



DIVISION OF ENVIRONMENTAL QUALITY

DRAFT OPERATING AIR PERMIT

PERMIT NUMBER: 2305-AOP-R10

IS ISSUED TO:

Big River Steel LLC
2027 E. State Hwy 198
Osceola, AR 72370
Mississippi County
AFIN: 47-00991

PURSUANT TO THE RULES OF THE ARKANSAS OPERATING AIR PERMIT PROGRAM, 8 CAR PT. 42: THIS PERMIT AUTHORIZES THE ABOVE REFERENCED PERMITTEE TO INSTALL, OPERATE, AND MAINTAIN THE EQUIPMENT AND EMISSION UNITS DESCRIBED IN THE PERMIT APPLICATION AND ON THE FOLLOWING PAGES. THIS PERMIT IS VALID BETWEEN:

February 8, 2024 AND February 7, 2029

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

Signed:

Demetria Kimbrough
Deputy Director, Office of Air Quality

Date

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List of Acronyms and Abbreviations

Ark. Code Ann.	Arkansas Code Annotated
AFIN	Arkansas DEQ Facility Identification Number
CAR	Code of Arkansas Rules
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
MVAC	Motor Vehicle Air Conditioner
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
SNAP	Significant New Alternatives Program (SNAP)
SO ₂	Sulfur Dioxide
SSM	Startup, Shutdown, and Malfunction Plan
Tpy	Tons Per Year
UTM	Universal Transverse Mercator
VOC	Volatile Organic Compound

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SECTION I: FACILITY INFORMATION

PERMITTEE:	Big River Steel LLC
AFIN:	47-00991
PERMIT NUMBER:	2305-AOP-R10
FACILITY ADDRESS:	2027 E. State Hwy 198 Osceola, AR 72370
MAILING ADDRESS:	P. O. Box 707 Osceola, AR 72370
COUNTY:	Mississippi County
CONTACT NAME:	Dean Caldwell
CONTACT POSITION:	Director Environmental
TELEPHONE NUMBER:	(870) 824-7547
REVIEWING ENGINEER:	Jesse Smith
UTM North South (Y):	Zone 16: 3949595.58 m
UTM East West (X):	Zone 16: 232531.96 m

SECTION II: INTRODUCTION

Summary of Permit Activity

Big River Steel LLC owns and operates a steel mill located at 2027 E. State Hwy 198 in Osceola, AR. This steel mill is contiguous to the newer Exploratory Ventures, LLC (EV) steel mill, AFIN: 47-01073, and both are under common control of BRS or its parent company. Thus the EV and BRS steel mills constitute a single stationary source under the Clean Air Act. At the request of BRS, each facility has been issued its own air permit.

This permitting action is to add a second RH degasser and supporting equipment (SN-133 through SN-139), revise multiple permitted sources in the cold mill, addition of two new boilers, a paint booth, and an annealing process for the cold mill (SN-140 through SN-143), addition of five new diesel fired emergency generators (SN-144 through SN-148), addition of two new hydrogen reformers (SN-149 and SN-150), and removal of NESHAP YYYYYY and NESHAP CCCCCC conditions as the facility is now a major source of HAPs. Permitted emission increases to the permit as a result of this modification are as follows: 22.7 tpy PM/PM₁₀/PM_{2.5}, 2.2 tpy SO₂, 14.0 tpy VOC, 234.6 tpy CO, 167.2 tpy NO_x, 0.00213107 tpy Lead, 275,517 tpy CO_{2e}, and 3.3 tpy HCl. Emissions of H₂SO₄ decreased by 0.2 tpy.

Process Description

The facility consists of two Electric Arc Furnaces to melt scrap iron and steel, Ladle Metallurgy Furnaces (LMF) to adjust the chemistry, a RH Degasser and boiler for further refinement, and Casters.

The facility has been approved by the Division to construct / operate the following:

- Horizontal Ladle Preheaters, Vertical Ladle Dryout Flash Preheater Stations, and Tundish Preheaters/Dryout Stands
- Tunnel Furnaces and Shuttle Zone
- A Pickling Line to clean steel of its rust, dirt and oil and supporting equipment including a sedimentation system
- A Push Pull Pickle Line
- Two (2) Galvanizing Lines to produce galvanized strips
- Batch Annealing Furnaces
- Two (2) Skin Pass Mills
- Two (2) Decarburizing Lines to reduce the carbon content at intermediate strip thickness
- Reversing Cold Mills to reduce the thickness of the steel to the desired specifications.
- An Annealing Pickling Line
- An Annealing and Coating Line for annealing of the cold rolled steel strip and application of an insulating coating
- Two (2) MgO Coating Lines to apply magnesia to the strip steel surface

- Two (2) Flattening Coating Lines to coat the steel strip with an insulation layer and subsequent flatness improvements
- A Color Coating Line
- Gasoline Storage Tanks and Dispensing Operations
- Emergency generators, cooling towers and other miscellaneous sources.
- A Hydrogen Plant

Specifics on each operation are found in the Specific Condition section.

Prevention of Significant Deterioration

This facility is considered contiguous and adjacent to the Exploratory Ventures, LLC (AFIN 47-01073).

The project is PSD major for PM_{2.5}, PM₁₀, CO, NO_x, and Greenhouse Gasses.

Ambient Impact Analysis

An applicant for a Prevention of Significant Deterioration (PSD) permit is required to conduct an air quality analysis of the ambient impacts associated with the construction and operation of the proposed new source or modification. The primary purpose of the air quality analysis is to demonstrate that new emissions emitted from a major stationary source, in conjunction with other applicable emissions from existing sources (including secondary emissions from growth associated with the new project), will not cause or contribute to a violation of any applicable National Ambient Air Quality Standard (NAAQS) or PSD increment.

PSD modeling is performed in two stages: the significance analysis and the full impact analysis. The significance analysis considers the net emissions change associated with PSD affected emissions units to determine if the increased emissions will have a significant impact upon the surrounding area. If the results of the significance analysis are below the corresponding Modeling Significance Levels, the full impact analysis is not required. A summary of the results of the significance analysis is in the table below.

Pollutant	Averaging Period	Modeled Concentration (µg/m ³)	Significance Level (µg/m ³)
CO	1-hour	22,051.0	2,000
	8-hour	3,560.7	500
PM ₁₀	24-hour	11.8	5
	Annual	1.5	1.0
PM _{2.5}	24-hour	8.2	1.2

Pollutant	Averaging Period	Modeled Concentration ($\mu\text{g}/\text{m}^3$)	Significance Level ($\mu\text{g}/\text{m}^3$)
	Annual	1.3	0.3
NO ₂	1-hour	146.8	7.52
	Annual	8.8	1.0
Ozone	8-hour	0.16	2.0

A full impact analysis was required for PM_{2.5}, PM₁₀, CO, and NO_x. The full impact analysis modeling must show that the emissions from the facility and surrounding existing sources will not cause or contribute to a violation of any applicable National Ambient Air Quality Standard (NAAQS) or PSD increment. For the PM_{2.5}, Tier-1 Screening of Secondary PM_{2.5} impacts using MERPS was used to estimate the concentration of PM_{2.5} secondary formation from NO_x and SO₂. The concentration from secondary formation was added to the modeled concentration for primary PM_{2.5}. That value is represented in the table below with the concentrations for other pollutants.

Pollutant	Averaging Period	Maximum Predicted Increment Consumption ($\mu\text{g}/\text{m}^3$)	PSD Class II Increment ($\mu\text{g}/\text{m}^3$)	Percent of Class II Increment (%)
PM ₁₀	24-hour	13.38	30	44.6%
	Annual	3.22	17	19.0%
NO ₂	Annual	11.51	25	46.1%
PM _{2.5}	24-hour	8.62	9	95.8%
	Annual	2.49	4	62.3%

Arkansas 8 CAR pt. 41 requires that if the issuance of a permit for any major stationary source or any major modification would result in the consumption of more than fifty percent of the available annual increment or eighty percent of any short term increment, the person applying for such a permit shall submit to the Department an assessment of the effects that the proposed consumption would have upon the industrial and economic development within the area of the proposed source and the alternatives to such consumption including alternate siting of the proposed source. To address this requirement, the facility submitted the following.

As stated in Arkansas CAR pt. 41.904, subsection (c) (1), where air quality impact analysis required under this subpart indicated that the issuance of a permit for any major stationary source or for any major modification would result in the

consumption of more than fifty (50%) of any available annual increment or eighty percent (80%) of any short term increment, the person applying for such a permit shall submit to the Division an assessment of the following factors:

- (a) Effect that the proposed consumption would have upon the industrial and economic development within the area of the proposed sources; and
- (b) Alternatives to such consumption, including alternative siting of the proposed source or portion thereof.

The facility will have potential emission of PM_{2.5} in and by itself that were predicted to be above 80% of the Class II increment (24-hour averaging period), but will be below the Class II Increment. Combined impacts from the BRS facility, the EV facility, and other increment consuming sources have shown predicted concentrations to be below the Class II increments for PM_{2.5} and PM₁₀, respectively. The specific point of maximum predicted concentrations reside within close proximity of the existing BRS and EV facilities or in the case of the facility along the property boundary or within a relative short distance of that boundary. Since the predicted concentration is representative of time and space, future growth in the area should not be limited. It is highly unlikely that future growth will take place near or in close proximity to the facility's property boundary or the existing BRS and EV facilities' property boundary. For any future project going through PSD review, a separate analysis will be required as part of that application process and primary point of increment consumption will also be based on time and space and will most likely occur in the immediate vicinity of that source as well.

Also as demonstrated to the AEEDEQ, the changes made to the EV facility and the BRS facility will meet the NAAQS established by EPA and as such will not be harmful to public health or the environment.

The full impact modeling analysis also requires modeling to show that the emissions from the facility and surrounding existing sources will not cause or contribute to a violation of any applicable National Ambient Air Quality Standard (NAAQS). For the PM_{2.5}, Tier-1 Screening of Secondary PM_{2.5} impacts using MERPS was used to estimate the concentration of PM_{2.5} secondary formation from NO_x and SO₂. The concentration from secondary formation was added to the modeled concentration for primary PM_{2.5}. A summary of the results of the NAAQS analysis is in the table below.

Pollutant	Averaging Period	Maximum Modeled Impact (µg/m ³)	Background Concentration (µg/m ³)	Total Impact (µg/m ³)	NAAQS (µg/m ³)
PM ₁₀	24-hour	10.7	42.0	52.7	150
PM _{2.5}	24-hour	16.5	12.0	28.5	35
	Annual	2.4	6.4	8.8	12

Pollutant	Averaging Period	Maximum Modeled Impact ($\mu\text{g}/\text{m}^3$)	Background Concentration ($\mu\text{g}/\text{m}^3$)	Total Impact ($\mu\text{g}/\text{m}^3$)	NAAQS ($\mu\text{g}/\text{m}^3$)
NO ₂	1-hour	140.2	44.6	184.8	188
	Annual	11.5	5.1	16.6	100
CO	1-hour	6725.1	1604.0	8329.1	40000
	8-hour	1136.2	1604.0	2740.2	10000

Additional Impact Review

An applicant for a Prevention of Significant Deterioration (PSD) permit must prepare additional impact analyses for each pollutant subject to the regulation under the Clean Air Act Amendments. Three areas constitute the Additional Impact Review: a growth analysis, a soils and vegetation analysis, and a visibility analysis.

Growth Analysis

The Growth Analysis estimates the impact of atmospheric emissions that will be generated by the projected growth from industrial, commercial, and residential growth associated with the project. The changes associated with these permit revisions will have limited, to no, effect on the future growth in the Osceola area. Operation of new equipment may require additional support personnel, who will reside in the general surrounding area.

Soils and Vegetation Analysis

A PSD applicant must also conduct a soil and vegetation air pollution impact analysis based on an inventory of the soils and vegetation types found in the impact area. For most types of soils and vegetation ambient concentrations of criteria pollutants below the secondary NAAQS will not result in harmful effects.

Class I Impacts

A screening analysis for visibility and deposition on the nearest Class I area was conducted during this permit's initial application. The emission increases due to this project are below the screening levels outlined in the FLAG document and therefore requires no further Class I analysis.

Best Available Control Technology

The PSD regulations mandate that a case-by-case Best Available Control Technology (BACT) analysis be performed on all new or modified affected sources at which a net emissions increase will occur. The following table is a summary of the BACT determinations made in this permit.

For more detailed discussion of BACT see the BACT analysis section of the permit application. The following summarizes the BACT analysis.

BACT Analysis Summary				
Source	Description	Pollutant	Control Technology	BACT Limit
SN-41, SN-43	Decarburizing and MgO Coating Line Cleaning Sections	PM	Mist Eliminator	0.005 gr/dscf
		PM ₁₀		
		PM _{2.5}		
		Opacity		5%
SN-63, SN-64, SN-65, SN-66, SN-67, SN-67A SN-67B, SN-67C, SN-67D, SN-67E, SN-110a, SN-110b, SN-110c, SN-110d, SN-110e, SN-144, SN-145, SN-146, SN-147, SN-148	Emergency Generators 2 through 23	PM	Good operating Practices (Periodic Equipment Maintenance), limited hours of operation, Compliance with NSPS Subpart IIII	0.2 g/kW-Hr
		PM ₁₀		0.2 g/kW-Hr
		PM _{2.5}		0.2 g/kW-Hr
		Opacity		20%
		SO ₂		<0.0015% sulfur in fuel
		VOC		1.55 g/kW-Hr
		CO		3.5 g/kW-Hr
		NO _x		4.86 g/kW-Hr
		GHG	Good Combustion Practices (Periodic Equipment Maintenance)	CO ₂ 163 lbs/MMBTU CH ₄ 0.0061 lbs/MMBTU N ₂ O 0.0013 lbs/MMBTU
SN-111a, SN-111b, SN-149, SN-150	Hydrogen Plant Reformer Furnaces	PM	Combustion of Natural gas and Good Combustion Practices (Periodic Equipment Maintenance)	0.0075 lb/MMBTU
		PM ₁₀		0.0075 lb/MMBTU
		PM _{2.5}		0.0075 lb/MMBTU
		Opacity		5%
		VOC		0.0054 lb/MMBTU
		NO _x	Low NO _x burners Combustion of clean fuel	0.1 lb/MMBTU

BACT Analysis Summary				
Source	Description	Pollutant	Control Technology	BACT Limit
			Good Combustion Practices (Periodic Equipment Maintenance)	
SN-133	RH Degasser #2	CO (from degasser)	Flare	0.04 lb/ton of steel produced
		PM	Combustion of Natural gas and Good Combustion Practices (Periodic Equipment Maintenance)	0.00052 lb/MMBTU
		PM ₁₀		0.00052 lb/MMBTU
		PM _{2.5}		0.00052 lb/MMBTU
		Opacity		5%
		CO (from natural gas combustion)		0.0824 lb/MMBTU
		NO _x		1.0 lb/MMBTU
		GHG	Good operating Practices (Periodic Equipment Maintenance)	CO ₂ 117 lb/MMBTU CH ₄ 0.0022 lb/MMBTU N ₂ O 0.0002 lb/MMBTU
SN-134	RH Degasser Boiler #2	PM	Combustion of Natural gas and Good Combustion Practices (Periodic Equipment Maintenance)	0.0075 lb/MMBTU
		PM ₁₀		0.0075 lb/MMBTU
		PM _{2.5}		0.0075 lb/MMBTU
		Opacity		5%
		CO		0.0824 lb/MMBTU
		NO _x	Low NO _x burners Combustion of clean fuel Good Combustion Practices (Periodic	0.035 lb/MMBTU

BACT Analysis Summary				
Source	Description	Pollutant	Control Technology	BACT Limit
			Equipment Maintenance)	
		GHG	Good operating Practices (Periodic Equipment Maintenance) Minimum Boiler Efficiency Combustion of natural gas only	CO ₂ 117 lb/MMBTU CH ₄ 0.0022 lb/MMBTU N ₂ O 0.0002 lb/MMBTU 75%
SN-135 SN-136 SN-137 SN-138	RH Degasser Vessel Preheater Station #2, Vessel Top Part Dryer #2, RH Vessel Nozzle Dryer #2 RH Degasser Burner/Top Lance #2	PM	Combustion of Natural gas and Good Combustion Practices (Periodic Equipment Maintenance)	0.00052 lb/MMBTU
		PM ₁₀		0.00052 lb/MMBTU
		PM _{2.5}		0.00052 lb/MMBTU
		Opacity		5%
		CO	Low NO _x burners Combustion of clean fuel Good Combustion Practices (Periodic Equipment Maintenance)	0.0824 lb/MMBTU
		NO _x		0.08 lb/MMBTU
		GHG	Good operating Practices (Periodic Equipment Maintenance)	CO ₂ 117 lb/MMBTU CH ₄ 0.0022 lb/MMBTU N ₂ O 0.0002 lb/MMBTU
SN-139	RH Degasser Alloy Delivery System #2	PM PM ₁₀ PM _{2.5}	Dust Control Plan, Enclosed Conveyors with Fabric Filters	0.003 gr/dscf 0.003 gr/dscf 0.01 gr/dscf

BACT Analysis Summary				
Source	Description	Pollutant	Control Technology	BACT Limit
			Enclosed Receiving System with Fabric Filter Fabric Filters Silos with Bin Vent Filters	
		Opacity		5%
SN-140	High Temperature Annealing	PM	Combustion of Natural gas and Good Combustion Practices (Periodic Equipment Maintenance)	0.0075 lb/MMBTU
		PM ₁₀		0.0075 lb/MMBTU
		PM _{2.5}		0.0075 lb/MMBTU
		Opacity		5%
		CO	Low NO _x burners Combustion of clean fuel Good Combustion Practices (Periodic Equipment Maintenance)	0.0824 lb/MMBTU
		NO _x		0.1 lb/MMBTU
		GHG		CO ₂ 117 lb/MMBTU CH ₄ 0.0022 lb/MMBTU N ₂ O 0.0002 lb/MMBTU
SN-141 SN-142	Cold Mill Boilers #3 and #4	PM	Good Combustion Practices (Periodic Equipment Maintenance) Energy efficient burners	0.0075 lb/MMBtu
		PM ₁₀		0.0075 lb/MMBtu
		PM _{2.5}		0.0075 lb/MMBtu
		Opacity		5%
		CO		0.0824 lb/MMBtu
		NO _x		0.035 lb/MMBtu

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BACT Analysis Summary				
Source	Description	Pollutant	Control Technology	BACT Limit
		GHG	Combustion of natural gas only	117 lb CO ₂ e/MMBtu

Rules and Regulations

The following table contains the rules and regulations applicable to this permit.

Rules and Regulations
Arkansas Air Pollution Control Code, 8 CAR pt. 40, effective March 14, 2016
Rules of the Arkansas Plan of Implementation for Air Pollution Control, 8 CAR pt. 41, effective May 6, 2022
Rules of the Arkansas Operating Air Permit Program, 8 CAR pt. 42, effective March 14, 2016
40 CFR 52.21, <i>Prevention of Significant Deterioration</i>
40 CFR Part 60, Subpart Dc - <i>Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units</i>
40 CFR Part 60, Subpart AAa - <i>Standards of Performance for Electric Arc Furnaces and Argon-Oxygen Decarburization Vessels Constructed After August 7, 1983, and on or Before May 16, 2022</i>
40 CFR Part 60, Subpart TT – <i>Standards of Performance for Metal Coil Surface Coating</i>
40 CFR Part 60 Subpart IIII, <i>Standards of Performance for Stationary Compression Ignition Internal Combustion Engines</i>
40 CFR Part 63 Subpart ZZZZ, <i>National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustions Engines</i>
40 CFR Part 63 Subpart DDDDD, <i>National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters</i>
40 CFR Part 63 Subpart SSSS, <i>National Emission Standards for Hazardous Air Pollutants: Surface Coating of Metal Coil</i>
40 CFR Part 63 Subpart CCC, <i>National Emission Standards for Hazardous Air Pollutants for Steel Pickling – HCl Process Facilities and Hydrochloric Acid Regeneration Plants</i>

Emission Summary

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

EMISSION SUMMARY				
Source Number	Description	Pollutant	Emission Rates	
			lb/hr	tpy
Total Allowable Emissions		PM	119.6	394.1
		PM ₁₀	138.2	487.5
		PM _{2.5}	129.2	451.2
		SO ₂	204.4	406.6
		VOC	140.3	412.2
		CO	1423.5	5228.7
		NO _x	961.4	1616.4
		Lead	0.28165097	1.16718678
		CO ₂ e	--	2,029,734
HAPs	Arsenic Cadmium Formaldehyde HCl Manganese Isophorone Mercury MIBK Toluene	0.0045576	0.0165679	
		0.007297	0.026987	
		0.23368	0.876	
		1.6	6.5	
		0.161102	0.804935	
		7.0	0.6	
		0.0608551	0.403327	
		2.7	11.8	
		2.7	11.8	
Air Contaminants ***	Ammonia	1.92	8.41	
	H ₂ SO ₄	6.3	2.1	
SN-01	EAF I and LMF I	PM	16.2	71.0
		PM ₁₀	21.6	94.7
		PM _{2.5}	21.6	94.7
		SO ₂	65.0	184.5
		VOC	23.3	90.2
		CO	505.0	2050.0
		NO _x	87.5	307.5
		Lead	0.14	0.58
		CO ₂ e	--	311,190
		Arsenic	0.002	0.007
		Cadmium	0.002	0.006
		Manganese	0.08	0.4
		Mercury	0.03	0.2
		SN-02	EAF II and LMF II	PM

EMISSION SUMMARY				
Source Number	Description	Pollutant	Emission Rates	
			lb/hr	tpy
		PM ₁₀	21.6	94.7
		PM _{2.5}	21.6	94.7
		SO ₂	65.0	205.0
		VOC	23.3	95.3
		CO	505.0	2070.5
		NO _x	87.5	358.8
		Lead	0.14	0.58
		CO _{2e}	--	311,190
		Arsenic	0.002	0.007
		Cadmium	0.002	0.006
		Manganese	0.08	0.4
		Mercury	0.03	0.2
SN-01A	Lime Injector Burner I	PM	0.2	0.7
		PM ₁₀	0.2	0.7
		PM _{2.5}	0.2	0.7
		SO ₂	0.1	0.1
		VOC	0.1	0.5
		CO	1.6	6.7
		NO _x	1.9	8.1
		Lead	9.07 E-06	3.97 E-05
		CO _{2e}	--	9,481
SN-02A	Lime Injector Burner II	PM	0.2	0.7
		PM ₁₀	0.2	0.7
		PM _{2.5}	0.2	0.7
		SO ₂	0.1	0.1
		VOC	0.1	0.5
		CO	1.6	6.7
		NO _x	1.9	8.1
		Lead	9.07 E-06	3.97 E-05
		CO _{2e}	--	9,481
SN-03	RH Degasser with Flare #1	PM	0.1	0.1
		PM ₁₀	0.1	0.1
		PM _{2.5}	0.1	0.1
		SO ₂	0.1	0.1
		VOC	0.1	0.2
		CO	9.8	29.8
		NO _x	0.4	1.8
		Lead	0.000003	0.00002
		CO _{2e}	--	4,760
		Arsenic	0.000001	0.000005

EMISSION SUMMARY				
Source Number	Description	Pollutant	Emission Rates	
			lb/hr	tpy
		Cadmium	0.000006	0.00003
		Formaldehyde	0.004	0.0002
		Manganese	0.000002	0.000009
		Mercury	0.000002	0.00006
SN-04	RH Degasser Boiler #1	PM	0.7	3.0
		PM ₁₀	0.7	3.0
		PM _{2.5}	0.7	3.0
		SO ₂	0.1	0.3
		VOC	0.5	2.1
		CO	7.4	32.0
		NO _x	3.2	13.6
		Lead	0.00005	0.0002
		CO _{2e}	--	45,457
		Arsenic	0.00002	0.00008
		Cadmium	0.0001	0.0005
		Formaldehyde	0.007	0.03
		Manganese	0.00004	0.0002
		Mercury	0.00003	0.0001
SN-04A	RH Degasser Preheater Vessel Station #1	PM	0.1	0.1
		PM ₁₀	0.1	0.1
		PM _{2.5}	0.1	0.1
		SO ₂	0.1	0.1
		VOC	0.1	0.2
		CO	0.5	2.2
		NO _x	0.5	2.1
		Lead	0.000003	0.00002
		CO _{2e}	--	3,075
		Arsenic	0.000002	0.000006
		Cadmium	0.000007	0.00003
		Formaldehyde	0.0005	0.002
		Manganese	0.000003	0.00001
		Mercury	0.000002	0.000007
SN-04B	RH Degasser Top Part Dryer #1	PM	0.1	0.1
		PM ₁₀	0.1	0.1
		PM _{2.5}	0.1	0.1
		SO ₂	0.1	0.1
		VOC	0.1	0.1
		CO	0.2	0.6
		NO _x	0.2	0.5
		Lead	0.0000007	0.000004

EMISSION SUMMARY				
Source Number	Description	Pollutant	Emission Rates	
			lb/hr	tpy
		CO ₂ e	--	718
		Arsenic	0.0000003	0.000002
		Cadmium	0.000002	0.000007
		Formaldehyde	0.0002	0.0005
		Manganese	0.0000006	0.000003
		Mercury	0.0000004	0.000002
SN-04C	RH Degasser Nozzle Dryer #1	PM	0.1	0.1
		PM ₁₀	0.1	0.1
		PM _{2.5}	0.1	0.1
		SO ₂	0.1	0.1
		VOC	0.1	0.1
		CO	0.2	0.7
		NO _x	0.2	0.7
		Lead	0.0000009	0.000004
		CO ₂ e	--	923
		Arsenic	0.0000004	0.000002
		Cadmium	0.000002	0.000009
		Formaldehyde	0.0002	0.0006
		Manganese	0.0000007	0.000003
		Mercury	0.0000005	0.000003
SN-04D	RH Degasser Burner/Top Lance #1	PM	0.1	0.1
		PM ₁₀	0.1	0.1
		PM _{2.5}	0.1	0.1
		SO ₂	0.1	0.1
		VOC	0.1	0.3
		CO	0.8	3.3
		NO _x	0.8	3.2
		Lead	0.000005	0.00002
		CO ₂ e	--	4,613
		Arsenic	0.000002	0.000008
		Cadmium	0.00001	0.00005
		Formaldehyde	0.0007	0.003
		Manganese	0.000004	0.00002
		Mercury	0.000003	0.00001
SN-05	Horizontal Ladle Preheater 1	PM	0.1	0.3
		PM ₁₀	0.1	0.3
		PM _{2.5}	0.1	0.3
		SO ₂	0.1	0.1
		VOC	0.1	0.2
		CO	0.7	2.9

EMISSION SUMMARY				
Source Number	Description	Pollutant	Emission Rates	
			lb/hr	tpy
		NO _x	0.8	3.4
		Lead	0.000004	0.00002
		CO _{2e}	--	4,100
		Arsenic	0.000002	0.000007
		Cadmium	0.000009	0.00004
		Formaldehyde	0.0006	0.003
		Manganese	0.000003	0.00002
		Mercury	0.000003	0.000009
SN-06	Horizontal Ladle Preheater 2	PM	0.1	0.3
		PM ₁₀	0.1	0.3
		PM _{2.5}	0.1	0.3
		SO ₂	0.1	0.1
		VOC	0.1	0.2
		CO	0.7	2.9
		NO _x	0.8	3.4
		Lead	0.000004	0.00002
		CO _{2e}	--	4,100
		Arsenic	0.000002	0.000007
		Cadmium	0.000009	0.00004
		Formaldehyde	0.0006	0.003
		Manganese	0.000003	0.00002
		Mercury	0.000003	0.000009
SN-07	Horizontal Ladle Preheater 3	PM	0.1	0.3
		PM ₁₀	0.1	0.3
		PM _{2.5}	0.1	0.3
		SO ₂	0.1	0.1
		VOC	0.1	0.2
		CO	0.7	2.9
		NO _x	0.8	3.4
		Lead	0.000004	0.00002
		CO _{2e}	--	4,100
		Arsenic	0.000002	0.000007
		Cadmium	0.000009	0.00004
		Formaldehyde	0.0006	0.003
		Manganese	0.000003	0.00002
		Mercury	0.000003	0.000009
SN-08	Horizontal Ladle Preheater 4	PM	0.1	0.3
		PM ₁₀	0.1	0.3
		PM _{2.5}	0.1	0.3
		SO ₂	0.1	0.1

EMISSION SUMMARY				
Source Number	Description	Pollutant	Emission Rates	
			lb/hr	tpy
		VOC	0.1	0.2
		CO	0.7	2.9
		NO _x	0.8	3.4
		Lead	0.000004	0.00002
		CO _{2e}	--	4,100
		Arsenic	0.000002	0.000007
		Cadmium	0.000009	0.00004
		Formaldehyde	0.0006	0.003
		Manganese	0.000003	0.00002
		Mercury	0.000003	0.000009
SN-09	Horizontal Ladle Preheater 5	PM	0.1	0.3
		PM ₁₀	0.1	0.3
		PM _{2.5}	0.1	0.3
		SO ₂	0.1	0.1
		VOC	0.1	0.2
		CO	0.7	2.9
		NO _x	0.8	3.4
		Lead	0.000004	0.00002
		CO _{2e}	--	4,100
		Arsenic	0.000002	0.000007
		Cadmium	0.000009	0.00004
		Formaldehyde	0.0006	0.003
		Manganese	0.000003	0.00002
		Mercury	0.000003	0.000009
SN-10	Vertical Ladle Dryout Flash Preheater Station 1	PM	0.1	0.3
		PM ₁₀	0.1	0.3
		PM _{2.5}	0.1	0.3
		SO ₂	0.1	0.1
		VOC	0.1	0.2
		CO	0.7	2.9
		NO _x	0.8	3.4
		Lead	0.000004	0.00002
		CO _{2e}	--	4,100
		Arsenic	0.000002	0.000007
		Cadmium	0.000009	0.00004
		Formaldehyde	0.0006	0.003
		Manganese	0.000003	0.00002
		Mercury	0.000003	0.000009

EMISSION SUMMARY				
Source Number	Description	Pollutant	Emission Rates	
			lb/hr	tpy
SN-11	Vertical Ladle Dryout Flash Preheater Station 2	PM	0.1	0.3
		PM ₁₀	0.1	0.3
		PM _{2.5}	0.1	0.3
		SO ₂	0.1	0.1
		VOC	0.1	0.2
		CO	0.7	2.9
		NO _x	0.8	3.4
		Lead	0.000004	0.00002
		CO _{2e}	--	4,100
		Arsenic	0.000002	0.000007
		Cadmium	0.000009	0.00004
		Formaldehyde	0.0006	0.003
		Manganese	0.000003	0.00002
		Mercury	0.000003	0.000009
SN-12	Vertical Ladle Dryout Flash Preheater Station 3	PM	0.1	0.3
		PM ₁₀	0.1	0.3
		PM _{2.5}	0.1	0.3
		SO ₂	0.1	0.1
		VOC	0.1	0.2
		CO	0.7	2.9
		NO _x	0.8	3.4
		Lead	0.000004	0.00002
		CO _{2e}	--	4,100
		Arsenic	0.000002	0.000007
		Cadmium	0.000009	0.00004
		Formaldehyde	0.0006	0.003
		Manganese	0.000003	0.00002
		Mercury	0.000003	0.000009
SN-13	Vertical Ladle Dryout Flash Preheater Station 4	PM	0.1	0.3
		PM ₁₀	0.1	0.3
		PM _{2.5}	0.1	0.3
		SO ₂	0.1	0.1
		VOC	0.1	0.2
		CO	0.7	2.9
		NO _x	0.8	3.4
		Lead	0.000004	0.00002
		CO _{2e}	--	4,100
		Arsenic	0.000002	0.000007
		Cadmium	0.000009	0.00004
		Formaldehyde	0.0006	0.003

EMISSION SUMMARY				
Source Number	Description	Pollutant	Emission Rates	
			lb/hr	tpy
		Manganese	0.000003	0.00002
		Mercury	0.000003	0.000009
SN-14	Caster #1	PM	0.4	1.3
		PM ₁₀	0.4	1.3
		PM _{2.5}	0.4	1.3
SN-15	Caster #2	PM	0.4	1.3
		PM ₁₀	0.4	1.3
		PM _{2.5}	0.4	1.3
SN-16	Tundish Preheaters/Dryout Stand #1	PM	0.1	0.3
		PM ₁₀	0.1	0.3
		PM _{2.5}	0.1	0.3
		SO ₂	0.1	0.1
		VOC	0.1	0.2
		CO	0.8	3.2
		NO _x	0.9	3.9
		Lead	0.000005	0.00002
		CO _{2e}	--	5,125
		Arsenic	0.000002	0.000008
		Cadmium	0.00001	0.00005
		Formaldehyde	0.0007	0.003
		Manganese	0.000004	0.00002
		Mercury	0.000003	0.00001
SN-17	Tundish Preheaters/Dryout Stand #2	PM	0.1	0.3
		PM ₁₀	0.1	0.3
		PM _{2.5}	0.1	0.3
		SO ₂	0.1	0.1
		VOC	0.1	0.2
		CO	0.8	3.2
		NO _x	0.9	3.9
		Lead	0.000005	0.00002
		CO _{2e}	--	5,125
		Arsenic	0.000002	0.000008
		Cadmium	0.00001	0.00005
		Formaldehyde	0.0007	0.003
		Manganese	0.000004	0.00002
		Mercury	0.000003	0.00001
SN-18	Tundish Preheater/Dryout Stand #3	PM	0.1	0.3
		PM ₁₀	0.1	0.3
		PM _{2.5}	0.1	0.3
		SO ₂	0.1	0.1

