.2	22.0
SO ₂	2.0	7.3
VOC	4.1	17.1
СО	17.8	78.3

ConAgra Frozen Packaged Foods Permit #: 1582-AR-6

AFIN: 58-00263

NO _x	16.3	70.3
Ammonia	14.0	60.0

Permit #: 1582-AR-6 AFIN: 58-00263

Section III: PERMIT HISTORY

Permit 1582-A was the initial permit for the facility. It was issued on January 11, 1995.

Permit 1582-AR-1 was issued on April 12, 1996. This modification included replacing 8 older fryers with two new ones, adding a new brander, increasing the allowable ammonia emissions, and permitting all sources for full time operation.

Permit 1582-AR-2 was issued May 30, 2000. In this permit, the facility added a new hot water heater (SN-35), removed the bulk corn receiving station from the permit, and designated nine small combustion sources as insignificant activities.

Permit 1582-AR-3 was issued March 26, 2002. This modification removes four fryers (SN's 09, 10, 27, and 33) and two insignificant activities (a 1.5 MMBtu/hr Burrito Fryer and a 2.5 MMBtu/hr Egg Roll Fryer) from service. Also included was the addition of a 25.11 MMBtu boiler, Boiler #5 (SN-37). Changes were made to modify the ammonia throughput to include only losses from non-point source emissions instead of tracking purchases of ammonia. The 40 CFR 60, Subpart Dc requirements for both SN-35 and SN-37 have been updated. The permitted emission rates were 16.3 tpy PM₁₀, 6.3 tpy SO₂, 9.3 tpy VOC, 44.3 tpy CO, 95.3 tpy NO_X, and 60.0 tpy ammonia.

Permit 1582-AR-4 was issued October 9, 2003. This modification was issued to allow diesel fuel as a backup in the four larger boilers during periods of natural gas curtailment. The emission limits on all of the boilers were recalculated based on the latest AP-42 emission factors. The permitted emission rates were 13.5 tpy PM10, 6.2 tpy SO2, 8.6 tpy VOC, 60.4 tpy CO, 81.5 tpy NOX, and 60.0 tpy ammonia

Permit 1582-AR-5 was issued on June 17, 2005. This modification allowed the permittee to add a fry-bake oven (SN-38), a fry-bake fryer (SN-39), and a Fulton Heater (SN-40) which provided heated oil for process heat for emission units. The thermal fluid heater was not subject to 40 CFR 60, Subpart Dc – Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units since the fluid heated was not water.

Permit #: 1582-AR-6 AFIN: 58-00263

Section IV: EMISSION UNIT INFORMATION

Specific Conditions

1. The permittee shall not exceed the emission rates set forth in the following table. [Regulation 19, §19.501 et seq., and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]

SN	Description	Pollutant	lb/hr	tpy
		PM ₁₀	0.1	0.4
	A mm our Potte: Orion	SO_2	0.1	0.4
01	Armour Patty Oven	VOC	0.1	0.4
1	(East Stack)	CO	0.1	0.4
		NO_x	0.3	1.2
		PM ₁₀	0.1	0.4
	A Dotto : O	SO_2	0.1	0.4
02	Armour Patty Oven	VOC	0.1	0.4
•	(Middle Stack)	CO	0.1	0.4
		NO_x	0.3	1.2
		PM ₁₀	0.1	0.4
}	D. (1)	SO_2	0.1	0.4
03	Armour Patty Oven	VOC	0. i	0.4
	(West Stack)	CO	0.1	0.4
	ļ	NO_x	0.3	1.2
04	Banquet Patty Oven (East Stack)	Remo	ved From Service	
05	Banquet Patty Oven (Middle Stack)	Remo	ved From Service	
06	Banquet Patty Oven (West Stack)	Remo	ved From Service	
09	Electric Egg Roll Fryer (North Vent)	Remo	ved From Service	
10	Electric Egg Roll Fryer (South Vent)	Remo	ved From Service	
23	Boiler #4 50.2 MMBtu/hr	Remo	ved From Service	
24	Boiler #1 20.9 MMBtu/hr	Remo	ved From Service	
25	Boiler #2 20.9 MMBtu/hr	Remo	ved From Service	
26	Boiler #3 13.0 MMBtu/hr	Remo	ved From Service	
27	Burrito Fryer (Particulate from Oils)	Remo	ved From Service	
2.1	Egg Roll Fryer #1	PM ₁₀	0.8	3.5
31	(Particulate and VOC)	VOC	0.3	1.3
33	Egg Roll Fryer #2 (Particulate and VOC)	Remo	ved From Service	
34	Flour Silo	PM ₁₀	0.1	0.5

