



ARKANSAS

ENERGY & ENVIRONMENT

August 4, 2021

Via email to: ben.barlow@bekaert.com
Paul.Sellers@bekaert.com & First Class Mail

Ben Barlow
EH&S Manager
Bekaert Corporation
1881 Bekaert Drive
Van Buren, AR 72956

Re: Notice of Final Permitting Decision; Permit No. 0299-AR-20

Dear Mr. Barlow,

After considering the application, any public comments, and other applicable materials as required by APC&EC Reg.8.211 and Ark. Code Ann. § 8-4-101 *et seq.*, this notice of final permitting decision is provided for:

Bekaert Corporation
1881 Bekaert Drive
Van Buren, AR 72956

Permit Number: 0299-AR-20

Permitting Decision: approval with permit conditions as set forth in final Permit No. 0299-AR-20

Accessing the Permitting Decision and Response to Comments, if any:
<https://www.adeq.state.ar.us/downloads/WebDatabases/PermitsOnline/Air/0299-AR-20.pdf>.

Accessing the Statement of Basis:
<https://www.adeq.state.ar.us/downloads/WebDatabases/PermitsOnline/Air/0299-AR-20-SOB.pdf>.

The permitting decision is effective on the date stated in the attached Certificate of Service unless a Commission review has been properly requested under Arkansas Pollution Control & Ecology Commission's Administrative Procedures, Regulation No. 8, within thirty (30) days after service of this decision.

The applicant or permittee and any other person submitting public comments on the record may request an adjudicatory hearing and Commission review of the final permitting decisions as

provided under Chapter Six of Regulation No. 8. Such a request shall be in the form and manner required by Reg.8.603, including filing a written Request for Hearing with the Commission secretary at 3800 Richards Rd, North Little Rock, Arkansas 72117. If you have any questions about filing the request, please call the Commission at 501-682-7890.

This permit is your authority to construct, operate, and maintain the equipment and control apparatus as set forth in your application initially received on 4/23/2020.

Sincerely,

William K. Montgomery
Associate Director, Office of Air Quality, Division of Environmental Quality
5301 Northshore Drive, North Little Rock, AR 72118-5317

Enclosure: Certificate of Service
cc: cgarland@trinityconsultants.com

CERTIFICATE OF SERVICE

I, Cynthia Hook, hereby certify that the final permit decision notice has been mailed by first class mail to Bekaert Corporation, 1881 Bekaert Drive, Van Buren, AR, 72956, on this 4th day of August, 2021.

A handwritten signature in black ink that reads "Cynthia Hook". The signature is written in a cursive style with a large initial "C" and a long, sweeping tail.

Cynthia Hook, AA, Office of Air Quality



DIVISION OF ENVIRONMENTAL QUALITY

MINOR SOURCE AIR PERMIT

PERMIT NUMBER: 0299-AR-20

IS ISSUED TO:

Bekaert Corporation
1881 Bekaert Drive
Van Buren, AR 72956
Crawford County
AFIN: 17-00043

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 DIVISION OF ENVIRONMENTAL QUALITY'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. § 8-4-101 *ET SEQ.*) AND THE REGULATIONS PROMULGATED THEREUNDER, AND IS SUBJECT TO ALL LIMITS AND CONDITIONS CONTAINED HEREIN.

Signed:

William K. Montgomery
Associate Director, Office of Air Quality
Division of Environmental Quality

August 4, 2021

Date

Bekaert Corporation
Permit #: 0299-AR-20
AFIN: 17-00043

Table of Contents

Section I: FACILITY INFORMATION	4
Section II: INTRODUCTION.....	5
Summary of Permit Activity	5
Process Description.....	5
Regulations	6
Total Allowable Emissions	7
Section III: PERMIT HISTORY	8
Section IV: EMISSION UNIT INFORMATION.....	11
NSPS Conditions	22
Section V: INSIGNIFICANT ACTIVITIES	24
Section VI: GENERAL CONDITIONS	25

Appendix A - 40 C.F.R. Part 60, Subpart Dc – *Standards of Performance for Small Industrial – Commercial – Institutional Steam Generating Units*

Bekaert Corporation
Permit #: 0299-AR-20
AFIN: 17-00043

List of Acronyms and Abbreviations

Ark. Code Ann.	Arkansas Code Annotated
AFIN	Arkansas DEQ Facility Identification Number
C.F.R.	Code of Federal Regulations
CO	Carbon Monoxide
COMS	Continuous Opacity Monitoring System
HAP	Hazardous Air Pollutant
Hp	Horsepower
lb/hr	Pound Per Hour
NESHAP	National Emission Standards (for) Hazardous Air Pollutants
No.	Number
NO _x	Nitrogen Oxide
NSPS	New Source Performance Standards
PM	Particulate Matter
PM ₁₀	Particulate Matter Equal To Or Smaller Than Ten Microns
PM _{2.5}	Particulate Matter Equal To Or Smaller Than 2.5 Microns
SO ₂	Sulfur Dioxide
Tpy	Tons Per Year
UTM	Universal Transverse Mercator
VOC	Volatile Organic Compound

Bekaert Corporation
Permit #: 0299-AR-20
AFIN: 17-00043

Section I: FACILITY INFORMATION

PERMITTEE: Bekaert Corporation

AFIN: 17-00043

PERMIT NUMBER: 0299-AR-20

FACILITY ADDRESS: 1881 Bekaert Drive
Van Buren, AR 72956

MAILING ADDRESS: 1881 Bekaert Drive
Van Buren, AR 72956

COUNTY: Crawford County

CONTACT NAME: Ben Barlow

CONTACT POSITION: EH&S Manager

TELEPHONE NUMBER: (479) 471-4758

REVIEWING ENGINEER: Andrea Sandage

UTM North South (Y): Zone 15: 3924548.04 m

UTM East West (X): Zone 15: 373572.53 m

Section II: INTRODUCTION

Summary of Permit Activity

Bekaert Corporation (Bekaert) manufactures drawn wire products (NAICS 331222) at its facility located at 1881 Bekaert Drive, Van Buren, Crawford County, Arkansas 72958. In this permit modification, the facility requested the following:

- Remove out of service sources – SN-12, SN-21, SN-33, SN-34, SN-40, SN-41, SN-59 SN-70-74
- Remove SN-67, SN-68, SN-69, SN-76 and SN-77 – Emissions are now routed to SN-66 and SN-78
- Add SN-85 Miscellaneous Natural Gas Fired Equipment - Includes SN-04, SN-05, SN-08, SN-13, SN-14, SN-17, SN-22, SN-23, SN-25, SN-27, SN-35, SN-36, SN-44, SN-79
- Move Wax Bath Fugitives (SN-15, SN-24, SN-37, SN-56, SN-58, SN-60) to A-13 Insignificant Activities
- Move Metal Cleaning and Treatment (SN-02, SN-09, SN-18, SN-29, SN-31, SN-57, SN-49, SN-55, SN-75) to B-21 Insignificant Activities
- Remove SN-28 Heat Treatment Lead Bath and SN-50 & SN-51 Zinc Quench Bath – Correction due to not being an emission source.
- Vent indoors SN-39 and SN-54 – No emissions
- Correct emissions based on updated calculations and emissions factors – SN-06, SN-11, SN-13, SN-42, SN-43, SN-53, SN-62A, SN-62B, SN-64, SN-66, SN-78, SN-81 and SN-83.

Plantwide emission decreases are 7.3 tpy PM/PM₁₀, 8.5 tpy SO₂, 1.8 tpy VOC and 4.6 tpy Hydrogen Chloride. Plantwide emission increases are 20.0 tpy CO, 7.9 tpy NO_x, 0.41 tpy Chlorine, 1.34 tpy Ammonia and 1.87 tpy Total HAPs.

Process Description

Bekaert Corporation (Bekaert) manufactures drawn wire products at its facility in Van Buren, Arkansas.