EMISSION SUMMARY				
Source Number	Description	Pollutant	Emission Rates	
			lb/hr	tpy
		VOC	0.1	0.2
		CO	0.8	3.2
		NO _x	0.9	3.9
		Lead	0.000005	0.00002
		CO _{2e}	--	5,125
		Arsenic	0.000002	0.000008
		Cadmium	0.00001	0.00005
		Formaldehyde	0.0007	0.003
		Manganese	0.000004	0.00002
		Mercury	0.000003	0.00001
SN-19	Tundish Preheater/Dryout Stand #4	PM	0.1	0.3
		PM ₁₀	0.1	0.3
		PM _{2.5}	0.1	0.3
		SO ₂	0.1	0.1
		VOC	0.1	0.2
		CO	0.8	3.2
		NO _x	0.9	3.9
		Lead	0.000005	0.00002
		CO _{2e}	--	5,125
		Arsenic	0.000002	0.000008
		Cadmium	0.00001	0.00005
		Formaldehyde	0.0007	0.003
		Manganese	0.000004	0.00002
		Mercury	0.000003	0.00001
SN-19A	Tundish Preheater/Dryout Stand #5	PM	0.1	0.3
		PM ₁₀	0.1	0.3
		PM _{2.5}	0.1	0.3
		SO ₂	0.1	0.1
		VOC	0.1	0.2
		CO	0.8	3.2
		NO _x	0.9	3.9
		Lead	0.000005	0.00002
		CO _{2e}	--	5,125
		Arsenic	0.000002	0.000008
		Cadmium	0.00001	0.00005
		Formaldehyde	0.0007	0.003
		Manganese	0.000004	0.00002
		Mercury	0.000003	0.00001

EMISSION SUMMARY				
Source Number	Description	Pollutant	Emission Rates	
			lb/hr	tpy
SN-19B	Tundish Preheater/Dryout Stand #6	PM	0.1	0.3
		PM ₁₀	0.1	0.3
		PM _{2.5}	0.1	0.3
		SO ₂	0.1	0.1
		VOC	0.1	0.2
		CO	0.8	3.2
		NO _x	0.9	3.9
		Lead	0.000005	0.00002
		CO _{2e}	--	5,125
		Arsenic	0.000002	0.000008
		Cadmium	0.00001	0.00005
		Formaldehyde	0.0007	0.003
		Manganese	0.000004	0.00002
		Mercury	0.000003	0.00001
SN-20	Tunnel Furnace 1	PM	1.7	7.2
		PM ₁₀	1.7	7.2
		PM _{2.5}	1.7	7.2
		SO ₂	0.2	0.6
		VOC	1.2	5.2
		CO	18.0	78.5
		NO _x	21.8	95.3
		Lead	0.0002	0.0006
		CO _{2e}	--	119,919
		Arsenic	0.00005	0.0002
		Cadmium	0.0003	0.002
		Formaldehyde	0.02	0.08
		Manganese	0.00009	0.0004
		Mercury	0.00006	0.0003
SN-21	Tunnel Furnace 2	PM	1.3	5.7
		PM ₁₀	1.3	5.7
		PM _{2.5}	1.3	5.7
		SO ₂	0.2	0.5
		VOC	1.0	4.1
		CO	14.2	62.2
		NO _x	17.3	75.6
		Lead	0.0001	0.0004
		CO _{2e}	--	98,395
		Arsenic	0.00004	0.0002
		Cadmium	0.0002	0.001
		Formaldehyde	0.02	0.06

EMISSION SUMMARY				
Source Number	Description	Pollutant	Emission Rates	
			lb/hr	tpy
		Manganese	0.00007	0.0003
		Mercury	0.00005	0.0002
SN-21C	Shuttle Zone	PM	0.6	2.7
		PM ₁₀	0.6	2.7
		PM _{2.5}	0.6	2.7
		SO ₂	0.1	0.3
		VOC	0.5	1.9
		CO	6.6	28.9
		NO _x	8	35.1
		Lead	0.00004	0.0002
		CO _{2e}	--	41,082
		Arsenic	0.00002	0.0001
		Cadmium	0.0001	0.0004
		Formaldehyde	0.01	0.03
		Manganese	0.00003	0.0001
		Mercury	0.00002	0.0001
SN-22	ACL, CGL 1, CGL 2, PL and RCM Boiler	PM	0.4	1.8
		PM ₁₀	0.4	1.8
		PM _{2.5}	0.4	1.8
		SO ₂	0.1	0.2
		VOC	0.3	1.3
		CO	4.5	19.4
		NO _x	1.9	8.3
		Lead	0.00003	0.0002
		CO _{2e}	--	27,531
		Arsenic	0.00002	0.00005
		Cadmium	0.00006	0.0003
		Formaldehyde	0.004	0.02
		Manganese	0.00002	0.00009
		Mercury	0.00002	0.00006
SN-23	Pickle Line Scale Dust	PM	1.0	4.4
		PM ₁₀	1.0	4.4
		PM _{2.5}	1.0	4.4
SN-24	Pickling Process with Outside Tanks and Supporting Scrubbers	HCl	0.2	0.6
SN-24A	Push Pull Pickle Line (PPPL) and Supporting Scrubber	PM	0.4	1.7
		PM ₁₀	0.4	1.7
		PM _{2.5}	0.4	1.7
		HCl	0.2	0.8

EMISSION SUMMARY				
Source Number	Description	Pollutant	Emission Rates	
			lb/hr	tpy
SN-25	Tandem Cold Mill	PM	4.8	20.7
		PM ₁₀	12.5	54.7
		PM _{2.5}	12.5	54.7
SN-26	ACL, CGL 1, CGL 2, PL, and RCM Boiler	PM	0.4	1.8
		PM ₁₀	0.4	1.8
		PM _{2.5}	0.4	1.8
		SO ₂	0.1	0.2
		VOC	0.3	1.3
		CO	4.5	19.4
		NO _x	1.9	8.3
		Lead	0.00003	0.00002
		CO _{2e}	--	27,531
		Arsenic	0.00002	0.00005
		Cadmium	0.00006	0.0003
		Formaldehyde	0.004	0.02
		Manganese	0.00002	0.00009
		Mercury	0.00002	0.00006
SN-27	Cold Mill Boiler #1	PM	0.4	0.8
		PM ₁₀	0.4	0.8
		PM _{2.5}	0.4	0.8
		SO ₂	0.1	0.2
		VOC	0.3	1.3
		CO	4.5	19.4
		NO _x	1.9	8.3
		Lead	0.00003	0.00002
		CO _{2e}	--	27,531
		Arsenic	0.00002	0.00005
		Cadmium	0.00006	0.0003
		Formaldehyde	0.004	0.02
		Manganese	0.00002	0.00009
		Mercury	0.00002	0.00006
SN-28	Galvanizing Line 1 – Furnace	PM	0.1	0.5
		PM ₁₀	0.1	0.5
		PM _{2.5}	0.1	0.5
		SO ₂	0.1	0.2
		VOC	0.5	1.9
		CO	6.5	28.2
		NO _x	2.8	12.0
		Lead	0.00004	0.0002
		CO _{2e}	--	40,078

EMISSION SUMMARY				
Source Number	Description	Pollutant	Emission Rates	
			lb/hr	tpy
		Arsenic	0.00002	0.00007
		Cadmium	0.00009	0.0004
		Formaldehyde	0.006	0.03
		Manganese	0.00003	0.0002
		Mercury	0.00002	0.00009
		Ammonia	0.64	2.80
SN-29	Galvanizing Line 2 – Furnace	PM	0.2	0.8
		PM ₁₀	0.2	0.8
		PM _{2.5}	0.2	0.8
		SO ₂	0.1	0.4
		VOC	0.9	3.6
		CO	12.4	54.3
		NO _x	5.3	23.1
		Lead	0.0001	0.0003
		CO ₂ e	--	77,121
		Arsenic	0.00003	0.0002
		Cadmium	0.0002	0.0008
		Formaldehyde	0.02	0.05
		Manganese	0.00006	0.0003
		Mercury	0.00004	0.0002
		Ammonia	1.28	5.61
SN-34	Galvanizing Line 1 – Caustic Cleaning	PM	0.2	0.9
		PM ₁₀	0.2	0.9
		PM _{2.5}	0.2	0.9
SN-35	Galvanizing Line 2 – Caustic Cleaning	PM	0.2	0.5
		PM ₁₀	0.2	0.5
		PM _{2.5}	0.2	0.5
SN-36	Galvanizing Line 1 – Post Treatment	PM	0.1	0.3
		PM ₁₀	0.1	0.3
		PM _{2.5}	0.1	0.3
SN-37	Galvanizing Line 2 – Post Treatment	PM	0.3	1.3
		PM ₁₀	0.3	1.3
		PM _{2.5}	0.3	1.3
SN-38a	Skin Pass Mill #1	PM	0.6	2.5
		PM ₁₀	1.5	6.6
		PM _{2.5}	1.5	6.6
SN-38b	Skin Pass Mill #2 (ACL)	PM	0.6	2.5
		PM ₁₀	1.5	6.6
		PM _{2.5}	1.5	6.6

EMISSION SUMMARY				
Source Number	Description	Pollutant	Emission Rates	
			lb/hr	tpy
SN-39	Annealing Furnaces	PM	0.9	3.9
		PM ₁₀	0.9	3.9
		PM _{2.5}	0.9	3.9
		SO ₂	0.1	0.3
		VOC	0.7	2.8
		CO	9.8	42.6
		NO _x	11.8	51.7
		Lead	0.0001	0.0003
		CO _{2e}	--	60,424
		Arsenic	0.00003	0.0001
		Cadmium	0.0002	0.0006
		Formaldehyde	0.009	0.04
		Manganese	0.00005	0.0002
		Mercury	0.00003	0.0002
SN-40	Decarburizing and MgO Coating Line 1 Furnace Section	PM	0.8	3.3
		PM ₁₀	0.8	3.3
		PM _{2.5}	0.8	3.3
		SO ₂	0.1	0.2
		VOC	0.4	1.4
		CO	4.8	20.7
		NO _x	5.8	25.1
		Lead	0.00003	0.00013
		CO _{2e}	--	29,264
		Arsenic	0.00002	0.00005
		Cadmium	0.00007	0.0003
		Formaldehyde	0.005	0.04
		Manganese	0.00003	0.0001
		Mercury	0.00002	0.00007
SN-41	Decarburizing and MgO Coating Line 1 Cleaning Section	PM	0.4	1.8
		PM ₁₀	0.4	1.8
		PM _{2.5}	0.4	1.8
SN-42	Decarburizing and MgO Coating Line 2 Furnace Section	PM	0.8	3.3
		PM ₁₀	0.8	3.3
		PM _{2.5}	0.8	3.3
		SO ₂	0.1	0.2
		VOC	0.4	1.4
		CO	4.8	20.7
		NO _x	5.8	25.1
		Lead	0.00003	0.00013
		CO _{2e}	--	29,264

EMISSION SUMMARY				
Source Number	Description	Pollutant	Emission Rates	
			lb/hr	tpy
		Arsenic	0.00002	0.00005
		Cadmium	0.00007	0.0003
		Formaldehyde	0.005	0.04
		Manganese	0.00003	0.0001
		Mercury	0.00002	0.00007
SN-43	Decarburizing and MgO Coating Line 2 Cleaning Section	PM	0.4	1.8
		PM ₁₀	0.4	1.8
		PM _{2.5}	0.4	1.8
SN-44	Reversing Cold Mill 1 (NGO – ACL Process Line)	PM	1.5	6.6
		PM ₁₀	4.0	17.4
		PM _{2.5}	4.0	17.4
SN-45	Reversing Cold Mill 2	PM	1.5	6.6
		PM ₁₀	4.0	17.4
		PM _{2.5}	4.0	17.4
SN-46	Reversing Cold Mill 3	PM	1.5	6.6
		PM ₁₀	4.0	17.4
		PM _{2.5}	4.0	17.4
SN-47	Annealing Pickling Line – Annealing Furnace	PM	0.9	3.8
		PM ₁₀	0.9	3.8
		PM _{2.5}	0.9	3.8
		SO ₂	0.1	0.2
		VOC	0.4	1.6
		CO	5.5	23.9
		NO _x	6.6	29.0
		Lead	0.00004	0.0002
		CO _{2e}	--	33,823
		Arsenic	0.00002	0.00006
		Cadmium	0.00008	0.00004
		Formaldehyde	0.005	0.003
		Manganese	0.00003	0.0002
		Mercury	0.00002	0.00008
SN-48	Annealing Pickling Line – Scale Dust Exhaust	PM	0.7	3.0
		PM ₁₀	0.7	3.0
		PM _{2.5}	0.7	3.0
SN-49	Annealing Pickling Line – Shot Blast	PM	1.0	4.4
		PM ₁₀	1.0	4.4
		PM _{2.5}	1.0	4.4
SN-50	Annealing Pickling Line Pickling Section	HCl	0.3	1.2

EMISSION SUMMARY				
Source Number	Description	Pollutant	Emission Rates	
			lb/hr	tpy
SN-51	Annealing and Coating Line - Annealing Furnace	PM	0.2	0.8
		PM ₁₀	0.2	0.8
		PM _{2.5}	0.2	0.8
		SO ₂	0.1	0.1
		VOC	0.1	0.4
		CO	1.1	4.7
		NO _x	1.3	5.7
		Lead	0.00001	0.00003
		CO _{2e}	--	6,663
		Arsenic	0.000003	0.00003
		Cadmium	0.00002	0.00007
		Formaldehyde	0.001	0.005
		Manganese	0.000005	0.00003
		Mercury	0.000004	0.00002
SN-52	Annealing and Coating Line – Cleaning Section	PM	0.3	1.0
		PM ₁₀	0.3	1.0
		PM _{2.5}	0.3	1.0
SN-53	Annealing and Coating Line – Drying Furnace & RTO	PM	0.4	1.6
		PM ₁₀	0.4	1.6
		PM _{2.5}	0.4	1.6
		SO ₂	0.1	0.1
		VOC	0.6	2.6
		CO	10.0	44.0
		NO _x	5.6	24.5
		Lead	0.00002	0.00005
		CO _{2e}	--	11,439
		Arsenic	0.000005	0.00002
		Cadmium	0.00003	0.0002
		Formaldehyde	0.002	0.008
		Manganese	0.000009	0.00004
		Mercury	0.000006	0.00003
SN-54	Decarburizing and MgO Coating Line 1 – Drying Furnace	PM	0.2	0.8
		PM ₁₀	0.2	0.8
		PM _{2.5}	0.2	0.8
		SO ₂	0.1	0.1
		VOC	0.1	0.4
		CO	1.2	4.8
		NO _x	1.4	5.9
		Lead	0.000007	0.00003
		CO _{2e}	--	6,816

EMISSION SUMMARY				
Source Number	Description	Pollutant	Emission Rates	
			lb/hr	tpy
		Arsenic	0.000003	0.00002
		Cadmium	0.00002	0.00007
		Formaldehyde	0.001	0.005
		Manganese	0.000005	0.00003
		Mercury	0.000004	0.00002
SN-55	Decarburizing and MgO Coating Line 1 – Cleaning Section	PM	0.3	1.1
		PM ₁₀	0.3	1.1
		PM _{2.5}	0.3	1.1
SN-56	Decarburizing and MgO Coating Line 2 – Drying Furnace	PM	0.2	0.8
		PM ₁₀	0.2	0.8
		PM _{2.5}	0.2	0.8
		SO ₂	0.1	0.1
		VOC	0.1	0.4
		CO	1.2	4.8
		NO _x	1.4	5.9
		Lead	0.000007	0.00003
		CO _{2e}	--	6,816
		Arsenic	0.000003	0.00002
		Cadmium	0.00002	0.00007
		Formaldehyde	0.001	0.005
		Manganese	0.000005	0.00003
		Mercury	0.000004	0.00002
SN-57	Decarburizing and MgO Coating Line 2 – Cleaning Section	PM	0.3	1.1
		PM ₁₀	0.3	1.1
		PM _{2.5}	0.3	1.1
SN-58A	Flattening and Coating Line 1 – Drying Furnace Process	PM	0.3	1.2
		PM ₁₀	0.3	1.2
		PM _{2.5}	0.3	1.2
		SO ₂	0.1	0.1
		VOC	0.2	0.5
		CO	1.8	7.6
		NO _x	2.1	9.2
		Lead	0.00001	0.00005
		CO _{2e}	--	10,660
		Arsenic	0.000005	0.00002
		Cadmium	0.00003	0.0001
		Formaldehyde	0.002	0.007
		Manganese	0.000008	0.00004
		Mercury	0.000006	0.00003

EMISSION SUMMARY				
Source Number	Description	Pollutant	Emission Rates	
			lb/hr	tpy
SN-58B	Flattening and Coating Line 1 – Annealing Furnace Radiant Tube Process	PM	0.2	0.7
		PM ₁₀	0.2	0.7
		PM _{2.5}	0.2	0.7
		SO ₂	0.1	0.1
		VOC	0.1	0.3
		CO	1.0	4.1
		NO _x	1.2	5.0
		Lead	0.00001	0.00003
		CO _{2e}	--	5,740
		Arsenic	0.000003	0.00001
		Cadmium	0.00002	0.00006
		Formaldehyde	0.0009	0.004
		Manganese	0.000005	0.00002
		Mercury	0.000003	0.00002
SN-59	Flattening and Coating Line 1 – Cleaning and Steel Activation Process	HCl	0.4	1.8
SN-60A	Flattening and Coating Line 2 – Drying Furnace Process	PM	0.3	1.2
		PM ₁₀	0.3	1.2
		PM _{2.5}	0.3	1.2
		SO ₂	0.1	0.1
		VOC	0.2	0.5
		CO	1.8	7.6
		NO _x	2.1	9.2
		Lead	0.00001	0.00005
		CO _{2e}	--	10,660
		Arsenic	0.000005	0.00002
		Cadmium	0.00003	0.0001
		Formaldehyde	0.002	0.007
		Manganese	0.000008	0.00004
		Mercury	0.000006	0.00003
SN-60B	Flattening and Coating Line 2 – Annealing Furnace Radiant Tube Process	PM	0.2	0.7
		PM ₁₀	0.2	0.7
		PM _{2.5}	0.2	0.7
		SO ₂	0.1	0.1
		VOC	0.1	0.3
		CO	1.0	4.1
		NO _x	1.2	5.0
		Lead	0.00001	0.00003

EMISSION SUMMARY				
Source Number	Description	Pollutant	Emission Rates	
			lb/hr	tpy
		CO _{2e}	--	5,740
		Arsenic	0.000003	0.00001
		Cadmium	0.00002	0.00006
		Formaldehyde	0.0009	0.004
		Manganese	0.000005	0.00002
		Mercury	0.000003	0.00002
SN-61	Flattening and Coating Line 2 – Cleaning and Steel Activation Process	HCl	0.4	1.8
SN-62	Emergency Generator 1 (100.1 – Meltshop), Diesel Fired, 500 kW	PM	0.3	0.1
		PM ₁₀	0.3	0.1
		PM _{2.5}	0.3	0.1
		SO ₂	5.1	0.3
		VOC	1.5	0.1
		CO	3.6	0.2
		NO _x	3.1	0.2
		CO _{2e}	--	32
		H ₂ SO ₄	0.4	0.1
SN-63	Emergency Generator 2 (600.3 – ColdMill), Diesel Fired, 1600 kW	PM	0.8	0.1
		PM ₁₀	0.8	0.1
		PM _{2.5}	0.8	0.1
		SO ₂	18.5	1.0
		VOC	5.8	0.3
		CO	13.2	0.7
		NO _x	18.3	1.0
		CO _{2e}	--	145
		H ₂ SO ₄	1.4	0.1
SN-64	Emergency Generator 3 (400.1 – HSM/CCM), Diesel Fired, 1600 kW	PM	0.8	0.1
		PM ₁₀	0.8	0.1
		PM _{2.5}	0.8	0.1
		SO ₂	18.5	1.0
		VOC	5.8	0.3
		CO	13.2	0.7
		NO _x	18.3	1.0
		CO _{2e}	--	145
		H ₂ SO ₄	1.4	0.1
SN-65	Emergency Generator 4 (100.2 –	PM	0.8	0.1
		PM ₁₀	0.8	0.1
		PM _{2.5}	0.8	0.1

EMISSION SUMMARY				
Source Number	Description	Pollutant	Emission Rates	
			lb/hr	tpy
	Meltshop), Diesel Fired, 1600 kW	SO ₂	18.5	1.0
		VOC	5.8	0.3
		CO	13.2	0.7
		NO _x	18.3	1.0
		CO _{2e}	--	145
		H ₂ SO ₄	1.4	0.1
SN-66	Emergency Generator 5 (100.4 – Meltshop), Diesel Fired, 2700 kW	PM	0.9	0.1
		PM ₁₀	0.9	0.1
		PM _{2.5}	0.9	0.1
		SO ₂	0.1	0.1
		VOC	1.1	0.1
		CO	7.3	0.4
		NO _x	31.5	1.6
		CO _{2e}	--	195
		H ₂ SO ₄	--	195
SN-67	Emergency Generator 6 (400.3 – HSM/CCM), Diesel Fired, 1145 kW	PM	0.4	0.1
		PM ₁₀	0.4	0.1
		PM _{2.5}	0.4	0.1
		SO ₂	0.1	0.1
		VOC	0.5	0.1
		CO	3.1	0.2
		NO _x	13.4	0.7
		CO _{2e}	--	195
		H ₂ SO ₄	0.1	0.1
SN-67A	Emergency Generator 7 (DC Gen 1 – Employee Building), Diesel Fired, 2700 kW	PM	0.9	0.1
		PM ₁₀	0.9	0.1
		PM _{2.5}	0.9	0.1
		SO ₂	0.1	0.1
		VOC	1.1	0.1
		CO	7.3	0.4
		NO _x	31.5	1.6
		CO _{2e}	--	195
		H ₂ SO ₄	--	195
SN-67B	Emergency Generator 8 (CGL2.GEN.1 – CGL2/ACL), Diesel Fired, 1600 kW	PM	0.4	0.1
		PM ₁₀	0.4	0.1
		PM _{2.5}	0.4	0.1
		SO ₂	0.1	0.1
		VOC	0.3	0.1
		CO	1.9	0.1
		NO _x	22.0	1.1

EMISSION SUMMARY				
Source Number	Description	Pollutant	Emission Rates	
			lb/hr	tpy
		CO ₂ e	--	127
		H ₂ SO ₄	0.1	0.1
SN-67C	Emergency Generator 9 (800A1.SS3 – RCM/ACL), Diesel Fired, 1600 kW	PM	0.4	0.1
		PM ₁₀	0.4	0.1
		PM _{2.5}	0.4	0.1
		SO ₂	0.1	0.1
		VOC	0.3	0.1
		CO	1.8	0.1
		NO _x	20.7	1.0
		CO ₂ e	--	127
		H ₂ SO ₄	0.1	0.1
SN-67D	Emergency Generator 10 (400.3 – CGL 2 Zinc Pot), Diesel Fired, 1114 kW	PM	0.1	0.1
		PM ₁₀	0.1	0.1
		PM _{2.5}	0.1	0.1
		SO ₂	0.1	0.1
		VOC	0.1	0.1
		CO	1.3	0.1
		NO _x	13.7	0.7
		CO ₂ e	--	80
		H ₂ SO ₄	0.1	0.1
SN-67E	Emergency Generator 11 (CGL.GEN.1 – CGL) Diesel Fired, 350 kW	PM	0.1	0.1
		PM ₁₀	0.1	0.1
		PM _{2.5}	0.1	0.1
		SO ₂	1.1	0.1
		VOC	0.1	0.1
		CO	0.5	0.1
		NO _x	2.9	0.1
		CO ₂ e	-	238
		H ₂ SO ₄	0.1	0.1
SN-68	Non-Contact Cooling Tower - Tower 1 MS	PM	0.2	0.9
		PM ₁₀	0.2	0.7
		PM _{2.5}	0.1	0.1
SN-69	Non-Contact Cooling Tower - Tower 2 MS: Gas Cleaning Plant (GCP)	PM	0.4	1.6
		PM ₁₀	0.3	1.1
		PM _{2.5}	0.1	0.1
SN-70	Non-Contact Cooling Tower - Tower 3 Caster/HM: Caster (CSP) Hotmill	PM	0.5	2.0
		PM ₁₀	0.4	1.4
		PM _{2.5}	0.1	0.1

EMISSION SUMMARY				
Source Number	Description	Pollutant	Emission Rates	
			lb/hr	tpy
SN-71	Non-Contact Cooling Tower – Caster/Hot Mill	PM	0.5	2.1
		PM ₁₀	0.4	1.5
		PM _{2.5}	0.1	0.1
SN-72A	Non-Contact Cooling Tower – Cold Mill APL/ACL Anneal and Coating/ RCM + CRL	PM	0.2	0.9
		PM ₁₀	0.2	0.6
		PM _{2.5}	0.1	0.1
SN-72B	Non-Contact Cooling Tower – Cold Mill ACL Furnace	PM	0.2	0.6
		PM ₁₀	0.1	0.5
		PM _{2.5}	0.1	0.1
SN-73	Non-Contact Cooling Tower - Cold Mill (PLTCM)	PM	0.4	1.5
		PM ₁₀	0.3	1.0
		PM _{2.5}	0.1	0.1
SN-74	Non-Contact Cooling Tower - Melt Shop Tower 1: Spray Cooled EAF (Duct Only)	PM	0.4	1.5
		PM ₁₀	0.3	1.0
		PM _{2.5}	0.1	0.1
SN-74A	Non-Contact Cooling Tower EAF / LMF 2 and DOC Spray Cool	PM	2.6	11.2
		PM ₁₀	1.8	7.8
		PM _{2.5}	0.1	0.1
SN-74B	Non-Contact Cooling Tower EAF Closed Loop for Electrode Arms	PM	0.2	0.8
		PM ₁₀	0.2	0.6
		PM _{2.5}	0.1	0.1
SN-75	Contact Cooling Tower - Tower 2 MS: RH Degasser	PM	0.2	0.5
		PM ₁₀	0.1	0.4
		PM _{2.5}	0.1	0.1
SN-76	Contact Cooling Tower - Tower 3 Caster: Caster (CSP) Only	PM	0.2	0.8
		PM ₁₀	0.2	0.6
		PM _{2.5}	0.1	0.1
SN-77	Contact Cooling Tower - Tower 4 HM: Hot Mill (HSM)	PM	0.3	1.2
		PM ₁₀	0.2	0.9
		PM _{2.5}	0.1	0.1
SN-78A	Contact Cooling Tower Hot Mill	PM	1.6	6.8
		PM ₁₀	1.1	4.8
		PM _{2.5}	0.1	0.1

EMISSION SUMMARY				
Source Number	Description	Pollutant	Emission Rates	
			lb/hr	tpy
SN-78B	Contact Cooling Tower – Caster	PM	0.2	0.8
		PM ₁₀	0.2	0.6
		PM _{2.5}	0.1	0.1
SN-79	Contact Cooling Tower Caster	PM	0.5	2.1
		PM ₁₀	0.4	1.5
		PM _{2.5}	0.1	0.1
SN-80	Charging Crane	PM	0.1	0.1
		PM ₁₀	0.1	0.1
		PM _{2.5}	0.1	0.1
SN-81	Scrap Yard Stockpiling	PM	0.1	0.5
		PM ₁₀	0.1	0.2
		PM _{2.5}	0.1	0.1
SN-82	EAF Flux Receiving System	PM	0.1	0.1
		PM ₁₀	0.1	0.1
		PM _{2.5}	0.1	0.1
SN-83	EAF Flux Storage and Handling System	PM	0.2	0.6
		PM ₁₀	0.1	0.3
		PM _{2.5}	0.1	0.1
SN-84	Carbon Injection Receiving System	PM	0.1	0.1
		PM ₁₀	0.1	0.1
		PM _{2.5}	0.1	0.1
SN-85	Carbon Injection Storage and Handling System	PM	0.1	0.2
		PM ₁₀	0.1	0.1
		PM _{2.5}	0.1	0.1
SN-86	LMF Flux Receiving System	PM	0.1	0.1
		PM ₁₀	0.1	0.1
		PM _{2.5}	0.1	0.1
SN-87	LMF Flux Storage and Handling System	PM	0.2	0.6
		PM ₁₀	0.1	0.3
		PM _{2.5}	0.1	0.1
SN-88	Alloy Receiving System	PM	0.1	0.1
		PM ₁₀	0.1	0.1
		PM _{2.5}	0.1	0.1
SN-89	Alloy Storage and Handling System	PM	0.1	0.1
		PM ₁₀	0.1	0.1
		PM _{2.5}	0.1	0.1
SN-90	Alloy Delivery System – LMF	PM	0.1	0.1
		PM ₁₀	0.1	0.1
		PM _{2.5}	0.1	0.1

EMISSION SUMMARY				
Source Number	Description	Pollutant	Emission Rates	
			lb/hr	tpy
SN-91	RH Degasser Alloy Delivery System #1	PM	0.1	0.1
		PM ₁₀	0.1	0.1
		PM _{2.5}	0.1	0.1
SN-92	Inside Drop Point - Spent Refractory and Other Waste	PM	0.1	0.1
		PM ₁₀	0.1	0.1
		PM _{2.5}	0.1	0.1
SN-93	Outside Drop Point - Spent Refractory and Other Waste	PM	0.1	0.1
		PM ₁₀	0.1	0.1
		PM _{2.5}	0.1	0.1
SN-94	Inside Drop Point – EAF Dust	PM	0.1	0.1
		PM ₁₀	0.1	0.1
		PM _{2.5}	0.1	0.1
SN-95	Drop Points Slag	PM	5.3	3.4
		PM ₁₀	2.6	1.7
		PM _{2.5}	0.9	0.6
SN-96	Slag Handling and Conveying	PM	1.1	1.2
		PM ₁₀	0.4	0.4
		PM _{2.5}	0.1	0.1
SN-97	Paved Roads	PM	0.7	2.9
		PM ₁₀	0.2	0.6
		PM _{2.5}	0.1	0.2
SN-98	Unpaved Roads	PM	2.2	9.6
		PM ₁₀	0.6	2.6
		PM _{2.5}	0.1	0.3
SN-99A	Feed Stock Piles - Wind Erosion	PM	0.9	3.7
		PM ₁₀	0.5	1.9
		PM _{2.5}	0.1	0.3
SN-99B	Slag Piles – Wind Erosion	PM	0.2	0.6
		PM ₁₀	0.1	0.3
		PM _{2.5}	0.1	0.1
SN-100	Gasoline Storage Tanks and Dispensing Operation	VOC	0.3	0.8
SN-101	Annealing Pickling Line Boiler	PM	0.4	1.8
		PM ₁₀	0.4	1.8
		PM _{2.5}	0.4	1.8
		SO ₂	0.1	0.2
		VOC	0.3	1.3
		CO	4.5	19.4

EMISSION SUMMARY				
Source Number	Description	Pollutant	Emission Rates	
			lb/hr	tpy
		NO _x	1.9	8.3
		Lead	0.00003	0.0002
		CO _{2e}	--	27,531
		Arsenic	0.00002	0.00005
		Cadmium	0.00006	0.0003
		Formaldehyde	0.004	0.02
		Manganese	0.00002	0.00009
		Mercury	0.00002	0.00006
SN-102	Natural Gas Fired Cold Mill/Supporting Building Structures Space Heaters	PM	3.7	15.9
		PM ₁₀	3.7	15.9
		PM _{2.5}	3.7	15.9
		SO ₂	0.3	1.3
		VOC	2.6	11.5
		CO	39.8	174.1
		NO _x	38.6	169.1
		Lead	0.0003	0.002
		CO _{2e}	--	247,201
		Arsenic	0.00001	0.0005
		Cadmium	0.0007	0.003
		Formaldehyde	0.04	0.16
		Manganese	0.0002	0.0008
		Mercury	0.0002	0.0006
SN-103	EAF I/II Lime Injection Receiving, Storage, and Handling System	PM	0.1	0.4
		PM ₁₀	0.1	0.4
		PM _{2.5}	0.1	0.4
SN-104A	Diesel Fired Emergency Water Pump 1 (EP2-A Line HM Tunnel Furnace), 282 hp	PM	0.6	0.1
		PM ₁₀	0.6	0.1
		PM _{2.5}	0.6	0.1
		SO ₂	0.5	0.1
		VOC	0.7	0.1
		CO	1.9	0.1
		NO _x	8.7	0.5
		CO _{2e}	-	6
		H ₂ SO ₄	0.1	0.1
SN-104B	Diesel Fired Emergency Water Pump 2 (EP3 – ColdMill), 376 hp	PM	0.8	0.1
		PM ₁₀	0.8	0.1
		PM _{2.5}	0.8	0.1
		SO ₂	0.7	0.1
		VOC	0.9	0.1