Permit #: 1582-AR-6 AFIN: 58-00263

35	Hot Water Heater	Remov	ed From Service	
		PM ₁₀	0.6	2.6
	D :: 4/5	SO ₂	1.2	5.3
37	Boiler #5	VOC	0.2	0.9
	25.1 MMBtu/hr	CO	2.2	9.6
		NO _x	3.4	14.9
38	Fry-Bake Oven #1	PM_{10}	1.4	6.1
39	Fry-Bake Fryer #1	PM ₁₀ VOC	0.4 2.1	1.6 9.0
		PM ₁₀	0.1	0.4
		SO_2	0.1	0.1
40	Fulton Heater #1	VOC	0.1	0.3
		CO	1.1	4.6
		NO_x	1.3	5.5
		PM ₁₀	0.8	3.5
41	Boiler #6	CO	8.3	37.4
		NO_X	3.7	15.9
42	Boiler #7	SO_2	0.1	0.4
		VOC	0.6	2.5
		PM ₁₀	0.1	0.4
	Red Meat Thermal Fluid	CO	0.9	3.7
43	Heater	NO_X	1.0	4.4
	Heater	SO_2	0.1	0.1
		VOC	0.1	0.3
		PM ₁₀	0.3	1.1
		CO	2.5	10.9
44	Hot Water Heater #1	NO_X	3.0	13.0
		SO_2	0.1	0.1
		VOC_	0.2	_ 0.8 _
		PM ₁₀	0.3	1.1
		CO	2.5	10.9
45	Hot Water Heater #2	NO_X	3.0	13.0
		SO_2	0.1	0.1
		VOC	0.2	0.8

2. The permittee shall not exceed the emission rates set forth in the following table. [Regulation 18, §18.801 and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]

SN	Description	Pollutant	lb/hr	tpy
01	Armour Patty Oven (East Stack)	PM	0.1	0.4
02	Armour Patty Oven (Middle Stack)	PM	0.1	0.4
03	Armour Patty Oven (West Stack)	PM	0.1	0.4

Permit #: 1582-AR-6

AFIN: 58-00263

04	Banquet Patty Oven (East Stack)	Remov	ved From Service	
05	Banquet Patty Oven (Middle Stack)	Remov	ved From Service	
06	Banquet Patty Oven (West Stack)	Remov	ved From Service	
09	Electric Egg Roll Fryer (North Vent)	Remov	ved From Service	
10	Electric Egg Roll Fryer (South Vent)	Remov	ved From Service	
23	Boiler #4 50.2 MMBtu/hr	Remov	ved From Service	
24	Boiler #1 20.9 MMBtu/hr	Remov	ved From Service	12
25	Boiler #2 20.9 MMBtu/hr	Remov	ved From Service	
26	Boiler #3 13.0 MMBtu/hr	Remov	ved From Service	
27	Burrito Fryer (Particulate from Oils)	Removed From Service		
31	Egg Roll Fryer #1 (Particulate and VOC)	PM	0.8	3.5
33	Egg Roll Fryer #2 (Particulate and VOC)	Removed From Service		
34	Flour Silo	PM	0.1	0.5
35	Hot Water Heater	Remov	ved From Service	
36	Refrigeration System	Ammonia	14.0	60.0
37	Boiler #5	РМ	0.6	2.6
38	Fry-Bake Oven #1	РМ	1.4	6.1
39	Fry-Bake Fryer #1	РМ	0.4	1.6
40	Fulton Heater #1	РМ	0.1	0.4
41	Boiler #6	PM	0.8	3.5
42	Boiler #7	Chromium, hex	0.000624	0.001
43	Red Meat Thermal Fluid Heater	PM	0.1	0.4
44	Hot Water Heater #1	РМ	0.3	1.1
45	Hot Water Heater #2	PM	0.3	1.1