Steel wire rod is prepared for wire drawing by chemical pickling in an HCl acid solution, water rinsed, coated with wire protectorants, and dried. HCl emissions are controlled with a scrubber (SN-81). The wire rod is then drawn on one of several wire drawing machines (dust emissions collected by SN-06, SN-53, SN-62A, and SN-62B) to become “bright” wire. Some wire also is further processed through redraw where the wire is put through the drawing process a second time in order to further reduce the diameter of the wire (dust emissions collected by SN-64, SN-66, and SN-78). The bright wire is further processed on one of three (3) lines utilizing two (2) types of hot dip galvanizing processes. The lines differ mainly in the heat treating and galvanizing process.

The first type of hot dip galvanizing line is identified as the IPV 40 line. Bright wire is heat treated in a patenting furnace, quenched in a molten lead bath (SN-26), and cooled in a water bath. The wire receives further cleaning in an HCl pickling bath (SN-30). A flux coating is then applied, with emissions controlled with a scrubber (SN-32). A zinc coating is then applied to the wire via dipping in a bath of molten zinc and/or a bath containing a mixture of molten zinc and aluminum (SN-35). Final steps involve cooling and application of surface protectorants.

The second type of galvanizing process is used on the IVD 40 and IVD 60 lines. Bright wire is heat treated in molten lead baths (SN-07 and SN-16) and water quenched. The wire receives further cleaning in HCl pickling baths, with HCl emissions controlled with scrubbers (SN-10 and SN-19). A flux coating is then applied, with emissions controlled with scrubbers (SN-11 and SN-20). A zinc coating is then applied to the wire via dipping in a bath of molten zinc or a bath containing a mixture of molten zinc and aluminum (SN-13 and SN-22). Final steps involve cooling and application of surface protectorants.

Several optional finishing operations are performed on a portion of the wire produced in the prior operations. Some wire is stranded together to produce wire cable on two processing lines. Emissions sources include the PC stranding machine (SN-84a), and the induction heaters (SN-83 cyclone and SN-84b dust collector).

Two boilers (SN-42 and SN-43) are located within the plant and are used to provide process steam. These natural gas fired boilers do not typically operate simultaneously. However, they are permitted to operate simultaneously at theoretical maximum annual rates.

There are numerous other pieces of small natural gas fired equipment which are now generically grouped under SN-85 for permitting purposes. These include burners for furnaces and baths.

There are numerous sources at the plant which are now considered Insignificant Activities, including various metal cleaning and treatment tanks and cooling towers.

One emergency generator (SN-82) is deployed to keep the zinc bath on the IVP-40 line from solidifying during a power interruption. It is considered an insignificant source since it is considered a “gap engine” in reference to NSPS Subpart JJJJ and NESHAP Subpart ZZZZ.

Regulations

The following table contains the regulations applicable to this permit.

Regulations
Arkansas Air Pollution Control Code, Regulation 18, effective March 14, 2016
Rules of the Arkansas Plan of Implementation for Air Pollution Control, Rule 19, effective August 6, 2020

Bekaert Corporation
 Permit #: 0299-AR-20
 AFIN: 17-00043

Regulations
40 C.F.R. Part 60, Subpart Dc – <i>Standards of Performance for Small Industrial – Commercial – Institutional Steam Generating Units</i>
40 C.F.R. Part 63, Subpart ZZZZ – <i>National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines</i>

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 ALLOWABLE EMISSIONS		
Pollutant	Emission Rates	
	lb/hr	tpy
PM	8.3	32.6
PM ₁₀	8.3	32.6
PM _{2.5}	See Note*	
SO ₂	2.6	9.6
VOC	1.0	2.6
CO	8.0	33.2
NO _x	9.5	40.7
Lead (Pb)	0.03	0.01
Chlorine (Cl ₂)	0.61	2.61
Hydrogen Chloride (HCl)	0.89	3.75
Ammonia (NH ₃ /NH ₄)	2.83	12.34
Total HAPs	0.36	1.87

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

Section III: PERMIT HISTORY

- 299-A Initial air permit for Bekaert Corporation. It established process and emission limits for the facility.
- 299-AR-1 Issued 11/28/89 and addressed emission changes within the facility.
- 299-AR-2 Issued 1/20/93 and 3/17/94 which established emission limits following process changes at the facility.
- 299-AR-3
- 299-AR-4 Issued 7/25/95 and updated all sources into one application due to past permit modifications and future production increases. Emissions data for the facility were modified slightly due to emission test results. Two additional sources were added which included a wire drawing department exhaust (SN-53) and a wax bath vacuum wipe (SN-54).
- 299-AR-5 Issued 1/29/96 and included the addition of a new pickling inhibitor chemical in the rod pickling HCl tanks and required the facility to measure the pressure drop across the sieve trays on SN-10 and SN-19 instead of measuring across the scrubbers.
- 299-AR-6 Issued 8/13/96 as a minor modification which involved the replacement of the EG 32 (electro-galvanizing) line with another Hot Dip line similar to the previously permitted IVD 40 and 60 lines. The IPV 40 sources, from the heat treating steps through the pickling steps, are the same type as the currently permitted EG 32 line. This replacement eliminated sulfuric acid from Bekaert's galvanizing process lines. The IPV 40 and the IVD 40 lines also have an additional hot dip step involving a mixture of zinc and aluminum. The operation of the IPV 40 line resulted in a total plant operational capacity increase of approximately 16%. From this modification, emissions of zinc sulfate, sulfuric acid, and sulfate were eliminated. The most significant increases in emissions were due mainly to more natural gas combustion and a larger pickling bath.
- 299-AR-7 Issued 4/25/97 and with the following modifications: modified SN-29 to include fugitive and the vacuum wipe emissions on the East side of the IPV 40 line; deleted SN-31 and ducted to SN-30 inlet; added a point source to include fugitive and the vacuum wipe emissions on the West side of the IPV 40 line as SN-31; combined sources 38, 39, and 57 into one source renumbered as SN-38; combined sources 55, 59, and 61 into one source renumbered as SN-39; added source emissions for IPV 40 air knife exhaust as SN-55; added a source number for the Wire drawing Dept. Hand vacuum system (SN-62); added the redraw dept. Dust Collector and Hand vacuum system (SN-63 and 64); added source emissions for the strand coating applicator as SN-57.
- 299-AR-8 Issued 10/27/97 and involved adding Dust Collector No. 2 (SN-61) to the Redraw Dept.