EMISSION SUMMARY				
Source Number	Description	Pollutant	Emission Rates	
			lb/hr	tpy
		CO	2.5	0.2
		NO _x	11.7	0.6
		CO _{2e}	-	8
		H ₂ SO ₄	0.1	0.1
SN-104C	Diesel Fired Emergency Water Pump 3 (EP6-B Line HM Tunnel Furnace), 282 hp	PM	0.6	0.1
		PM ₁₀	0.6	0.1
		PM _{2.5}	0.6	0.1
		SO ₂	0.5	0.1
		VOC	0.7	0.1
		CO	1.9	0.1
		NO _x	8.7	0.5
		CO _{2e}	-	6
		H ₂ SO ₄	0.1	0.1
SN-104D	Diesel Fired Emergency Water Pump 4 (FP2 – Fire Line), 376 hp	PM	0.8	0.1
		PM ₁₀	0.8	0.1
		PM _{2.5}	0.8	0.1
		SO ₂	0.7	0.1
		VOC	0.9	0.1
		CO	2.5	0.2
		NO _x	11.7	0.6
		CO _{2e}	-	8
		H ₂ SO ₄	0.1	0.1
SN-104E	Emergency Water Pump 5 (RCM/ACL Process Line), 360 kW	PM	0.7	0.1
		PM ₁₀	0.7	0.1
		PM _{2.5}	0.7	0.1
		SO ₂	0.6	0.1
		VOC	0.7	0.1
		CO	1.9	0.1
		NO _x	8.7	0.5
		CO _{2e}	--	6
		H ₂ SO ₄	0.1	0.1
SN-105	Color Coating Line – Pre-Cleaning Section	PM	0.3	1.2
		PM ₁₀	0.3	1.2
		PM _{2.5}	0.3	1.2
SN-106	Color Coating Line – Cleaning Section	PM	0.3	1.2
		PM ₁₀	0.3	1.2
		PM _{2.5}	0.3	1.2
SN-107	Color Coating Line – Prime/Finish Coating	VOC	34.9	152.7
		Isophorone	7.0	30.6
		MIBK	2.7	11.8

EMISSION SUMMARY				
Source Number	Description	Pollutant	Emission Rates	
			lb/hr	tpy
		Toluene	2.7	11.8
SN-108a	Color Coating Line – Chemical Dryer	PM	0.1	0.2
		PM ₁₀	0.1	0.2
		PM _{2.5}	0.1	0.2
		SO ₂	0.1	0.1
		VOC	0.1	0.2
		CO	0.4	1.9
		NO _x	0.3	1.2
		Lead	0.000003	0.00002
		CO _{2e}	--	2,768
SN-108b	Color Coating Line – Primer Oven	PM	0.2	0.9
		PM ₁₀	0.2	0.9
		PM _{2.5}	0.2	0.9
		SO ₂	0.1	0.1
		VOC	0.2	0.6
		CO	2.1	9.1
		NO _x	1.3	5.5
		Lead	0.00002	0.00006
		CO _{2e}	--	12,813
SN-108c	Color Coating Line – Finish Oven	PM	0.3	1.0
		PM ₁₀	0.3	1.0
		PM _{2.5}	0.3	1.0
		SO ₂	0.1	0.1
		VOC	0.2	0.7
		CO	2.3	10.1
		NO _x	1.4	6.1
		Lead	0.00002	0.00007
		CO _{2e}	--	14,350
SN-108d	Color Coating Line – Thermal Oxidation	PM	0.2	0.6
		PM ₁₀	0.2	0.6
		PM _{2.5}	0.2	0.6
		SO ₂	0.1	0.1
		VOC	0.3	1.3
		CO	6.5	28.4
		NO _x	12.2	53.6
		Lead	0.00001	0.00004
		CO _{2e}	--	7,380

EMISSION SUMMARY				
Source Number	Description	Pollutant	Emission Rates	
			lb/hr	tpy
SN-109a	Non-Contact Color Coating Line – Cooling Tower #1	PM	0.1	0.3
		PM ₁₀	0.1	0.2
		PM _{2.5}	0.1	0.1
SN-109b	Non-Contact Color Coating Line – Cooling Tower #2	PM	0.1	0.2
		PM ₁₀	0.1	0.1
		PM _{2.5}	0.1	0.1
SN-110a	Emergency Generator 12, Diesel Fired, 2700 kW	PM	0.9	0.1
		PM ₁₀	0.9	0.1
		PM _{2.5}	0.9	0.1
		SO ₂	0.1	0.1
		VOC	1.1	0.1
		CO	7.3	0.4
		NO _x	31.5	1.6
		CO _{2e}	--	195
		H ₂ SO ₄		
SN-110b	Emergency Generator 13, Diesel Fired, 2700 kW	PM	0.9	0.1
		PM ₁₀	0.9	0.1
		PM _{2.5}	0.9	0.1
		SO ₂	0.1	0.1
		VOC	1.1	0.1
		CO	7.3	0.4
		NO _x	31.5	1.6
		CO _{2e}	--	195
		H ₂ SO ₄		
SN-110c	Emergency Generator 14, Diesel Fired, 2700 kW	PM	0.9	0.1
		PM ₁₀	0.9	0.1
		PM _{2.5}	0.9	0.1
		SO ₂	0.1	0.1
		VOC	1.1	0.1
		CO	7.3	0.4
		NO _x	31.5	1.6
		CO _{2e}	--	195
		H ₂ SO ₄		
SN-110d	Emergency Generator 15, Diesel Fired, 2700 kW	PM	0.9	0.1
		PM ₁₀	0.9	0.1
		PM _{2.5}	0.9	0.1
		SO ₂	0.1	0.1
		VOC	1.1	0.1
		CO	7.3	0.4
		NO _x	31.5	1.6

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EMISSION SUMMARY				
Source Number	Description	Pollutant	Emission Rates	
			lb/hr	tpy
		CO _{2e} H ₂ SO ₄	--	195
SN-110e	Emergency Generator 16, Diesel Fired, 2700 kW	PM PM ₁₀ PM _{2.5} SO ₂ VOC CO NO _x CO _{2e} H ₂ SO ₄	0.9 0.9 0.9 0.1 0.1 1.1 7.3 31.5 --	0.1 0.1 0.1 0.1 0.1 0.1 0.4 1.6 195
SN-110f	Emergency Generator 17 (CCL Process Line) Diesel Fired, 360 kW	PM PM ₁₀ PM _{2.5} SO ₂ VOC CO NO _x CO _{2e} H ₂ SO ₄	1.1 1.1 1.1 1.0 1.3 3.3 15.0 -- 0.1	0.1 0.1 0.1 0.1 0.1 0.2 0.8 4 0.1
SN-110g	Emergency Generator 18 (Guard Station) Diesel Fired, 30 kW	PM PM ₁₀ PM _{2.5} SO ₂ VOC CO NO _x CO _{2e} H ₂ SO ₄	0.1 0.1 0.1 0.1 0.2 0.3 1.4 -- 0.1	0.1 0.1 0.1 0.1 0.1 0.1 0.1 4 0.1
SN-111a	Hydrogen Plant Methane Reformer (PHG830) #1	PM PM ₁₀ PM _{2.5} SO ₂ VOC CO NO _x Lead CO _{2e}	0.1 0.1 0.1 0.1 0.1 1.1 1.3 0.00001 --	0.5 0.5 0.5 0.1 0.3 4.5 5.5 0.00003 6,396

EMISSION SUMMARY				
Source Number	Description	Pollutant	Emission Rates	
			lb/hr	tpy
SN-111b	Hydrogen Plant Methane Reformer (PHG250) #2	PM	0.1	0.1
		PM ₁₀	0.1	0.1
		PM _{2.5}	0.1	0.1
		SO ₂	0.1	0.1
		VOC	0.1	0.1
		CO	0.3	1.0
		NO _x	0.3	1.2
		Lead	0.00000127	0.00000558
		CO _{2e}	-	1,333
SN-120	ACL, CGL1, CGL2 and RCM Boiler	PM	0.7	3.0
		PM ₁₀	0.7	3.0
		PM _{2.5}	0.7	3.0
		SO ₂	0.1	0.3
		VOC	0.5	2.1
		CO	7.3	32.1
		NO _x	3.1	13.6
		Lead	0.0000433	0.00019
		CO _{2e}	-	45,459
		Arsenic	0.00002	0.00008
		Cadmium	0.0001	0.0005
		Formaldehyde	0.007	0.03
		Manganese	0.00004	0.0002
		Mercury	0.00003	0.0001
SN-124	Hot Mill Roll Shop Parts Washer	PM	0.1	0.1
		PM ₁₀	0.1	0.1
		PM _{2.5}	0.1	0.1
		SO ₂	0.1	0.1
		VOC	0.1	0.1
		CO	0.1	0.4
		NO _x	0.1	0.4
		Lead	0.0000005	0.0000022
		CO _{2e}	-	513
		Arsenic	0.0000002	0.0000009
		Cadmium	0.000002	0.000005
		Formaldehyde	0.00008	0.0004
		Manganese	0.0000004	0.000002
		Mercury	0.0000003	0.000002
SN-125	Cold Mill Boiler #2	PM	0.7	3.0
		PM ₁₀	0.7	3.0
		PM _{2.5}	0.7	3.0

EMISSION SUMMARY				
Source Number	Description	Pollutant	Emission Rates	
			lb/hr	tpy
		SO ₂	0.1	0.3
		VOC	0.5	2.1
		CO	7.3	32.1
		NO _x	3.1	13.6
		Lead	0.0000433	0.00019
		CO _{2e}	-	45,459
		Arsenic	0.00002	0.00008
		Cadmium	0.0001	0.0005
		Formaldehyde	0.007	0.03
		Manganese	0.00004	0.0002
		Mercury	0.00003	0.0001
SN-126	Color Coating Line Boiler	PM	0.3	1.0
		PM ₁₀	0.3	1.0
		PM _{2.5}	0.3	1.0
		SO ₂	0.1	0.1
		VOC	0.2	0.7
		CO	2.3	10.2
		NO _x	1.0	4.3
		Lead	0.0000138	0.000061
		CO _{2e}	-	14,424
		Arsenic	0.000006	0.00003
		Cadmium	0.00004	0.0002
		Formaldehyde	0.003	0.01
		Manganese	0.00002	0.00005
		Mercury	0.000008	0.00004
SN-127a	Truck Dump and Silos SMAC Dust Collector	PM	2.0	8.5
		PM ₁₀	2.0	8.5
		PM _{2.5}	2.0	8.5
SN-127b	Rail Loading Building SMAC Dust Collector	PM	0.6	2.7
		PM ₁₀	0.6	2.7
		PM _{2.5}	0.6	2.7
SN-127c	Cold Mill Coil Entry SMAC Dust Collector	PM	0.4	1.7
		PM ₁₀	0.4	1.7
		PM _{2.5}	0.4	1.7
SN-128	Pickling Section Sedimentation System	HCl	0.1	0.3
SN-129	Non-Contact Cooling Tower – Annealing Pickling Line (APL)	PM	0.6	2.5
		PM ₁₀	0.4	1.7
		PM _{2.5}	0.1	0.1

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Source Number	Description	Pollutant	Emission Rates	
			lb/hr	tpy
SN-130	Non-Contact Cooling Tower – Reversing Cold Mill 3 (RCM3)	PM	0.6	2.5
		PM ₁₀	0.4	1.7
		PM _{2.5}	0.1	0.1
SN-131	Non-Contact Cooling Tower – Decarburizing Coating Line (DCL) and High Temperature Annealing (HTA)	PM	0.6	2.5
		PM ₁₀	0.4	1.7
		PM _{2.5}	0.1	0.1
SN-132	Non-Contact Cooling Tower – Flattening and Coating Line (FCL)	PM	0.6	2.5
		PM ₁₀	0.4	1.7
		PM _{2.5}	0.1	0.1
SN-133	RH Degasser with Flare #2	PM	0.1	0.1
		PM ₁₀	0.1	0.1
		PM _{2.5}	0.1	0.1
		SO ₂	0.1	0.1
		VOC	0.1	0.2
		CO	9.8	29.8
		NO _x	0.4	1.8
		Lead	0.000003	0.00002
		CO _{2e}	--	4,760
		Arsenic	0.000001	0.000005
		Cadmium	0.000006	0.00003
		Formaldehyde	0.004	0.0002
		Manganese	0.000002	0.000009
		Mercury	0.000002	0.00006
SN-134	RH Degasser Boiler #2	PM	0.7	3.0
		PM ₁₀	0.7	3.0
		PM _{2.5}	0.7	3.0
		SO ₂	0.1	0.3
		VOC	0.5	2.1
		CO	7.4	32.0
		NO _x	3.2	13.6
		Lead	0.00005	0.0002
		CO _{2e}	--	45,457
		Arsenic	0.00002	0.00008
		Cadmium	0.0001	0.0005
		Formaldehyde	0.007	0.03

EMISSION SUMMARY				
Source Number	Description	Pollutant	Emission Rates	
			lb/hr	tpy
		Manganese	0.00004	0.0002
		Mercury	0.00003	0.0001
SN-135	RH Preheater Vessel Station #2	PM	0.1	0.1
		PM ₁₀	0.1	0.1
		PM _{2.5}	0.1	0.1
		SO ₂	0.1	0.1
		VOC	0.1	0.2
		CO	0.5	2.2
		NO _x	0.5	2.1
		Lead	0.000003	0.00002
		CO _{2e}	--	3,075
		Arsenic	0.000002	0.000006
		Cadmium	0.000007	0.00003
		Formaldehyde	0.0005	0.002
		Manganese	0.000003	0.00001
		Mercury	0.000002	0.000007
SN-136	RH Vessel Top Part Dryer #2	PM	0.1	0.1
		PM ₁₀	0.1	0.1
		PM _{2.5}	0.1	0.1
		SO ₂	0.1	0.1
		VOC	0.1	0.1
		CO	0.2	0.6
		NO _x	0.2	0.5
		Lead	0.0000007	0.000004
		CO _{2e}	--	718
		Arsenic	0.0000003	0.000002
		Cadmium	0.000002	0.000007
		Formaldehyde	0.0002	0.0005
		Manganese	0.0000006	0.000003
		Mercury	0.0000004	0.000002
SN-137	RH Vessel Nozzle Dryer #2	PM	0.1	0.1
		PM ₁₀	0.1	0.1
		PM _{2.5}	0.1	0.1
		SO ₂	0.1	0.1
		VOC	0.1	0.1
		CO	0.2	0.7
		NO _x	0.2	0.7
		Lead	0.0000009	0.000004
		CO _{2e}	--	923
		Arsenic	0.0000004	0.000002

EMISSION SUMMARY				
Source Number	Description	Pollutant	Emission Rates	
			lb/hr	tpy
		Cadmium	0.000002	0.000009
		Formaldehyde	0.0002	0.0006
		Manganese	0.0000007	0.000003
		Mercury	0.0000005	0.000003
SN-138	RH Degasser Burner/Top Lance #2	PM	0.1	0.1
		PM ₁₀	0.1	0.1
		PM _{2.5}	0.1	0.1
		SO ₂	0.1	0.1
		VOC	0.1	0.3
		CO	0.8	3.3
		NO _x	0.8	3.2
		Lead	0.000005	0.00002
		CO _{2e}	--	4,613
		Arsenic	0.000002	0.000008
		Cadmium	0.00001	0.00005
		Formaldehyde	0.0007	0.003
		Manganese	0.000004	0.00002
		Mercury	0.000003	0.00001
SN-139	RH Degasser Alloy Delivery System #2	PM	0.1	0.1
		PM ₁₀	0.1	0.1
		PM _{2.5}	0.1	0.1
SN-140	High Temperature Annealing	PM	0.5	1.9
		PM ₁₀	0.5	1.9
		PM _{2.5}	0.5	1.9
		SO ₂	0.1	0.2
		VOC	0.3	1.4
		CO	4.6	20.2
		NO _x	5.6	24.5
		Lead	0.000028	0.00012
		CO _{2e}	-	28,598
		Arsenic	0.00002	0.00005
		Cadmium	0.00006	0.0003
		Formaldehyde	0.004	0.02
		Manganese	0.00003	0.00009
		Mercury	0.00002	0.00007
SN-141	Cold Mill Boiler #3	PM	0.7	3.0
		PM ₁₀	0.7	3.0
		PM _{2.5}	0.7	3.0
		SO ₂	0.1	0.3
		VOC	0.5	2.1

EMISSION SUMMARY				
Source Number	Description	Pollutant	Emission Rates	
			lb/hr	tpy
		CO	7.4	32.1
		NO _x	3.1	13.6
		Lead	0.000044	0.00019
		CO ₂ e	-	45,613
		Arsenic	0.00002	0.00008
		Cadmium	0.0001	0.0005
		Formaldehyde	0.007	0.03
		Manganese	0.00004	0.0002
		Mercury	0.00003	0.0001
SN-142	Cold Mill Boiler #4	PM	0.5	1.8
		PM ₁₀	0.5	1.8
		PM _{2.5}	0.5	1.8
		SO ₂	0.1	0.2
		VOC	0.3	1.3
		CO	4.5	19.5
		NO _x	1.9	8.3
		Lead	0.000027	0.00012
		CO ₂ e	-	27,675
		Arsenic	0.00002	0.00005
		Cadmium	0.00006	0.0003
		Formaldehyde	0.004	0.02
		Manganese	0.00003	0.00009
		Mercury	0.00002	0.00007
SN-143	Continuous Galvanizing Line 2 Paint Booth	VOC	1.1	0.2
SN-144	Emergency Generator 19, Diesel Fired, 2700 kW	PM	0.9	0.1
		PM ₁₀	0.9	0.1
		PM _{2.5}	0.9	0.1
		SO ₂	0.1	0.1
		VOC	1.1	0.1
		CO	7.3	0.4
		NO _x	31.5	1.6
		CO ₂ e	-	195
		H ₂ SO ₄	0.1	0.1
SN-145	Emergency Generator 20, Diesel Fired, 2700 kW	PM	0.9	0.1
		PM ₁₀	0.9	0.1
		PM _{2.5}	0.9	0.1
		SO ₂	0.1	0.1
		VOC	1.1	0.1

EMISSION SUMMARY				
Source Number	Description	Pollutant	Emission Rates	
			lb/hr	tpy
		CO	7.3	0.4
		NO _x	31.5	1.6
		CO _{2e}	-	195
		H ₂ SO ₄	0.1	0.1
SN-146	Emergency Generator 21, Diesel Fired, 2700 kW	PM	0.9	0.1
		PM ₁₀	0.9	0.1
		PM _{2.5}	0.9	0.1
		SO ₂	0.1	0.1
		VOC	1.1	0.1
		CO	7.3	0.4
		NO _x	31.5	1.6
		CO _{2e}	-	195
		H ₂ SO ₄	0.1	0.1
SN-147	Emergency Generator 22, Diesel Fired, 2700 kW	PM	0.9	0.1
		PM ₁₀	0.9	0.1
		PM _{2.5}	0.9	0.1
		SO ₂	0.1	0.1
		VOC	1.1	0.1
		CO	7.3	0.4
		NO _x	31.5	1.6
		CO _{2e}	-	195
		H ₂ SO ₄	0.1	0.1
SN-148	Emergency Generator 23, Diesel Fired, 2700 kW	PM	0.9	0.1
		PM ₁₀	0.9	0.1
		PM _{2.5}	0.9	0.1
		SO ₂	0.1	0.1
		VOC	1.1	0.1
		CO	7.3	0.4
		NO _x	31.5	1.6
		CO _{2e}	-	195
		H ₂ SO ₄	0.1	0.1
SN-149	Hydrogen Plant Reformer Furnace #3	PM	0.1	0.4
		PM ₁₀	0.1	0.4
		PM _{2.5}	0.1	0.4
		SO ₂	0.1	0.1
		VOC	0.1	0.3
		CO	1.0	4.3
		NO _x	1.2	5.2
		Lead	0.0000058	0.000026
		CO _{2e}	-	6,007

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EMISSION SUMMARY				
Source Number	Description	Pollutant	Emission Rates	
			lb/hr	tpy
SN-150	Hydrogen Plant Reformer Furnace #4	PM	0.1	0.4
		PM ₁₀	0.1	0.4
		PM _{2.5}	0.1	0.4
		SO ₂	0.1	0.1
		VOC	0.1	0.3
		CO	1.0	4.3
		NO _x	1.2	5.2
		Lead	0.0000058	0.000026
		CO _{2e}	-	6,007

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

**HAPs included in the VOC totals. Other HAPs are not included in any other totals unless specifically stated.

***Air Contaminants such as ammonia, acetone, and certain halogenated solvents are not VOCs or HAPs.

SECTION III: PERMIT HISTORY

Permit #2305-AOP-R0 was issued to Big River Steel LLC on September 18, 2013. This permit was the initial air permit for the facility. The facility required prevention of significant deterioration review to ensure the new source would not cause a significant deterioration of the local ambient air quality. PSD review was required for NO_x, CO, PM, PM₁₀, PM_{2.5}, SO₂, VOC, lead, and greenhouse gasses.

The PSD regulations mandate that a case-by-case Best Available Control Technology (BACT) analysis be performed on all new or modified affected sources at which a net emissions increase will occur. The following table is a summary of the BACT determinations made in 2305-AOP-R0.

BACT Analysis Summary				
Source	Description	Pollutant	Control Technology	BACT Limit
SN-01 and SN-02	EAFs	PM	Fabric Filter	0.0018 gr/dscf (filterable only)
		PM ₁₀	Fabric Filter	0.0024 gr/dscf
		PM _{2.5}	Fabric Filter	0.0024 gr/dscf
		Opacity	Fabric Filter	3% as a 6-minute average 6% from melt shop
		SO ₂	Scrap management plan	0.18 lb/ton of steel produced
		VOC	Scrap management plan and Good operating Practices (Periodic Equipment Maintenance)	0.088 lb/ton steel produced
		CO		2 lb/ton of steel produced
		NO _x		0.3 lb/ton of steel produced
		Lead	Fabric Filter	0.00056 lb/ton of steel produced
SN-01 and SN-02	LMFs	PM	Fabric Filter	0.0018 gr/dscf (filterable only)
		PM ₁₀	Fabric Filter	0.0024 gr/dscf
		PM _{2.5}	Fabric Filter	0.0024 gr/dscf
		Opacity	Fabric Filter	3% as a 6-minute average 6% from melt shop

BACT Analysis Summary				
Source	Description	Pollutant	Control Technology	BACT Limit
		SO ₂	Scrap management plan	0.02 lb/ton of steel produced
		VOC	Scrap management plan and Good operating Practices (Periodic Equipment Maintenance)	0.005 lb/ton of steel produced
		CO		0.02 lb/ton of steel produced
		NO _x		0.05 lb/ton of steel produced
		Lead	Fabric Filter	
SN-01, SN-02, and SN-03	Meltshop	GHG	Energy Efficiency improvements.	0.155 tons of CO ₂ e/Ton of Liquid steel produced.
SN-03	RH Degasser	CO (from degasser)	Flare	0.04 lb/ton of steel produced
		PM	Combustion of Natural gas and Good Combustion Practices (Periodic Equipment Maintenance)	0.00052 lb/MMBTU
		PM ₁₀		0.00052 lb/MMBTU
		PM _{2.5}		0.00052 lb/MMBTU
		Opacity		5%
		SO ₂		0.000588 lb/MMBTU
		VOC		0.0054 lb/MMBTU
		CO		0.0824 lb/MMBTU
		NO _x		1.0 lb/MMBTU
		GHG	Good operating Practices (Periodic Equipment Maintenance)	CO ₂ 117 lb/MMBTU CH ₄ 0.0022 lb/MMBTU N ₂ O 0.0002 lb/MMBTU
SN-04	RH Degasser Boiler	PM	Combustion of Natural gas and Good Combustion Practices (Periodic Equipment Maintenance)	0.00052 lb/MMBTU
		PM ₁₀		0.00052 lb/MMBTU
		PM _{2.5}		0.00052 lb/MMBTU
		Opacity		5%
		SO ₂		0.000588 lb/MMBTU
		VOC		0.0054 lb/MMBTU
		CO		0.0824 lb/MMBTU

BACT Analysis Summary				
Source	Description	Pollutant	Control Technology	BACT Limit
		NO _x	Low NO _x burners Combustion of clean fuel Good Combustion Practices (Periodic Equipment Maintenance)	0.035 lb/MMBTU
		GHG	Good operating Practices (Periodic Equipment Maintenance) Minimum Boiler Efficiency	CO ₂ 117 lb/MMBTU CH ₄ 0.0022 lb/MMBTU N ₂ O 0.0002 lb/MMBTU 75%
SN-04A SN-04B SN-04C SN-04D	RH Degasser Vessel Preheater Station, Vessel Top Part Dryer, RH Vessel Nozzle Dryer RH Degasser Burner/Top Lance	PM	Combustion of Natural gas and Good Combustion Practices (Periodic Equipment Maintenance)	0.00052 lb/MMBTU
		PM ₁₀		0.00052 lb/MMBTU
		PM _{2.5}		0.00052 lb/MMBTU
		Opacity		5%
		SO ₂		0.000588 lb/MMBTU
		VOC		0.0054 lb/MMBTU
		CO		0.0824 lb/MMBTU
		NO _x	Low NO _x burners Combustion of clean fuel Good Combustion Practices (Periodic Equipment Maintenance)	0.08 lb/MMBTU
		GHG	Good operating Practices (Periodic Equipment Maintenance)	CO ₂ 117 lb/MMBTU CH ₄ 0.0022 lb/MMBTU N ₂ O 0.0002 lb/MMBTU
SN-05, SN-06, SN-07, SN-08, and SN-09	Ladle Preheaters	PM	Combustion of Natural gas and Good Combustion Practices (Periodic Equipment Maintenance)s (Periodic Equipment Maintenance)	0.00052 lb/MMBTU
		PM ₁₀		0.00052 lb/MMBTU
		PM _{2.5}		0.00052 lb/MMBTU
		Opacity		5%
		SO ₂		0.000588 lb/MMBTU
		VOC		0.0054 lb/MMBTU
		CO		0.0824 lb/MMBTU

BACT Analysis Summary				
Source	Description	Pollutant	Control Technology	BACT Limit
		NO _x	Low NO _x burners Combustion of clean fuel Good Combustion Practices (Periodic Equipment Maintenance)	0.08 lb/MMBTU
		GHG	Good operating Practices (Periodic Equipment Maintenance)	CO ₂ 117 lb/MMBTU CH ₄ 0.0022 lb/MMBTU N ₂ O 0.0002 lb/MMBTU
SN-10 and SN-11	Ladle Dryout Station	PM	Combustion of Natural gas and Good Combustion Practices (Periodic Equipment Maintenance)	0.00052 lb/MMBTU
		PM ₁₀		0.00052 lb/MMBTU
		PM _{2.5}		0.00052 lb/MMBTU
		Opacity		5%
		SO ₂		0.000588 lb/MMBTU
		VOC		0.0054 lb/MMBTU
		CO		0.0824 lb/MMBTU
		NO _x	Low NO _x burners Combustion of clean fuel Good Combustion Practices (Periodic Equipment Maintenance)	0.08 lb/MMBTU
		GHG	Good operating Practices (Periodic Equipment Maintenance)	CO ₂ 117 lb/MMBTU CH ₄ 0.0022 lb/MMBTU N ₂ O 0.0002 lb/MMBTU
SN-12 and SN-13	Vertical Ladle Holding Station	PM	Combustion of Natural gas and Good Combustion Practices (Periodic Equipment Maintenance)	0.00052 lb/MMBTU
		PM ₁₀		0.00052 lb/MMBTU
		PM _{2.5}		0.00052 lb/MMBTU
		Opacity		5%
		SO ₂		0.000588 lb/MMBTU
		VOC		0.0054 lb/MMBTU
		CO		0.0824 lb/MMBTU

BACT Analysis Summary				
Source	Description	Pollutant	Control Technology	BACT Limit
		NO _x	Low NO _x burners Combustion of clean fuel Good Combustion Practices (Periodic Equipment Maintenance)	0.08 lb/MMBTU
		GHG	Good operating Practices (Periodic Equipment Maintenance)	CO ₂ 117 lb/MMBTU CH ₄ 0.0022 lb/MMBTU N ₂ O 0.0002 lb/MMBTU
SN-16, SN-17, SN-18, and SN-19	Tundish Preheaters/ Dryout Stands #1 and #2 Tundish Preheaters #3 & #4	PM	Combustion of Natural gas and Good Combustion Practices (Periodic Equipment Maintenance)	0.00052 lb/MMBTU
		PM ₁₀		0.00052 lb/MMBTU
		PM _{2.5}		0.00052 lb/MMBTU
		Opacity		5%
		SO ₂		0.000588 lb/MMBTU
		VOC		0.0054 lb/MMBTU
		CO		0.0824 lb/MMBTU
		NO _x	Low NO _x burners Combustion of clean fuel Good Combustion Practices (Periodic Equipment Maintenance)	0.08 lb/MMBTU
		GHG	Good operating Practices (Periodic Equipment Maintenance)	CO ₂ 117 lb/MMBTU CH ₄ 0.0022 lb/MMBTU N ₂ O 0.0002 lb/MMBTU
SN-20 and SN-21	Tunnel Furnaces	PM	Combustion of Natural gas and Good Combustion Practices (Periodic Equipment Maintenance)	0.00052 lb/MMBTU
		PM ₁₀		0.00052 lb/MMBTU
		PM _{2.5}		0.00052 lb/MMBTU
		Opacity		5%
		SO ₂		0.000588 lb/MMBTU
		VOC		0.0054 lb/MMBTU
		CO		0.0824 lb/MMBTU

BACT Analysis Summary				
Source	Description	Pollutant	Control Technology	BACT Limit
		NO _x	Low NO _x burners Combustion of clean fuel Good Combustion Practices (Periodic Equipment Maintenance)	0.1 lb/MMBTU
		GHG	Good operating Practices (Periodic Equipment Maintenance)	CO ₂ 117 lb/MMBTU CH ₄ 0.0022 lb/MMBTU N ₂ O 0.0002 lb/MMBTU
SN-22	Pickle Line Boiler	PM	Combustion of Natural gas and Good Combustion Practices (Periodic Equipment Maintenance)	0.00052 lb/MMBTU
		PM ₁₀		0.00052 lb/MMBTU
		PM _{2.5}		0.00052 lb/MMBTU
		Opacity		5%
		SO ₂		0.000588 lb/MMBTU
		VOC		0.0054 lb/MMBTU
		CO		0.0824 lb/MMBTU
		NO _x	Low NO _x burners Combustion of clean fuel Good Combustion Practices (Periodic Equipment Maintenance)	0.035 lb/MMBTU
		GHG	Good operating Practices (Periodic Equipment Maintenance) Minimum Boiler Efficiency	CO ₂ 117 lb/MMBTU CH ₄ 0.0022 lb/MMBTU N ₂ O 0.0002 lb/MMBTU 75%
SN-23	Pickle Line Scale Exhaust	PM	Fabric Filter	0.003 gr/dscf
		PM ₁₀		
		PM _{2.5}		
		Opacity		5%
SN-23A	Tension Leveler Dust Exhaust	PM	Fabric Filter	0.003 gr/dscf
		PM ₁₀		
		PM _{2.5}		

BACT Analysis Summary				
Source	Description	Pollutant	Control Technology	BACT Limit
		Opacity		5%
SN-25	Tandem Cold Mill	PM	Mist Eliminator	0.0025 gr/dscf (filterable only)
		PM ₁₀		0.0066 gr/dscf
		PM _{2.5}		0.0066 gr/dscf
		Opacity		
SN-26 and SN-27	Galvanizing Line Boiler	PM	Combustion of Natural gas and Good Combustion Practices (Periodic Equipment Maintenance)	0.00052 lb/MMBTU
		PM ₁₀		0.00052 lb/MMBTU
		PM _{2.5}		0.00052 lb/MMBTU
		Opacity		5%
		SO ₂		0.000588 lb/MMBTU
		VOC		0.0054 lb/MMBTU
		CO		0.0824 lb/MMBTU
		NO _x	Low NO _x burners Combustion of clean fuel Good Combustion Practices (Periodic Equipment Maintenance)	0.035 lb/MMBTU
		GHG	Good operating Practices (Periodic Equipment Maintenance) Minimum Boiler Efficiency	CO ₂ 117 lb/MMBTU CH ₄ 0.0022 lb/MMBTU N ₂ O 0.0002 lb/MMBTU 75%
SN-28 and SN-29	Galvanizing Line Preheater	PM	Combustion of Natural gas and Good Combustion Practices (Periodic Equipment Maintenance)	0.00052 lb/MMBTU
		PM ₁₀		0.00052 lb/MMBTU
		PM _{2.5}		0.00052 lb/MMBTU
		Opacity		5%
		SO ₂		0.000588 lb/MMBTU
		VOC		0.0054 lb/MMBTU
		CO		0.0824 lb/MMBTU

BACT Analysis Summary				
Source	Description	Pollutant	Control Technology	BACT Limit
		NO _x	SCR, Low NO _x burners Combustion of clean fuel Good Combustion Practices (Periodic Equipment Maintenance)	0.035 lb/MMBTU
		GHG	Good operating Practices (Periodic Equipment Maintenance)	CO ₂ 117 lb/MMBTU CH ₄ 0.0022 lb/MMBTU N ₂ O 0.0002 lb/MMBTU
SN-34, SN-35, SN-36, SN-37	Galvanizing Line Caustic Cleaning and Post Treatment	PM	Mist Eliminator	0.003 gr/dscf
		PM ₁₀		
		PM _{2.5}		
		Opacity		5%
SN-38	Skin Pass Mill	PM	Mist Eliminator	0.0025 gr/dscf
		PM ₁₀		0.0066 gr/dscf
		PM _{2.5}		
		Opacity		5%
SN-39	Annealing Furnaces	PM	Combustion of Natural gas and Good Combustion Practices (Periodic Equipment Maintenance)	0.00052 lb/MMBTU
		PM ₁₀		0.00052 lb/MMBTU
		PM _{2.5}		0.00052 lb/MMBTU
		Opacity		5%
		SO ₂		0.000588 lb/MMBTU
		VOC		0.0054 lb/MMBTU
		CO		0.0824 lb/MMBTU
		NO _x	Low NO _x burners Combustion of clean fuel Good Combustion Practices (Periodic Equipment Maintenance)	0.1 lb/MMBTU
		GHG	Good operating Practices (Periodic Equipment Maintenance)	CO ₂ 117 lb/MMBTU CH ₄ 0.0022 lb/MMBTU N ₂ O 0.0002 lb/MMBTU
		PM		0.00052 lb/MMBTU