Permit #: 1582-AR-6 AFIN: 58-00263

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

SN	Limit	Regulatory Citation
SN-01, SN-02, SN-03, SN-31, SN-34, SN-36, SN-37, SN-38, SN-40, SN-41, SN-42, SN-43, SN-44 and SN-45	5%	§18.501
SN-39	20%	§18.501

- 4. The permittee shall not cause or permit the emission of air contaminants, including odors or water vapor and including an air contaminant whose emission is not otherwise prohibited by Regulation #18, if the emission of the air contaminant constitutes air pollution within the meaning of A.C.A. §8-4-303. [Regulation 18, §18.801 and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]
- 5. The permittee shall not conduct operations in such a manner as to unnecessarily cause air contaminants and other pollutants to become airborne. [Regulation 18, §18.901 and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]
- 6. The permittee shall not use more than 120,000 pounds of ammonia to recharge the Refrigeration Equipment (SN-36) in any consecutive 12 month period. This limit does not include ammonia used in the initial charge of new equipment; however, a record of new equipment and the amount of ammonia used to charge that equipment must also be kept to demonstrate that the facility has not exceeded the 120,000 pound limit. [§19.705 of Regulation 19 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]
- 7. The permittee shall maintain monthly records which demonstrate compliance with Specific Condition 6. 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. [\$19.705 of Regulation 19 and A.C.A. \$8-4-203 as referenced by \$8-4-304 and \$8-4-311]
- 8. In the removal of equipment from the Refrigeration System (SN-36), the permittee must remove the ammonia from the equipment before disconnecting the equipment from the system. [§19.705 of Regulation 19 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]
- 9. The facility shall burn only pipeline quality natural gas at the facility. Natural Gas supplied by the major marketers of natural gas in the state of Arkansas (ex: Arkansas Oklahoma Gas, Arkansas Western Gas, Centerpoint Energy, Duke Energy, and NGPL) are assumed to meet this requirement.

Permit #: 1582-AR-6 AFIN: 58-00263

NSPS Requirements for SN-37, SN-41, SN-42, SN-43, SN-44 and SN-45

10. The fuel for the Boiler #5 (SN-37), Boiler #6 (SN-41), Boiler #7 (SN-42), Red Meat Thermal Fluid Heater (SN-43), Hot Water Heater #1 (SN-44) and Hot Water Heater #2 (SN-45) shall be accounted for monthly. Fuel usage shall be prorated based on the maximum Btu rating for each fuel consuming source when compared to the total of the Btu ratings (maximum) for all equipment using the same type of fuel. [40 CFR 60 Subpart Dc and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

Fuel Hagge -	Fuel Usage total	Max Btu source
Fuel Usage source=	x	Max Btu total (all sources)

- 11. The permittee shall maintain records that demonstrate compliance with Specific Condition #10. These records shall: [§19.705 of Regulation 19 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]
 - 1. Document the monthly meter readings or the prorated results accompanied with the calculations;
 - 2. Be updated by the fifteenth day of the month following the month to which the records pertain;
 - 3. Be maintained on site for a minimum of two years;
 - 4. Be made available to Department personnel upon request.

Permit #: 1582-AR-6 AFIN: 58-00263

Section V: 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 19 Appendix A. Insignificant activity emission determinations rely upon the information submitted by the permittee in an application dated August 21, 2008.

Description	Category
(1) 0.85 MMBTU/hr Enchilada Oven	A-1
(2) 0.75 MMBTU/hr Tortilla Ovens	A-1
(1) 2.5 MMBTU/hr Egg Roll Fryer*	A-1
(2) 960 scf/hr (0.98 MMBtu/hr) Rotary Branders #1 and #2	A-1