- 229-AR-9 Issued 6/30/99 and authorized the removal of collectors on the lead annealing process (SN-7 and SN-16) and added SN-65 and SN-66 (dust collectors). This permit also authorized the installation of the welded wire machines (SN-59).
- 299-AR-10 Issued 3/8/01 and covered the addition of three new ventilation fan stacks (SN-67, SN-68, and SN-69) for the wire drawing building. In addition, emissions for several permitted sources (06, 28, 40, 50, 51, 53, 55, 59, 61-66) were changed due to updated calculation methodologies.
- 299-AR-11 Issued 7/14/03 and included the addition of SN-70 through SN-74 to quantify emissions from each separate wire welding machine stack; installation of a new air knife system (SN-75), similar to currently permitted SN-55; installation of new vacuum wipe systems on the galvanizing line HCl baths which will discharge into the current scrubber system, causing a slight increase in HCl emissions for SN-01, SN-10, SN-19, and SN-30; and increase inhibitor usage (SN-01) to 1650 gallons per year. Emission increases were 1.1 ton/yr VOC, 0.5 ton/yr zinc oxide, and 0.24 ton/yr HCl.
- 0299-AR-12 Issued 8/10/06 and authorized the following modifications: removal of the dust collector for SN-40; removal of dust collectors SN-61, SN-63, and SN-65 and route these emissions to SN-66 and the dust collector from SN-40 (new SN-78); add two roof ventilation fans (SN-76 and SN-77); and re-designate aluminum, zinc, and zinc oxide as PM/PM₁₀ instead of HAPs. Total facility emissions were permitted at: 31.5 tpy PM/PM₁₀, 11.8 tpy SO₂, 4.6 tpy VOC, 11.9 tpy CO, 44.4 tpy NO_x, 0.3 tpy Pb, 2.2 tpy Cl₂, 8.74 tpy HCl, 11.0 tpy NH₃/NH₄.
- 0299-AR-13 Issued 3/7/07 and authorized the following modification: add a standalone zinc phosphate coating process. This process included three liquid baths (zinc phosphate, rinse, and borax coating) and a 1.5 MMBtu/hr drying furnace (SN-79). Permitted annual emission increases associated with this change are: 0.1 tpy PM, 0.1 tpy PM₁₀, 0.1 tpy SO₂, 0.1 tpy VOC, 0.6 tpy CO, and 0.7 tpy NO_x. It was amended on 11/12/08 to authorize removal of three Vacuum Bath Wipe Systems (SN-38, 46, and 47) and designated one new and three existing Quench Air Knives (formerly SN-55 and SN-75) to the Insignificant Activities (A-13) list. The permit template was also updated.
- 0299-AR-14 Issued on 5/5/2009 and authorized the following modification: installed four new dry drawing machines with a new dust collector (SN-80). Emissions from the Wire Drawing Department were formerly split equally between two exhaust systems (SN-06 and SN-53). The emissions from the Wire Drawing Department are now split equally among three exhaust systems (SN-06, 53 and 80). Changes in total permitted emissions were: 0.6 tpy PM/PM₁₀.
- 0299-AR-15 Issued January 22, 2010. In this activity, a dust collector, SN-80, previously permitted but never installed, was removed from the permit. The particulates will be collected by two existing dust collectors. In addition, Bekaert asked to replace two existing 28 MMBtu/hr boilers, SN-42 and SN-43, (vintage circa 1972) with

Bekaert Corporation
Permit #: 0299-AR-20
AFIN: 17-00043

two new, more efficient, 14.7 MMBtu/hr boilers, which will result in reduced emissions. They will use existing stacks, and the source numbers will remain the same. The Company also requests to bubble emissions for SN-42 and SN-43. Permitted PM and PM₁₀ emissions will decrease by 0.4 tpy each, due to rounding.

- 0299-AR-16 Issued February 15, 2013. SN-01 and SN-03 were removed from the permit and a new, higher efficiency packed bed scrubber for the Pickling Baths/Rod Pickling (SN-81) was added. SN-45 and SN-48 were also removed. As well, the active permit, #0299-AR-15, lists two alternative scenarios addressing replacement of two boilers, SN-42 and SN-43, with newer, smaller, boilers in a staged approach. Both old boilers have been replaced (Alternative Scenario #2 in the active permit), and these requirements have been incorporated into this modification. These activities increased permitted CO emissions by 1.2 tpy. Permitted emissions decreased as follows: PM and PM₁₀ by 1.3 tpy each; VOC by 0.4 tpy; NO_x by 11.4 tpy; and HCl by 0.39 tpy.
- 0299-AR-17 Issued July 11, 2013. Added an existing emergency generator (SN-82) as an insignificant activity and added a new Pre-stretch Cable Strander (SN-83). Specific Condition #15 was revised to lower the acceptable pressure drop for SN-81 from 2.5 to 0.5 and change the pressure drop for SN-30 from 5 to 8 to 5.5 to 9.0. The plant wide emissions increased 0.1 tpy PM/PM₁₀.
- 0299-AR-18 Issued May 13, 2014. Pickled steel rod process limit of 144,870 tpy was replaced with 312 tpy anthracite coal. Dust collectors for SN-13, SN-22 and SN-35 were removed and dust emissions were vented outside through the roof. Plantwide emissions increased by 0.6 tpy PM/PM₁₀, 6.2 tpy SO₂ and 0.1 tpy VOC. Plantwide emissions decreased by 0.5 tpy CO, 0.9 tpy NO_x and 0.29 tpy Lead.
- 0299-AR-19 Issued May 16, 2017. New PC Strander equipment (SN-84A PC Strander and SN-84B Induction Heater for PC Strander with Duct Collector) was installed. Plantwide emission increases were 11.4 tpy PM/PM₁₀.

Section IV: EMISSION UNIT INFORMATION

Specific Conditions

1. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by operating at or less than maximum capacity and by complying with Specific Conditions #6, #7, #11 and #13. [Reg.19.501 *et seq.* and Ark. Code Ann. § 8-4-203 as referenced by Ark. Code Ann. §§ 8-4-304 and 8-4-311]

SN	Description	Pollutant	lb/hr	tpy
01	Removed for R-16			
02	Borax Coating Bath/Pickling	Removed for R-20 - B21 Insignificant Activities		
03	Removed for R-16			
04	Drying Furnace #1/Pickling (natural gas, 2.5 MMBtu/hr)	Moved to SN-85		
05	Drying Furnace #2/Pickling (natural gas, 2.5 MMBtu/hr)			
06	Wire Drawing Dept. Torit Dust Collector (North)	PM ₁₀	0.2	0.6
07	IVD 60 Wire Heat Treat Lead Bath	PM ₁₀	0.2	2.1*
		SO ₂	0.9	9.2*
		VOC	0.1	0.1*
		CO	0.1	0.1*
		NO _x	0.2	1.4*
		Pb	0.01	0.01*
08	Heat Treatment Lead Bath Furnace (natural gas, 7.6 MMBtu/hr)	Moved to SN-85		
09	Quench Bath	Removed for R-20 - B21 Insignificant Activities		
11	IVD 60 Wire Fluxing Bath Scrubber	PM ₁₀	0.3	1.2
12	Drying Furnace (natural gas)	Removed for R-20 - Out of Service		
13	IVD 60 Wire Hot Dip Galvanizing Kettle	PM ₁₀	0.1	0.5
14	Hot Dip Galvanizing Bath (natural gas, 3.7 MMBtu/hr)	Moved to SN-85		
15	Wax Bath	Moved to Insignificant Activity A-13		

SN	Description	Pollutant	lb/hr	tpy
16	IVD 40 Wire Heat Treat Lead Bath	PM ₁₀ SO ₂ VOC CO NO _x Pb	0.2 0.9 0.1 0.1 0.2 0.01	*Bubbled with SN-07
17	Heat Treatment Lead Bath (natural gas, 8.6 MMBtu/hr)	Moved to SN-85		
18	Quench Bath	Removed for R-20 - B21 Insignificant Activities		
20	IVD 40 Wire Fluxing Bath Scrubber	PM ₁₀	0.3	1.2
21	Drying Furnace (natural gas, 0.56 MMBtu/hr)	Removed for R-20 - Out of Service		
22	IVD 40 Wire Hot Dip Galvanizing Kettle	PM ₁₀	0.1	0.5
23	Hot Dip Galvanizing Bath Furnace (natural gas, 3.4 MMBtu/hr)	Moved to SN-85		
24	Wax Bath	Moved to Insignificant Activity A-13		
25	Patenting Furnace (natural gas, 11 MMBtu/hr)	Moved to SN-85		
26	IPV 40 Heat Treatment Lead Bath	PM ₁₀ SO ₂ VOC CO NO _x Pb	0.1 0.5 0.1 0.1 0.1 0.01	*Bubbled with SN-07
27	Heat Treatment Lead Bath Furnace (natural gas, 1.5 MMBtu/hr)	Moved to SN-85		
28	Heat Treatment Lead Bath	Removed for R-20		
29	Quench Bath and Vacuum Wipe East	Removed for R-20 B21 Insignificant Activities		
31	Quench Bath and Vacuum Wipe West			
32	IPV 40 Wire Fluxing Bath Scrubber	PM ₁₀	0.6	2.3
33	West Drying Oven (natural gas)	Removed for R-20 - Out of Service		
34	East Drying Oven (natural gas)			
35	IPV 40 Wire Hot Dip Galvanizing Kettles	PM ₁₀	0.1	0.5
36	BEZINAL Bath Furnace (natural gas)	Moved to SN-85		