BACT Analysis Summary				
Source	Description	Pollutant	Control Technology	BACT Limit
SN-40, SN-42	Decarburizing Line Furnace Section	PM ₁₀	Combustion of Natural gas and Good Combustion Practices (Periodic Equipment Maintenance)	0.00052 lb/MMBTU
		PM _{2.5}		0.00052 lb/MMBTU
		Opacity		5%
		SO ₂		0.000588 lb/MMBTU
		VOC		0.0054 lb/MMBTU
		CO		0.0824 lb/MMBTU
		NO _x	Low NO _x burners SCR Combustion of clean fuel Good Combustion Practices (Periodic Equipment Maintenance)	0.1 lb/MMBTU
		GHG	Good operating Practices (Periodic Equipment Maintenance)	CO ₂ 117 lb/MMBTU CH ₄ 0.0022 lb/MMBTU N ₂ O 0.0002 lb/MMBTU
SN-41, SN-43	Decarburizing Line Cleaning Sections	PM	Mist Eliminator	0.003 gr/dscf
		PM ₁₀		
		PM _{2.5}		
		Opacity		
SN-44, SN-45, SN-46	Reversing Cold Mills	PM	Mist Eliminator	0.0025gr/dscf 0.0066 gr/dscf
		PM ₁₀		
		PM _{2.5}		
		Opacity		
SN-47	Annealing Pickling Line Furnace Section	PM	Combustion of Natural gas and Good Combustion Practices (Periodic Equipment Maintenance)	0.00052 lb/MMBTU
		PM ₁₀		0.00052 lb/MMBTU
		PM _{2.5}		0.00052 lb/MMBTU
		Opacity		5%
		SO ₂		0.000588 lb/MMBTU
		VOC		0.0054 lb/MMBTU
		CO		0.0824 lb/MMBTU

BACT Analysis Summary				
Source	Description	Pollutant	Control Technology	BACT Limit
		NO _x	Low NO _x burners SCR Combustion of clean fuel Good Combustion Practices (Periodic Equipment Maintenance)	0.1 lb/MMBTU
		GHG	Good operating Practices (Periodic Equipment Maintenance)	CO ₂ 117 lb/MMBTU CH ₄ 0.0022 lb/MMBTU N ₂ O 0.0002 lb/MMBTU
SN-48, SN-49	Annealing Pickling Line Scale Dust Exhaust and Shotblast	PM	Fabric Filter	0.003 gr/dscf
		PM ₁₀		
		PM _{2.5}		
		Opacity		5%
SN-51	Annealing Coating Line Furnace Section	PM	Combustion of Natural gas and Good Combustion Practices (Periodic Equipment Maintenance)	0.00052 lb/MMBTU
		PM ₁₀		0.00052 lb/MMBTU
		PM _{2.5}		0.00052 lb/MMBTU
		Opacity		5%
		SO ₂		0.000588 lb/MMBTU
		VOC		0.0054 lb/MMBTU
		CO		0.0824 lb/MMBTU
		NO _x	Low NO _x burners SCR Combustion of clean fuel Good Combustion Practices (Periodic Equipment Maintenance)	0.1 lb/MMBTU
		GHG	Good operating Practices (Periodic Equipment Maintenance)	CO ₂ 117 lb/MMBTU CH ₄ 0.0022 lb/MMBTU N ₂ O 0.0002 lb/MMBTU
SN-52	Annealing Coating Line Cleaning Section	PM	Mist Eliminator	0.003 gr/dscf
		PM ₁₀		
		PM _{2.5}		
		Opacity		5%

BACT Analysis Summary				
Source	Description	Pollutant	Control Technology	BACT Limit
SN-53	Annealing Coating Line Drying Furnace	PM	Combustion of Natural gas and Good Combustion Practices (Periodic Equipment Maintenance)	0.00052 lb/MMBTU
		PM ₁₀		0.00052 lb/MMBTU
		PM _{2.5}		0.00052 lb/MMBTU
		Opacity		5%
		SO ₂		0.000588 lb/MMBTU
		CO		0.0824 lb/MMBTU
		VOC Natural gas Combustion	RTO	0.0054 lb/MMBTU
		NO _x	Low NO _x burners Combustion of clean fuel Good Combustion Practices (Periodic Equipment Maintenance)	0.1 lb/MMBTU
		GHG	Good operating Practices (Periodic Equipment Maintenance)	CO ₂ 117 lb/MMBTU CH ₄ 0.0022 lb/MMBTU N ₂ O 0.0002 lb/MMBTU
SN-54, SN-56	MgO Coating Lines Drying Sections	PM	Combustion of Natural gas and Good Combustion Practices (Periodic Equipment Maintenance)	0.00052 lb/MMBTU
		PM ₁₀		0.00052 lb/MMBTU
		PM _{2.5}		0.00052 lb/MMBTU
		Opacity		5%
		SO ₂		0.000588 lb/MMBTU
		VOC		0.0054 lb/MMBTU
		CO		0.0824 lb/MMBTU
		NO _x	Low NO _x burners Combustion of clean fuel Good Combustion Practices (Periodic Equipment Maintenance)	0.1 lb/MMBTU
		GHG	Good operating Practices (Periodic Equipment Maintenance)	CO ₂ 117 lb/MMBTU CH ₄ 0.0022 lb/MMBTU N ₂ O 0.0002 lb/MMBTU
SN-55, SN-57	MgO Coating Lines	PM	Mist Eliminator	0.003 gr/dscf
		PM ₁₀		

BACT Analysis Summary				
Source	Description	Pollutant	Control Technology	BACT Limit
SN-58, SN-60	Cleaning Sections	PM _{2.5}		
		Opacity		
	Final Annealing and Coating Lines Furnace Sections	PM	Combustion of Natural gas and Good Combustion Practices (Periodic Equipment Maintenance)	0.00052 lb/MMBTU
		PM ₁₀		0.00052 lb/MMBTU
		PM _{2.5}		0.00052 lb/MMBTU
		Opacity		5%
		SO ₂		0.000588 lb/MMBTU
		VOC		0.0054 lb/MMBTU
		CO		0.0824 lb/MMBTU
		NO _x	Low NO _x burners SCR Combustion of clean fuel Good Combustion Practices (Periodic Equipment Maintenance)	0.1 lb/MMBTU
		GHG	Good operating Practices (Periodic Equipment Maintenance)	CO ₂ 117 lb/MMBTU CH ₄ 0.0022 lb/MMBTU N ₂ O 0.0002 lb/MMBTU
SN-62	Emergency Generator #1	PM	Good operating Practices (Periodic Equipment Maintenance), limited hours of operation, Compliance with NSPS Subpart IIII	0.02 g/kW-Hr
		PM ₁₀		0.02 g/kW-Hr
		PM _{2.5}		0.02 g/kW-Hr
		Opacity		20%
		SO ₂		<0.0015% sulfur in fuel
		VOC		0.19 g/kW-Hr
		CO		3.5 g/kW-Hr
		NO _x		0.4 g/kW-Hr
		GHG	Good Combustion Practices (Periodic Equipment Maintenance)	CO ₂ 163 lbs/MMBTU CH ₄ 0.0061 lbs/MMBTU N ₂ O 0.0013 lbs/MMBTU
SN-63, SN-64, SN-65, SN-66, SN-67	Emergency Generators 2 through 6	PM	Good operating Practices (Periodic Equipment Maintenance), limited hours of operation,	0.04 g/kW-Hr
		PM ₁₀		0.04 g/kW-Hr
		PM _{2.5}		0.04 g/kW-Hr
		Opacity		20%
		SO ₂		<0.0015% sulfur in fuel
		VOC		0.19 g/kW-Hr
		CO		3.5 g/kW-Hr

BACT Analysis Summary				
Source	Description	Pollutant	Control Technology	BACT Limit
		NO _x	Compliance with NSPS Subpart IIII	0.67 g/kW-Hr
		GHG	Good Combustion Practices (Periodic Equipment Maintenance)	CO ₂ 163 lbs/MMBTU CH ₄ 0.0061 lbs/MMBTU N ₂ O 0.0013 lbs/MMBTU
SN-68, SN-69, SN-70, SN-71, SN-72, SN-73	Non-Contact Cooling Towers	PM	Drift Eliminators Low TDS	0.0005 percent drift loss
		PM ₁₀		
		PM _{2.5}		
		Opacity		5%
SN-73, SN-74, SN-75, SN-76, SN-77, SN-78, SN-79	Contact Cooling Towers	PM	Drift Eliminators Low TDS	0.0005 percent drift loss
		PM ₁₀		
		PM _{2.5}		
		Opacity		5%
SN-80	Charge Crane	PM	Dust Control Plan	0.1 lb/hr, 0.1 tpy
		PM ₁₀		0.1 lb/hr, 0.1 tpy 0.1 tpy
		PM _{2.5}		0.1 lb/hr, 0.1 tpy
		Opacity		20%
SN-81	Scrap yard Stockpiling	PM	Dust Control Plan	0.1 lb/hr, 0.5 tpy
		PM ₁₀		0.1 lb/hr, 0.2 tpy
		PM _{2.5}		0.1 lb/hr, 0.1 tpy
		Opacity		20%
SN-82	EAF Flux Receiving System	PM	Dust Control Plan Enclosed Receiving System with Fabric Filter	0.003 gr/dscf
		PM ₁₀		
		PM _{2.5}		
		Opacity		5%
SN-83	EAF Flux Storage and Handling System	PM PM ₁₀ PM _{2.5}	Dust Control Plan, Enclosed Conveyors with Fabric Filters Silos with Bin Vent Filters	0.003 gr/dscf
				0.01 gr/dscf
		Opacity		5%
SN-84		PM	Dust Control Plan	0.003 gr/dscf
		PM ₁₀		

BACT Analysis Summary					
Source	Description	Pollutant	Control Technology	BACT Limit	
	Carbon Injection Receiving	PM _{2.5}	Enclosed Receiving System with Fabric Filter	5%	
		Opacity			
SN-85	Carbon Injection Storage and Handling System	PM	Dust Control Plan, Enclosed Conveyors with Fabric Filters Silos with Bin Vent Filters	0.003 gr/dscf	
		PM ₁₀		0.01 gr/dscf	
		PM _{2.5}			
		Opacity		5%	
SN-86	LMF Flux Receiving	PM	Dust Control Plan Enclosed Receiving System with Fabric Filter	0.003 gr/dscf	
		PM ₁₀			
		PM _{2.5}		5%	
		Opacity			
SN-87	LMF Flux Storage and Handling System	PM	Dust Control Plan, Enclosed Conveyors with Fabric Filters Silos with Bin Vent Filters	0.003 gr/dscf	
		PM ₁₀		0.01 gr/dscf	
		PM _{2.5}			
		Opacity		5%	
SN-88	Alloy Receiving System	PM	Dust Control Plan Enclosed Receiving System with Fabric Filter	0.003 gr/dscf	
		PM ₁₀		5%	
		PM _{2.5}			
		Opacity			
SN-89	Alloy Storage and Handling System	PM	Dust Control Plan, Enclosed Conveyors with Fabric Filters Silos with Bin Vent Filters	0.003 gr/dscf	
		PM ₁₀		0.01 gr/dscf	
		PM _{2.5}			
		Opacity		5%	
SN-90	Alloy Delivery System – LMF	PM	Dust Control Plan, Enclosed Conveyors with Fabric Filters Enclosed Receiving System with Fabric Filter Fabric Filters Silos with Bin Vent Filters	0.003 gr/dscf	
		PM ₁₀		0.003 gr/dscf	
		PM _{2.5}			
		Opacity		0.01 gr/dscf	
				5%	
SN-91		PM			

BACT Analysis Summary				
Source	Description	Pollutant	Control Technology	BACT Limit
	RH Degasser Alloy Delivery System	PM ₁₀	Dust Control Plan, Enclosed Conveyors with Fabric Filters Enclosed Receiving System with Fabric Filter Fabric Filters	0.003 gr/dscf
		PM _{2.5}		0.003 gr/dscf
				0.01 gr/dscf
		Opacity	Silos with Bin Vent Filters	5%
SN-92	Inside Drop Point - Spent Refractory and Other Waste	PM	Dust Control Plan	0.1 lb/hr, 0.1 tpy
		PM ₁₀		0.1 lb/hr, 0.1 tpy
		PM _{2.5}		0.1 lb/hr, 0.1 tpy
		Opacity		20%
SN-93	Outside Drop Point - Spent Refractory and Other Waste	PM	Dust Control Plan	0.1 lb/hr, 0.1 tpy
		PM ₁₀		0.1 lb/hr, 0.1 tpy
		PM _{2.5}		0.1 lb/hr, 0.1 tpy
		Opacity		20%
SN-94	Inside Drop Point – EAF Dust	PM	Dust Control Plan	0.1 lb/hr, 0.1 tpy
		PM ₁₀		0.1 lb/hr, 0.1 tpy
		PM _{2.5}		0.1 lb/hr, 0.1 tpy
		Opacity		20%
SN-95	Drop Points Slag	PM	Dust Control Plan	0.2 lb/hr, 0.8 tpy
		PM ₁₀		0.1 lb/hr, 0.4 tpy
		PM _{2.5}		0.1 lb/hr, 0.1 tpy
		Opacity		20%
SN-96	Slag Handling and Conveying	PM	Dust Control Plan	0.2 lb/hr, 0.5 tpy
		PM ₁₀		0.1 lb/hr, 0.2 tpy
		PM _{2.5}		0.1 lb/hr, 0.1 tpy
		Opacity		20%
SN-97	Paved Roads	PM	Dust Control Plan	0.7 lb/hr, 2.9 tpy
		PM ₁₀		0.2 lb/hr, 0.6 tpy
		PM _{2.5}		0.1 lb/hr, 0.2 tpy
SN-98	Unpaved Roads	PM	Dust Control Plan	2.2 lb/hr, 9.6 tpy
		PM ₁₀		0.6 lb/hr, 2.6 tpy
		PM _{2.5}		0.1 lb/hr, 0.3 tpy
SN-99A		PM	Dust Control Plan	0.9 lb/hr, 3.7 tpy
		PM ₁₀		0.5 lb/hr, 1.9 tpy

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BACT Analysis Summary				
Source	Description	Pollutant	Control Technology	BACT Limit
	Feed Stock Piles - Wind Erosion	PM _{2.5}		0.1 lb/hr, 0.3 tpy
		Opacity		20%
SN-99B	Slag Piles – Wind Erosion	PM	Dust Control Plan	0.2 lb/hr, 0.6 tpy
		PM ₁₀		0.1 lb/hr, 0.3 tpy
		PM _{2.5}		0.1 lb/hr, 0.1 tpy
		Opacity		20%

Permit #2305-AOP-R1 was issued to Big River Steel LLC on August 31, 2015. This permitting action was necessary to add four insignificant activities to the permit. There were no changes to the permitted emission rates.

Permit #2305-AOP-R2 was issued to Big River Steel LLC on November 7, 2018. This permitting action was necessary to update phase 1 equipment. The cooling towers' drift eliminator rate was updated along with emissions changes due to size changes. SN-04, SN-22, SN-26, and SN-28 BACT and emission limits were updated due to testing results. The tundish and ladle heaters (SN-05 through SN-11, SN-16, and SN-17) BACT limit was increased to match the rate of similar sources. Some emergency generators (SN-63 through SN-65) were slightly larger than permitted and have been updated. This modification also added a gasoline dispensing operation and three insignificant activities. The permitted emission changes from this modification were as follows: increase of 2.2 tpy PM, increase of 1 tpy PM₁₀, increase of 0.4 tpy PM_{2.5}, increase of 0.4 tpy SO₂, increase of 0.5 tpy VOC, decrease of 7.7 tpy CO, decrease of 8.8 tpy NO_x, decrease of 0.00012 tpy Lead, and a decrease of 8,975 tpy CO_{2e}.

Permit #2305-AOP-R3 was issued to Big River Steel LLC on December 28, 2018. This permitting action was an administrative amendment to correct the previous final permit. The previous permit did not include changes made during the comment period. Those changes were as follows. The emission limits and BACT limits were updated for SN-05-SN-11, SN-16, SN-17, and SN-39. These units were also removed from the testing requirements in Specific Conditions #53 and #70. Permit condition #26 was updated to remove the requirement for monthly submittal and to clarify the recordkeeping portion of the requirement for tons of steel tapped from the EAFs. The permitted emission changes from this amendment were as follows: an increase of 4.4 tpy PM, an increase of 4.5 tpy PM₁₀, and an increase of 4.5 tpy PM_{2.5}. The following table is a summary of the BACT determinations made in 2305-AOP-R2 and 2305-AOP-R3.

BACT Analysis Summary				
Source	Description	Pollutant	Control Technology	BACT Limit
SN-04		PM		0.000938 lb/MMBTU

BACT Analysis Summary				
Source	Description	Pollutant	Control Technology	BACT Limit
	RH Degasser Boiler	PM ₁₀	Combustion of	0.000938 lb/MMBTU
		PM _{2.5}	Natural gas and	0.000938 lb/MMBTU
		Opacity	Good Combustion	5%
		SO ₂	Practices (Periodic	0.000588 lb/MMBTU
		VOC	Equipment	0.0054 lb/MMBTU
		CO	Maintenance)	0.0824 lb/MMBTU
		NO _x	Low NO _x burners Combustion of clean fuel Good Combustion Practices (Periodic Equipment Maintenance)	0.035 lb/MMBTU
		GHG	Good operating Practices (Periodic Equipment Maintenance) Minimum Boiler Efficiency	CO ₂ 117 lb/MMBTU CH ₄ 0.0022 lb/MMBTU N ₂ O 0.0002 lb/MMBTU 75%
SN-05, SN-06, SN-07, SN-08, and SN-09	Ladle Preheaters	PM	Combustion of	0.0075 lb/MMBTU
		PM ₁₀	Natural gas and	0.0075 lb/MMBTU
		PM _{2.5}	Good Combustion	0.0075 lb/MMBTU
		Opacity	Practices (Periodic	5%
		SO ₂	Equipment	0.000588 lb/MMBTU
		VOC	Maintenance)s	0.0054 lb/MMBTU
		CO	(Periodic Equipment Maintenance)	0.0824 lb/MMBTU
		NO _x	Low NO _x burners Combustion of clean fuel Good Combustion Practices (Periodic Equipment Maintenance)	0.095 lb/MMBTU
		GHG	Good operating Practices (Periodic Equipment Maintenance)	CO ₂ 117 lb/MMBTU CH ₄ 0.0022 lb/MMBTU N ₂ O 0.0002 lb/MMBTU
		PM		0.0075 lb/MMBTU

BACT Analysis Summary				
Source	Description	Pollutant	Control Technology	BACT Limit
SN-10 and SN-11	Ladle Dryout Station	PM ₁₀	Combustion of	0.0075 lb/MMBTU
		PM _{2.5}	Natural gas and	0.0075 lb/MMBTU
		Opacity	Good Combustion	5%
		SO ₂	Practices (Periodic	0.000588 lb/MMBTU
		VOC	Equipment	0.0054 lb/MMBTU
		CO	Maintenance)	0.0824 lb/MMBTU
		NO _x	Low NO _x burners Combustion of clean fuel Good Combustion Practices (Periodic Equipment Maintenance)	0.095 lb/MMBTU
		GHG	Good operating Practices (Periodic Equipment Maintenance)	CO ₂ 117 lb/MMBTU CH ₄ 0.0022 lb/MMBTU N ₂ O 0.0002 lb/MMBTU
SN-16 and SN-17	Tundish Preheaters/ Dryout Stands #1 and #2	PM	Combustion of	0.0075 lb/MMBTU
		PM ₁₀	Natural gas and	0.0075 lb/MMBTU
		PM _{2.5}	Good Combustion	0.0075 lb/MMBTU
		Opacity	Practices (Periodic	5%
		SO ₂	Equipment	0.000588 lb/MMBTU
		VOC	Maintenance)	0.0054 lb/MMBTU
		CO		0.0824 lb/MMBTU
		NO _x	Low NO _x burners Combustion of clean fuel Good Combustion Practices (Periodic Equipment Maintenance)	0.097 lb/MMBTU
		GHG	Good operating Practices (Periodic Equipment Maintenance)	CO ₂ 117 lb/MMBTU CH ₄ 0.0022 lb/MMBTU N ₂ O 0.0002 lb/MMBTU
SN-22	Pickle Line Boiler	PM	Combustion of	0.00186 lb/MMBTU
		PM ₁₀	Natural gas and	0.00186 lb/MMBTU
		PM _{2.5}	Good Combustion	0.00186 lb/MMBTU
		Opacity	Practices (Periodic	5%
		SO ₂		0.000588 lb/MMBTU

BACT Analysis Summary				
Source	Description	Pollutant	Control Technology	BACT Limit
		VOC	Equipment Maintenance)	0.0054 lb/MMBTU
		CO		0.0824 lb/MMBTU
		NO _x	Low NO _x burners Combustion of clean fuel Good Combustion Practices (Periodic Equipment Maintenance)	0.035 lb/MMBTU
		GHG	Good operating Practices (Periodic Equipment Maintenance) Minimum Boiler Efficiency	CO ₂ 117 lb/MMBTU CH ₄ 0.0022 lb/MMBTU N ₂ O 0.0002 lb/MMBTU 75%
SN-26	Galvanizing Line Boiler	PM	Combustion of Natural gas and Good Combustion Practices (Periodic Equipment Maintenance)	0.00068 lb/MMBTU
		PM ₁₀		0.00068 lb/MMBTU
		PM _{2.5}		0.00068 lb/MMBTU
		Opacity		5%
		SO ₂		0.000588 lb/MMBTU
		VOC		0.0054 lb/MMBTU
		CO		0.0824 lb/MMBTU
		NO _x	Low NO _x burners Combustion of clean fuel Good Combustion Practices (Periodic Equipment Maintenance)	0.035 lb/MMBTU
		GHG	Good operating Practices (Periodic Equipment Maintenance) Minimum Boiler Efficiency	CO ₂ 117 lb/MMBTU CH ₄ 0.0022 lb/MMBTU N ₂ O 0.0002 lb/MMBTU 75%
SN-28	Galvanizing Line Preheater	PM	Combustion of Natural gas and Good Combustion	0.0012 lb/MMBTU
		PM ₁₀		0.0012 lb/MMBTU
		PM _{2.5}		0.0012 lb/MMBTU

BACT Analysis Summary				
Source	Description	Pollutant	Control Technology	BACT Limit
		Opacity	Practices (Periodic Equipment Maintenance)	5%
		SO ₂		0.000588 lb/MMBTU
		VOC		0.0054 lb/MMBTU
		CO		0.0824 lb/MMBTU
		NO _x	SCR, Low NO _x burners Combustion of clean fuel Good Combustion Practices (Periodic Equipment Maintenance)	0.035 lb/MMBTU
		GHG	Good operating Practices (Periodic Equipment Maintenance)	CO ₂ 117 lb/MMBTU CH ₄ 0.0022 lb/MMBTU N ₂ O 0.0002 lb/MMBTU
SN-39	Annealing Furnaces	PM	Combustion of Natural gas and Good Combustion Practices (Periodic Equipment Maintenance)	0.0075 lb/MMBTU
		PM ₁₀		0.0075 lb/MMBTU
		PM _{2.5}		0.0075 lb/MMBTU
		Opacity		5%
		SO ₂		0.000588 lb/MMBTU
		VOC		0.0054 lb/MMBTU
		CO		0.0824 lb/MMBTU
		NO _x	Low NO _x burners Combustion of clean fuel Good Combustion Practices (Periodic Equipment Maintenance)	0.1 lb/MMBTU
		GHG	Good operating Practices (Periodic Equipment Maintenance)	CO ₂ 117 lb/MMBTU CH ₄ 0.0022 lb/MMBTU N ₂ O 0.0002 lb/MMBTU
SN-63, SN-64, and SN-65	Emergency Generators 2 through 4	PM	Good operating Practices (Periodic Equipment Maintenance), limited hours of operation,	0.2 g/kW-Hr
		PM ₁₀		0.2 g/kW-Hr
		PM _{2.5}		0.2 g/kW-Hr
		Opacity		20%
		SO ₂		<0.0015% sulfur in fuel
		VOC		1.55 g/kW-Hr

BACT Analysis Summary				
Source	Description	Pollutant	Control Technology	BACT Limit
		CO	Compliance with NSPS Subpart IIII	3.5 g/kW-Hr
		NO _x		3.86 g/kW-Hr
		GHG	Good Combustion Practices (Periodic Equipment Maintenance)	CO ₂ 163 lbs/MMBTU CH ₄ 0.0061 lbs/MMBTU N ₂ O 0.0013 lbs/MMBTU
SN-68, SN-69, SN-70, SN-73, and SN-74	Non-Contact Cooling Towers	PM	Drift Eliminators Low TDS	0.001 percent drift loss
		PM ₁₀		
		PM _{2.5}		5%
		Opacity		
SN-75, SN-76, SN-77, and SN-79	Contact Cooling Towers	PM	Drift Eliminators Low TDS	0.001 percent drift loss
		PM ₁₀		
		PM _{2.5}		5%
		Opacity		

Permit #2305-AOP-R4 was issued to Big River Steel LLC on April 5, 2019. This permitting action updated emissions and specifications of some Phase II equipment and added some new sources.

The Vertical Ladle Dryout Flash Preheater Stations SN-12 and SN-13 were updated to match the BACT and emission rates of the Phase I Ladle Dryout Stations SN-10 and SN-11. The same was true for the Tundish Preheaters (SN-17, SN-18, SN-19), Galvanizing Line Boiler 2 (SN-27), and Galvanizing Line Preheater 2 (SN-29) all being updated to match their Phase I counterpart. There were also two additional Tundish Preheaters added in this modification, SN-19A and SN-19B.

Emergency engines SN-62, SN-66, and SN-67 had their BACT limits updated to reflect the correct tier engine installed at each source. SN-66 and SN-67 also had their sizes updated to correctly reflect the installed source. Three new emergency engines, SN-67A, SN-67B, and SN-67C were also added to the permit during this modification.

Cooling towers SN-71, SN-72 (now SN-72A), and SN-78 (now SN-78A) were updated to reflect size and TDS limit changes. Four new cooling towers (SN-72B, SN-74A, SN-74B and SN-78B) were added to the permit.

Two new sources were added to the Cold Mill, an Annealing Pickle Line Boiler (SN-101), and 50 natural gas fired space heaters (SN-102).

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The total permitted emission changes as a result of this modification were as follows: Increase of 43.8tpy PM, increase of 65.4 tpy of PM₁₀ and PM_{2.5}, increase of 4.4 tpy SO₂, increase of 6.3 tpy VOC, increase of 72.3 tpy CO, increase of 63 tpy NO_x, and an increase of 0.00028 tpy Lead.

The following table is a summary of the BACT determinations made in 2305-AOP-R4.

BACT Analysis Summary				
Source	Description	Pollutant	Control Technology	BACT Limit
SN-10 SN-11 SN-12 SN-13	Vertical Ladle Dryout Flash Preheater Station	PM	Combustion of Natural gas and Good Combustion Practices (Periodic Equipment Maintenance)	0.0075 lb/MMBTU
		PM ₁₀		0.0075 lb/MMBTU
		PM _{2.5}		0.0075 lb/MMBTU
		Opacity		5%
		SO ₂		0.000588 lb/MMBTU
		VOC		0.0054 lb/MMBTU
		CO		0.0824 lb/MMBTU
		NO _x	Low NO _x burners Combustion of clean fuel Good Combustion Practices (Periodic Equipment Maintenance)	0.095 lb/MMBTU
		GHG	Good operating Practices (Periodic Equipment Maintenance)	CO ₂ 117 lb/MMBTU CH ₄ 0.0022 lb/MMBTU N ₂ O 0.0002 lb/MMBTU
SN-16 SN-17 SN-18 SN-19 SN-19A SN-19B	Tundish Preheaters/D ryout Stands #1 through #6	PM	Combustion of Natural gas and Good Combustion Practices (Periodic Equipment Maintenance)	0.0075 lb/MMBTU
		PM ₁₀		0.0075 lb/MMBTU
		PM _{2.5}		0.0075 lb/MMBTU
		Opacity		5%
		SO ₂		0.000588 lb/MMBTU
		VOC		0.0054 lb/MMBTU
		CO		0.0824 lb/MMBTU
		NO _x	Low NO _x burners Combustion of clean fuel Good Combustion Practices (Periodic Equipment Maintenance)	0.097 lb/MMBTU

BACT Analysis Summary				
Source	Description	Pollutant	Control Technology	BACT Limit
		GHG	Good operating Practices (Periodic Equipment Maintenance)	CO ₂ 117 lb/MMBTU CH ₄ 0.0022 lb/MMBTU N ₂ O 0.0002 lb/MMBTU
SN-22	Pickle Line Boiler	PM	Combustion of Natural gas and Good Combustion Practices (Periodic Equipment Maintenance)	0.00186 lb/MMBTU
		PM ₁₀		0.00186 lb/MMBTU
		PM _{2.5}		0.00186 lb/MMBTU
		Opacity		5%
		SO ₂		0.000588 lb/MMBTU
		VOC		0.0054 lb/MMBTU
		CO		0.0824 lb/MMBTU
		NO _x	Low NO _x burners Combustion of clean fuel Good Combustion Practices (Periodic Equipment Maintenance)	0.035 lb/MMBTU
		GHG	Good operating Practices (Periodic Equipment Maintenance) Minimum Boiler Efficiency	CO ₂ 117 lb/MMBTU CH ₄ 0.0022 lb/MMBTU N ₂ O 0.0002 lb/MMBTU 75%
SN-26 and SN-27	Galvanizing Line Boilers 1 and 2	PM	Combustion of Natural gas and Good Combustion Practices (Periodic Equipment Maintenance)	0.00068 lb/MMBTU
		PM ₁₀		0.00068 lb/MMBTU
		PM _{2.5}		0.00068 lb/MMBTU
		Opacity		5%
		SO ₂		0.000588 lb/MMBTU
		VOC		0.0054 lb/MMBTU
		CO		0.0824 lb/MMBTU
		NO _x	Low NO _x burners Combustion of clean fuel Good Combustion Practices (Periodic Equipment Maintenance)	0.035 lb/MMBTU

BACT Analysis Summary				
Source	Description	Pollutant	Control Technology	BACT Limit
		GHG	Good operating Practices (Periodic Equipment Maintenance) Minimum Boiler Efficiency	CO ₂ 117 lb/MMBTU CH ₄ 0.0022 lb/MMBTU N ₂ O 0.0002 lb/MMBTU 75%
SN-28 and SN-29	Galvanizing Line Preheaters 1 and 2	PM	Combustion of Natural gas and Good Combustion Practices (Periodic Equipment Maintenance)	0.0012 lb/MMBTU
		PM ₁₀		0.0012 lb/MMBTU
		PM _{2.5}		0.0012 lb/MMBTU
		Opacity		5%
		SO ₂		0.000588 lb/MMBTU
		VOC		0.0054 lb/MMBTU
		CO		0.0824 lb/MMBTU
		NO _x	SCR, Low NO _x burners Combustion of clean fuel Good Combustion Practices (Periodic Equipment Maintenance)	0.035 lb/MMBTU
		GHG	Good operating Practices (Periodic Equipment Maintenance)	CO ₂ 117 lb/MMBTU CH ₄ 0.0022 lb/MMBTU N ₂ O 0.0002 lb/MMBTU
SN-62	Emergency Generator #1	PM	Good operating Practices (Periodic Equipment Maintenance), limited hours of operation, Compliance with NSPS Subpart IIII	0.2 g/kW-Hr
		PM ₁₀		0.2 g/kW-Hr
		PM _{2.5}		0.2 g/kW-Hr
		Opacity		20%
		SO ₂		<0.0015% sulfur in fuel
		VOC		1.0 g/kW-Hr
		CO		3.5 g/kW-Hr
		NO _x		3.0 g/kW-Hr
		GHG	Good Combustion Practices (Periodic Equipment Maintenance)	CO ₂ 163 lbs/MMBTU CH ₄ 0.0061 lbs/MMBTU N ₂ O 0.0013 lbs/MMBTU
		PM	Good operating Practices (Periodic	0.2 g/kW-Hr
		PM ₁₀	Practices (Periodic	0.2 g/kW-Hr

BACT Analysis Summary				
Source	Description	Pollutant	Control Technology	BACT Limit
SN-63, SN-64, SN-65, SN-66, SN-67, SN-67A SN-67B, SN-67C	Emergency Generators 2 through 9	PM _{2.5}	Equipment Maintenance), limited hours of operation, Compliance with NSPS Subpart IIII	0.2 g/kW-Hr
		Opacity		20%
		SO ₂		<0.0015% sulfur in fuel
		VOC		1.55 g/kW-Hr
		CO		3.5 g/kW-Hr
		NO _x		4.86 g/kW-Hr
		GHG	Good Combustion Practices (Periodic Equipment Maintenance)	CO ₂ 163 lbs/MMBTU CH ₄ 0.0061 lbs/MMBTU N ₂ O 0.0013 lbs/MMBTU
SN-68 SN-69, SN-70, SN-71, SN-72A, SN-72B, SN-73, SN-74, SN-74A, SN-74B	Non-Contact Cooling Towers	PM	Drift Eliminators Low TDS	0.001 percent drift loss
		PM ₁₀		
		PM _{2.5}		
		Opacity		5%
SN-75, SN-76, SN-77, SN-78A, SN-78B, SN-79	Contact Cooling Towers	PM	Drift Eliminators Low TDS	0.001 percent drift loss
		PM ₁₀		
		PM _{2.5}		
		Opacity		5%
SN-101	Annealing Pickle Line Boiler	PM	Combustion of Natural gas and Good Combustion Practices (Periodic Equipment Maintenance)	0.00186 lb/MMBTU
		PM ₁₀		0.00186 lb/MMBTU
		PM _{2.5}		0.00186 lb/MMBTU
		Opacity		5%
		SO ₂		0.000588 lb/MMBTU
		VOC		0.0054 lb/MMBTU
		CO		0.0824 lb/MMBTU
		NO _x	Low NO _x burners Combustion of clean fuel Good Combustion Practices (Periodic Equipment Maintenance)	0.035 lb/MMBTU

BACT Analysis Summary				
Source	Description	Pollutant	Control Technology	BACT Limit
		GHG	Good operating Practices (Periodic Equipment Maintenance) Minimum Boiler Efficiency	CO ₂ 117 lb/MMBTU CH ₄ 0.0022 lb/MMBTU N ₂ O 0.0002 lb/MMBTU 75%
SN-102	Cold Mill Space Heaters - Natural Gas Fired (110 MMBtu)	PM	Combustion of Natural gas and Good Combustion Practices (Periodic Equipment Maintenance)	0.0075 lb/MMBTU
		PM ₁₀		0.0075 lb/MMBTU
		PM _{2.5}		0.0075 lb/MMBTU
		Opacity		5%
		SO ₂		0.000588 lb/MMBTU
		VOC		0.0054 lb/MMBTU
		CO		0.0824 lb/MMBTU
		NO _x	Low NO _x burners Combustion of clean fuel Good Combustion Practices (Periodic Equipment Maintenance)	0.08 lb/MMBTU
		GHG	Good operating Practices (Periodic Equipment Maintenance)	CO ₂ 117 lb/MMBTU CH ₄ 0.0022 lb/MMBTU N ₂ O 0.0002 lb/MMBTU

Permit #2305-AOP-R5 was issued to Big River Steel LLC on July 12, 2019. This permitting modification increased the allowable production from EAF I (SN-01) from 1,700,000 tons to 2,050,000 tons of steel per rolling twelve months due to a higher demand for production. This modification resulted in the following permitted emission changes: increase of 14.5 tpy SO₂, increase of 11.1 tpy VOC, increase of 333 tpy CO, increase of 10 tpy NO_x, increase of 0.1 tpy of Lead, and increase of 53,130 tpy of CO_{2e}.