Permit #: 1582-AR-6 AFIN: 58-00263

Section VI: GENERAL CONDITIONS

- 1. Any terms or conditions included in this permit that specify and reference Arkansas Pollution Control & Ecology Commission Regulation 18 or the Arkansas Water and Air Pollution Control Act (A.C.A. §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 (A.C.A. §8-4-101 et seq.). Any terms or conditions included in this permit that specify and reference Arkansas Pollution Control & Ecology Commission Regulation 18 or the Arkansas Water and Air Pollution Control Act (A.C.A. §8-4-101 et seq.) as the origin of and authority for the terms or conditions are enforceable under this Arkansas statute.
- 2. This permit does not relieve the owner or operator of the equipment and/or the facility from compliance with all applicable provisions of the Arkansas Water and Air Pollution Control Act and the regulations promulgated under the Act. [A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]
- 3. The permittee shall notify the Department in writing within thirty (30) days after commencement of construction, completion of construction, first operation of equipment and/or facility, and first attainment of the equipment and/or facility target production rate. [Regulation 19, §19.704 and/or A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]
- 4. Construction or modification must commence within eighteen (18) months from the date of permit issuance. [Regulation 19, §19.410(B) and/or Regulation 18, §18.309(B) and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]
- 5. The permittee must keep records for five years to enable the Department to determine compliance with the terms of this permit such as hours of operation, throughput, upset conditions, and continuous monitoring data. The Department may use the records, at the discretion of the Department, to determine compliance with the conditions of the permit. [Regulation 19, §19.705 and/or Regulation 18, §18.1004 and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]
- 6. A responsible official must certify any reports required by any condition contained in this permit and submit any reports to the Department at the address below. [Regulation 19, §19.705 and/or Regulation 18, §18.1004 and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]

Arkansas Department of Environmental Quality

Air Division

ATTN: Compliance Inspector Supervisor

Permit #: 1582-AR-6 AFIN: 58-00263

> 5301 Northshore Drive North Little Rock, AR 72118-5317

- 7. The permittee shall test any equipment scheduled for testing, unless stated in the Specific Conditions of this permit or by any federally regulated requirements, within the following time frames: (1) newly constructed or 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) existing equipment already operating according to the time frames set forth by the Department. The permittee must notify the Department of the scheduled date of compliance testing at least fifteen (15) days in advance of such test. The permittee must submit compliance test results to the Department within thirty (30) days after the completion of testing. [Regulation 19, §19.702 and/or Regulation 18, §18.1002 and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]
- 8. The permittee shall provide: [Regulation 19, §19.702 and/or Regulation 18, §18.1002 and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]
 - 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
- 9. The permittee shall operate equipment, control apparatus and emission monitoring equipment within their design limitations. The permittee shall maintain in good condition at all times equipment, control apparatus and emission monitoring equipment. [Regulation 19, §19.303 and/or Regulation 18, §18.1104 and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]
- 10. If the permittee exceeds an emission limit established by this permit, the permittee will be deemed in violation of said permit and will be subject to enforcement action. The Department may forego enforcement action for emissions exceeding any limits established by this permit provided the following requirements are met: [Regulation 19, §19.601 and/or Regulation 18, §18.1101 and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]
 - a. The permittee demonstrates to the satisfaction of the Department that the emissions resulted from an equipment malfunction or upset and are not the result of negligence or improper maintenance, and the permittee took all reasonable measures to immediately minimize or eliminate the excess emissions.
 - b. The permittee reports the occurrence or upset or breakdown of equipment (by telephone, facsimile, or overnight delivery) to the Department by the end of the next business day after the occurrence or the discovery of the occurrence.
 - c. The permittee must submit to the Department, within five business days after the occurrence or the discovery of the occurrence, a full, written report of such occurrence, including a statement of all known causes and of the scheduling and

Permit #: 1582-AR-6 AFIN: 58-00263

nature of the actions to be taken to minimize or eliminate future occurrences, including, but not limited to, action to reduce the frequency of occurrence of such conditions, to minimize the amount by which said limits are exceeded, and to reduce the length of time for which said limits are exceeded. If the information is included in the initial report, the information need not be submitted again.