SN	Description	Pollutant	lb/hr	tpy
37	West Light Wax Bath	Moved to Insignificant Activity A-13		
39	East Cooling & Wax Baths Vacuum Wipe Systems	Vented indoors – no emissions		
40	Welded Field Fence/Finished Products	Removed for R-20 - Out of Service		
41	Dramix Electric Drying Oven Finished Products			
42	Service Boiler North (natural gas, 14.7 MMBtu/hr)	PM ₁₀	0.2	0.5
		SO ₂	0.1	0.1
		VOC	0.1	0.4
		CO	1.3	5.5
		NO _x	1.5	6.5
43	Service Boiler South (natural gas, 14.7 MMBtu/hr)	PM ₁₀	0.2	0.5
		SO ₂	0.1	0.1
		VOC	0.1	0.4
		CO	1.3	5.5
		NO _x	1.5	6.5
44	BEZINAL Bath Furnace (natural gas)	Moved to SN-85		
50	Zinc Quench Bath Area Ventilation	Removed for R-20		
51	Zinc Quench Bath Area Ventilation			
53	Wire Drawing Dept. Torit Dust Collector (South)	PM ₁₀	0.2	0.6
54	Wax Bath Vacuum Wipe	Vented indoors – no emissions		
56	West Standard Wax Bath	Moved to Insignificant Activity A-13		
57	Strand Coating Applicator	Removed for R-20 B21 Insignificant Activities		
58	East Standard Wax Bath	Moved to Insignificant Activity A-13		
59	Welded Wire Machine #1 Stack	Removed for R-20 - Out of Service		
60	East Light Wax Bath	Moved to Insignificant Activity A-13		
62A	Wire Drawing Dept. Hand Vacuum Systems Dust Collector #1	PM ₁₀	0.1	0.1
62B	Wire Drawing Dept. Hand Vacuum Systems Dust Collector #2	PM ₁₀	0.1	0.1
64	Redraw Dept. Hand Vacuum System Dust Collector	PM ₁₀	0.1	0.1
66	Redraw Dept. Dust Collector System (Machines 1-4)	PM ₁₀	0.3	1.0

SN	Description	Pollutant	lb/hr	tpy
67	Wire Drawing Department VF#1	Removed for R-20 Emissions routed to SN-66 and SN-78		
68	Wire Drawing Department VF#2			
69	Wire Drawing Department VF#3			
70 - 74	Welded Wire Machine #2, #3, #4, #5, #6	Removed for R-20 - Out of Service		
76	Vent Fan #1 Redraw Dept. Roof	Removed for R-20 Emissions routed to SN-66 and SN-78		
77	Vent Fan #2 Redraw Dept. Roof			
78	Redraw Dept. Soap Dust Collector System (Machines 5-10, 16, 17)	PM ₁₀	0.2	0.9
79	Drying Furnace/Zinc Phosphate Line (natural gas, 1.5 MM Btu/hr)	Moved to SN-85		
49, 55, 75	Removed for R-20 - B21 Insignificant Activities			
38, 46, 47, 61, 63, 65	Removed from Service			
80	Collector Never Installed			
81	HCl Pickling Tunnel with Scrubber (KCH)	VOC	0.1	0.2
83	Induction Heater for PC Strander #70, with Cyclone	PM ₁₀	1.5	6.5
84A	PC Strander #71	PM ₁₀	2.3	9.9
84B	Induction Heater for PC Strander #71 w/Dust Collector	PM ₁₀	0.4	1.5
85	Miscellaneous Natural Gas Fired Equipment – Includes SN-04, SN-05, SN- 08, SN-13, SN-14, SN-17, SN-22, SN-23, SN-25, SN-27, SN-35, SN-36, SN-44, SN- 79	PM ₁₀	0.5	2.0
		SO ₂	0.1	0.2
		VOC	0.4	1.5
		CO	5.1	22.1
		NO _x	6.0	26.3

2. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by operating at or less than maximum capacity and by complying with Specific Conditions #6, #7, #11, and #13. [Reg.18.801 and Ark. Code Ann. § 8-4-203 as referenced by Ark. Code Ann. §§ 8-4-304 and 8-4-311]

SN	Description	Pollutant	lb/hr	tpy
01	Removed for R-16			

Bekaert Corporation
 Permit #: 0299-AR-20
 AFIN: 17-00043

SN	Description	Pollutant	lb/hr	tpy
02	Borax Coating Bath/Pickling	Removed for R-20 - B21 Insignificant Activities		
03	Removed for R-16			
04	Drying Furnace #1/Pickling (natural gas, 2.5 MMBtu/hr)	Moved to SN-85		
05	Drying Furnace #2/Pickling (natural gas, 2.5 MMBtu/hr)			
06	Wire Drawing Dept. Torit Dust Collector (North)	PM	0.2	0.6
07	IVD 60 Wire Heat Treat Lead Bath	PM Total HAPs	0.2 -	2.1* 3.35E-02*
08	Heat Treatment Lead Bath Furnace (natural gas, 7.6 MMBtu/hr)	Moved to SN-85		
09	Quench Bath	Removed for R-20 - B21 Insignificant Activities		
10	IVD 60 Wire Pickling Scrubber (Galvanizing Dept.)	HCl	0.18	0.75
11	IVD 60 Wire Fluxing Bath Scrubber	PM Chlorine Ammonia	0.3 0.04 0.11	1.2 0.16 0.46
12	Drying Furnace (natural gas)	Removed for R-20 - Out of Service		
13	IVD 60 Wire Hot Dip Galvanizing Kettle	PM Chlorine Ammonia	0.1 0.15 0.80	0.5 0.66 3.50
14	Hot Dip Galvanizing Bath (natural gas, 3.7 MMBtu/hr)	Moved to SN-85		
16	IVD 40 Wire Heat Treat Lead Bath	PM Total HAPs	0.2 -	*Bubbled with SN-07

Bekaert Corporation
 Permit #: 0299-AR-20
 AFIN: 17-00043

SN	Description	Pollutant	lb/hr	tpy
17	Heat Treatment Lead Bath (natural gas, 8.6 MMBtu/hr)	Moved to SN-85		
18	Quench Bath	Removed for R-20 - B21 Insignificant Activities		
19	Chemical/Electro-Chemical Pickling w/Scrubber	HCl	0.18	0.75
20	IVD 40 Wire Fluxing Bath Scrubber	PM Chlorine Ammonia	0.3 0.04 0.11	1.2 0.16 0.46
21	Drying Furnace (natural gas, 0.56 MMBtu/hr)	Removed for R-20 - Out of Service		
22	IVD 40 Wire Hot Dip Galvanizing Kettle	PM Chlorine Ammonia	0.1 0.15 0.80	0.5 0.66 3.50
23	Hot Dip Galvanizing Bath Furnace (natural gas, 3.4 MMBtu/hr)	Moved to SN-85		
24	Wax Bath	Moved to Insignificant Activity A-13		
25	Patenting Furnace (natural gas, 11 MMBtu/hr)	Moved to SN-85		
26	IPV 40 Heat Treatment Lead Bath	PM Total HAPs	0.1 -	*Bubbled with SN-07
27	Heat Treatment Lead Bath Furnace (natural gas, 1.5 MMBtu/hr)	Moved to SN-85		
28	Heat Treatment Lead Bath	Removed for R-20		
29	Quench Bath and Vacuum Wipe East	Removed for R-20 B21 Insignificant Activities		
30	IPV 40 Wire Pickling Scrubber (Galvanizing Dept.)	HCl	0.18	0.75