Permit #2305-AOP-R6 was issued to Big River Steel LLC on June 9, 2020. This permitting modification made the following changes to the existing permit:

- Added the following new sources to the permit: Lime Injector Burner I and II (SN-01A and SN-02A), Caster #1 and #2 (SN-14 and SN-15), Tunnel Furnace Shuttle Zone (SN-21C), Emergency Generator 10 and 11 (SN-67D and SN-67E), four emergency water pumps (SN-104A through SN-104D), and an EAF I/II Lime Injection System (SN-103).
- Updated BACT for some existing sources and included BACT analysis for new sources.

- Increased throughput for EAF II and LMF II (SN-02) to match the rates of EAF I and LMF I (SN-01).
- Increased PM/PM₁₀/PM_{2.5} emissions from the tunnel furnaces (SN-20 and SN-21) due to an emission factor change.
- Increased the power rating of Emergency Generators 5 through 9 (SN-66, SN-67, SN-67A, SN-67B, and SN-67C) from 2000 kW each to 2700 kW each.
- Increased TDS limits for all permitted cooling tower sources by four times. The cooling towers require four passes, but the permit was currently limiting the TDS to the amount required in one pass. Emissions of cooling tower sources updated as well with this change.
- Increased throughput for the Carbon Injection Receiving system (SN-84) from 49,210 tons/year to 79,204 tons/year.
- Increased throughput to the slag handling operations (SN-95, SN-96, and SN-99B) from 488,980 tons/year to 650,000 tons/year.
- Added Air Products Cooling Towers #1 and #2 to the insignificant activities list.
- Some other miscellaneous changes to permit condition wording and error corrections.

The permitted emission changes for this permitting action were as follows: Increase of 29.7 tpy PM, increase of 29.0 tpy PM₁₀, increase of 28.6 tpy PM_{2.5}, increase of 31.2 tpy SO₂, increase of 17.4 tpy VOC, increase of 381.6 tpy CO, increase of 102.9 tpy NO_x, increase of 0.100079 tpy Lead, increase of 113,771 tpy CO_{2e}, and an increase of 0.7 tpy H₂SO₄.

The following table is a summary of the BACT determinations made in 2305-AOP-R6.

BACT Analysis Summary				
Source	Description	Pollutant	Control Technology	BACT Limit
SN-01A and SN-02A	Lime Injector Burners	PM	Combustion of Natural gas and Good Combustion Practices (Periodic Equipment Maintenance)s (Periodic Equipment Maintenance)	0.0075 lb/MMBTU
		PM ₁₀		0.0075 lb/MMBTU
		PM _{2.5}		0.0075 lb/MMBTU
		Opacity		5%
		CO	Low NO _x burners Combustion of clean fuel Good Combustion Practices (Periodic Equipment Maintenance)	0.0824 lb/MMBTU
		NO _x		0.095 lb/MMBTU

BACT Analysis Summary				
Source	Description	Pollutant	Control Technology	BACT Limit
		GHG	Good operating Practices (Periodic Equipment Maintenance)	CO ₂ 117 lb/MMBTU CH ₄ 0.0022 lb/MMBTU N ₂ O 0.0002 lb/MMBTU
SN-14 and SN-15	Casters #1 and #2	PM	Good operating Practices (Periodic Equipment Maintenance)	0.062 lb/ton of liquid steel produced
		PM ₁₀		
		PM _{2.5}		
SN-20, SN-21, and SN-21C	Tunnel Furnaces and Tunnel Furnace Shuttle Zone	PM	Combustion of Natural gas and Good Combustion Practices (Periodic Equipment Maintenance)	0.0075 lb/MMBTU
		PM ₁₀		0.0075 lb/MMBTU
		PM _{2.5}		0.0075 lb/MMBTU
		Opacity		5%
		SO ₂		0.000588 lb/MMBTU
		VOC		0.0054 lb/MMBTU
		CO		0.0824 lb/MMBTU
		NO _x	Low NO _x burners Combustion of clean fuel Good Combustion Practices (Periodic Equipment Maintenance)	0.1 lb/MMBTU
		GHG	Good operating Practices (Periodic Equipment Maintenance)	CO ₂ 117 lb/MMBTU CH ₄ 0.0022 lb/MMBTU N ₂ O 0.0002 lb/MMBTU
SN-63, SN-64, SN-65, SN-66, SN-67, SN-67A, SN-67B, SN-67C, SN-67D	Emergency Generators 2 through 10	PM	Good operating Practices (Periodic Equipment Maintenance), limited hours of operation, Compliance with NSPS Subpart IIII	0.2 g/kW-Hr
		PM ₁₀		0.2 g/kW-Hr
		PM _{2.5}		0.2 g/kW-Hr
		Opacity		20%
		SO ₂		<0.0015% sulfur in fuel
		VOC		1.55 g/kW-Hr
		CO		3.5 g/kW-Hr
		NO _x		4.86 g/kW-Hr
		GHG	Good Combustion Practices (Periodic Equipment Maintenance)	CO ₂ 163 lbs/MMBTU CH ₄ 0.0061 lbs/MMBTU N ₂ O 0.0013 lbs/MMBTU
SN-103	EAF I/II Lime	PM	Fabric Filter	0.1 lb/hr, 0.4 tpy
		PM ₁₀		0.1 lb/hr, 0.4 tpy

BACT Analysis Summary				
Source	Description	Pollutant	Control Technology	BACT Limit
	Injection System	PM _{2.5}	Enclosed Conveyors with Compressed Air Dust Control Plan Bin Vent Filter on Each Silo	0.1 lb/hr, 0.4 tpy
		Opacity		5%

Permit #2305-AOP-R7 was issued to Big River Steel LLC on March 18, 2021. This permitting modification makes the following changes to the existing permit:

- Updated the heat input on SN-29
- Inclusion of two additional Batch Annealing Furnaces (SN-39). Total heat input increased from 85.15 MMBtu/hr to 117.8 MMBtu/hr
- Revised the flow rates for SN-35 and SN-37
- Revised the heat input of SN-51 and SN-53. An inline skin pass mill also added to enhance the Annealing and Coating Line process.
- Revised PM, PM₁₀, and PM_{2.5} emission factors for natural gas fired combustion sources to be consistent with previous changes to the permit, resulting in updated BACT for some sources.
- Added a new coil coating line, including a pre-treatment section, prime and finish coating, natural gas fired combustion devices, a cooling tower, and a truck washing operation.
- Incorporation of five new diesel fired emergency generators rated at 2700 kW each. Each of these generators may be operated for emergency backup purposes only and are limited to no more than 100 hours per year for readiness testing.
- Installation of a 500-gallon gasoline storage tank to support the slag handling operation.
- Installation of a new hydrogen plant.
- Updated insignificant activities, adding two new cutting activities.
- Specify opacity observation type and frequency for multiple sources which were not explicitly stated in the permit.

As a result of these changes to emissions, the facility was classified as a major source of HAPs. Relevant conditions were added from NESHAP Subparts CCC, SSSS, DDDDD, and EEEEE. Upon commencement of operation of SN-107, the facility is no longer subject to NESHAP Subparts CCCCCC and YYYYYY as the facility will be a major source of HAPs. The permitted emission changes as a result of this modification were as follows: an increase of 8.6 tpy PM, an increase of 12.7 tpy PM₁₀, an increase of 12.7 tpy PM_{2.5}, an increase of 1 tpy SO₂, an increase of 154.8 tpy VOC, an increase of 99 tpy CO, an increase of 68 tpy NO_x, an increase of 0.00029 tpy Lead, an increase of 73,168 tpy CO_{2e}, an increase of 0.4 tpy H₂SO₄, and an increase of 54.3 tpy total HAPs.

The following table is a summary of the BACT determinations made in 2305-AOP-R7.

BACT Analysis Summary				
Source	Description	Pollutant	Control Technology	BACT Limit
SN-29	Galvanizing Line #2 Furnace	PM	Combustion of Natural gas and Good Combustion Practices (Periodic Equipment Maintenance)	0.0012 lb/MMBTU
		PM ₁₀		0.0012 lb/MMBTU
		PM _{2.5}		0.0012 lb/MMBTU
		Opacity		5%
		SO ₂		0.000588 lb/MMBTU
		VOC		0.0054 lb/MMBTU
		CO		0.0824 lb/MMBTU
		NO _x	SCR, Low NO _x burners Combustion of clean fuel Good Combustion Practices (Periodic Equipment Maintenance)	0.035 lb/MMBTU
		GHG	Good operating Practices (Periodic Equipment Maintenance)	CO ₂ 117 lb/MMBTU CH ₄ 0.0022 lb/MMBTU N ₂ O 0.0002 lb/MMBTU
SN-35 and SN-37	Galvanizing Line Caustic Cleaning and Post Treatment	PM	Mist Eliminator	0.003 gr/dscf
		PM ₁₀		
		PM _{2.5}		
		Opacity		5%
SN-38a SN-38b	SN-38a Skin Pass Mill #1 SN-38b Skin Pass Mill #2 (ACL)	PM	Mist Eliminator	0.0025 gr/dscf
		PM ₁₀		0.0066 gr/dscf
		PM _{2.5}		0.0066 gr/dscf
		Opacity		5%
SN-39	Annealing Furnaces	PM	Combustion of Natural gas and Good Combustion Practices (Periodic Equipment Maintenance)	0.0075 lb/MMBTU
		PM ₁₀		0.0075 lb/MMBTU
		PM _{2.5}		0.0075 lb/MMBTU
		Opacity		5%
		SO ₂		0.000588 lb/MMBTU
		VOC		0.0054 lb/MMBTU
		CO		0.0824 lb/MMBTU

BACT Analysis Summary				
Source	Description	Pollutant	Control Technology	BACT Limit
		NO _x	Low NO _x burners Combustion of clean fuel Good Combustion Practices (Periodic Equipment Maintenance)	0.1 lb/MMBTU
		GHG	Good operating Practices (Periodic Equipment Maintenance)	CO ₂ 117 lb/MMBTU CH ₄ 0.0022 lb/MMBTU N ₂ O 0.0002 lb/MMBTU
SN-40, SN-42	Decarburizing Line Furnace Section	PM	Combustion of Natural gas and Good Combustion Practices (Periodic Equipment Maintenance)	0.013 lb/MMBTU
		PM ₁₀		0.013 lb/MMBTU
		PM _{2.5}		0.013 lb/MMBTU
		Opacity		5%
		SO ₂		0.000588 lb/MMBTU
		VOC		0.0054 lb/MMBTU
		CO		0.0824 lb/MMBTU
		NO _x	Low NO _x burners SCR Combustion of clean fuel Good Combustion Practices (Periodic Equipment Maintenance)	0.1 lb/MMBTU
SN-47	Annealing Pickling Line Furnace Section	PM	Combustion of Natural gas and Good Combustion Practices (Periodic Equipment Maintenance)	0.013 lb/MMBTU
		PM ₁₀		0.013 lb/MMBTU
		PM _{2.5}		0.013 lb/MMBTU
		Opacity		5%
		SO ₂		0.000588 lb/MMBTU
		VOC		0.0054 lb/MMBTU
		CO		0.0824 lb/MMBTU

BACT Analysis Summary				
Source	Description	Pollutant	Control Technology	BACT Limit
		NO _x	Low NO _x burners SCR Combustion of clean fuel Good Combustion Practices (Periodic Equipment Maintenance)	0.1 lb/MMBTU
		GHG	Good operating Practices (Periodic Equipment Maintenance)	CO ₂ 117 lb/MMBTU CH ₄ 0.0022 lb/MMBTU N ₂ O 0.0002 lb/MMBTU
SN-51	Annealing and Coating Line Furnace Section	PM	Combustion of Natural gas and Good Combustion Practices (Periodic Equipment Maintenance)	0.013 lb/MMBTU
		PM ₁₀		0.013 lb/MMBTU
		PM _{2.5}		0.013 lb/MMBTU
		Opacity		5%
		SO ₂		0.000588 lb/MMBTU
		VOC		0.0054 lb/MMBTU
		CO		0.0824 lb/MMBTU
		NO _x	Low NO _x burners SCR Combustion of clean fuel Good Combustion Practices (Periodic Equipment Maintenance)	0.1 lb/MMBTU
		GHG	Good operating Practices (Periodic Equipment Maintenance)	CO ₂ 117 lb/MMBTU CH ₄ 0.0022 lb/MMBTU N ₂ O 0.0002 lb/MMBTU
SN-53	Annealing and Coating Line Drying Furnace	PM	Combustion of Natural gas and Good Combustion Practices (Periodic Equipment Maintenance)	0.016 lb/MMBTU
		PM ₁₀		0.016 lb/MMBTU
		PM _{2.5}		0.016 lb/MMBTU
		Opacity		5%
		SO ₂		0.000588 lb/MMBTU
		CO		0.45 lb/MMBTU
		VOC Natural gas Combustion	RTO	0.0054 lb/MMBTU

BACT Analysis Summary				
Source	Description	Pollutant	Control Technology	BACT Limit
		NO _x	Low NO _x burners Combustion of clean fuel Good Combustion Practices (Periodic Equipment Maintenance)	0.25 lb/MMBTU
		GHG	Good operating Practices (Periodic Equipment Maintenance)	CO ₂ 117 lb/MMBTU CH ₄ 0.0022 lb/MMBTU N ₂ O 0.0002 lb/MMBTU
SN-54, SN-56	MgO Coating Lines Drying Sections	PM	Combustion of Natural gas and Good Combustion Practices (Periodic Equipment Maintenance)	0.013 lb/MMBTU
		PM ₁₀		0.013 lb/MMBTU
		PM _{2.5}		0.013 lb/MMBTU
		Opacity		5%
		SO ₂		0.000588 lb/MMBTU
		VOC		0.0054 lb/MMBTU
		CO		0.0824 lb/MMBTU
		NO _x	Low NO _x burners Combustion of clean fuel Good Combustion Practices (Periodic Equipment Maintenance)	0.1 lb/MMBTU
		GHG	Good operating Practices (Periodic Equipment Maintenance)	CO ₂ 117 lb/MMBTU CH ₄ 0.0022 lb/MMBTU N ₂ O 0.0002 lb/MMBTU
SN-58, SN-60	Flattening Coating Lines Furnace Sections	PM	Combustion of Natural gas and Good Combustion Practices (Periodic Equipment Maintenance)	0.013 lb/MMBTU
		PM ₁₀		0.013 lb/MMBTU
		PM _{2.5}		0.013 lb/MMBTU
		Opacity		5%
		SO ₂		0.000588 lb/MMBTU
		VOC		0.0054 lb/MMBTU
		CO		0.0824 lb/MMBTU

BACT Analysis Summary				
Source	Description	Pollutant	Control Technology	BACT Limit
		NO _x	Low NO _x burners SCR Combustion of clean fuel Good Combustion Practices (Periodic Equipment Maintenance)	0.1 lb/MMBTU
		GHG	Good operating Practices (Periodic Equipment Maintenance)	CO ₂ 117 lb/MMBTU CH ₄ 0.0022 lb/MMBTU N ₂ O 0.0002 lb/MMBTU
SN-105, SN-106	Coil Coating Line – Pre-Cleaning and Cleaning Sections	PM	Mist eliminator	0.003 gr/dscf
		PM ₁₀	Good operating Practices (Periodic Equipment Maintenance)	0.003 gr/dscf
		PM _{2.5}		0.003 gr/dscf
		Opacity		5%
SN-107	Coil Coating Line – Prime/Finish Coating	VOC	Enclosed painting system Thermal oxidation Good work practices	152.6 tpy 99% Destruction
SN-108A, SN-108B, SN-108C	Coil Coating Line – Chemical Dryer, Primer Oven, and Finish Oven	PM	Good Combustion Practices (Periodic Equipment Maintenance)	0.0075 lb/MMBTU
		PM ₁₀		0.0075 lb/MMBTU
		PM _{2.5}		0.0075 lb/MMBTU
		Opacity		5%
		VOC	Energy efficient burners	0.0054 lb/MMBTU
		NO _x	Combustion of natural gas	0.05 lb/MMBTU
SN-108D	Coil Coating Line – Finish Oven	PM	Good Combustion Practices (Periodic Equipment Maintenance)	0.009 lb/MMBTU
		PM ₁₀		0.009 lb/MMBTU
		PM _{2.5}		0.009 lb/MMBTU
		Opacity		5%
		VOC	Energy efficient burners	0.0054 lb/MMBTU
		NO _x	Combustion of natural gas	0.25 lb/MMBTU
SN-110a, SN-110b,	Emergency Generators 12 through 16	PM	Good operating Practices (Periodic Equipment	0.2 g/kW-Hr
		PM ₁₀		0.2 g/kW-Hr
		PM _{2.5}		0.2 g/kW-Hr

BACT Analysis Summary				
Source	Description	Pollutant	Control Technology	BACT Limit
SN-110c, SN-110d, SN-110e		Opacity	Maintenance), limited hours of operation, Compliance with NSPS Subpart IIII	20%
		SO ₂		<0.0015% sulfur in fuel
		VOC		1.55 g/kW-Hr
		CO		3.5 g/kW-Hr
		NO _x		4.86 g/kW-Hr
		GHG	Good Combustion Practices (Periodic Equipment Maintenance)	CO ₂ 163 lbs/MMBTU CH ₄ 0.0061 lbs/MMBTU N ₂ O 0.0013 lbs/MMBTU
SN-109	Contact Cooling Towers	PM	Drift Eliminators Low TDS	0.001 percent drift loss
		PM ₁₀		
		PM _{2.5}		
		Opacity		5%
SN-111	Hydrogen Plant #2 Reformer Furnace (PHG830)	PM	Combustion of Natural gas and Good Combustion Practices (Periodic Equipment Maintenance)	0.0075 lb/MMBTU
		PM ₁₀		0.0075 lb/MMBTU
		PM _{2.5}		0.0075 lb/MMBTU
		Opacity		5%
		VOC		0.0054 lb/MMBTU
		NO _x	Low NO _x burners Combustion of clean fuel Good Combustion Practices (Periodic Equipment Maintenance)	0.1 lb/MMBTU

Permit #2305-AOP-R8 was issued to Big River Steel LLC on February 8, 2024. This permitting action was to renew and modify the facility's Title V air permit. The permitting modification made the following changes to the permit:

- Combined BACT limits for EAFs and LMFs at SN-01 and SN-02 as the sources share a common emission point
- Removed NESHAP EEEEE conditions for SN-01 and SN-02 as it was determined the subpart is not applicable to the facility
- Updated the name of the "Coil Coating Line" to "Color Coating Line"
- Updated the heat input of SN-53, SN-102, SN-108a, SN-108b, SN-108c, and SN-108d
- Revised the PM, PM₁₀, and PM_{2.5} emission factor for SN-04, SN-22, SN-26, SN-27, and SN-101
- Addition of new natural gas sources SN-108e and SN-112 through SN-126.

- Updated in kW rating for SN-67, SN-67B, and SN-67C
- Revised emission factors for PM₁₀ and PM_{2.5} from cooling tower sources
- Updated gallon per hour rates for multiple existing cooling towers and added four new cooling tower sources.
- Increased throughput of gasoline at SN-100 from 10,000 gallons per month to 500,000 gallons per rolling twelve-month period. NESHAP CCCCCC conditions updated due to the change in applicability.
- Addition of material handling units with self-maintaining air cleaner units, SN-127a, SN-127b, and SN-127c.
- Addition of pickling line process with a sedimentation system (SN-128) controlling HCl emissions.

The permitted emission changes to this permit as a result of this modification were as follows: Increase of 44.2 tpy PM, increase of 30.5 tpy PM₁₀, increase of 0.6 tpy PM_{2.5}, increase of 2.2 tpy SO₂, increase of 13.6 tpy VOC, increase of 164.8 tpy CO, increase of 143.3 tpy NO_x, increase of 0.000903 tpy Lead, and increase of 216,882 tpy CO_{2e}.

The following table is a summary of the BACT determinations made in 2305-AOP-R8.

BACT Analysis Summary				
Source	Description	Pollutant	Control Technology	BACT Limit
SN-04	RH Degasser Boiler	PM	Combustion of Natural gas and Good Combustion Practices (Periodic Equipment Maintenance)	0.0075 lb/MMBTU
		PM ₁₀		0.0075 lb/MMBTU
		PM _{2.5}		0.0075 lb/MMBTU
		Opacity		5%
		SO ₂		0.000588 lb/MMBTU
		VOC		0.0054 lb/MMBTU
		CO		0.0824 lb/MMBTU
		NO _x	Low NO _x burners Combustion of clean fuel Good Combustion Practices (Periodic Equipment Maintenance)	0.035 lb/MMBTU

BACT Analysis Summary				
Source	Description	Pollutant	Control Technology	BACT Limit
		GHG	Good operating Practices (Periodic Equipment Maintenance) Minimum Boiler Efficiency	CO ₂ 117 lb/MMBTU CH ₄ 0.0022 lb/MMBTU N ₂ O 0.0002 lb/MMBTU 75%
SN-22	Pickle Line Boiler	PM	Combustion of Natural gas and Good Combustion Practices (Periodic Equipment Maintenance)	0.0075 lb/MMBTU
		PM ₁₀		0.0075 lb/MMBTU
		PM _{2.5}		0.0075 lb/MMBTU
		Opacity		5%
		SO ₂		0.000588 lb/MMBTU
		VOC		0.0054 lb/MMBTU
		CO		0.0824 lb/MMBTU
		NO _x	Low NO _x burners Combustion of clean fuel Good Combustion Practices (Periodic Equipment Maintenance)	0.035 lb/MMBTU
		GHG	Good operating Practices (Periodic Equipment Maintenance) Minimum Boiler Efficiency	CO ₂ 117 lb/MMBTU CH ₄ 0.0022 lb/MMBTU N ₂ O 0.0002 lb/MMBTU 75%
SN-26 and SN-27	Galvanizing Line Boilers 1 and 2	PM	Combustion of Natural gas and Good	0.0075 lb/MMBTU
		PM ₁₀		0.0075 lb/MMBTU

BACT Analysis Summary				
Source	Description	Pollutant	Control Technology	BACT Limit
		PM _{2.5}	Combustion Practices (Periodic Equipment Maintenance)	0.0075 lb/MMBTU
		Opacity		5%
		SO ₂		0.000588 lb/MMBTU
		VOC		0.0054 lb/MMBTU
		CO		0.0824 lb/MMBTU
		NO _x	Low NO _x burners Combustion of clean fuel Good Combustion Practices (Periodic Equipment Maintenance)	0.035 lb/MMBTU
		GHG	Good operating Practices (Periodic Equipment Maintenance) Minimum Boiler Efficiency	CO ₂ 117 lb/MMBTU CH ₄ 0.0022 lb/MMBTU N ₂ O 0.0002 lb/MMBTU 75%
SN-101	Annealing Pickle Line Boiler	PM	Combustion of Natural gas and Good Combustion Practices (Periodic Equipment Maintenance)	0.0075 lb/MMBTU
		PM ₁₀		0.0075 lb/MMBTU
		PM _{2.5}		0.0075 lb/MMBTU
		Opacity		5%
		SO ₂		0.000588 lb/MMBTU
		VOC		0.0054 lb/MMBTU
		CO		0.0824 lb/MMBTU
		NO _x	Low NO _x burners Combustion of clean fuel	0.035 lb/MMBTU

BACT Analysis Summary				
Source	Description	Pollutant	Control Technology	BACT Limit
			Good Combustion Practices (Periodic Equipment Maintenance)	
SN-108D	Color Coating Line RTO	PM	Good Combustion Practices (Periodic Equipment Maintenance)	0.009 lb/MMBTU
		PM ₁₀		0.009 lb/MMBTU
		PM _{2.5}		0.009 lb/MMBTU
		Opacity		5%
		VOC	Energy efficient burners	0.021 lb/MMBTU
		NO _x	Combustion of natural gas	0.85 lb/MMBTU
SN-108E	Color Coating Line Spray Passivation	PM	Good Combustion Practices (Periodic Equipment Maintenance)	0.0075 lb/MMBtu
		PM ₁₀		0.0075 lb/MMBtu
		PM _{2.5}		0.0075 lb/MMBtu
		Opacity		5%
		CO	Energy efficient burners	0.0824 lb/MMBtu
		NO _x	Combustion of natural gas	0.10 lb/MMbtu
		GHG		117 lb CO _{2e} /MMBtu
SN-112 SN-113 SN-114 SN-115 SN-116 SN-117 SN-118 SN-119	Space Heaters	PM	Good Combustion Practices (Periodic Equipment Maintenance)	0.0075 lb/MMBtu
		PM ₁₀		0.0075 lb/MMBtu
		PM _{2.5}		0.0075 lb/MMBtu
		Opacity		5%
		CO	Energy efficient burners	0.0824 lb/MMBtu
		NO _x	Combustion of natural gas	0.08 lb/MMbtu
		GHG		117 lb CO _{2e} /MMBtu
SN-120	Cold Mill Boiler NGO Line	PM	Good Combustion Practices	0.0075 lb/MMBtu
		PM ₁₀		0.0075 lb/MMBtu

BACT Analysis Summary				
Source	Description	Pollutant	Control Technology	BACT Limit
		PM _{2.5}	(Periodic Equipment Maintenance) Energy efficient burners Combustion of natural gas	0.0075 lb/MMBtu
		Opacity		5%
		CO		0.0824 lb/MMBtu
		NO _x		0.035 lb/MMBtu
		GHG		117 lb CO ₂ e/MMBtu
SN-121 SN-122 SN-123	Pots for GL Curing and Melting	PM	Good Combustion Practices (Periodic Equipment Maintenance) Energy efficient burners Combustion of natural gas	0.0075 lb/MMBtu
		PM ₁₀		0.0075 lb/MMBtu
		PM _{2.5}		0.0075 lb/MMBtu
		Opacity		5%
		CO		0.0824 lb/MMBtu
		NO _x		0.08 lb/MMBtu
		GHG		117 lb CO ₂ e/MMBtu
SN-124	Stingray Parts Washer SMS Hotmill Rollshop	PM	Good Combustion Practices (Periodic Equipment Maintenance) Energy efficient burners Combustion of natural gas	0.0075 lb/MMBtu
		PM ₁₀		0.0075 lb/MMBtu
		PM _{2.5}		0.0075 lb/MMBtu
		Opacity		5%
		CO		0.0824 lb/MMBtu
		NO _x		0.08 lb/MMBtu
		GHG		117 lb CO ₂ e/MMBtu
SN-125	Cold Mill Boiler	PM	Good Combustion Practices (Periodic Equipment Maintenance) Energy efficient burners Combustion of natural gas	0.0075 lb/MMBtu
		PM ₁₀		0.0075 lb/MMBtu
		PM _{2.5}		0.0075 lb/MMBtu
		Opacity		5%
		CO		0.0824 lb/MMBtu
		NO _x		0.035 lb/MMBtu
		GHG		117 lb CO ₂ e/MMBtu

BACT Analysis Summary				
Source	Description	Pollutant	Control Technology	BACT Limit
SN-126	Color Coating Line Boiler	PM	Good Combustion Practices (Periodic Equipment Maintenance) Energy efficient burners Combustion of natural gas	0.0075 lb/MMBtu
		PM ₁₀		0.0075 lb/MMBtu
		PM _{2.5}		0.0075 lb/MMBtu
		Opacity		5%
		CO		0.0824 lb/MMBtu
		NO _x		0.035 lb/MMBtu
		GHG		117 lb CO _{2e} /MMBtu
SN-109b, SN-129, SN-130, SN-131, SN-132	Cooling Towers	PM	Drift Eliminators Low TDS	0.0005 percent drift loss
		PM ₁₀		
		PM _{2.5}		
		Opacity		5%
SN-127a SN-127b SN-127c	SMAC Dust Collectors	PM	Good operating Practices (Periodic Equipment Maintenance)	0.002 gr/dscf
		PM ₁₀		0.002 gr/dscf
		PM _{2.5}		0.002 gr/dscf
		Opacity		5%

Permit #2305-AOP-R9 was issued Big River Steel LLC on December 17, 2024. This permitting action is to renew and modify the facility's Title V air permit. This permitting modification removes the PM_{2.5} testing requirement from natural gas fired boilers due to a previous change of emission factor, addresses change of required control technology for NO_x emissions from SN-51, updates the kilowatt rating of SN-67B, and adds a new emergency water pump and two new emergency generators. The permitted emission increases to the permit as a result of this modification are as follows: 0.4 tpy PM/PM₁₀/PM_{2.5}, 0.4 tpy SO₂, 0.4 tpy VOC, 1.4 tpy CO, 3.1 tpy NO_x, 1,394 tpy CO_{2e}, 8.41 tpy Ammonia, and 0.3 tpy H₂SO₄.

The following table is a summary of the BACT determinations made in 2305-AOP-R9.

BACT Analysis Summary				
Source	Description	Pollutant	Control Technology	BACT Limit
SN-51		PM		0.013 lb/MMBTU

Big River Steel LLC
 Permit #: 2305-AOP-R10
 AFIN: 47-00991

BACT Analysis Summary				
Source	Description	Pollutant	Control Technology	BACT Limit
	Annealing and Coating Line - Annealing Furnace	PM ₁₀	Combustion of Natural gas and Good Combustion Practices (Periodic Equipment Maintenance)	0.013 lb/MMBTU
		PM _{2.5}		0.013 lb/MMBTU
		Opacity		5%
		SO ₂		0.000588 lb/MMBTU
		VOC		0.0054 lb/MMBTU
		CO		0.0824 lb/MMBTU
		NO _x	Low NO _x burners Combustion of clean fuel Good Combustion Practices (Periodic Equipment Maintenance)	0.1 lb/MMBTU
		GHG	Good operating Practices (Periodic Equipment Maintenance)	CO ₂ 117 lb/MMBTU CH ₄ 0.0022 lb/MMBTU N ₂ O 0.0002 lb/MMBTU

SECTION IV: SPECIFIC CONDITIONS

Melt Shop

SN-01 EAF I and LMF I
SN-01A Lime Injector Burner I

SN-02 EAF II and LMF II
SN-02A Lime Injector Burner II

SN-14 Caster #1
SN-15 Caster #2

Source Description

The steel facility will receive scrap iron and steel by barge, rail, and truck. The scrap will be unloaded and stockpiled on site. The scrap will be moved from the storage piles and placed in charging buckets. These charging buckets will be used to load one of the plant's two Electric Arc Furnaces, EAF I (SN-01) or EAF II (SN-02). In the EAF, additional raw materials are added through various feed systems, and the charged steel is melted using electric arc applied through carbon electrodes. The two EAFs are capable of producing on average 250 tons per hour of liquid steel each. The liquid steel is then transferred to the Ladle Metallurgy Furnaces (LMF) and / or the RH Degasser for further refinement. Each EAF is equipped with a natural gas fired lime injection burner each rated at 18.5 MMBtu/hr and assigned SN-01A and SN-02A, respectively.