- 11. The permittee shall allow representatives of the Department upon the presentation of credentials: [A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]
 - a. To enter upon the permittee's premises, or other premises under the control of the permittee, where an air pollutant source is located or in which any records are required to be kept under the terms and conditions of this permit;
 - b. To have access to and copy any records required to be kept under the terms and conditions of this permit, or the Act;
 - c. To inspect any monitoring equipment or monitoring method required in this permit;
 - d. To sample any emission of pollutants; and
 - e. To perform an operation and maintenance inspection of the permitted source.
- 12. The Department issued this permit in reliance upon the statements and presentations made in the permit application. The Department has no responsibility for the adequacy or proper functioning of the equipment or control apparatus. [A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]
- 13. The Department may revoke or modify this permit when, in the judgment of the Department, such revocation or modification is necessary to comply with the applicable provisions of the Arkansas Water and Air Pollution Control Act and the regulations promulgated the Arkansas Water and Air Pollution Control Act. [Regulation 19, §19.410(A) and/or Regulation 18, §18.309(A) and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]
- 14. This permit may be transferred. An applicant for a transfer must submit a written request for transfer of the permit on a form provided by the Department and submit the disclosure statement required by Arkansas Code Annotated §8-1-106 at least thirty (30) days in advance of the proposed transfer date. The permit will be automatically transferred to the new permittee unless the Department denies the request to transfer within thirty (30) days of the receipt of the disclosure statement. The Department may deny a transfer on the basis of the information revealed in the disclosure statement or other investigation or, deliberate falsification or omission of relevant information. [Regulation 19, §19.407(B) and/or Regulation 18, §18.307(B) and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]
- 15. This permit shall be available for inspection on the premises where the control apparatus is located. [A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]

Permit #: 1582-AR-6 AFIN: 58-00263

- This permit authorizes only those pollutant emitting activities addressed herein. [A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]
- 17. This permit supersedes and voids all previously issued air permits for this facility. [Regulation 18 and 19 and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]
- 18. The permittee must pay all permit fees in accordance with the procedures established in Regulation No. 9. [A.C.A §8-1-105(c)]
- 19. 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.

[Regulation 18, §18.102(C-D), Regulation 19, §19.103(D), A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311, and CFR Part 52, Subpart E]

- 20. 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 facilities 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.

[Regulation 18, §18.102(C-D), Regulation 19, §19.103(D), A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311, and CFR Part 52, Subpart E]

Permit #: 1582-AR-6 AFIN: 58-00263

- 21. 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.

[Regulation 18, §18.102(C-D), Regulation19, §19.103(D), A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311, and CFR Part 52, Subpart E]

APPENDIX A 40 CFR 60, Subpart Dc

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

Source: 72 FR 32759, June 13, 2007, unless otherwise noted.

§ 60.40c Applicability and delegation of authority.

- (a) Except as provided in paragraph (d) 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/hr)) or less, but greater than or equal to 2.9 MW (10 MMBtu/hr).
- (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 (SO_2) or particulate matter (PM) emission limits, performance testing requirements, or monitoring requirements under this subpart (§§0.42c, 60.43c, 60.44c, 60.45c, 60.46c, or 60.47c) during periods of combustion research, as defined in §0.41c.
- (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) Heat recovery steam generators that are associated with combined cycle gas turbines and meet the applicability requirements of subpart GG or KKKK of this part are not subject to this subpart. This subpart will continue to apply to all other heat recovery steam generators that are capable of combusting more than or equal to 2.9 MW (10 MMBtu/hr) heat input of fossil fuel but less than or equal to 2.9 MW (100 MMBtu/hr) heat input of fossil fuel. If the heat recovery steam generator is subject to this subpart, only emissions resulting from combustion of fuels in the steam generating unit are subject to this subpart. (The gas turbine emissions are subject to subpart GG or KKKK, as applicable, of this part).
- (f) Any facility covered by subpart AAAA of this part is not covered by this subpart.
- (g) Any facility covered by an EPA approved State or Federal section 111(d)/129 plan implementing subpart BBBB of this part is not covered by this subpart.

§ 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 ofthis part.

Annual capacity factormeans 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 steamgenerating unit from all fuels had the steamgenerating 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, 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 (byweight) and a heating value less than 13,900 kilopules per kilogram (kJ/kg) (6,000 Btu per pound (Btu/lb) on a drybasis.

Cogeneration steam generating unit means a steam generating unit that simultaneously produces both electrical (or mechanical) and thermal energy from the same primary energy source.

Combined cycle systemmeans 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).

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 separatelyor 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 dryflue 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 steamgenerating 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 technologymeans 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 stationarygas 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 capacitymeans 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 northydrocarbon gases bund 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).

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 ratemeans the theoretical SQ₂emissions (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 unitmeans a device that combusts any fuel and produces steam or heats water or any other 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 asdefined in this subpart.

Steam generating unit operating daymeans 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.

Wet flue gas desulfurization technology means an SO₂control 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 cortrol 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.

§ 60.42c Standard for sulfur dioxide (SO₂).