Bekaert Corporation
 Permit #: 0299-AR-20
 AFIN: 17-00043

SN	Description	Pollutant	lb/hr	tpy
31	Quench Bath and Vacuum Wipe West	Removed for R-20 B21 Insignificant Activities		
32	IPV 40 Wire Fluxing Bath Scrubber	PM	0.6	2.3
		Chlorine	0.08	0.31
		Ammonia	0.21	0.92
33	West Drying Oven (natural gas)	Removed for R-20 - Out of Service		
34	East Drying Oven (natural gas)			
35	IPV 40 Wire Hot Dip Galvanizing Kettles	PM	0.1	0.5
		Chlorine	0.15	0.66
		Ammonia	0.80	3.50
36	BEZINAL Bath Furnace (natural gas)	Moved to SN-85		
37	West Light Wax Bath	Moved to Insignificant Activity A-13		
39	East Cooling & Wax Baths Vacuum Wipe Systems	Vented indoors – no emissions		
40	Welded Field Fence/Finished Products	Removed for R-20 - Out of Service		
41	Dramix Electric Drying Oven Finished Products			
42	Service Boiler North (natural gas, 14.7 MMBtu/hr)	PM	0.2	0.5
		Total HAPs	-	0.13
43	Service Boiler South (natural gas, 14.7 MMBtu/hr)	PM	0.2	0.5
		Total HAPs	-	0.13
44	BEZINAL Bath Furnace (natural gas)	Moved to SN-85		
45	Removed for R-16			
48	Removed for R-16			
50	Zinc Quench Bath Area Ventilation	Removed for R-20		

SN	Description	Pollutant	lb/hr	tpy
51	Zinc Quench Bath Area Ventilation			
53	Wire Drawing Dept. Torit Dust Collector (South)	PM	0.2	0.6
54	Wax Bath Vacuum Wipe	Vented indoors – no emissions		
56	West Standard Wax Bath	Moved to Insignificant Activity A-13		
57	Strand Coating Applicator	Removed for R-20 B21 Insignificant Activities		
58	East Standard Wax Bath	Moved to Insignificant Activity A-13		
59	Welded Wire Machine #1 Stack	Removed for R-20 - Out of Service		
60	East Light Wax Bath	Moved to Insignificant Activity A-13		
62A	Wire Drawing Dept. Hand Vacuum Systems Dust Collector #1	PM	0.1	0.1
62B	Wire Drawing Dept. Hand Vacuum Systems Dust Collector #2	PM	0.1	0.1
64	Redraw Dept. Hand Vacuum System Dust Collector	PM	0.1	0.1
66	Redraw Dept. Dust Collector System (Machines 1-4)	PM	0.3	1.0
67	Wire Drawing Department VF#1	Removed for R-20 Emissions routed to SN-66 and SN-78		
68	Wire Drawing Department VF#2			
69	Wire Drawing Department VF#3			
70 - 74	Welded Wire Machine #2, #3, #4, #5, #6	Removed for R-20 - Out of Service		
76	Vent Fan #1 Redraw Dept. Roof	Removed for R-20 Emissions routed to SN-66 and SN-78		

SN	Description	Pollutant	lb/hr	tpy
77	Vent Fan #2 Redraw Dept. Roof			
78	Redraw Dept. Soap Dust Collector System (Machines 5-10, 16, 17)	PM	0.2	0.9
79	Drying Furnace/Zinc Phosphate Line (natural gas, 1.5 MM Btu/hr)	Moved to SN-85		
49, 55, 75	Removed for R-20 - B21 Insignificant Activities			
38, 46, 47, 61, 63, 65	Removed from Service			
80	Collector Never Installed			
81	HCl Pickling Tunnel with Scrubber (KCH)	HCl Total HAPs	0.35 0.36	1.50 1.57
83	Induction Heater for PC Strander #70, with Cyclone	PM	1.5	6.5
84A	PC Strander #71	PM	2.3	9.9
84B	Induction Heater for PC Strander #71 w/Dust Collector	PM	0.4	1.5
85	Miscellaneous Natural Gas Fired Equipment – Includes SN-04, SN-05, SN-08, SN- 13, SN-14, SN-17, SN-22, SN-23, SN- 25, SN-27, SN-35, SN-36, SN-44, SN- 79	PM	0.5	2.0

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

SN	Limit	Regulatory Citation
42, 43, 62A, 62B, 84B, 85	5%	[Reg.18.501 <i>et seq.</i> and Ark. Code Ann. § 8-4-203 as referenced by Ark. Code Ann. §§ 8-4-304 and 8-4-311]
06, 07, 11, 16, 20, 32, 53, 64, 66, 78, 81, 83, 84A, 13, 22 ,35	20%	[Reg.19.503 <i>et seq.</i> and Ark. Code Ann. § 8-4-203 as referenced by Ark. Code Ann. §§ 8-4-304 and 8-4-311]

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 Ark. Code Ann. § 8-4-303. [Reg.18.801 and Ark. Code Ann. § 8-4-203 as referenced by Ark. Code Ann. §§ 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. [Reg.18.901 and Ark. Code Ann. § 8-4-203 as referenced by Ark. Code Ann. §§ 8-4-304 and 8-4-311]
6. The permittee shall use only pipeline quality natural gas as fuel at the facility. Propane gas shall be used only as a standby source of fuel during natural gas curtailments. The permittee shall maintain records of propane gas usage. [Reg.19.705 and Ark. Code Ann. § 8-4-203 as referenced by Ark. Code Ann. §§ 8-4-304 and 8-4-311]
7. The permittee shall limit the total heat input for all miscellaneous natural gas combustion sources designated as SN-85, at the facility, to 60 MM Btu/hr. Compliance with this condition shall be demonstrated through compliance with Specific Conditions #8 & #9. [Reg.19.705, Ark. Code Ann. § 8-4-203 as referenced by Ark. Code Ann. §§ 8-4-304 and 8-4-311]
8. The permittee shall maintain an up-to-date list of all miscellaneous natural gas combustion equipment and associated firing rates designated as SN-85. Changes to the miscellaneous natural gas fired equipment list are allowed, provided that the total firing rate of all miscellaneous equipment in the group does not exceed 60 MM Btu/hr, and that the permittee shall update the list immediately after a change, keep records onsite, and make the records available to Department personnel upon request. [Reg.19.705, Ark. Code Ann. § 8-4-203 as referenced by Ark. Code Ann. §§ 8-4-304 and 8-4-311]
9. The permittee shall not construct, reconstruct, install, or modify any combination of miscellaneous natural gas combustion equipment that have a total heat input capacity greater than 10 MMBTU/hr without submitting the appropriate application and obtaining the Department's prior approval. [Reg.19.304 and Ark. Code Ann. § 8-4-203 as referenced by Ark. Code Ann. §§ 8-4-304 and 8-4-311]