In the LMF the chemistry and temperature of the molten steel is further refined while it is still in the ladle. The liquid steel proceeds from the LMF to the RH Degasser, SN-03, and back to the LMF if needed, or to the Casters, SN-14 and SN-15 depending on the type of steel being produced. As the steel passes through the caster, it is cooled and formed. Dry powder is applied in the caster for lubrication. The casters also generate emissions of particulates.

The Casting Process (CP) involves operations and equipment that are designed to process liquid steel from the Melt Shop to produce a slab or coiled steel. The liquid from the Melt Shop is poured out from a ladle via a tundish into the casters and coiled by a down coiler. The primary emission sources associated with the CP are two Casters, SN-14 and SN-15.

EAF I and LMF I are routed to a single baghouse. EAF II and LMF II are also routed to a single baghouse.

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 Specific Conditions #5, #13, and #26. [8 CAR § 41-801 et seq. and 40 C.F.R. § 52 Subpart E]

SN	Description	Pollutant	lb/hr	tpy
SN-01	EAF I and LMF I	PM	16.2	71.0
		PM ₁₀	21.6	94.7
		PM _{2.5}	21.6	94.7
		SO ₂	65.0	184.5
		VOC	23.3	90.2
		CO	505.0	2050.0
		NO _x	87.5	307.5
		Lead	0.14	0.58
		CO _{2e}	--	311,190
SN-01A	Lime Injector Burner I	PM	0.2	0.7
		PM ₁₀	0.2	0.7
		PM _{2.5}	0.2	0.7
		SO ₂	0.1	0.1
		VOC	0.1	0.5
		CO	1.6	6.7
		NO _x	1.9	8.1
		Lead	9.07 E-06	3.97 E-05
		CO _{2e}	--	9,481
SN-02	EAF II and LMF II	PM	16.2	71.0
		PM ₁₀	21.6	94.7
		PM _{2.5}	21.6	94.7
		SO ₂	65.0	205.0
		VOC	23.3	95.3
		CO	505.0	2070.5
		NO _x	87.5	358.8
		Lead	0.14	0.58
		CO _{2e}	--	311,190
SN-02A	Lime Injector Burner II	PM	0.2	0.7
		PM ₁₀	0.2	0.7
		PM _{2.5}	0.2	0.7
		SO ₂	0.1	0.1
		VOC	0.1	0.5
		CO	1.6	6.7
		NO _x	1.9	8.1
		Lead	9.07 E-06	3.97 E-05
		CO _{2e}	--	9,481
SN-14	Caster #1	PM	0.4	1.3
		PM ₁₀	0.4	1.3
		PM _{2.5}	0.4	1.3
SN-15	Caster #2	PM	0.4	1.3
		PM ₁₀	0.4	1.3
		PM _{2.5}	0.4	1.3

2. The permittee shall not exceed the emission rates set forth in the following table and must install the control devices or implement the pollution prevention measures set forth in the following table. Compliance with these emission limits shall be demonstrated by compliance with Specific Conditions #4, #5, and #13 through #27. [8 CAR § 41-801 et seq. and 40 C.F.R. § 52 Subpart E]

BACT Analysis Summary				
Source	Description	Pollutant	Control Technology	BACT Limit
SN-01 and SN-02	EAFs and LMFs	PM	Fabric Filter	0.0018 gr/dscf (filterable only)
		PM ₁₀	Fabric Filter	0.0024 gr/dscf
		PM _{2.5}	Fabric Filter	0.0024 gr/dscf
		Opacity	Fabric Filter	3% as a 6-minute average from baghouse 6% from melt shop
		SO ₂	Scrap management plan	0.2 lb/ton of steel produced
		VOC	Scrap management plan and Good operating Practices (Periodic Equipment Maintenance)	0.093 lb/ton steel produced
		CO		2.02 lb/ton of steel produced
		NO _x		0.35 lb/ton of steel produced
		Lead	Fabric Filter	0.00056 lb/ton of steel produced
		CO _{2e}	Good operating Practices (Periodic Equipment Maintenance)	622,380 tpy CO _{2e}
SN-01A and SN-02A	Lime Injector Burners	PM	Combustion of Natural gas and Good Combustion Practices (Periodic Equipment Maintenance)	0.0075 lb/MMBTU
		PM ₁₀		0.0075 lb/MMBTU
		PM _{2.5}		0.0075 lb/MMBTU
		Opacity		5%
		CO		0.0824 lb/MMBTU

BACT Analysis Summary				
Source	Description	Pollutant	Control Technology	BACT Limit
		NO _x	Low NO _x burners Combustion of clean fuel Good Combustion Practices (Periodic Equipment Maintenance)	0.10 lb/MMBTU
		GHG	Good operating Practices (Periodic Equipment Maintenance)	CO ₂ 117 lb/MMBTU CH ₄ 0.0022 lb/MMBTU N ₂ O 0.0002 lb/MMBTU
SN-14 and SN-15	Casters #1 and #2	PM	Good operating Practices (Periodic Equipment Maintenance)	0.062 lb/ton of liquid steel produced
		PM ₁₀		
		PM _{2.5}		

3. The permittee shall not exceed the emission rates set forth in the following table. Compliance with these emission limits shall be demonstrated by compliance with Conditions 4 and 13-24. [8 CAR § 40-701 and Ark. Code Ann. § 8-4-203 as referenced by Ark. Code Ann. §§ 8-4-304 and 8-4-311]

Source	Description	Pollutant	lb/hr	tpy
SN-01	EAF I and LMF I	Arsenic	0.002	0.007
		Cadmium	0.002	0.006
		Manganese	0.08	0.4
		Mercury	0.03	0.2
SN-02	EAF II and LMF II	Arsenic	0.002	0.007
		Cadmium	0.002	0.006
		Manganese	0.08	0.4
		Mercury	0.03	0.2

4. Visible emissions may not exceed the limits specified in the following table of this permit as measured by EPA Reference Method 9. Compliance with this condition will be shown by combustion of natural gas only and Plantwide Condition 5.

Source	Limit	Regulatory Citation
SN-01A and SN-02A	5%	8 CAR § 41-801 et seq. and 40 C.F.R. § 52 Subpart E

5. The permittee shall perform stack testing of SN-01 and SN-02. Testing shall be performed initially and annually thereafter in accordance with Plantwide Condition 3 and 4, and EPA Reference Method 5D as found in 40 CFR, Part 60, Appendix A. The sampling time and sampling volume for each run shall be at least 4 hours and 4.50 dscm (160 dscf). The permittee shall report all emissions measured using Method 5D as filterable PM, PM₁₀, or PM_{2.5} or may conduct separate filterable PM₁₀ testing using EPA Reference Method 201 or 201A. The permittee shall also conduct test for condensable particulate emissions concurrently using EPA reference Method 202 and include these results in PM₁₀ and PM_{2.5} values for compliance with emission rates. The report shall include information specified in § 60.276a(f) of 40 CFR, Part 60, Subpart AAa excluding § 60.276a(f)(6). Testing shall be conducted when the EAF is operated at or near its capacity based on the specific type of steel to be produced. A targeted capacity would be 250 tons/hour of steel. If the production rate is less than 250 tons/hour, the tested emission rates shall be scaled up to 250 ton/hour and compared to the permitted emission rates. If the production rate is above 250 tons/hour, the tested rate would be compared directly to the permitted emission rate. [8 CAR § 41-204 and 40 C.F.R. §§ 60.275a(e)(1) Subpart AAa and 8 CAR § 41-602 and 40 C.F.R. § 52 Subpart E]
6. Unless the presence of inclement weather makes concurrent testing infeasible, the permittee shall conduct the performance tests required by Specific Conditions #5, #9, and #16, concurrently. [8 CAR § 41-204 and 40 C.F.R. §§ 60.275a(e)(4) and 60.275a(j)]
7. The permittee shall submit to the Department a written report of the results of the performance test required by Specific Condition #5. The report shall include information specified in §60.276a(f) of 40 CFR, Part 60, Subpart AAa, and the information required under Plantwide Condition 4. [8 CAR § 41-605 and 40 C.F.R. § 52 Subpart E and 8 CAR § 41-204 and 40 C.F.R. § 60.276a(f)]
8. The permittee shall not discharge into the atmosphere any gases from the EAF Baghouses, SN-01 and SN-02, exhibiting 3 percent opacity or greater. [8 CAR § 41-204 and 40 C.F.R. § 60.272a(a)(2)]
9. The permittee shall perform observations of the opacity of the visible emissions from EAF Baghouses, SN-01 and SN-02 by a certified visible emission observer as follows: Visible emission observations are conducted at least once per day when the furnace is operating in the melting and refining period in accordance with §60.273a(c). These observations shall be taken in accordance with Method 9, and, for at least three 6-minute periods, the opacity shall be recorded for any point(s) where visible emissions are observed. Where it is possible to determine that a number of visible emission sites relate to only one incident of the visible emissions, only one set of three 6-minute observations will be required. In this case, Method 9 observations must be made for the site of highest opacity that directly relates to the cause (or location) of visible emissions observed during a single incident. Records shall be maintained of any 6-minute average that is in excess of 3% opacity. Reports of exceedances shall be submitted in accordance with Specific Condition 11. [8 CAR § 41-204 and 40 C.F.R. § 60 Subpart AAa]

10. The permittee has installed a single stack to its melt shop baghouses SN-01 and SN-02, respectively, and as such the permittee has installed and operates a bag leak detection system for SN-01 and SN-02 in accordance with §60.273a(c), (e), (f), and (g). The permittee shall maintain records for each bag leak detection system as outlined in §60.276a(h). [8 CAR § 41-204 and 40 C.F.R. § 60 Subpart AAa]
11. The permittee shall submit a written report of exceedances of the EAF baghouse opacity and the EAF Melt Shop opacity to the Department semi-annually in accordance with General Provision 7. For the purposes of these reports, exceedances are defined as all 6-minute periods during which the average opacity is 3 percent or greater at the EAF baghouse, and all 6-minute periods during which the average opacity is 6 percent or greater at the EAF Melt Shop due solely to the operations of the EAF. Opacity observations shall be recorded on a visible emissions observation form. The information presented in Figures 9-1 and 9-2 to EPA Method 9 shall be recorded. [8 CAR § 41-204 and 40 C.F.R. § 60 Subpart AAa]
12. The permittee shall not discharge into the atmosphere any gases which exit from EAF Melt Shop which exceed 6 percent opacity or greater due solely to the operations of the EAF. Exceedances shall be defined as all 6-minute periods during which the average opacity is 6 percent or greater. This opacity limit shall apply at all times that either of the EAFs is in operation and due solely to the operations of the electric arc furnace. [8 CAR § 41-204 and 40 C.F.R. § 60 Subpart AAa]
13. The permittee shall either (a) install, calibrate, and maintain a monitoring device that allows the pressure in the free space inside each EAF to be monitored, pursuant to 40 CFR §60.274a(f), or (b) perform daily observations of shop opacity, pursuant to 40 CFR §60.273a(d). The permittee shall notify the Department which method it elects within 180 days before startup of SN-01 or 02. The permittee has elected to perform daily observations of shop opacity, pursuant to 40 C.F.R. § 60.273a(d). The permittee shall conduct these daily opacity readings on the EAF Melt Shop as follows: Shop opacity observations shall be conducted at least once per day when the furnace(s) is operating in the meltdown and refining period. Shop opacity shall be determined as the arithmetic average of 24 or more consecutive 15-second opacity observations of emissions from the shop taken in accordance with Method 9. Shop opacity shall be recorded for any point(s) where visible emissions are observed in proximity to an affected EAF. Where it is possible to determine that a number of visible emission sites relate to only one incident of visible emissions, only one observation of shop opacity will be required. In this case, the shop opacity observations must be made for the site of highest opacity that directly relates to the cause (or location) of visible emissions observed during a single incident. Records of these opacity observations shall be kept on site and made available for inspection upon request. Reports of exceedances shall be submitted in accordance with Specific Condition 11. If the permittee elects to install a monitoring device in lieu of continuing to perform opacity observations, the permittee must notify the department of this change within 30 days of installing a monitoring device that allows the pressure

- inside the free space inside each EAF to be monitored. [8 CAR § 41-204 and 40 C.F.R. § 60 Subpart AAa]
14. The permittee shall check and record the control system fan motor amperes and damper positions as specified in 40 CFR § 60.274a(b). [8 CAR § 41-204 and 40 C.F.R. § 60 Subpart AAa]
 15. The permittee shall comply with 40 C.F.R. §60.274a(c) and shall conduct a compliance test to re-establish these parameters as specified in 40 C.F.R. § 60.274a(c) within 180 days after the effective date of Permit #2305-AOP-R0 and may do so subsequently upon approval from the Division. The permittee has conducted this required compliance test. [8 CAR § 41-204 and 40 C.F.R. § 60 Subpart AAa]
 16. The permittee shall determine baseline values of the fan motor amperes and damper positions during annual performance testing in accordance with Specific Condition 6 to demonstrate compliance with the operating parameters monitored by the permittee pursuant to Specific Condition 14. The values of these parameters as determined during the most recent demonstration of compliance shall be maintained at the appropriate level for each applicable period. [8 CAR § 41-204 and 40 C.F.R. § 60 Subpart AAa]
 17. The permittee shall perform monthly operational status inspections of the equipment that is important to the performance of the total capture system (i.e., pressure sensors, dampers, and damper switches). This inspection shall include observations of the physical appearance of the equipment (e.g., presence of holes in ductwork or hoods, flow constrictions caused by dents or accumulated dust in ductwork, and fan erosion). Any deficiencies shall be noted, and proper maintenance performed. [8 CAR § 41-204 and 40 C.F.R. § 60 Subpart AAa]
 18. The permittee shall maintain records of all data obtained under Specific Condition 16 and all monthly operational status inspections performed under Specific Condition #17. [8 CAR § 41-204 and 40 C.F.R. § 60 Subpart AAa]
 19. For the pressure device installed in Specific Condition 13, the pressure shall be recorded as 15-minute integrated averages. The monitoring device may be installed in any appropriate location in the EAF duct prior to the introduction of ambient air such that reproducible results will be obtained. The pressure monitoring device shall have an accuracy of ± 5 mm of water gauge over its normal operating range and shall be calibrated according to the manufacturer's instructions. [8 CAR § 41-204 and 40 C.F.R. § 60 Subpart AAa]
 20. For the pressure device installed in Specific Condition 13, during each performance testing conducted in accordance with Specific Condition 4, the permittee shall determine baseline values of the pressure in the free space inside the furnace during the meltdown and refining period(s). The pressure determined during the most recent demonstration of

particulate emission compliance shall be maintained at all times when the EAF is operating in a meltdown and refining period. [8 CAR § 41-204 and 40 C.F.R. § 60 Subpart AAa]

21. Operation of the EAFs at a furnace static pressure that exceeds the value established under Specific Condition 20 will require the permittee to perform an opacity reading at the Melt Shop. Operation of the EAFs at this rate may be considered by the Department to be unacceptable operation and maintenance of the affected facility, if operation at such rates results in opacity readings at the Melt Shop Building greater than 6%. Operation at such values shall be reported to the Department semiannually. [8 CAR § 41-204 and 40 C.F.R. § 60 Subpart AAa]
22. The permittee shall maintain records which demonstrate compliance with Specific Condition 20 and may be used by the Department for enforcement purposes. The records shall be updated on a daily basis, shall be kept on site, and shall be provided to Department personnel upon request. [8 CAR § 41-204 and 40 C.F.R. § 60 Subpart AAa]
23. During the initial performance test required under Specific Condition #4, the permittee shall monitor the information specified in 40 CFR § 60.274a(h) for all heats covered by the test. During any subsequent annual performance test conducted in accordance with Specific Condition 4, the owner or operator shall monitor the following information for all heats covered by the test:
 - (1) Charge weights and materials, tap weights and materials;
 - (2) Heat times, including start and stop times, and a log of process operation, including periods of no operation during testing and, the pressure inside an EAF when direct-shell evacuation control systems are used;
 - (3) Control device operation log; and
 - (4) Continuous monitor or Reference Method 9 data for the EAF baghouse stack.

[8 CAR § 41-204 and 40 C.F.R. § 60 Subpart AAa]

24. The permittee shall retain all records of the measurements required by Specific Conditions 13 through 23 for at least five years following the date of the measurement. [8 CAR § 41-204 and 40 C.F.R. § 60 Subpart AAa]
25. The permittee shall perform stack testing of SN-01 and SN-02 for NO_x, SO₂, CO, CO₂ and VOC emissions. Testing shall be performed in accordance with Plantwide Conditions 3 and 4 and shall be repeated every six months until six consecutive tests are passed. As six consecutive tests have been passed for SN-01 and SN-02, the permittee shall conduct subsequent testing annually. The permittee shall measure NO_x, SO₂, CO₂ and CO emissions in accordance with EPA Reference Methods 7E, 6C, 3A and 10, respectively. The permittee shall measure the total VOC emissions using EPA Reference Method 25A, from which it will subtract out methane (CH₄) and ethane (C₂H₆) emissions from the EAF baghouse using EPA Reference Method 18 to arrive at applicable VOC levels for

purposes of this permit. Semiannual or annual stack testing for a pollutant is not required if the permittee elects to operate a CEMS for that pollutant at SN-01 and SN-02. Testing shall be conducted when the EAF is operated at or near its capacity based on the specific type of steel to be produced. A targeted capacity would be 250 tons/hour of steel. If the production rate is less than 250 tons/hour, the tested emission rates shall be scaled up to 250 ton/hour and compared to the permitted emission rates. If the production rate is above 250 tons/hour, the tested rate would be compared directly to the permitted emission rate. [8 CAR § 41-801 and 40 C.F.R. § 52 Subpart E]

26. The permittee shall keep record of the total number of tons of steel tapped from the EAFs during each of the previous twelve months updated on a monthly basis and submitted in accordance with General Provision #7. For each month, the emission factor from the nearest preceding stack test shall be multiplied by the total tons of steel tapped during that month, to establish the amount of each pollutant emitted during that month. The emissions so calculated for each of the last twelve months shall be added together and expressed as tons of pollutant per year. The sum of the last twelve months shall not exceed the ton per year limits for SN-01 and SN-02 in Specific Condition #1. If more than one stack test is conducted during a month, the calculation for that month shall be modified so that the total number of tons of steel tapped during the period between two consecutive stack tests shall be multiplied by the emission factor established by the stack test at the beginning of any such period. This record must be updated by the 15th day of the following month. [8 CAR § 41-605, Ark. Code Ann. § 8-4-203 as referenced by Ark. Code Ann. §§ 8-4-304 and 8-4-311, and 40 C.F.R. § 70.6]
27. The permittee shall perform stack testing of SN-01 and SN-02 for lead (Pb) emissions. Testing shall be performed in accordance with Plantwide Conditions 3 and 4 and shall be repeated annually thereafter. The permittee shall measure lead emissions in accordance with EPA Reference Method 12 or other alternate method, provided the Department approves the alternate method prior to use. Testing shall be conducted when the EAF is operated at or near its capacity based on the specific type of steel to be produced. A targeted capacity would be 250 tons/hour of steel. If the production rate is less than 250 tons/hour, the tested emission rates shall be scaled up to 250 ton/hour and compared to the permitted emission rates. If the production rate is above 250 tons/hour, the tested rate would be compared directly to the permitted emission rate. [8 CAR § 41-602 and 40 C.F.R. § 52 Subpart E]
28. Upon commencement of operation of SN-107 (Color Coating Line), the facility must meet the following Case-by-Case requirements for SN-01 and SN-02:
 - a. Install, operate, and maintain a capture system that collects emissions from each EAF and conveys the collected emissions to a control device for the removal of particulate matter (PM);
 - b. An EAF must not discharge from a control device and contain in excess of 0.0018 grains of PM per dry standard cubic foot (gr/dscf);

- c. Any emission exiting from a Melt Shop due to the operations of an EAF is not allowed to exhibit 6% opacity or greater; and
- d. The requirements of 40 C.F.R. § 63.10685 which identifies specific requirements for the control of contaminants from scrap. The primary requirement is to prepare / implement a plan to minimize scrap steel containing mercury.

[8 CAR § 41-204, 40 C.F.R. § 63.55, and Ark. Code Ann. § 8-4-203 as referenced by Ark. Code Ann. §§ 8-4-304 and 8-4-311]

29. A reasonable possibility exists that the modification resulting in issuance of Permit No. 2305-AOP-R5 may result in a significant increase for SO₂, VOC, CO, and NO_x. The applicable requirements of “reasonable possibility” include, but are not limited to, the following:

- a. The permittee shall document and maintain a record of the following information as it pertains to the modification in association with Permit No. 2305-AOP-R5: [40 C.F.R. §52.21 (r)(6)(i)]
 - i. A description of the project;
 - ii. Identification of the emissions unit(s) whose emissions of a regulated NSR pollutant could be affected by the project; and
 - iii. A description of the applicability test used to determine that the project was not a major modification for any regulated NSR pollutant, including the baseline actual emissions, the projected actual emissions, the amount of emissions excluded under paragraph (b)(41)(ii)(c) of 40 C.F.R. §52.21 and an explanation for why such amount was excluded, and any netting calculations, if applicable.
- b. The permittee shall monitor the emissions of any regulated NSR pollutant that could increase as a result of the project and that is emitted by any emissions unit identified in Specific Condition 29 (a)(ii); and calculate and maintain a record of the annual emissions, in tons per year on a calendar year basis, for a period of 5 years following resumption of regular operations after the change, or for a period of 10 years following resumption of regular operations after the change if the project increases the design capacity or potential to emit that regulated NSR pollutant at such an emissions unit. [40 C.F.R. §52.21 (r)(6)(iii)]
- c. The permittee shall submit a report if the annual emissions, in tons per year, from the project identified in Specific Condition 29 (a)(i), exceed the baseline actual emissions (as documented and maintained pursuant Specific Condition 29 (a)(iii)), by a significant amount (*i.e.* 40 tons SO₂, 40 tons VOC, 100 tons CO, or

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40 tons NO_x), and if such emissions differ from the preconstruction projection as documented and maintained pursuant to Specific Condition 29 (a)(iii). Such report shall be submitted within 60 days after the end of such year. The report shall contain the following: [40 C.F.R. §52.21 (r)(6)(v)]

- i. The name, address and telephone number of the major stationary source;
 - ii. The annual emissions as calculated pursuant to Specific Condition 29; and
 - iii. Any other information that the owner or operator wishes to include in the report (e.g., an explanation as to why the emissions differ from the preconstruction projection).
- d. The permittee shall make the information required to be documented and maintained pursuant to Specific Condition 29 available for review upon a request for inspection by ADEQ, the EPA, or the general public. [40 C.F.R. §70.4(b)(3)(viii)]

RH Degasser and Boiler

SN-03 RH Degasser with Flare #1
SN-04 RH Degasser Boiler #1

SN-04A RH Degasser Vessel Preheater Station #1
SN-04B RH Vessel Top Part Dryer #1
SN-04C RH Vessel Nozzle Dryer #1
SN-04D RH Degasser Burner/Top Lance #1
SN-91 RH Degasser Alloy Delivery System #1

SN-133 RH Degasser with Flare #2
SN-134 RH Degasser Boiler #2

SN-135 RH Degasser Vessel Preheater Station #2
SN-136 RH Vessel Top Part Dryer #2
SN-137 RH Vessel Nozzle Dryer #2
SN-138 RH Degasser Burner/Top Lance #2
SN-139 RH Degasser Alloy Delivery System #2

Source Description

The Rührstahl - Herraues (RH) Degassers, SN-03 and SN-133, remove carbon, nitrogen, and hydrogen from the liquid steel in order to produce certain specialty steel grades. Each RH Degasser is equipped with an open design flare to control CO emissions. Each RH Degasser is capable of processing 250 tons of steel per hour. The RH Degasser Flares are each equipped with a 5 MMBTU/hr of natural gas assist and pilot flame.

The RH Degasser Boilers, SN-04 and SN-134, are used to provide steam and heat to the RH Degassers. Each natural gas fired boiler has a heat input of 88.7 MMBTU/hr.

The RH Degasser Vessel Preheater Stations, SN-04A and SN-135, the RH Vessel Top Part Dryers, SN-04B and SN-136, the RH Vessel Nozzle Dryers, SN-04C and SN-137, and RH Degasser Burners/Top Lances, SN-04D and SN-138, are all natural gas fired burners to support the RH Degassers. The RH Degasser Vessel Preheater Stations, SN-04A and SN-135, are rated at 6 MMBTU/hr each. The RH Vessel Top Part Dryers, SN-04B and SN-136, are rated at 1.4 MMBTU/hr each. The RH Vessel Nozzle Dryers, SN-04C and SN-137, are rated at 1.8 MMBTU/hr each. The RH Degasser Burners/Lances, SN-04D and SN-138, are rated at 9 MMBTU/hr each.

The RH Degasser Alloy Delivery Systems, SN-91 and SN-139, are used to transport and feed alloy materials into the RH Degassers. A stocking pocket conveyor will be used to transfer materials to the feed hoppers that will then be used to feed the RH degassers.

Specific Conditions

30. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by compliance with Specific Conditions 33, 34, 37 and 42. [8 CAR § 41-801 et seq. and 40 C.F.R. § 52 Subpart E]

SN	Description	Pollutant	lb/hr	tpy
SN-03	RH Degasser with Flare #1	PM	0.1	0.1
		PM ₁₀	0.1	0.1
		PM _{2.5}	0.1	0.1
		SO ₂	0.1	0.1
		VOC	0.1	0.2
		CO	9.8	29.8
		NO _x	0.4	1.8
		Lead	0.000003	0.00002
		CO _{2e}	--	4,760
SN-04	RH Degasser Boiler #1	PM	0.7	3.0
		PM ₁₀	0.7	3.0
		PM _{2.5}	0.7	3.0
		SO ₂	0.1	0.3
		VOC	0.5	2.1
		CO	7.4	32.0
		NO _x	3.2	13.6
		Lead	0.00005	0.0002
		CO _{2e}	--	45,457
SN-04A	RH Degasser Preheater Vessel Station #1	PM	0.1	0.1
		PM ₁₀	0.1	0.1
		PM _{2.5}	0.1	0.1
		SO ₂	0.1	0.1
		VOC	0.1	0.2
		CO	0.5	2.2
		NO _x	0.5	2.1
		Lead	0.000003	0.00002
		CO _{2e}	--	3,075
SN-04B	RH Degasser Top Part Dryer #1	PM	0.1	0.1
		PM ₁₀	0.1	0.1
		PM _{2.5}	0.1	0.1
		SO ₂	0.1	0.1
		VOC	0.1	0.1
		CO	0.2	0.6
		NO _x	0.2	0.5
		Lead	0.0000007	0.000004
		CO _{2e}	--	718

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SN	Description	Pollutant	lb/hr	tpy
SN-04C	RH Degasser Nozzle Dryer #1	PM	0.1	0.1
		PM ₁₀	0.1	0.1
		PM _{2.5}	0.1	0.1
		SO ₂	0.1	0.1
		VOC	0.1	0.1
		CO	0.2	0.7
		NO _x	0.2	0.7
		Lead	0.0000009	0.000004
		CO _{2e}	--	923
SN-04D	RH Degasser Burner/Top Lance #1	PM	0.1	0.1
		PM ₁₀	0.1	0.1
		PM _{2.5}	0.1	0.1
		SO ₂	0.1	0.1
		VOC	0.1	0.3
		CO	0.8	3.3
		NO _x	0.8	3.2
		Lead	0.000005	0.00002
		CO _{2e}	--	4,613
SN-91	RH Degasser Alloy Delivery System #1	PM	0.1	0.1
		PM ₁₀	0.1	0.1
		PM _{2.5}	0.1	0.1
SN-133	RH Degasser with Flare #2	PM	0.1	0.1
		PM ₁₀	0.1	0.1
		PM _{2.5}	0.1	0.1
		SO ₂	0.1	0.1
		VOC	0.1	0.2
		CO	9.8	29.8
		NO _x	0.4	1.8
		Lead	0.000003	0.00002
		CO _{2e}	--	4,760
SN-134	RH Degasser Boiler #2	PM	0.7	3.0
		PM ₁₀	0.7	3.0
		PM _{2.5}	0.7	3.0
		SO ₂	0.1	0.3
		VOC	0.5	2.1
		CO	7.4	32.0
		NO _x	3.2	13.6
		Lead	0.00005	0.0002
		CO _{2e}	--	45,457

SN	Description	Pollutant	lb/hr	tpy
SN-135	RH Preheater Vessel Station #2	PM	0.1	0.1
		PM ₁₀	0.1	0.1
		PM _{2.5}	0.1	0.1
		SO ₂	0.1	0.1
		VOC	0.1	0.2
		CO	0.5	2.2
		NO _x	0.5	2.1
		Lead	0.000003	0.00002
		CO _{2e}	--	3,075
SN-136	RH Vessel Top Part Dryer #2	PM	0.1	0.1
		PM ₁₀	0.1	0.1
		PM _{2.5}	0.1	0.1
		SO ₂	0.1	0.1
		VOC	0.1	0.1
		CO	0.2	0.6
		NO _x	0.2	0.5
		Lead	0.0000007	0.000004
		CO _{2e}	--	718
SN-137	RH Vessel Nozzle Dryer #2	PM	0.1	0.1
		PM ₁₀	0.1	0.1
		PM _{2.5}	0.1	0.1
		SO ₂	0.1	0.1
		VOC	0.1	0.1
		CO	0.2	0.7
		NO _x	0.2	0.7
		Lead	0.0000009	0.000004
		CO _{2e}	--	923
SN-138	RH Degasser Burner/Top Lance #2	PM	0.1	0.1
		PM ₁₀	0.1	0.1
		PM _{2.5}	0.1	0.1
		SO ₂	0.1	0.1
		VOC	0.1	0.3
		CO	0.8	3.3
		NO _x	0.8	3.2
		Lead	0.000005	0.00002
		CO _{2e}	--	4,613
SN-139	RH Degasser Alloy Delivery System #2	PM	0.1	0.1
		PM ₁₀	0.1	0.1
		PM _{2.5}	0.1	0.1

31. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by compliance with Specific

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Conditions 33, 34, 38, 41 and 42. [8 CAR § 40-701 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
SN-03	RH Degasser with Flare #1	Arsenic	0.000001	0.000005
		Cadmium	0.000006	0.00003
		Formaldehyde	0.004	0.0002
		Manganese	0.000002	0.000009
		Mercury	0.000002	0.00006
SN-04	RH Degasser Boiler #1	Arsenic	0.00002	0.00008
		Cadmium	0.0001	0.0005
		Formaldehyde	0.007	0.03
		Manganese	0.00004	0.0002
		Mercury	0.00003	0.0001
SN-04A	RH Degasser Preheater Vessel Station #1	Arsenic	0.000002	0.000006
		Cadmium	0.000007	0.00003
		Formaldehyde	0.0005	0.002
		Manganese	0.000003	0.00001
		Mercury	0.000002	0.000007
SN-04B	RH Degasser Top Part Dryer #1	Arsenic	0.0000003	0.000002
		Cadmium	0.000002	0.000007
		Formaldehyde	0.0002	0.0005
		Manganese	0.0000006	0.000003
		Mercury	0.0000004	0.000002
SN-04C	RH Degasser Nozzle Dryer #1	Arsenic	0.0000004	0.000002
		Cadmium	0.000002	0.000009
		Formaldehyde	0.0002	0.0006
		Manganese	0.0000007	0.000003
		Mercury	0.0000005	0.000003
SN-04D	RH Degasser Burner/Top Lance #1	Arsenic	0.000002	0.000008
		Cadmium	0.00001	0.00005
		Formaldehyde	0.0007	0.003
		Manganese	0.000004	0.00002
		Mercury	0.000003	0.00001
SN-133	RH Degasser with Flare #2	Arsenic	0.000001	0.000005
		Cadmium	0.000006	0.00003
		Formaldehyde	0.004	0.0002
		Manganese	0.000002	0.000009
		Mercury	0.000002	0.00006
SN-134	RH Degasser Boiler #2	Arsenic	0.00002	0.00008
		Cadmium	0.0001	0.0005
		Formaldehyde	0.007	0.03
		Manganese	0.00004	0.0002
		Mercury	0.00003	0.0001

SN	Description	Pollutant	lb/hr	tpy
SN-135	RH Preheater Vessel Station #2	Arsenic	0.000002	0.000006
		Cadmium	0.000007	0.00003
		Formaldehyde	0.0005	0.002
		Manganese	0.000003	0.00001
		Mercury	0.000002	0.000007
SN-136	RH Vessel Top Part Dryer #2	Arsenic	0.0000003	0.000002
		Cadmium	0.000002	0.000007
		Formaldehyde	0.0002	0.0005
		Manganese	0.0000006	0.000003
		Mercury	0.0000004	0.000002
SN-137	RH Vessel Nozzle Dryer #2	Arsenic	0.0000004	0.000002
		Cadmium	0.000002	0.000009
		Formaldehyde	0.0002	0.0006
		Manganese	0.0000007	0.000003
		Mercury	0.0000005	0.000003
SN-138	RH Degasser Burner/Top Lance #2	Arsenic	0.000002	0.000008
		Cadmium	0.00001	0.00005
		Formaldehyde	0.0007	0.003
		Manganese	0.000004	0.00002
		Mercury	0.000003	0.00001