- (a) Except as provided in paragraphs (b), (c), and (e) offthis 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 SO₂in excess of 87 ng/J (0.20 lb/MMBtu) heat input or 10 percent (0.10) offthe potential SO₂emission rate (90 percent reduction), nor cause to be discharged into the atmosphere from the affected facility any gases that contain SO₂in 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 SO₂in excess of 87 ng/J (0.20 lb/MMBtu) heat input or 10 percent (0.10) of the potential SO₂emission rate (90 percent reduction), nor cause to be discharged into the atmosphere from the affected facility any gases that contain SO₂in excess of the emission limit is determined pursuant to paragraph (e)(2) of this section.
- (b) Except as provided in paragraphs (c) and (e) ofthis 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 SQ₂in excess of 87 ng/J (0.20 lb/MMBtu) heat input or 20 percent (0.20) of the potential SO₂emission rate (80 percent reduction); nor

- (ii) Cause to be discharged into the atmosphere from that affected facility any gases that contain SQ in excess of SO₂in 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) ofthis section.
- (2) Combusts only coal and that uses an emerging technology for the control of SO₂emissions shall neither:
- (i) Cause to be discharged into the atmosphere from that affected facility any gases that contain SQ,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 SQ 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 SO reduction requirement specified in this paragraph and the emission limit determined pursuant to paragraph (e)(2) ofthis 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 SO₂in 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),
- (1) Affected facilities that have a heat input capacity of 22 MW (75 MMBtu/hr) 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
- (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 steamgenerating 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 SQ,in excess of 215 ng/J (0.50 lb/MMBtu) heat input; or, as an atternative, 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 SQ in excess of the following:
- (1) The percent of potential SO₂emission rate or numerical SO₂emission 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/hr); 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:

$$E_{c} = \frac{\left(K_{a}H_{a} + K_{b}H_{b} + K_{c}H_{c}\right)}{\left(H_{a} + H_{b} + H_{c}\right)}$$

Where:

E_s= SO₂emission limit, expressed in ng/J or lb/MMBtu heat input;

 $K_a = 520 \text{ ng/J } (1.2 \text{ lb/MMBtu});$

 $K_b = 260 \text{ ng/J } (0.60 \text{ lb/MMBtu});$

 $K_c = 215 \text{ ng/J } (0.50 \text{ lb/MMBtu});$

 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

 $H_cK_aH_b$ = 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 SO_2 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), or (3) ofthis 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 facilities with heat input capacities between 2.9 and 8.7 MW (10 and 30 MMBtu/hr).
- (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) Only the heat input supplied to the afected 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.

§ 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/hr) 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 capacityfactor 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/hr) or greater, shall cause to be discharged into the amosphere from that affected facility any gases that contain PMin 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 capacityof 8.7 MW (30 MMBtu/hr) 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.
- (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/hr) or greater shall cause to be discharged into the atmosphere from that affected facility any gases that contain PMin excess of 13 ng/J (0.030 lb/MMBtu) heat input, except as provided in paragraphs (e)(2), (e)(3), and (e)(4) ofthis 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/hr) or greater shall cause to be discharged into the atmosphere from that affected facility any gases that contain PMin excess of 43 ng/J (0.10 lb/MMBtu) heat input.
- (4) 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, 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 postcombustion technology (except a wet scrubber) to reduce PMor SO2 emissions is not subject to the PM limit in this

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

- (a) Except as provided in paragraphs (g) and (h) ofthis 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 (i) 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 SO₂emission 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 affect 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 SQ 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 SO₂emission 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 Eaowhen 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_{ho}(E_{ho}o) is used in Equation 19-19 of Method 19 of appendix A of this part to compute the adjusted $E_{ao}(E_{ao}o)$. The $E_{ho}o$ is computed using the following formula:

$$E_{bo} o = \frac{E_{bo} - E_{w}(1 - X_{1})}{X_{1}}$$

Where:

 E_{ho} o = Adjusted E_{ho} , ng/J (lb/MMBtu);

E_{bo}= Hourly SO₂emission 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 $\S60.42c(a)$ or (b) shall determine compliance with the SO_2 emission limits under $\S60.42c$ pursuant to paragraphs (d) σ (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 SO₂ emission rate is computed using the following formula:

$$%P_{f} = 100 \left(1 - \frac{%R_{f}}{100}\right) \left(1 - \frac{%R_{f}}{100}\right)$$