10. The permittee shall maintain monthly records which demonstrate compliance with Specific Condition #7. The permittee shall update the records by the fifteenth day of the month following the month to which the records pertain. The permittee will keep the records onsite, and make the records available to Department personnel upon request. [Reg.19.705 and Ark. Code Ann. § 8-4-203 as referenced by Ark. Code Ann. §§ 8-4-304 and 8-4-311]
11. The permittee shall not use more than a combined total of 312 tons of anthracite coal for SN-07, SN-16, and SN-26 per rolling 12-month period. [Reg.19.705 and Ark. Code Ann. § 8-4-203 as referenced by Ark. Code Ann. §§ 8-4-304 and 8-4-311]
12. The permittee shall maintain monthly records which demonstrate compliance with Specific Condition #11. The permittee shall maintain a twelve month rolling total and each individual month's data. The permittee shall update the records by the fifteenth day of the month following the month to which the records pertain. The permittee will keep the records onsite, and make the records available to Department personnel upon request. [Reg.19.705 and Ark. Code Ann. § 8-4-203 as referenced by Ark. Code Ann. §§ 8-4-304 and 8-4-311]
13. The permittee shall not use more than 1,650 gallons of pickling inhibitor at the facility per rolling 12-month period. [Reg.19.705 and Ark. Code Ann. § 8-4-203 as referenced by Ark. Code Ann. §§ 8-4-304 and 8-4-311]
14. The permittee shall maintain monthly records which demonstrate compliance with Specific Condition #13. The permittee shall maintain a twelve month rolling total and each individual month's data in a spreadsheet, database, or other well-organized format. The permittee shall maintain the records and the MSDS records or other equivalent documentation on-site and made available to Department personnel upon request. The permittee shall update the records by the fifteenth day of the month following the month to which the records pertain. [Reg.19.705 and Ark. Code Ann. § 8-4-203 as referenced by Ark. Code Ann. §§ 8-4-304 and 8-4-311]
15. The permittee shall maintain all control equipment in proper working order for the pickling scrubbers according to the manufacturer's specifications submitted in the permit application. Compliance with this condition shall be demonstrated by maintaining daily records of the pressure drop across the HCl scrubber (SN-81) and the total sieve tray differential pressure on SN-10, SN-19, and SN-30. Acceptable pressure differentials are as follows:

Source	Scrubber Designation	Acceptable Pressure Drop (Inches of Water)
SN-10	IVD 60 Wire Pickling Scrubber (Galvanizing Dept.)	5.0 – 8.0
SN-19	IVD 40 Wire Pickling Scrubber (Galvanizing Dept.)	5.0 – 8.0

Source	Scrubber Designation	Acceptable Pressure Drop (Inches of Water)
SN-30	IPV 40 Wire Pickling Scrubber (Galvanizing Dept.)	5.5 – 9.0
SN-81	HCl Pickling Tunnel with Scrubber (KCH)	0.5 – 5.0

If the pressure drop falls out of the acceptable range then this shall be noted on the daily record keeping and the corrective action shall also be noted. Corrective action for the problem shall be taken within 24 hours. If the pressure drop cannot be corrected to an acceptable level within 24 hours, then this process shall be shut down until the problem is resolved. These records shall be kept on-site and shall be made available to Department personnel upon request. [Reg.18.1003 and Ark. Code Ann. § 8-4-203 as referenced by Ark. Code Ann. §§ 8-4-304 and 8-4-311]

16. The permittee shall maintain all control equipment in proper working order for the fluxing bath scrubbers according to the manufacturer's specifications submitted in the permit application. Compliance with this condition shall be demonstrated by maintaining daily operation records for the fluxing bath scrubbers. The parameters to be monitored are the following:

Source	Scrubber Designation	Parameters
SN-11	IVD 60 Wire Fluxing Bath Scrubber	20 gpm Minimum Recirculation Rate
SN-20	IVD 40 Wire Fluxing Bath Scrubber	
SN-32	IPV 40 Fluxing Scrubber	Visual Confirmation of Spray

If the monitored parameter is not met on a given day, then this shall be noted on the daily record keeping and the corrective action shall also be noted. Corrective action for the problem shall be taken within 24 hours. If the issue cannot be corrected to an acceptable level within 24 hours, then this process shall be shut down until the problem is resolved. These records shall be kept on-site and shall be made available to Department personnel upon request. [Reg.18.1003 and Ark. Code Ann. § 8-4-203 as referenced by Ark. Code Ann. §§ 8-4-304 and 8-4-311]

NSPS Conditions

17. SN-42 & SN-43 are subject to the provisions of 40 C.F.R. Part 60, Subpart Dc – Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units due to the dates of manufacture/installation. The permittee shall

Bekaert Corporation
Permit #: 0299-AR-20
AFIN: 17-00043

comply with all requirements of this subpart, which include, but are not limited to the following: [Reg.19.304 and 40 C.F.R. Part 60, Subpart Dc]

18. 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 and as provided in §60.48I(a)(1)-(4). [Reg.19.304 and 40 C.F.R. §60.48c(a)]
19. The permittee shall record and maintain records of the amount of natural gas used each month on the two boilers. [Reg.19.705, 40 C.F.R. §60.48c(g)(2), 40 C.F.R. Part 52, Subpart E and Ark. Code Ann. § 8-4-203 as referenced by Ark. Code Ann. §§ 8-4-304 and 8-4-311]
20. All records of natural gas usage at SN-42 and SN-43 shall be maintained by the owner or operator of the affected facility for a period of two years following the date of such record. [Reg.19.304 and 40 C.F.R. §60.48c(i)]

Section V: INSIGNIFICANT ACTIVITIES

The Division of Environmental Quality deems the following types of activities or emissions as insignificant on the basis of size, emission rate, production rate, or activity in accordance with Group A of the Insignificant Activities list found in Regulation 18 and Regulation 19 Appendix A. Group B insignificant activities may be listed but are not required to be listed in permits. Insignificant activity emission determinations rely upon the information submitted by the permittee in an application dated February 11, 2009 and April 23, 2020. [Reg.19.408 and Ark. Code Ann. § 8-4-203 as referenced by Ark. Code Ann. §§ 8-4-304 and 8-4-311]

Description	Category
Three Zinc Quench Bath Vacuums (one, formerly SN-49), water vapor only	A-13
Four Zinc or Beznal Quench Knives (two, formerly SN-55 and 75), water vapor only	A-13
Wire Drawing Cooling Tower #1	A-13
Wire Drawing Cooling Tower #2	A-13
Wire Drawing Cooling Tower #3	A-13
Redraw Cooling Tower #1	A-13
IVD 60 Cooling Tower	A-13
IVD 40 Cooling Tower	A-13
IPV 40 Cooling Tower	A-13
PC Strander Cooling Tower	A-13
Front Office Cooling Tower	A-13
Wax Bath Fugitives (SN-15, 24, 37, 56, 58, 60)	A-13
Quality Control Laboratory	A-5
IVP-40 Zinc Bath Emergency Generator (SN-82) ¹	A-1

¹ Generator SN-82 is an existing emergency stationary SI RICE located at an Area Source of HAP and is subject to NESHAP Subpart ZZZZ but has no requirements. SN-82 is not subject to NSPS Subpart JJJ since it was manufactured before July 1, 2008.

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 (Ark. Code Ann. § 8-4-101 *et seq.*) as the sole origin of and authority for the terms or conditions are not required under the Clean Air Act or any of its applicable requirements, and are not federally enforceable under the Clean Air Act. Arkansas Pollution Control & Ecology Commission Regulation 18 was adopted pursuant to the Arkansas Water and Air Pollution Control Act (Ark. Code Ann. § 8-4-101 *et seq.*). Any terms or conditions included in this permit that specify and reference Arkansas Pollution Control & Ecology Commission Regulation 18 or the Arkansas Water and Air Pollution Control Act (Ark. Code Ann. § 8-4-101 *et seq.*) as the origin of and authority for the terms or conditions are enforceable under this Arkansas statute.
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. [Ark. Code Ann. § 8-4-203 as referenced by Ark. Code Ann. §§ 8-4-304 and 8-4-311]
3. The permittee shall notify the Division of Environmental Quality in writing within thirty (30) days after each of the following events: 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. [Reg.19.704 and/or Ark. Code Ann. § 8-4-203 as referenced by Ark. Code Ann. §§ 8-4-304 and 8-4-311]
4. Construction or modification must commence within eighteen (18) months from the date of permit issuance. [Reg.19.410(B) and/or Reg.18.309(B) and Ark. Code Ann. § 8-4-203 as referenced by Ark. Code Ann. §§ 8-4-304 and 8-4-311]
5. The permittee must keep records for five years to enable the Division of Environmental Quality to determine compliance with the terms of this permit such as hours of operation, throughput, upset conditions, and continuous monitoring data. The Division of Environmental Quality may use the records, at the discretion of the Division of Environmental Quality, to determine compliance with the conditions of the permit. [Reg.19.705 and/or Reg.18.1004 and Ark. Code Ann. § 8-4-203 as referenced by Ark. Code Ann. §§ 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 Division of Environmental Quality electronically using <https://portal.adeg.state.ar.us> or mail them to the address below. [Reg.19.705 and/or Reg.18.1004 and Ark. Code Ann. § 8-4-203 as referenced by Ark. Code Ann. §§ 8-4-304 and 8-4-311]