32. The permittee shall not exceed the emission rates set forth in the following table and must install the control devices or implement the pollution prevention measures set forth in the following table. Compliance with this condition will be show by compliance with Specific Conditions 33, 34, 37 and 42. [8 CAR § 41-801 et seq. and 40 C.F.R. § 52 Subpart E]

BACT Analysis Summary				
Source	Description	Pollutant	Control Technology	BACT Limit
SN-03	RH Degasser #1	CO (from degasser)	Flare	0.04 lb/ton of steel produced
		PM	Combustion of Natural gas and Good Combustion Practices (Periodic Equipment Maintenance)	0.00052 lb/MMBTU
		PM ₁₀		0.00052 lb/MMBTU
		PM _{2.5}		0.00052 lb/MMBTU
		Opacity		5%
		SO ₂		0.000588 lb/MMBTU
		VOC		0.0054 lb/MMBTU
		CO (from natural gas combustion)		0.0824 lb/MMBTU
		NO _x		1.0 lb/MMBTU

BACT Analysis Summary				
Source	Description	Pollutant	Control Technology	BACT Limit
		GHG	Good operating Practices (Periodic Equipment Maintenance)	CO ₂ 117 lb/MMBTU CH ₄ 0.0022 lb/MMBTU N ₂ O 0.0002 lb/MMBTU
SN-04	RH Degasser Boiler #1	PM	Combustion of Natural gas and Good Combustion Practices (Periodic Equipment Maintenance)	0.0075 lb/MMBTU
		PM ₁₀		0.0075 lb/MMBTU
		PM _{2.5}		0.0075 lb/MMBTU
		Opacity		5%
		SO ₂		0.000588 lb/MMBTU
		VOC		0.0054 lb/MMBTU
		CO		0.0824 lb/MMBTU
		NO _x	Low NO _x burners Combustion of clean fuel Good Combustion Practices (Periodic Equipment Maintenance)	0.035 lb/MMBTU
		GHG	Good operating Practices (Periodic Equipment Maintenance) Minimum Boiler Efficiency Combustion of natural gas only	CO ₂ 117 lb/MMBTU CH ₄ 0.0022 lb/MMBTU N ₂ O 0.0002 lb/MMBTU 75%
SN-04A SN-04B SN-04C SN-04D	RH Degasser Vessel Preheater Station #1, Vessel Top Part Dryer #1, RH Vessel Nozzle Dryer #1	PM	Combustion of Natural gas and Good Combustion Practices (Periodic Equipment Maintenance)	0.00052 lb/MMBTU
		PM ₁₀		0.00052 lb/MMBTU
		PM _{2.5}		0.00052 lb/MMBTU
		Opacity		5%
		SO ₂		0.000588 lb/MMBTU
		VOC		0.0054 lb/MMBTU
		CO		0.0824 lb/MMBTU

BACT Analysis Summary				
Source	Description	Pollutant	Control Technology	BACT Limit
	RH Degasser Burner/Top Lance #1	NO _x	Low NO _x burners Combustion of clean fuel Good Combustion Practices (Periodic Equipment Maintenance)	0.08 lb/MMBTU
		GHG	Good operating Practices (Periodic Equipment Maintenance)	CO ₂ 117 lb/MMBTU CH ₄ 0.0022 lb/MMBTU N ₂ O 0.0002 lb/MMBTU
SN-91	RH Degasser Alloy Delivery System #1	PM PM ₁₀ PM _{2.5}	Dust Control Plan, Enclosed Conveyors with Fabric Filters Enclosed Receiving System with Fabric Filter Fabric Filters Silos with Bin Vent Filters	0.003 gr/dscf 0.003 gr/dscf 0.01 gr/dscf
		Opacity		5%
SN-133	RH Degasser #2	CO (from degasser)	Flare	0.04 lb/ton of steel produced
		PM	Combustion of Natural gas and Good Combustion Practices (Periodic Equipment Maintenance)	0.00052 lb/MMBTU
		PM ₁₀		0.00052 lb/MMBTU
		PM _{2.5}		0.00052 lb/MMBTU
		Opacity		5%
		CO (from natural gas combustion)		0.0824 lb/MMBTU
		NO _x		1.0 lb/MMBTU
		GHG	Good operating Practices (Periodic Equipment Maintenance)	CO ₂ 117 lb/MMBTU CH ₄ 0.0022 lb/MMBTU N ₂ O 0.0002 lb/MMBTU
SN-134	RH Degasser Boiler #2	PM	Combustion of Natural gas and Good Combustion Practices (Periodic	0.0075 lb/MMBTU
		PM ₁₀		0.0075 lb/MMBTU
		PM _{2.5}		0.0075 lb/MMBTU
		Opacity		5%

BACT Analysis Summary				
Source	Description	Pollutant	Control Technology	BACT Limit
		CO	Equipment Maintenance)	0.0824 lb/MMBTU
		NO _x	Low NO _x burners Combustion of clean fuel Good Combustion Practices (Periodic Equipment Maintenance)	0.035 lb/MMBTU
		GHG	Good operating Practices (Periodic Equipment Maintenance) Minimum Boiler Efficiency Combustion of natural gas only	CO ₂ 117 lb/MMBTU CH ₄ 0.0022 lb/MMBTU N ₂ O 0.0002 lb/MMBTU 75%
SN-135 SN-136 SN-137 SN-138	RH Degasser Vessel Preheater Station #2, Vessel Top Part Dryer #2, RH Vessel Nozzle Dryer #2 RH Degasser Burner/Top Lance #2	PM	Combustion of	0.00052 lb/MMBTU
		PM ₁₀	Natural gas and	0.00052 lb/MMBTU
		PM _{2.5}	Good Combustion	0.00052 lb/MMBTU
		Opacity	Practices (Periodic	5%
		CO	Equipment Maintenance)	0.0824 lb/MMBTU
		NO _x	Low NO _x burners Combustion of clean fuel Good Combustion Practices (Periodic Equipment Maintenance)	0.08 lb/MMBTU
		GHG	Good operating Practices (Periodic Equipment Maintenance)	CO ₂ 117 lb/MMBTU CH ₄ 0.0022 lb/MMBTU N ₂ O 0.0002 lb/MMBTU
SN-139	RH Degasser Alloy Delivery System #2	PM PM ₁₀ PM _{2.5}	Dust Control Plan, Enclosed	0.003 gr/dscf 0.003 gr/dscf 0.01 gr/dscf

BACT Analysis Summary				
Source	Description	Pollutant	Control Technology	BACT Limit
		Opacity	Conveyors with Fabric Filters Enclosed Receiving System with Fabric Filter Fabric Filters Silos with Bin Vent Filters	5%

33. The permittee shall install and operate alarm system to notify the operator of the presence of a pilot flame or other possible flare malfunction. The permittee shall perform monthly visual confirmation of the pilot lights, semi-annually remove the strainer and check for debris, and annual test fire to ensure pilot light. The permittee shall maintain logs of all flare inspection and maintenance activities. These logs shall be kept on site and made available to Department personnel upon request. [8 CAR § 41-801, 8 CAR § 41-204, 40 C.F.R. § 52 Subpart E, and 40 C.F.R. § 64]
34. The permittee shall record and monthly maintain records of the amounts of natural gas combusted in the RH Degasser Boilers, SN-04 and SN-134, during each month. These records shall be kept on site and available for inspection upon request. [8 CAR § 41-801, 8 CAR § 41-204, and 40 C.F.R. § 60 Subpart Dc]
35. Visible emissions may not exceed the limits specified in the following table of this permit as measured by EPA Reference Method 9. Compliance with this condition will be shown by Specific Condition #36 and Plantwide Condition 5 for SN-03 SN-91, SN-133, and SN-139. Compliance with this condition will be shown by combustion of natural gas only and Plantwide Condition 5 for SN-04, SN-04A, SN-04B, SN-04C, SN-04D, SN-135, SN-136, SN-137, and SN-138.

Source	Limit	Regulatory Citation
SN-03 SN-04 SN-04A SN-04B SN-04C SN-04D SN-133 SN-134 SN-135 SN-136 SN-137 SN-138	5%	8 CAR § 41-801 et seq. and 40 C.F.R. § 52 Subpart E
SN-91 SN-139	5%	8 CAR § 41-801 et seq. and 40 C.F.R. § 52 Subpart E

36. The permittee shall conduct weekly observations of the opacity from SN-03, SN-91, SN-133, and SN-139. If visible emissions are detected, then the permittee shall immediately conduct a 6-minute opacity reading in accordance with EPA Reference Method 9. The result of these observations or readings shall be recorded in a log that shall be kept on site and made available for inspection upon request. [8 CAR § 41-605 and 40 C.F.R. § 52 Subpart E]
37. The permittee shall test the RH Degasser Boilers, SN-04 and SN-134, for CO, and NO_x emissions. This test shall be conducted in accordance with Plantwide Condition 3 and EPA Reference Method 10 and 7E for CO and NO_x respectively and repeated every 5 years after the initial test. [8 CAR § 41-801 and 40 C.F.R. § 52 Subpart E]
38. The permittee shall test the RH Degassers, SN-03 and SN-133, to show the flare is designed and operated in accordance with 40 C.F.R. 60.18(b) through (f). This test includes a Method 22 for opacity, measurement of the actual gas flow rate and, calculations of the heating value of the gas (if complying with 60.18(c)(3)(ii) and (c)(4)). This test shall be conducted in accordance with Plantwide Condition 3. This test has been performed and passed on all requirements on November 7, 2019. [8 CAR § 41-602 and 40 C.F.R. § 52 Subpart E]
39. The permittee shall not process more than 680,000 tons of alloying materials through SN-91 and SN-139 each in any consecutive rolling 12-month period. [8 CAR § 41-801 et seq. and 40 C.F.R. § 52 Subpart E]
40. The permittee shall maintain monthly records of the amount of alloying materials processed through SN-91 and SN-139. The records shall include the amount processed for the previous 12 months and the 12-month rolling total processed. These records shall

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be updated by the 15th day of the month following the month to which the records pertain, kept onsite and submitted in accordance with General Provision 7 and made available to Department personnel upon request. [8 CAR § 41-801 et seq. and 40 C.F.R. § 52 Subpart E]

41. The permittee shall not process more than 1,500,000 tons of steel through the RH Degassers, SN-03 and SN-133 each in any consecutive rolling 12-month period. [8 CAR § 41-801 et seq. and 40 C.F.R. § 52 Subpart E]
42. The permittee shall maintain monthly records of the amount of steel processed in SN-03 and SN-133. These records shall include the monthly total of steel processed and the 12-month rolling total of steel processed. These records shall be updated by the 15th day of the month following the month to which the records pertain, kept on site, made available to Department personnel upon request, and submitted in accordance with General Provision 7. [8 CAR § 41-801 et seq. and 40 C.F.R. § 52 Subpart E]

Melt Shop Natural Gas Sources

SN-05 Horizontal Ladle Preheater 1
SN-06 Horizontal Ladle Preheater 2
SN-07 Horizontal Ladle Preheater 3
SN-08 Horizontal Ladle Preheater 4
SN-09 Horizontal Ladle Preheater 5

SN-10 Vertical Ladle Dryout Flash Preheater Stations
SN-11 Vertical Ladle Dryout Flash Preheater Stations
SN-12 Vertical Ladle Dryout Flash Preheater Stations
SN-13 Vertical Ladle Dryout Flash Preheater Stations

SN-16 Tundish Preheaters/Dryout Stand #1
SN-17 Tundish Preheaters/Dryout Stand #2
SN-18 Tundish Preheater/Dryout Stand #3
SN-19 Tundish Preheater/Dryout Stand #4
SN-19A Tundish Preheater/Dryout Stand #5
SN-19B Tundish Preheater/Dryout Stand #6

Source Description

The Horizontal Ladle Preheaters, SN-05, SN-06, SN-07, SN-08 and SN-09 are natural gas fired burners used to raise the temperature of ladles prior to the transfer of molten steel from the EAFs. Each Horizontal Ladle Preheater is rated at 8 MMBTU/hr.

The Vertical Ladle Dryout Flash Preheater Stations, SN-10, SN-11, SN-12, and SN-13, are natural gas fired heaters used to cure new refractory linings after they are replaced. Each of the Vertical Ladle Dryout Flash Preheater Stations are rated at 8 MMBTU/hr.

The Tundish Preheaters/Dryout Stand, SN-16, SN-17, SN-18, SN-19, SN-19A, and SN-19B are natural gas fired heaters used to raise the temperature of tundishes prior to transfer of molten steel to the ladles. Each of the Tundish Preheaters/Dryout Stand is rated at 9 MMBTU/hr.

Specific Conditions

43. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by compliance with Plantwide Condition 5. [8 CAR § 41-801 et seq. and 40 C.F.R. § 52 Subpart E]

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SN	Description	Pollutant	lb/hr	tpy
SN-05	Horizontal Ladle Preheater 1	PM	0.1	0.3
		PM ₁₀	0.1	0.3
		PM _{2.5}	0.1	0.3
		SO ₂	0.1	0.1
		VOC	0.1	0.2
		CO	0.7	2.9
		NO _x	0.8	3.4
		Lead	0.000004	0.00002
		CO _{2e}	--	4,100
SN-06	Horizontal Ladle Preheater 2	PM	0.1	0.3
		PM ₁₀	0.1	0.3
		PM _{2.5}	0.1	0.3
		SO ₂	0.1	0.1
		VOC	0.1	0.2
		CO	0.7	2.9
		NO _x	0.8	3.4
		Lead	0.000004	0.00002
		CO _{2e}	--	4,100
SN-07	Horizontal Ladle Preheater 3	PM	0.1	0.3
		PM ₁₀	0.1	0.3
		PM _{2.5}	0.1	0.3
		SO ₂	0.1	0.1
		VOC	0.1	0.2
		CO	0.7	2.9
		NO _x	0.8	3.4
		Lead	0.000004	0.00002
		CO _{2e}	--	4,100
SN-08	Horizontal Ladle Preheater 4	PM	0.1	0.3
		PM ₁₀	0.1	0.3
		PM _{2.5}	0.1	0.3
		SO ₂	0.1	0.1
		VOC	0.1	0.2
		CO	0.7	2.9
		NO _x	0.8	3.4
		Lead	0.000004	0.00002
		CO _{2e}	--	4,100

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SN	Description	Pollutant	lb/hr	tpy
SN-09	Horizontal Ladle Preheater 5	PM	0.1	0.3
		PM ₁₀	0.1	0.3
		PM _{2.5}	0.1	0.3
		SO ₂	0.1	0.1
		VOC	0.1	0.2
		CO	0.7	2.9
		NO _x	0.8	3.4
		Lead	0.000004	0.00002
		CO _{2e}	--	4,100
SN-10	Vertical Ladle Dryout Flash Preheater Station 1	PM	0.1	0.3
		PM ₁₀	0.1	0.3
		PM _{2.5}	0.1	0.3
		SO ₂	0.1	0.1
		VOC	0.1	0.2
		CO	0.7	2.9
		NO _x	0.8	3.4
		Lead	0.000004	0.00002
		CO _{2e}	--	4,100
SN-11	Vertical Ladle Dryout Flash Preheater Station 2	PM	0.1	0.3
		PM ₁₀	0.1	0.3
		PM _{2.5}	0.1	0.3
		SO ₂	0.1	0.1
		VOC	0.1	0.2
		CO	0.7	2.9
		NO _x	0.8	3.4
		Lead	0.000004	0.00002
		CO _{2e}	--	4,100
SN-12	Vertical Ladle Dryout Flash Preheater Station 3	PM	0.1	0.3
		PM ₁₀	0.1	0.3
		PM _{2.5}	0.1	0.3
		SO ₂	0.1	0.1
		VOC	0.1	0.2
		CO	0.7	2.9
		NO _x	0.8	3.4
		Lead	0.000004	0.00002
		CO _{2e}	--	4,100

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SN	Description	Pollutant	lb/hr	tpy
SN-13	Vertical Ladle Dryout Flash Preheater Station 4	PM	0.1	0.3
		PM ₁₀	0.1	0.3
		PM _{2.5}	0.1	0.3
		SO ₂	0.1	0.1
		VOC	0.1	0.2
		CO	0.7	2.9
		NO _x	0.8	3.4
		Lead	0.000004	0.00002
		CO _{2e}	--	4,100
SN-16	Tundish Preheaters/Dryout Stand #1	PM	0.1	0.3
		PM ₁₀	0.1	0.3
		PM _{2.5}	0.1	0.3
		SO ₂	0.1	0.1
		VOC	0.1	0.2
		CO	0.8	3.2
		NO _x	0.9	3.9
		Lead	0.000005	0.00002
		CO _{2e}	--	5,125
SN-17	Tundish Preheaters/Dryout Stand #2	PM	0.1	0.3
		PM ₁₀	0.1	0.3
		PM _{2.5}	0.1	0.3
		SO ₂	0.1	0.1
		VOC	0.1	0.2
		CO	0.8	3.2
		NO _x	0.9	3.9
		Lead	0.000005	0.00002
		CO _{2e}	--	5,125
SN-18	Tundish Preheater/Dryout Stand #3	PM	0.1	0.3
		PM ₁₀	0.1	0.3
		PM _{2.5}	0.1	0.3
		SO ₂	0.1	0.1
		VOC	0.1	0.2
		CO	0.8	3.2
		NO _x	0.9	3.9
		Lead	0.000005	0.00002
		CO _{2e}	--	5,125

SN	Description	Pollutant	lb/hr	tpy
SN-19	Tundish Preheater/Dryout Stand # 4	PM	0.1	0.3
		PM ₁₀	0.1	0.3
		PM _{2.5}	0.1	0.3
		SO ₂	0.1	0.1
		VOC	0.1	0.2
		CO	0.8	3.2
		NO _x	0.9	3.9
		Lead	0.000005	0.00002
		CO _{2e}	--	5,125
SN-19A	Tundish Preheater/Dryout Stand # 5	PM	0.1	0.3
		PM ₁₀	0.1	0.3
		PM _{2.5}	0.1	0.3
		SO ₂	0.1	0.1
		VOC	0.1	0.2
		CO	0.8	3.2
		NO _x	0.9	3.9
		Lead	0.000005	0.00002
		CO _{2e}	--	5,125
SN-19B	Tundish Preheater/Dryout Stand # 6	PM	0.1	0.3
		PM ₁₀	0.1	0.3
		PM _{2.5}	0.1	0.3
		SO ₂	0.1	0.1
		VOC	0.1	0.2
		CO	0.8	3.2
		NO _x	0.9	3.9
		Lead	0.000005	0.00002
		CO _{2e}	--	5,125

44. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by compliance with Plantwide Condition 5. [8 CAR § 40-701 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
SN-05	Horizontal Ladle Preheater 1	Arsenic	0.000002	0.000007
		Cadmium	0.000009	0.00004
		Formaldehyde	0.0006	0.003
		Manganese	0.000003	0.00002
		Mercury	0.000003	0.000009

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SN	Description	Pollutant	lb/hr	tpy
SN-06	Horizontal Ladle Preheater 2	Arsenic	0.000002	0.000007
		Cadmium	0.000009	0.00004
		Formaldehyde	0.0006	0.003
		Manganese	0.000003	0.00002
		Mercury	0.000003	0.000009
SN-07	Horizontal Ladle Preheater 3	Arsenic	0.000002	0.000007
		Cadmium	0.000009	0.00004
		Formaldehyde	0.0006	0.003
		Manganese	0.000003	0.00002
		Mercury	0.000003	0.000009
SN-08	Horizontal Ladle Preheater 4	Arsenic	0.000002	0.000007
		Cadmium	0.000009	0.00004
		Formaldehyde	0.0006	0.003
		Manganese	0.000003	0.00002
		Mercury	0.000003	0.000009
SN-09	Horizontal Ladle Preheater 5	Arsenic	0.000002	0.000007
		Cadmium	0.000009	0.00004
		Formaldehyde	0.0006	0.003
		Manganese	0.000003	0.00002
		Mercury	0.000003	0.000009
SN-10	Vertical Ladle Dryout Flash Preheater Stations	Arsenic	0.000002	0.000007
		Cadmium	0.000009	0.00004
		Formaldehyde	0.0006	0.003
		Manganese	0.000003	0.00002
		Mercury	0.000003	0.000009
SN-11	Vertical Ladle Dryout Flash Preheater Stations	Arsenic	0.000002	0.000007
		Cadmium	0.000009	0.00004
		Formaldehyde	0.0006	0.003
		Manganese	0.000003	0.00002
		Mercury	0.000003	0.000009
SN-12	Vertical Ladle Holding Station 1	Arsenic	0.000002	0.000007
		Cadmium	0.000009	0.00004
		Formaldehyde	0.0006	0.003
		Manganese	0.000003	0.00002
		Mercury	0.000003	0.000009
SN-13	Vertical Ladle Holding Station 2	Arsenic	0.000002	0.000007
		Cadmium	0.000009	0.00004
		Formaldehyde	0.0006	0.003
		Manganese	0.000003	0.00002
		Mercury	0.000003	0.000009

SN	Description	Pollutant	lb/hr	tpy
SN-16	Tundish Preheaters/Dryout Stand #1	Arsenic	0.000002	0.000008
		Cadmium	0.00001	0.00005
		Formaldehyde	0.0007	0.003
		Manganese	0.000004	0.00002
		Mercury	0.000003	0.00001
SN-17	Tundish Preheaters/Dryout Stand #2	Arsenic	0.000002	0.000008
		Cadmium	0.00001	0.00005
		Formaldehyde	0.0007	0.003
		Manganese	0.000004	0.00002
		Mercury	0.000003	0.00001
SN-18	Tundish Preheater 3	Arsenic	0.000002	0.000008
		Cadmium	0.00001	0.00005
		Formaldehyde	0.0007	0.003
		Manganese	0.000004	0.00002
		Mercury	0.000003	0.00001
SN-19	Tundish Preheater 4	Arsenic	0.000002	0.000008
		Cadmium	0.00001	0.00005
		Formaldehyde	0.0007	0.003
		Manganese	0.000004	0.00002
		Mercury	0.000003	0.00001
SN-19A	Tundish Preheater 5	Arsenic	0.000002	0.000008
		Cadmium	0.00001	0.00005
		Formaldehyde	0.0007	0.003
		Manganese	0.000004	0.00002
		Mercury	0.000003	0.00001
SN-19B	Tundish Preheater 6	Arsenic	0.000002	0.000008
		Cadmium	0.00001	0.00005
		Formaldehyde	0.0007	0.003
		Manganese	0.000004	0.00002
		Mercury	0.000003	0.00001

45. The permittee shall not exceed the emission rates set forth in the following table and must install the control devices or implement the pollution prevention measures set forth in the following table. Compliance with this condition will be show by compliance with Plantwide Condition 5. [8 CAR § 41-801 et seq. and 40 C.F.R. § 52 Subpart E]

BACT Analysis Summary				
Source	Description	Pollutant	Control Technology	BACT Limit
SN-05, SN-06, SN-07,	Ladle Preheaters	PM	Combustion of Natural gas and Good Combustion Practices	0.0075 lb/MMBTU
		PM ₁₀		0.0075 lb/MMBTU
		PM _{2.5}		0.0075 lb/MMBTU
		Opacity		5%

BACT Analysis Summary				
Source	Description	Pollutant	Control Technology	BACT Limit
SN-08, SN-09		SO ₂	(Periodic Equipment Maintenance)	0.000588 lb/MMBTU
		VOC		0.0054 lb/MMBTU
		CO		0.0824 lb/MMBTU
		NO _x	Low NO _x burners Combustion of clean fuel Good Combustion Practices (Periodic Equipment Maintenance)	0.095 lb/MMBTU
		GHG	Good operating Practices (Periodic Equipment Maintenance)	CO ₂ 117 lb/MMBTU CH ₄ 0.0022 lb/MMBTU N ₂ O 0.0002 lb/MMBTU
SN-10 SN-11 SN-12 SN-13	Ladle Dryout Station	PM	Combustion of Natural gas and Good Combustion Practices (Periodic Equipment Maintenance)	0.0075 lb/MMBTU
		PM ₁₀		0.0075 lb/MMBTU
		PM _{2.5}		0.0075 lb/MMBTU
		Opacity		5%
		SO ₂		0.000588 lb/MMBTU
		VOC		0.0054 lb/MMBTU
		CO		0.0824 lb/MMBTU
		NO _x	Low NO _x burners Combustion of clean fuel Good Combustion Practices (Periodic Equipment Maintenance)	0.095 lb/MMBTU
		GHG	Good operating Practices (Periodic Equipment Maintenance)	CO ₂ 117 lb/MMBTU CH ₄ 0.0022 lb/MMBTU N ₂ O 0.0002 lb/MMBTU
SN-16 SN-17 SN-18 SN-19 SN-19A SN-19B	Tundish Preheaters/Dryout Stands #1 through #6	PM	Combustion of Natural gas and Good Combustion Practices (Periodic Equipment Maintenance)	0.0075 lb/MMBTU
		PM ₁₀		0.0075 lb/MMBTU
		PM _{2.5}		0.0075 lb/MMBTU
		Opacity		5%
		SO ₂		0.000588 lb/MMBTU
		VOC		0.0054 lb/MMBTU
		CO		0.0824 lb/MMBTU

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BACT Analysis Summary				
Source	Description	Pollutant	Control Technology	BACT Limit
		NO _x	Low NO _x burners Combustion of clean fuel Good Combustion Practices (Periodic Equipment Maintenance)	0.097 lb/MMBTU
		GHG	Good operating Practices (Periodic Equipment Maintenance)	CO ₂ 117 lb/MMBTU CH ₄ 0.0022 lb/MMBTU N ₂ O 0.0002 lb/MMBTU

46. Visible emissions may not exceed the limits specified in the following table of this permit as measured by EPA Reference Method 9. Compliance with this condition will be shown by combustion of natural gas only and Plantwide Condition 5.

Source	Limit	Regulatory Citation
SN-05, SN-06, SN-07, SN-08, SN-09, SN-10, SN-11, SN-12, SN-13, SN-16, SN-17, SN-18, SN-19, SN-19A, SN-19B	5%	8 CAR § 41-801 et seq. and 40 C.F.R. § 52 Subpart E

Tunnel Furnaces

SN-20 Tunnel Furnace 1

SN-21 Tunnel Furnace 2

SN-21C Shuttle Zone

Source Description

After being cast into thin slabs, the steel enters the tunnel furnace lines. The tunnel furnaces are used to stabilize slab temperatures prior to rolling. Tunnel Furnace #1 (SN-20) has a combined total heat input of 217.6 MMBtu/hr from a series of individual natural-gas fired burners, Tunnel Furnace #2 (SN-21) has a combined total heat input capacity of 172.5 MMBtu/hr from a series of individual natural-gas fired burners and the Shuttle Zone (SN-21C) has a heat input capacity of 80.2 MMBtu/hr from a series of individual natural gas-fired burners.

Specific Conditions

47. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by compliance with Plantwide Condition 5. [8 CAR § 41-801 et seq. and 40 C.F.R. § 52 Subpart E]

SN	Description	Pollutant	lb/hr	tpy
SN-20	Tunnel Furnace 1	PM	1.7	7.2
		PM ₁₀	1.7	7.2
		PM _{2.5}	1.7	7.2
		SO ₂	0.2	0.6
		VOC	1.2	5.2
		CO	18.0	78.5
		NO _x	21.8	95.3
		Lead	0.0002	0.0006
		CO _{2e}	--	119,919
SN-21	Tunnel Furnace 2	PM	1.3	5.7
		PM ₁₀	1.3	5.7
		PM _{2.5}	1.3	5.7
		SO ₂	0.2	0.5
		VOC	1.0	4.1
		CO	14.2	62.2
		NO _x	17.3	75.6
		Lead	0.0001	0.0004
		CO _{2e}	--	98,395

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SN	Description	Pollutant	lb/hr	tpy
SN-21C	Shuttle Zone	PM	0.6	2.7
		PM ₁₀	0.6	2.7
		PM _{2.5}	0.6	2.7
		SO ₂	0.1	0.3
		VOC	0.5	1.9
		CO	6.6	28.9
		NO _x	8	35.1
		Lead	0.00004	0.0002
		CO ₂ e	--	41,082

48. The permittee shall not exceed the emission rates set forth in the following table. Compliance with this condition will be show by compliance with Plantwide Condition 5. [8 CAR § 41-801 et seq. and 40 C.F.R. § 52 Subpart E]

BACT Analysis Summary				
Source	Description	Pollutant	Control Technology	BACT Limit
SN-20, SN-21, and SN-21C	Tunnel Furnaces and Shuttle Zone	PM	Combustion of Natural gas and Good Combustion Practices (Periodic Equipment Maintenance)	0.0075 lb/MMBTU
		PM ₁₀		0.0075 lb/MMBTU
		PM _{2.5}		0.0075 lb/MMBTU
		Opacity		5%
		SO ₂		0.000588 lb/MMBTU
		VOC		0.0054 lb/MMBTU
		CO		0.0824 lb/MMBTU
		NO _x	Low NO _x burners Combustion of clean fuel Good Combustion Practices (Periodic Equipment Maintenance)	0.1 lb/MMBTU
		GHG	Good operating Practices (Periodic Equipment Maintenance)	CO ₂ 117 lb/MMBTU CH ₄ 0.0022 lb/MMBTU N ₂ O 0.0002 lb/MMBTU

49. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by compliance with

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Plantwide Condition 5. [8 CAR § 40-701 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
SN-20	Tunnel Furnace 1	Arsenic	0.00005	0.0002
		Cadmium	0.0003	0.002
		Formaldehyde	0.02	0.08
		Manganese	0.00009	0.0004
		Mercury	0.00006	0.0003
SN-21	Tunnel Furnace 2	Arsenic	0.00004	0.0002
		Cadmium	0.0002	0.001
		Formaldehyde	0.02	0.06
		Manganese	0.00007	0.0003
		Mercury	0.00005	0.0002
SN-21C	Shuttle Zone	Arsenic	0.00002	0.0001
		Cadmium	0.0001	0.0004
		Formaldehyde	0.01	0.03
		Manganese	0.00003	0.0001
		Mercury	0.00002	0.0001

50. Visible emissions may not exceed the limits specified in the following table of this permit as measured by EPA Reference Method 9. Compliance with this condition will be shown by combustion of natural gas only and Plantwide Condition 5.

Source	Limit	Regulatory Citation
SN-20, SN-21, and SN-21C	5%	8 CAR § 41-801 et seq. and 40 C.F.R. § 52 Subpart E

Cold Mill Operations

SN-22 ACL, CGL 1, CGL 2, PL and RCM Boiler
SN-23 Pickle Line Scale Dust
SN-24 Pickling Process with Outside Tanks and Supporting Scrubber
SN-128 Pickle Line Sedimentation System

SN-24A Push Pull Pickle Line (PPPL) and Supporting Scrubber

SN-25 Pickling Line Tandem Cold Mill

SN-26 ACL, CGL 1, CGL 2, PL, and RCM Boiler
SN-27 Cold Mill Boiler #1
SN-28 Galvanizing Line 1 – Furnace
SN-29 Galvanizing Line 2 – Furnace
SN-34 Galvanizing Line 1 – Caustic Cleaning
SN-35 Galvanizing Line 2 – Caustic Cleaning
SN-36 Galvanizing Line 1 – Post Treatment
SN-37 Galvanizing Line 2 – Post Treatment
SN-143 Continuous Galvanizing Line 2 Paint Booth

SN-38a Skin Pass Mill #1
SN-38b Skin Pass Mill #2

SN-39 Annealing Furnaces

SN-40 Decarburizing and MgO Coating Line 1 Furnace Section
SN-41 Decarburizing and MgO Coating Line 1 Cleaning Section
SN-42 Decarburizing and MgO Coating Line 2 Furnace Section
SN-43 Decarburizing and MgO Coating Line 2 Cleaning Section

SN-44 Reversing Cold Mill 1 (NGO – ACL Process Line)

SN-45 Reversing Cold Mill 2
SN-46 Reversing Cold Mill 3

SN-47 Annealing Pickling Line – Annealing Furnace
SN-48 Annealing Pickling Line – Scale Dust Exhaust
SN-49 Annealing Pickling Line – Shot Blast
SN-50 Annealing Pickling Line – Pickling Section
SN-51 Annealing and Coating Line - Annealing Furnace
SN-52 Annealing and Coating Line – Cleaning Section
SN-53 Annealing and Coating Line – Drying Furnace and RTO
SN-54 Decarburizing and MgO Coating Line 1 – Drying Furnace

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SN-55 Decarburizing and MgO Coating Line 1 – Cleaning Section
SN-56 Decarburizing and MgO Coating Line 2 – Drying Furnace
SN-57 Decarburizing and MgO Coating Line 2 – Cleaning Section

SN-58A Flattening and Coating Line 1 – Drying Furnace Process
SN-58B Flattening and Coating Line 1 – Annealing Furnace Radiant Tube Process
SN-59 Flattening and Coating Line 1 – Cleaning and Steel Activation Process
SN-60A Flattening and Coating Line 2 – Drying Furnace Process
SN-60B Flattening and Coating Line 2 – Annealing Furnace Radiant Tube Process
SN-61 Flattening and Coating Line 2 – Cleaning and Steel Activation Process

SN-101 Annealing Pickling Line – Boiler Natural Gas Fired

SN-102 Natural Gas Fired Cold Mill/Supporting Building Structures Space Heaters

SN-105 Color Coating Line – Pre-Cleaning Section
SN-106 Color Coating Line – Cleaning Section
SN-107 Color Coating Line – Prime/Finish Coating

SN-108a Color Coating Line Chemical Dryer
SN-108b Color Coating Line Primer Oven
SN-108c Color Coating Line Finish Oven
SN-108d Color Coating Line RTO
SN-108e Color Coating Line Spray Passivation

SN-120 ACL, CGL1, CGL2 and RCM Boiler
SN-125 Cold Mill Boiler #2
SN-126 Color Coating Line Boiler

SN-140 High Temperature Annealing
SN-141 Cold Mill Boiler #3
SN-142 Cold Mill Boiler #4

Source Description

Pickling Line / Push Pull Pickle Line

Pickling Process with Outside Tanks and Supporting Scrubber, SN-24, pickling is the process that cleans a steel coil of its rust, dirt and oil so the metal can be further processed. The steel coil is unwound and sent through a series of hydrochloric acid baths that remove the oxides. The steel sheet is then rinsed and dried. A wet scrubber is used to control the HCl emissions. This source also includes fourteen 22,500-gallon HCL tanks.