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= SO₂removal 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 ${}^{\circ}\!\!\!/ P_s$, an adjusted ${}^{\circ}\!\!\!\!/ R_g({}^{\circ}\!\!\!/ R_g)$ is computed from E_{ao} o from paragraph (e)(1) of this section and an adjusted average SO_2 inlet rate (E_{ai} 0) using the following formula:

$$\%R_{go} = 100 \left(1 - \frac{E_{\omega}^{\circ}}{E_{\omega}^{\circ}} \right)$$

Where:

%R_qo = Adjusted %R_q, in percent;

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

E_{ai}o = Adjusted average SO₂inlet rate, ng/J (lb/MMBtu).

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

$$E_{hi}o = \frac{E_{hi} - E_{w}(1 - X_{1})}{X_{1}}$$

Where:

 E_{hi} o = Adjusted E_{hi} , ng/J (lb/MMBtu);

E_{hi}= Hourly SO₂inlet 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 SO₂standards based on fuel supplier certification, the performance test shall consist of the certification, the certification from the fuel supplier, as described under §60.48c (f), as applicable.
- (i) The owner or operator of an affected facility seeking to demonstrate compliance with the SO₂standards 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 (\S) of this section, as applicable, whether or not the minimum emissions data requirements under $\S60.46c(\S$) 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 (\S) of this section, as applicable

§ 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 3 of appendix A of this part shall be used for gas analysis when applying Method 5, 5B, or 17 of appendix A 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 mnutes 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 O₂or CO₃measurements and PM measurements obtained under this section, (ii) The dry basis F factor, and
- (iii) The dry basis emission rate calculation procedure contained inMethod 19 of appendix A of this part.
- (8) Method 9 of appendix A of this part (6-minute average of 24 observations) 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 EPA Reference Method 5, 5B, or 17 of appendix A 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 EPA Method 5, 5B, or 17 of appendix A of this part shall install, calibrate, maintain, and operate a CEMS and shall comply with the requirements specified in paragraphs (c)(1) through (c)(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 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 (d)(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 (d)(7) of this section shall be expressed in ng/J or lb/MMBtu heat input and shall be used to calculate the boiler operating daydaily arithmetic average emission concentrations. The 1-hour arithmetic averages shall be calculated using thedata 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 (d)(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 60minute period) by both the continuous emission monitors and the test methods specified in paragraph (d)(7)(i) of this section.
- (i) For PM, EPA Reference Method 5, 5B, or 17 of appendix A of this part shall be used.
- (ii) For O₂(or CO₂), EPA reference Method 3, 3A, or 3B of appendix A 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 appendixF 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 becauseof 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.
- (d) The owner or operator of an affected facility seeking to demonstrate compliance under §60.43c(e)(4)

shall follow the applicable procedures under §6048c(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/hr).

§ 60.46c Emission monitoring for sulfur dioxide.