Division of Environmental Quality
Office of Air Quality

Bekaert Corporation
Permit #: 0299-AR-20
AFIN: 17-00043

ATTN: Compliance Inspector Supervisor
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 Division of Environmental Quality. The permittee must notify the Division of Environmental Quality of the scheduled date of compliance testing at least fifteen (15) business days in advance of such test. The permittee must submit compliance test results to the Division of Environmental Quality within sixty (60) calendar days after the completion of testing. [Reg.19.702 and/or Reg.18.1002 and Ark. Code Ann. § 8-4-203 as referenced by Ark. Code Ann. §§ 8-4-304 and 8-4-311]
8. The permittee shall provide: [Reg.19.702 and/or Reg.18.1002 and Ark. Code Ann. § 8-4-203 as referenced by Ark. Code Ann. §§ 8-4-304 and 8-4-311]
 - 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. [Reg.19.303 and/or Reg.18.1104 and Ark. Code Ann. § 8-4-203 as referenced by Ark. Code Ann. §§ 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 Division of Environmental Quality may forego enforcement action for emissions exceeding any limits established by this permit provided the following requirements are met: [Reg.19.601 and/or Reg.18.1101 and Ark. Code Ann. § 8-4-203 as referenced by Ark. Code Ann. §§ 8-4-304 and 8-4-311]
 - a. The permittee demonstrates to the satisfaction of the Division of Environmental Quality 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, overnight delivery, or online at <https://portal.adeg.state.ar.us>) to the Division of Environmental Quality by the

- end of the next business day after the occurrence or the discovery of the occurrence.
- c. The permittee must submit to the Division of Environmental Quality, 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 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 Division of Environmental Quality upon the presentation of credentials: [Ark. Code Ann. § 8-4-203 as referenced by Ark. Code Ann. §§ 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 Division of Environmental Quality issued this permit in reliance upon the statements and presentations made in the permit application. The Division of Environmental Quality has no responsibility for the adequacy or proper functioning of the equipment or control apparatus. [Ark. Code Ann. § 8-4-203 as referenced by Ark. Code Ann. §§ 8-4-304 and 8-4-311]
 13. The Division of Environmental Quality may revoke or modify this permit when, in the judgment of the Division of Environmental Quality, 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. [Reg.19.410(A) and/or Reg.18.309(A) and Ark. Code Ann. § 8-4-203 as referenced by Ark. Code Ann. §§ 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 Division of Environmental Quality 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 Division of Environmental Quality denies the request to transfer within thirty (30) days of the receipt of the

disclosure statement. The Division of Environmental Quality 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. [Reg.19.407(B) and/or Reg.18.307(B) and Ark. Code Ann. § 8-4-203 as referenced by Ark. Code Ann. §§ 8-4-304 and 8-4-311]

15. This permit shall be available for inspection on the premises where the control apparatus is located. [Ark. Code Ann. § 8-4-203 as referenced by Ark. Code Ann. §§ 8-4-304 and 8-4-311]
16. This permit authorizes only those pollutant emitting activities addressed herein. [Ark. Code Ann. § 8-4-203 as referenced by Ark. Code Ann. §§ 8-4-304 and 8-4-311]
17. This permit supersedes and voids all previously issued air permits for this facility. [Reg. 18 and/or Reg. 19 and Ark. Code Ann. § 8-4-203 as referenced by Ark. Code Ann. §§ 8-4-304 and 8-4-311]
18. The permittee must pay all permit fees in accordance with the procedures established in Regulation 9. [Ark. Code Ann. § 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 Division of Environmental Quality approval. The Division of Environmental Quality 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.

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

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 Division of Environmental Quality approval. Any such emissions shall be included in the facility's total emissions and reported as such. The Division of Environmental Quality 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 Division of Environmental Quality to evaluate the request, including but not limited to, quantification of such emissions and the date/time such emission will occur;
- e. Such a request will result in increased emissions less than five tons of any individual criteria pollutant, one ton of any single HAP and 2.5 tons of total HAPs; and
- f. The permittee maintains records of the dates and results of such temporary emissions/testing.

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

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 Division of Environmental Quality approval. The Division of Environmental Quality may grant such a request, at its discretion under the following conditions:
- a. The request does not violate a federal requirement;
 - b. The request provides an equivalent or greater degree of actual monitoring to the current requirements; and
 - c. Any such request, if approved, is incorporated in the next permit modification application by the permittee.

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

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

APPENDIX A

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

APPENDIX A

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

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

Contents

- [§60.40c](#) Applicability and delegation of authority.
 - [§60.41c](#) Definitions.
 - [§60.42c](#) Standard for sulfur dioxide (SO₂).
 - [§60.43c](#) Standard for particulate matter (PM).
 - [§60.44c](#) Compliance and performance test methods and procedures for sulfur dioxide.
 - [§60.45c](#) Compliance and performance test methods and procedures for particulate matter.
 - [§60.46c](#) Emission monitoring for sulfur dioxide.
 - [§60.47c](#) Emission monitoring for particulate matter.
 - [§60.48c](#) Reporting and recordkeeping requirements.
-

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

[↑ Back to Top](#)

§60.40c Applicability and delegation of authority.

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

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

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

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

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

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

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

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

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

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

[↑ Back to Top](#)

§60.41c Definitions.

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

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

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

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

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

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

heating, driving pumps, preheating combustion air for other units, generating electricity, or any other purpose).

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

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

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

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

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

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

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

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

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

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

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

Natural gas means:

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

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

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

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

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

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

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

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

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

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

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

(1) The equipment is attached to a foundation.

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

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

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

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

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

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

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

[↑ Back to Top](#)

§60.42c Standard for sulfur dioxide (SO₂).

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

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

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

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

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

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

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

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

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

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

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

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

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

(d) On and after the date on which the initial performance test is completed or required to be completed under §60.8, whichever date comes first, no owner or operator of an affected facility that combusts oil shall cause to be discharged into the atmosphere from that affected facility any gases that contain SO₂ in excess of 215 ng/J (0.50 lb/MMBtu) heat input from oil; or, as an alternative, no owner or operator of an affected facility that combusts oil shall combust oil in the affected facility that

contains greater than 0.5 weight percent sulfur. The percent reduction requirements are not applicable to affected facilities under this paragraph.

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

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

- (i) Combusts coal in combination with any other fuel;
- (ii) Has a heat input capacity greater than 22 MW (75 MMBtu/h); and
- (iii) Has an annual capacity factor for coal greater than 55 percent (0.55); and

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

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

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Where:

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

[↑ Back to Top](#)

§60.43c Standard for particulate matter (PM).

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

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

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

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

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

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

(c) On and after the date on which the initial performance test is completed or required to be completed under §60.8, whichever date comes first, no owner or operator of an affected facility that combusts coal, wood, or oil and has a heat input capacity of 8.7 MW (30 MMBtu/h) or greater shall cause to be discharged into the atmosphere from that affected facility any gases that exhibit greater than 20 percent opacity (6-minute average), except for one 6-minute period per hour of not more than 27 percent opacity. Owners and operators of an affected facility that elect to install, calibrate, maintain, and operate a continuous emissions monitoring system (CEMS) for measuring PM emissions according to the requirements of this subpart and are subject to a federally enforceable PM limit of 0.030 lb/MMBtu or less are exempt from the opacity standard specified in this paragraph (c).