- (a) Except as provided in paragraphs (d) and (e) ofthis section, the owner or operator of an affected facility subject to the SO_2 emission limits under §60.42c shall install, calibrate, maintain, and operate a CEMS for measuring SO_2 concentrations and either O_2 or CO_2 concentrations at the outlet of the SO_2 control device (or the outlet of the steam generating unit if no SO_2 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 SO_2 concentrations and either O_2 or SO_2 concentrations at both the inlet and outlet of the SO_2 control device.
- (b) The 1-hour average SO_2 emission rates measured by a CEMS shall be expressed in ng/J or lb/MMBtu heat input and shall be used to calculatethe average emission rates under §60.42c. Each 1 hour average SO_2 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 SO_2 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 $\S60.42c$, the span value of the SO_2CEMS at the inlet to the $SO_2control$ device shall be 125 percent ofthe maximum estimated hourly potential $SO_2control$ device shall be 50 percent of the span value of the $SO_2control$ device shall be 50 percent of the maximum estimated hourly potential $SO_2control$ device shall be 50 percent of the maximum estimated hourly potential $SO_2control$ device shall be 50 percent of the maximum estimated hourly potential $SO_2control$ device shall be 50 percent of the maximum estimated hourly potential $SO_2control$ device shall be 50 percent of the maximum estimated hourly potential $SO_2control$ device shall be 50 percent of the maximum estimated hourly potential $SO_2control$ device shall be 50 percent of the maximum estimated hourly potential $SO_2control$ device shall be 50 percent of the maximum estimated hourly potential $SO_2control$ device shall be 50 percent of the maximum estimated hourly potential $SO_2control$ device shall be 50 percent of the maximum estimated hourly potential $SO_2control$ device shall be 50 percent of the maximum estimated hourly potential $SO_2control$ device shall be 50 percent of the maximum estimated hourly potential $SO_2control$ device shall be 50 percent of the maximum estimated hourly potential $SO_2control$ device shall be 50 percent of the maximum estimated hourly potential $SO_2control$ device $SO_2control$ device S
- (4) For affected facilities that are not subject to the percent reduction requirements of §60.42c, the span value of the SO₂CEMS at the outlet from the SO₂control device (or outlet of the steam generating unit if no SO₂control device is used) shall be 125 percent ofthe maximum estimated hourly potential SO₂emission rate of the fuel combusted.
- (d) As an alternative to operating a CEMS at the inlet to the SO_2 control device (or outlet of the steam generating unit if no SO_2 control device is used) as required under paragraph (a) of this section, an owner or operator may elect to determine the average SO_2 emission rate by sampling the fuel prior to combustion. As an alternative to operating a CEMS at the outlet from the SO_2 control device (or outlet of the steam generating unit if no SO_2 control device is used) as required under paragraph (a) of this section, an owner or operator may elect to determine the average SO_2 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 steamgenerating unit and analyzed for sulfur content and heat cortent according 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 SO_2 at the inlet or outlet of the SO_2 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 SO_2 and CO_2 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, 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) ofthis section, or conducting as fired fuel sampling pursuant to paragraph (d)(1) ofthis 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.

§ 60.47c Emission monitoring for particulate matter.

- (a) Except as provided in paragraphs (c), (d), (e), and (j) 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 COMS for measuring the opacity of the emissions discharged to the atmosphere and record the output ofthe system.
- (b) All COMS for measuring opacity 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) 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 (0.06 lb/MMBtu) heat input or less and that do not use a postcombustion technology to reduce SO₂ or PM emissions are not required to operate a CEMS for measuring opacity if they follow the applicable procedures under §60.48c(f).
- (d) Owners or operators complying with the PM emission limit by using a PM CEMS monitor instead of monitoring opacity must calibrate, maintain, and operate a CEMS, and record the output of the system, for PM emissions discharged to the atmosphere as specified in §60.45c(d). The CEMS specified in paragraph §60.45c(d) 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) An affected facility 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 suffur, and is operated such that emissions of CO 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 for measuring opacity. Owners and operators of affected facilities electing to comply with this paragraph must demonstrate compliance according to the procedures specifed in paragraphs (e)(1) through (4) of this section.

- (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, certifed, 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. At least two data points per hour must be used to calculate each 1-hour average.
- (iv) Quarterly accuracy determinations and daily calibration drift tests for the CO CEMS must be performed in accordance with procedure 1 in appendx 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
- (3) You must evaluate the preceding 24hour 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 affected facility that burns only gaseous fuels or fuel oils that contain less than or equal to 0.5 weight percent sulfur and operates according to a witten site-specific monitoring plan approved by the appropriate delegated permitting authority is not required to operate a COMS for measuring opacity. This monitoring plan must include procedures and criteria or establishing and monitoring specific parameters for the affected facility indicative of compliance with the opacity standard.

§ 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 afected 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) The owner or operator of each coal-fired, oil-fired, or wood-fired affected facility subject to the opacity limits under §60.43c(c) shall submit excess emission reports for any excess emissions from the affected facility that occur during the reporting period.
- (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.
- Calendar dates covered in the reporting period.
- (2) Each 30-day average SO₂emission 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 SO₂or diluent (O₂or 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 appendixF, Procedure 1 of this part.
- (11) If fuel supplier certification is used to demonstrate compliance, records of fuel supplier certification is used to demonstrate compliance, records offuel supplier catification as described under paragraph (f)(1), (2), (3), or (4) of this section, as applicable. In addition to records offuel supplier certifications, the report shall include a certifed 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 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 refner'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 mne, 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 cortent, 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 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 propertyunit 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 SO₂standard, 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 sulpart 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.

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