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

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

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

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

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

(3) On and after the date on which the initial performance test is completed or is required to be completed under §60.8, whichever date comes first, no owner or operator of an affected facility that

commences modification after February 28, 2005, and that combusts over 30 percent wood (by heat input) on an annual basis and has a heat input capacity of 8.7 MW (30 MMBtu/h) or greater shall cause to be discharged into the atmosphere from that affected facility any gases that contain PM in excess of 43 ng/J (0.10 lb/MMBtu) heat input.

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

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

[↑ Back to Top](#)

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

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

(b) The initial performance test required under §60.8 shall be conducted over 30 consecutive operating days of the steam generating unit. Compliance with the percent reduction requirements and SO₂ emission limits under §60.42c shall be determined using a 30-day average. The first operating day included in the initial performance test shall be scheduled within 30 days after achieving the maximum production rate at which the 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 SO₂ emission rate are calculated to show compliance with the standard.

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

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

(1) An adjusted E_{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:

$$E_{\text{ho},o} = \frac{E_{\text{ho}} - E_w(1 - X_k)}{X_k}$$

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Where:

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

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

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

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

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

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

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

$$\%P_f = 100 \left(1 - \frac{\%R_z}{100} \right) \left(1 - \frac{\%R_f}{100} \right)$$

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Where:

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

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

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

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

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

$$\%R_{g,o} = 100 \left(1 - \frac{E_{g,o}}{E_{g,i}} \right)$$

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Where:

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

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

$E_{a,i}$ = Adjusted average SO_2 inlet rate, ng/J (lb/MMBtu).

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

$$E_{ni,o} = \frac{E_{ni} - E_w(1 - X_k)}{X_k}$$

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Where:

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

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

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

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

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

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

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

affected facility, the demonstrated 24-hour average firing rate shall be used to determine the annual capacity factor for the affected facility; otherwise, the maximum design heat input capacity provided by the manufacturer shall be used.

(j) The owner or operator of an affected facility shall use all valid SO₂ emissions data in calculating %P_s and E_{no} under paragraphs (d), (e), or (f) of this section, as applicable, whether or not the minimum emissions data requirements under §60.46c(f) are achieved. All valid emissions data, including valid data collected during periods of startup, shutdown, and malfunction, shall be used in calculating %P_s or E_{no} pursuant to paragraphs (d), (e), or (f) of this section, as applicable.

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

[↑ Back to Top](#)

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

(5) The owner or operator of an affected facility shall conduct an initial performance test for PM emissions as required under §60.8 of subpart A of this part. Compliance with the PM emission limit shall be determined by using the CEMS specified in paragraph (d) of this section to measure PM

and calculating a 24-hour block arithmetic average emission concentration using EPA Reference Method 19 of appendix A of this part, section 4.1.

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

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

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

(ii) [Reserved]

(8) The 1-hour arithmetic averages required under paragraph (c)(7) of this section shall be expressed in ng/J or lb/MMBtu heat input and shall be used to calculate the boiler operating day daily arithmetic average emission concentrations. The 1-hour arithmetic averages shall be calculated using the data points required under §60.13(e)(2) of subpart A of this part.

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

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

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

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

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

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

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

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

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

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

[↑ Back to Top](#)

§60.46c Emission monitoring for sulfur dioxide.

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

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

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

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

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

(3) For affected facilities subject to the percent reduction requirements under §60.42c, the span value of the SO₂ CEMS at the inlet to the SO₂ control device shall be 125 percent of the maximum estimated hourly potential SO₂ emission rate of the fuel combusted, and the span value of the SO₂ CEMS at the outlet from the SO₂ control device shall be 50 percent of the maximum estimated hourly potential SO₂ emission rate of the fuel combusted.

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

(d) As an alternative to operating a CEMS at the inlet to the SO₂ control device (or outlet of the steam generating unit if no SO₂ control device is used) as required under paragraph (a) of this section, an owner or operator may elect to determine the average SO₂ emission rate by sampling the fuel prior to combustion. As an alternative to operating a CEMS at the outlet from the SO₂ control device (or outlet of the steam generating unit if no SO₂ control device is used) as required under

paragraph (a) of this section, an owner or operator may elect to determine the average SO₂ emission rate by using Method 6B of appendix A of this part. Fuel sampling shall be conducted pursuant to either paragraph (d)(1) or (d)(2) of this section. Method 6B of appendix A of this part shall be conducted pursuant to paragraph (d)(3) of this section.

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

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

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

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

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

[↑ Back to Top](#)

§60.47c Emission monitoring for particulate matter.

(a) Except as provided in paragraphs (c), (d), (e), and (f) of this section, the owner or operator of an affected facility combusting coal, oil, or wood that is subject to the opacity standards under §60.43c shall install, calibrate, maintain, and operate a continuous opacity monitoring system (COMS) for measuring the opacity of the emissions discharged to the atmosphere and record the output of the system. The owner or operator of an affected facility subject to an opacity standard in §60.43c(c) that is not required to use a COMS due to paragraphs (c), (d), (e), or (f) of this section that elects not to use a COMS shall conduct a performance test using Method 9 of appendix A-4 of this part and the procedures in §60.11 to demonstrate compliance with the applicable limit in §60.43c by April 29, 2011, within 45 days of stopping use of an existing COMS, or within 180 days after initial startup of the facility, whichever is later, and shall comply with either paragraphs (a)(1), (a)(2), or (a)(3) of this section. The observation period for Method 9 of appendix A-4 of this part performance tests may be reduced from 3 hours to 60 minutes if all 6-minute averages are less than 10 percent and all individual 15-second observations are less than or equal to 20 percent during the initial 60 minutes of observation.

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

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

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

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

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

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

(i) The owner or operator shall conduct 10 minute observations (during normal operation) each operating day the affected facility fires fuel for which an opacity standard is applicable using Method 22 of appendix A-7 of this part and demonstrate that the sum of the occurrences of any visible emissions is not in excess of 5 percent of the observation period (*i.e.*, 30 seconds per 10 minute period). If the sum of the occurrence of any visible emissions is greater than 30 seconds during the

initial 10 minute observation, immediately conduct a 30 minute observation. If the sum of the occurrence of visible emissions is greater than 5 percent of the observation period (*i.e.*, 90 seconds per 30 minute period), the owner or operator shall either document and adjust the operation of the facility and demonstrate within 24 hours that the sum of the occurrence of visible emissions is equal to or less than 5 percent during a 30 minute observation (*i.e.*, 90 seconds) or conduct a new Method 9 of appendix A-4 of this part performance test using the procedures in paragraph (a) of this section within 45 calendar days according to the requirements in §60.45c(a)(8).

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

(3) The affected facility burns only gaseous fuels and/or fuel oils that contain no greater than 0.5 weight percent sulfur, and the owner or operator operates the unit according to a written site-specific monitoring plan approved by the permitting authority. This monitoring plan must include

procedures and criteria for establishing and monitoring specific parameters for the affected facility indicative of compliance with the opacity standard. For testing performed as part of this site-specific monitoring plan, the permitting authority may require as an alternative to the notification and reporting requirements specified in §§60.8 and 60.11 that the owner or operator submit any deviations with the excess emissions report required under §60.48c(c).

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[↑ Back to Top](#)

§60.48c Reporting and recordkeeping requirements.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

(1) Calendar dates covered in the reporting period.

(2) Each 30-day average SO₂ emission rate (ng/J or lb/MMBtu), or 30-day average sulfur content (weight percent), calculated during the reporting period, ending with the last 30-day period; reasons for any noncompliance with the emission standards; and a description of corrective actions taken.

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

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

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

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

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

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

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

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

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

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

(1) For distillate oil:

(i) The name of the oil supplier;

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

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

(2) For residual oil:

(i) The name of the oil supplier;

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

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

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

(3) For coal:

(i) The name of the coal supplier;

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

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

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

(4) For other fuels:

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

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

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

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

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

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

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

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

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

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

[↑ Back to Top](#)