The Pickling Line Tandem Cold Mill, SN-25, is a cold rolling process directly coupled with the pickling line. The process consists of removal of hot strip scale and a rolling operation to final

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material thickness. The steel coil is unwound and passed between sets of work rolls that are compressed by hydraulically-forced backup rolls. The oil emissions from the pickling line tandem cold mill will be reduced by a mist eliminator.

Pickle Line Scale Dust, SN-23, scale dust will be generated from the uncoiling, flattening and scale breaking of the steel. The scale dust emissions are controlled by a fabric filter.

The Push Pull Pickle Line (PPPL) and Supporting Scrubber has been assigned emission source ID # SN-24A. This represents the scrubber exhaust stack associated with this line.

The Pickle Line Sedimentation System, SN-128, is used to process waste pickle material from the pickling process. This process includes supporting storage tanks to support the pickling and sedimentation system process. Appropriate exhaust gas streams from the sedimentation system and supporting storage tanks are tied into the Pickle Line scrubber (SN-24) used to control HCl emissions from the pickle line process and supporting sedimentation system process.

Galvanizing Line

The Cold Mill will incorporate two continuous galvanizing lines to produce galvanized strips. BRS has designed the galvanizing line to double as a continuous annealing line.

The Galvanizing Line 1 – Furnace, SN-28, is a 78.2 MMBtu/hr natural gas fired heater that provides heat for the galvanizing line. The exhaust stack associated with SN-28 also includes volume air the Continuous Line Dryer that is included in the permit as an insignificant activity.

Galvanizing Line 2 – Furnace, SN-29, has a heat input of 150.5 MMBtu/hr which includes two separate heating zones.

Galvanizing Line 1 – Caustic Cleaning, SN-34, and Galvanizing Line 2 – Caustic Cleaning, SN-35, are the pre-cleaning sections of the galvanizing process. These sources are equipped with mist eliminators to reduce the emissions of particulate matter from caustic cleaning.

Galvanizing Line 1 – Post Treatment, SN-36, and Galvanizing Line 2 – Post Treatment, SN-37, are the cleaning sections of the galvanizing line. These sources are equipped with mist eliminators to reduce the emissions of particulate matter.

The Continuous Galvanizing Line 2 Paint Booth, SN-143, is a paint booth to be used for quality assurance. This paint booth has a maximum material usage of approximately 80 gallons per year.

The Skin Pass Mill #1, SN-38a, adjusts the final mechanical properties, flatness, and surface finish of the cold rolled strip. A mist eliminator is used to reduce the particulate matter from the emulsion applied to the rolling material. The Skin Pass Mill can process 160 tons per hour of steel.

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The Skin Pass Mill (ACL), SN-38b, adjusts the final mechanical properties, flatness, and surface finish of the cold rolled strip. A mist eliminator is used to reduce the particulate matter from the emulsion applied to the rolling material. The Skin Pass Mill can process 160 tons per hour of steel.

The Annealing Furnaces, SN-39, will consist of 15 annealing furnace bases for a total of 117.9 MMBTU/hr. Eleven (11) annealing furnace bases installed to provide cooling. These bases are not natural gas fired.

Decarburizing and MgO Coating Line

The decarburizing lines reduce the carbon content at intermediate strip thickness. The decarburizing line consists of two sections the cleaning section, SN-41 and SN-43, and the furnace section, SN-40 and SN-42. Each of the two decarburization lines is capable of processing 30 tons of steel per hour. The furnace sections are natural gas fired burners with a heat input of 57.1 MMBTU/hr each.

The MgO coating section applies magnesia to the strip steel surface. The application of this material is required to avoid the steel sticking during high temperature annealing. There are two MgO coating sections each with a cleaning and coating section and a drying furnace section.

MgO Coating Line 1 – Drying Furnace, SN-54, is a 13.2 MMBTU/hr natural gas fired combustion device used to provide heat to the MgO coating line.

MgO Coating Line 1 – Cleaning Section, SN-55, uses sodium hydroxide to clean the strip steel. A mist eliminator is used to reduce emissions.

MgO Coating Line 2 – Drying Furnace, SN-56, is a 13.2 MMBTU/hr natural gas fired combustion device used to provide heat to the MgO coating line.

MgO Coating Line 2 – Cleaning Section, SN-57, uses sodium hydroxide to clean the strip steel. A mist eliminator is used to reduce emissions.

The decarburizing lines and MgO Coating Lines are a single process line. Decarburizing is performed first followed by the MgO coating process.

Reversing Cold Mill

The Reversing Cold Mill 1 (NGO – ACL Process Line), 2, and 3, SN-45, SN-46, and SN-44 reduce the thickness of the steel to the desired specifications. Each reversing mill is capable of processing 45 tons per hour of steel. A set of rolls applies pressure to the steel while maintaining the shape and width. The steel runs back and forth between rollers which reduce the thickness further with each pass. As the steel passes through the rolls, it is re-coiled onto the delivery tension reel. From there it goes back through the rolls in reverse reducing the steel thickness

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further. An emulsion is added to the strip surface during the rolling. Mist eliminators are employed to reduce emissions of particulate matter.

Annealing Pickling Line

Annealing Pickling Line – Annealing Furnace, SN-47, is a 66 MMBTU/hr natural gas fired heater to provide heat to the annealing pickling line for hot strip annealing.

Annealing Pickling Line – Scale Dust Exhaust, SN-48, this process will involve removal of scale from the steel strip surface.

Annealing Pickling Line – Shot Blast, SN-49, is the mechanical cleaning at the annealing pickling section with a shot blast machine. A fabric filter will be used to reduce emissions from the shot blast machine.

Annealing Pickling Line - Pickling Section, SN-50, pickling is the process that cleans a steel coil of its rust, dirt and oil so the metal can be further processed. A wet scrubber is used to control HCl emissions.

Annealing Pickling Line – Boiler, SN-101, is a 53.7 MMBTU/hr natural gas fired boiler which provides steam to the Annealing Pickling Line.

Annealing and Coating Line

The annealing and coating line will be used for annealing of the cold roll steel strip and application of an insulating coating.

Annealing and Coating Line - Annealing Furnace, SN-51, is a 13.0 MMBtu/hr natural gas fired annealing furnace in the annealing and coating line.

Annealing and Coating Line – Cleaning Section, SN-52, uses a caustic solution to clean the steel. A mist eliminator is used to reduce emissions.

Annealing and Coating Line – Drying Furnace & RTO, SN-53, consists of a coating dryer and RTO control devices to reduce potential VOC emissions from the coating drying process. The drying furnace and RTO are both natural gas fired combustion devices with a total heat input of 22.3 MMBtu/hr. The annealing and coating line is used to apply an insulating coating to the steel.

High Temperature Annealing Process, SN-140, involves taking coiled steel and subjecting that coiled steel to extreme temperature over a specified period of time. Heat is generated by combustion of natural gas in the HTA with a total heat input of 55.8 MMBtu/hr.

Flattening and Coating Lines

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The Flattening and Coating Lines (FCL) are used to coat the steel strip with an insulation layer and subsequent flatness improvements. The process line does involve an annealing process. This is the final step in producing a grain-oriented product.

Flattening and Coating Line 1 (FCL 1) – Drying Furnace Process and Annealing Furnace Radiant Tube Process, SN-58A and SN-58B, are natural gas fired and have a maximum heat input of 20.8 and 11.2 MMBTU/hr respectively.

Flattening and Coating Line 1 (FCL 1) – Cleaning and Steel Activation Process, SN-59, is a cleaning section which uses hydrochloric acid to clean the steel strip of excess MgO and for activation prior to coating. A wet scrubber is used to help control emissions.

Flattening and Coating Line 2 (FCL 2) – Drying Furnace Process and Annealing Furnace Radiant Tube Process, SN-60A and SN-60B, are natural gas fired and have a maximum heat input of 20.8 and 11.2 MMBTU/hr respectively.

Flattening and Coating Line 2 (FCL 2) – Cleaning and Steel Activation Process, SN-61, is a cleaning section which uses hydrochloric acid to clean the steel strip of excess MgO and for activation prior to coating. A wet scrubber is used to help control emissions.

Color Coating Line

SN-105 Color Coating Line – Pre-Cleaning Section is arranged in front of the entry loop accumulator to clean the strip surfaces from residual oil and iron fines from the cold rolling process by means of process steps like spray cleaning, cascade rinsing and drying.

SN-106 Color Coating Line – Cleaning Section, the main cleaning section, consists of a two-stage alkaline spray cleaning section with an additional brushing stage in-between. In each spraying section, the nozzle bars can be switched on-off by automatic valves section wise to control the pickling efficiency.

SN-107 Color Coating Line – Prime/Finish Coating, the pain coating section, is comprised of the roller coating machine with the power and finish coaters for coating both strip sides.

The color coating line consists of several natural gas fired combustion devices: SN-108a Color Coating Line Chemical Dryer – 5.4 MMBtu/hr, SN-108b Color Coating Line Primer Oven – 25.0 MMBtu/hr, SN-108c Color Coating Line Finish Oven – 28.0 MMBtu/hr, SN-108d Color Coating Line RTO – 14.4 MMBtu/hr, and SN-126 Color Coating Line Boiler – 53.7 MMBtu/hr.

Boilers Supporting Cold Mill Process Lines

The Cold Mill also contains several natural gas fired boilers that provide steam to various process lines:

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SN-22 ACL, CGL 1, CGL 2, PL, and RCM Boiler, with a heat input of 53.7 MMBTU/hr.
 SN-26 ACL, CGL 1, CGL 2, PL, and RCM Boiler, with a heat input of 53.7 MMBtu/hr.
 SN-27 Cold Mill Boiler #1, with a heat input of 53.7 MMBtu/hr.
 SN-120 ACL, CGL1, CGL2 and RCM Boiler, with a heat input of 88.7 MMBtu/hr,
 SN-125 Cold Mill Boiler #2, with a heat input of 88.7 MMBtu/hr.
 SN-141 Cold Mill Boiler #3, with a heat input of 89 MMBtu/hr.
 SN-142 Cold Mill Boiler #4, with a heat input of 54 MMBtu/hr.

Miscellaneous Natural Gas Sources

Natural Gas Fired Cold Mill/Supporting Building Structures Space Heaters, SN-102, has various numerous heaters to support the Cold Mill. The heaters have a total heat input of 482.34 MMBtu/hr.

The following list multiple miscellaneous natural gas sources as well as their heat input value: , SN-121 Pots for GI Curing and Zinc Melting – 3.7 MMBtu/hr, SN-122 Pots for GL Curing and Zinc Melting – 3.7 MMBtu/hr, and SN-123 Pot for Curing and Zinc Melting – 1.9 MMBtu/hr.

Specific Conditions

51. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by compliance with Specific Conditions 55 through 73. [8 CAR § 41-801 et seq. and 40 C.F.R. § 52 Subpart E]

SN	Description	Pollutant	lb/hr	tpy
SN-22	ACL, CGL 1, CGL 2, PL and RCM Boiler	PM	0.4	1.8
		PM ₁₀	0.4	1.8
		PM _{2.5}	0.4	1.8
		SO ₂	0.1	0.2
		VOC	0.3	1.3
		CO	4.5	19.4
		NO _x	1.9	8.3
		Lead	0.00003	0.0002
		CO _{2e}	--	27,531
SN-23	Pickle Line Scale Dust	PM	1.0	4.4
		PM ₁₀	1.0	4.4
		PM _{2.5}	1.0	4.4
SN-24A	Push Pull Pickle Line (PPPL) and Supporting Scrubber	PM	0.4	1.7
		PM ₁₀	0.4	1.7
		PM _{2.5}	0.4	1.7
SN-25	Tandem Cold Mill	PM	4.8	20.7
		PM ₁₀	12.5	54.7
		PM _{2.5}	12.5	54.7

SN	Description	Pollutant	lb/hr	tpy
SN-26	ACL, CGL 1, CGL 2, PL, and RCM Boiler	PM	0.4	1.8
		PM ₁₀	0.4	1.8
		PM _{2.5}	0.4	1.8
		SO ₂	0.1	0.2
		VOC	0.3	1.3
		CO	4.5	19.4
		NO _x	1.9	8.3
		Lead	0.00003	0.00002
		CO ₂ e	--	27,531
SN-27	Cold Mill Boiler #1	PM	0.4	1.8
		PM ₁₀	0.4	1.8
		PM _{2.5}	0.4	1.8
		SO ₂	0.1	0.2
		VOC	0.3	1.3
		CO	4.5	19.4
		NO _x	1.9	8.3
		Lead	0.00003	0.00002
		CO ₂ e	--	27,531
SN-28	Galvanizing Line 1 – Furnace	PM	0.1	0.5
		PM ₁₀	0.1	0.5
		PM _{2.5}	0.1	0.5
		SO ₂	0.1	0.2
		VOC	0.5	1.9
		CO	6.5	28.2
		NO _x	2.8	12.0
		Lead	0.00004	0.0002
		CO ₂ e	--	40,078
SN-29	Galvanizing Line 2 – Furnace	PM	0.2	0.8
		PM ₁₀	0.2	0.8
		PM _{2.5}	0.2	0.8
		SO ₂	0.1	0.4
		VOC	0.9	3.6
		CO	12.4	54.3
		NO _x	5.3	23.1
		Lead	0.0001	0.0003
		CO ₂ e	--	77,121
SN-34	Galvanizing Line 1 – Caustic Cleaning	PM	0.2	0.9
		PM ₁₀	0.2	0.9
		PM _{2.5}	0.2	0.9
SN-35	Galvanizing Line 2 – Caustic Cleaning	PM	0.2	0.5
		PM ₁₀	0.2	0.5
		PM _{2.5}	0.2	0.5

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SN	Description	Pollutant	lb/hr	tpy
SN-36	Galvanizing Line 1 – Post Treatment	PM	0.1	0.3
		PM ₁₀	0.1	0.3
		PM _{2.5}	0.1	0.3
SN-37	Galvanizing Line 2 – Post Treatment	PM	0.3	1.3
		PM ₁₀	0.3	1.3
		PM _{2.5}	0.3	1.3
SN-38a	Skin Pass Mill #1	PM	0.6	2.5
		PM ₁₀	1.5	6.6
		PM _{2.5}	1.5	6.6
SN-38b	Skin Pass Mill #2 (ACL)	PM	0.6	2.5
		PM ₁₀	1.5	6.6
		PM _{2.5}	1.5	6.6
SN-39	Annealing Furnaces	PM	0.9	3.9
		PM ₁₀	0.9	3.9
		PM _{2.5}	0.9	3.9
		SO ₂	0.1	0.3
		VOC	0.7	2.8
		CO	9.8	42.6
		NO _x	11.8	51.7
		Lead	0.0001	0.0003
		CO _{2e}	--	60,424
SN-40	Decarburizing and MgO Coating Line 1 Furnace Section	PM	0.8	3.3
		PM ₁₀	0.8	3.3
		PM _{2.5}	0.8	3.3
		SO ₂	0.1	0.2
		VOC	0.4	1.4
		CO	4.8	20.7
		NO _x	5.8	25.1
		Lead	0.00003	0.00013
		CO _{2e}	--	29,264
SN-41	Decarburizing and MgO Coating Line 1 Cleaning Section	PM	0.4	1.8
		PM ₁₀	0.4	1.8
		PM _{2.5}	0.4	1.8
SN-42	Decarburizing and MgO Coating Line 2 Furnace Section	PM	0.8	3.3
		PM ₁₀	0.8	3.3
		PM _{2.5}	0.8	3.3
		SO ₂	0.1	0.2
		VOC	0.4	1.4
		CO	4.8	20.7
		NO _x	5.8	25.1
		Lead	0.00003	0.00013
		CO _{2e}	--	11,274

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SN	Description	Pollutant	lb/hr	tpy
SN-43	Decarburizing and MgO Coating Line 2 Cleaning Section	PM	0.4	1.8
		PM ₁₀	0.4	1.8
		PM _{2.5}	0.4	1.8
SN-44	Reversing Cold Mill 1 (NGO – ACL Process Line)	PM	1.5	6.6
		PM ₁₀	4.0	17.4
		PM _{2.5}	4.0	17.4
SN-45	Reversing Cold Mill 2	PM	1.5	6.6
		PM ₁₀	4.0	17.4
		PM _{2.5}	4.0	17.4
SN-46	Reversing Cold Mill 3	PM	1.5	6.6
		PM ₁₀	4.0	17.4
		PM _{2.5}	4.0	17.4
SN-47	Annealing Pickling Line – Annealing Furnace	PM	0.9	3.8
		PM ₁₀	0.9	3.8
		PM _{2.5}	0.9	3.8
		SO ₂	0.1	0.2
		VOC	0.4	1.6
		CO	5.5	23.9
		NO _x	6.6	29.0
		Lead	0.00004	0.0002
SN-48	Annealing Pickling Line – Scale Dust Exhaust	CO _{2e}	--	33,823
		PM	0.7	3.0
		PM ₁₀	0.7	3.0
SN-49	Annealing Pickling Line – Shot Blast	PM _{2.5}	0.7	3.0
		PM	1.0	4.4
		PM ₁₀	1.0	4.4
SN-51	Annealing and Coating Line – Annealing Furnace	PM _{2.5}	1.0	4.4
		PM	0.2	0.8
		PM ₁₀	0.2	0.8
		PM _{2.5}	0.2	0.8
		SO ₂	0.1	0.1
		VOC	0.1	0.4
		CO	1.1	4.7
		NO _x	1.3	5.7
SN-52	Annealing and Coating Line – Cleaning Section	Lead	0.00001	0.00003
		CO _{2e}	--	6,663
		PM	0.3	1.0
		PM ₁₀	0.3	1.0
		PM _{2.5}	0.3	1.0

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SN	Description	Pollutant	lb/hr	tpy
SN-53	Annealing and Coating Line – Drying Furnace & RTO	PM	0.4	1.6
		PM ₁₀	0.4	1.6
		PM _{2.5}	0.4	1.6
		SO ₂	0.1	0.1
		VOC	0.6	2.6
		CO	10.0	44.0
		NO _x	5.6	24.5
		Lead	0.00002	0.00005
		CO _{2e}	--	11,439
SN-54	Decarburizing and MgO Coating Line 1 – Drying Furnace	PM	0.2	0.8
		PM ₁₀	0.2	0.8
		PM _{2.5}	0.2	0.8
		SO ₂	0.1	0.1
		VOC	0.1	0.4
		CO	1.2	4.8
		NO _x	1.4	5.9
		Lead	0.000007	0.00003
		CO _{2e}	--	6,816
SN-55	Decarburizing and MgO Coating Line 1 – Cleaning Section	PM	0.3	1.1
		PM ₁₀	0.3	1.1
		PM _{2.5}	0.3	1.1
SN-56	Decarburizing and MgO Coating Line 2 – Drying Furnace	PM	0.2	0.8
		PM ₁₀	0.2	0.8
		PM _{2.5}	0.2	0.8
		SO ₂	0.1	0.1
		VOC	0.1	0.4
		CO	1.2	4.8
		NO _x	1.4	5.9
		Lead	0.000007	0.00003
		CO _{2e}	--	6,816
SN-57	Decarburizing and MgO Coating Line 2 – Cleaning Section	PM	0.3	1.1
		PM ₁₀	0.3	1.1
		PM _{2.5}	0.3	1.1

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SN	Description	Pollutant	lb/hr	tpy
SN-58A	Flattening and Coating Line 1 – Drying Furnace Process	PM	0.3	1.2
		PM ₁₀	0.3	1.2
		PM _{2.5}	0.3	1.2
		SO ₂	0.1	0.1
		VOC	0.2	0.5
		CO	1.8	7.6
		NO _x	2.1	9.2
		Lead	0.00001	0.00005
		CO ₂ e	--	10,660
SN-58B	Flattening and Coating Line 1 – Annealing Furnace Radiant Tube Process	PM	0.2	0.7
		PM ₁₀	0.2	0.7
		PM _{2.5}	0.2	0.7
		SO ₂	0.1	0.1
		VOC	0.1	0.3
		CO	1.0	4.1
		NO _x	1.2	5.0
		Lead	0.00001	0.00003
		CO ₂ e	--	5,740
SN-60A	Flattening and Coating Line 2 – Drying Furnace Process	PM	0.3	1.2
		PM ₁₀	0.3	1.2
		PM _{2.5}	0.3	1.2
		SO ₂	0.1	0.1
		VOC	0.2	0.5
		CO	1.8	7.6
		NO _x	2.1	9.2
		Lead	0.00001	0.00005
		CO ₂ e	--	10,660
SN-60B	Flattening and Coating Line 2 – Annealing Furnace Radiant Tube Process	PM	0.2	0.7
		PM ₁₀	0.2	0.7
		PM _{2.5}	0.2	0.7
		SO ₂	0.1	0.1
		VOC	0.1	0.3
		CO	1.0	4.1
		NO _x	1.2	5.0
		Lead	0.00001	0.00003
		CO ₂ e	--	5,740

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SN	Description	Pollutant	lb/hr	tpy
SN-101	Annealing Pickling Line Boiler	PM	0.4	1.8
		PM ₁₀	0.4	1.8
		PM _{2.5}	0.4	1.8
		SO ₂	0.1	0.2
		VOC	0.3	1.3
		CO	4.5	19.4
		NO _x	1.9	8.3
		Lead	0.00003	0.0002
		CO ₂ e	--	27,531
SN-102	Cold Mill Space Heaters – Natural Gas Fired	PM	3.7	15.9
		PM ₁₀	3.7	15.9
		PM _{2.5}	3.7	15.9
		SO ₂	0.3	1.3
		VOC	2.6	11.5
		CO	39.8	174.1
		NO _x	38.6	169.1
		Lead	0.0003	0.002
		CO ₂ e	--	247,201
SN-105	Color Coating Line – Pre-Cleaning Section	PM	0.3	1.2
		PM ₁₀	0.3	1.2
		PM _{2.5}	0.3	1.2
SN-106	Color Coating Line – Cleaning Section	PM	0.3	1.2
		PM ₁₀	0.3	1.2
		PM _{2.5}	0.3	1.2
SN-107	Color Coating Line – Prime/Finish Coating	VOC	34.9	152.7
SN-108a	Color Coating Line – Chemical Dryer	PM	0.1	0.2
		PM ₁₀	0.1	0.2
		PM _{2.5}	0.1	0.2
		SO ₂	0.1	0.1
		VOC	0.1	0.2
		CO	0.4	1.9
		NO _x	0.3	1.2
		Lead	0.000003	0.00002
		CO ₂ e	--	2,768

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SN	Description	Pollutant	lb/hr	tpy
SN-108b	Color Coating Line – Primer Oven	PM	0.2	0.9
		PM ₁₀	0.2	0.9
		PM _{2.5}	0.2	0.9
		SO ₂	0.1	0.1
		VOC	0.2	0.6
		CO	2.1	9.1
		NO _x	1.3	5.5
		Lead	0.00002	0.00006
		CO _{2e}	--	12,813
SN-108c	Color Coating Line – Finish Oven	PM	0.3	1.0
		PM ₁₀	0.3	1.0
		PM _{2.5}	0.3	1.0
		SO ₂	0.1	0.1
		VOC	0.2	0.7
		CO	2.3	10.1
		NO _x	1.4	6.1
		Lead	0.00002	0.00007
		CO _{2e}	--	14,350
SN-108d	Color Coating Line – Thermal Oxidation	PM	0.2	0.6
		PM ₁₀	0.2	0.6
		PM _{2.5}	0.2	0.6
		SO ₂	0.1	0.1
		VOC	0.3	1.3
		CO	6.5	28.4
		NO _x	12.2	53.6
		Lead	0.00001	0.00004
		CO _{2e}	--	7,380
SN-120	ACL, CGL1, CGL2 and RCM Boiler	PM	0.7	3.0
		PM ₁₀	0.7	3.0
		PM _{2.5}	0.7	3.0
		SO ₂	0.1	0.3
		VOC	0.5	2.1
		CO	7.3	32.1
		NO _x	3.1	13.6
		Lead	0.0000433	0.00019
		CO _{2e}	-	45,459

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SN	Description	Pollutant	lb/hr	tpy
SN-125	Cold Mill Boiler #2	PM	0.7	3.0
		PM ₁₀	0.7	3.0
		PM _{2.5}	0.7	3.0
		SO ₂	0.1	0.3
		VOC	0.5	2.1
		CO	7.3	32.1
		NO _x	3.1	13.6
		Lead	0.0000433	0.00019
		CO ₂ e	-	45,459
SN-126	Color Coating Line Boiler	PM	0.3	1.0
		PM ₁₀	0.3	1.0
		PM _{2.5}	0.3	1.0
		SO ₂	0.1	0.1
		VOC	0.2	0.7
		CO	2.3	10.2
		NO _x	1.0	4.3
		Lead	0.0000138	0.000061
		CO ₂ e	-	14,424
SN-140	High Temperature Annealing	PM	0.5	1.9
		PM ₁₀	0.5	1.9
		PM _{2.5}	0.5	1.9
		SO ₂	0.1	0.2
		VOC	0.3	1.4
		CO	4.6	20.2
		NO _x	5.6	24.5
		Lead	0.000028	0.00012
		CO ₂ e	-	28,598
SN-141	Cold Mill Boiler #3	PM	0.7	3.0
		PM ₁₀	0.7	3.0
		PM _{2.5}	0.7	3.0
		SO ₂	0.1	0.3
		VOC	0.5	2.1
		CO	7.4	32.1
		NO _x	3.1	13.6
		Lead	0.000044	0.00019
		CO ₂ e	-	45,613

SN	Description	Pollutant	lb/hr	tpy
SN-142	Cold Mill Boiler #4	PM	0.5	1.8
		PM ₁₀	0.5	1.8
		PM _{2.5}	0.5	1.8
		SO ₂	0.1	0.2
		VOC	0.3	1.3
		CO	4.5	19.5
		NO _x	1.9	8.3
		Lead	0.000027	0.00012
		CO _{2e}	-	27,675
SN-143	Continuous Galvanizing Line 2 Paint Booth	VOC	1.1	0.2

52. The permittee shall not exceed the emission rates set forth in the following table and must install the control devices or implement the pollution prevention measures set forth in the following table. Compliance with this condition will be show by compliance with Specific Conditions 55 through 73. [8 CAR § 41-801 et seq. and 40 C.F.R. § 52 Subpart E]

BACT Analysis Summary				
Source	Description	Pollutant	Control Technology	BACT Limit
SN-22	ACL, CGL 1, CGL 2, PL and RCM Boiler	PM	Combustion of Natural gas and Good Combustion Practices (Periodic Equipment Maintenance)	0.0075 lb/MMBTU
		PM ₁₀		0.0075 lb/MMBTU
		PM _{2.5}		0.0075 lb/MMBTU
		Opacity		5%
		SO ₂		0.000588 lb/MMBTU
		VOC		0.0054 lb/MMBTU
		CO		0.0824 lb/MMBTU
		NO _x	Low NO _x burners Combustion of clean fuel Good Combustion Practices (Periodic Equipment Maintenance)	0.035 lb/MMBTU

BACT Analysis Summary				
Source	Description	Pollutant	Control Technology	BACT Limit
		GHG	Good operating Practices (Periodic Equipment Maintenance) Minimum Boiler Efficiency Combustion of Natural Gas Only	CO ₂ 117 lb/MMBTU CH ₄ 0.0022 lb/MMBTU N ₂ O 0.0002 lb/MMBTU 75%
SN-23	Pickle Line Scale Exhaust	PM	Fabric Filter	0.003 gr/dscf
		PM ₁₀		
		PM _{2.5}		
		Opacity		5%
SN-24A	Push Pull Pickle Line (PPPL) and Supporting Scrubber	PM	Scrubber	0.003 gr/dscf
		PM ₁₀		
		PM _{2.5}		
		Opacity		5%
SN-25	Tandem Cold Mill	PM	Mist Eliminator	0.0025 gr/dscf (filterable only)
		PM ₁₀		0.0066 gr/dscf
		PM _{2.5}		0.0066 gr/dscf
		Opacity		5%
SN-26 and SN-27	ACL, CGL 1, CGL 2, PL, and RCM Boiler and Cold Mill Boiler #1	PM	Combustion of Natural gas and Good Combustion Practices (Periodic Equipment Maintenance)	0.0075 lb/MMBTU
		PM ₁₀		0.0075 lb/MMBTU
		PM _{2.5}		0.0075 lb/MMBTU
		Opacity		5%
		SO ₂		0.000588 lb/MMBTU
		VOC		0.0054 lb/MMBTU
		CO		0.0824 lb/MMBTU

BACT Analysis Summary				
Source	Description	Pollutant	Control Technology	BACT Limit
		NO _x	Low NO _x burners Combustion of clean fuel Good Combustion Practices (Periodic Equipment Maintenance)	0.035 lb/MMBTU
		GHG	Good operating Practices (Periodic Equipment Maintenance) Minimum Boiler Efficiency Combustion of Natural Gas Only	CO ₂ 117 lb/MMBTU CH ₄ 0.0022 lb/MMBTU N ₂ O 0.0002 lb/MMBTU 75%
SN-28 and SN-29	Galvanizing Line 1 Furnace and Galvanizing Line 2 Furnace	PM	Combustion of Natural gas and Good Combustion Practices (Periodic Equipment Maintenance)	0.0012 lb/MMBTU
		PM ₁₀		0.0012 lb/MMBTU
		PM _{2.5}		0.0012 lb/MMBTU
		Opacity		5%
		SO ₂		0.000588 lb/MMBTU
		VOC		0.0054 lb/MMBTU
		CO		0.0824 lb/MMBTU
		NO _x	SCR, Low NO _x burners Combustion of clean fuel Good Combustion Practices (Periodic Equipment Maintenance)	0.035 lb/MMBTU

BACT Analysis Summary				
Source	Description	Pollutant	Control Technology	BACT Limit
		GHG	Good operating Practices (Periodic Equipment Maintenance)	CO ₂ 117 lb/MMBTU CH ₄ 0.0022 lb/MMBTU N ₂ O 0.0002 lb/MMBTU
SN-34, SN-35, SN-36, SN-37	Galvanizing Lines #1 and #2 Caustic Cleaning and Post Treatment	PM	Mist Eliminator	0.003 gr/dscf
		PM ₁₀		
		PM _{2.5}		
		Opacity		5%
SN-38a SN-38b	Skin Pass Mill #1 Skin Pass Mill #2 (ACL)	PM	Mist Eliminator	0.0025 gr/dscf
		PM ₁₀		0.0066 gr/dscf
		PM _{2.5}		
		Opacity		5%
SN-39	Annealing Furnaces	PM	Combustion of Natural gas and Good Combustion Practices (Periodic Equipment Maintenance)	0.0075 lb/MMBTU
		PM ₁₀		0.0075 lb/MMBTU
		PM _{2.5}		0.0075 lb/MMBTU
		Opacity		5%
		SO ₂		0.000588 lb/MMBTU
		VOC		0.0054 lb/MMBTU
		CO		0.0824 lb/MMBTU
		NO _x	Low NO _x burners Combustion of clean fuel Good Combustion Practices (Periodic Equipment Maintenance)	0.1 lb/MMBTU
		GHG	Good operating Practices (Periodic Equipment Maintenance)	CO ₂ 117 lb/MMBTU CH ₄ 0.0022 lb/MMBTU N ₂ O 0.0002 lb/MMBTU
SN-40, SN-42	Decarburizing and MgO Coating Line Furnace Section	PM	Combustion of Natural gas and Good	0.013 lb/MMBTU
		PM ₁₀		0.013 lb/MMBTU
		PM _{2.5}		0.013 lb/MMBTU

BACT Analysis Summary				
Source	Description	Pollutant	Control Technology	BACT Limit
		Opacity	Combustion Practices (Periodic Equipment Maintenance)	5%
		SO ₂		0.000588 lb/MMBTU
		VOC		0.0054 lb/MMBTU
		CO		0.0824 lb/MMBTU
		NO _x	Low NO _x burners SCR Combustion of clean fuel Good Combustion Practices (Periodic Equipment Maintenance)	0.1 lb/MMBTU
		GHG	Good operating Practices (Periodic Equipment Maintenance)	CO ₂ 117 lb/MMBTU CH ₄ 0.0022 lb/MMBTU N ₂ O 0.0002 lb/MMBTU
SN-41, SN-43	Decarburizing and MgO Coating Line Cleaning Sections	PM	Mist Eliminator	0.005 gr/dscf
		PM ₁₀		
		PM _{2.5}		
		Opacity		5%
SN-44, SN-45, SN-46	Reversing Cold Mills	PM	Mist Eliminator	0.0025 gr/dscf
		PM ₁₀		0.0066 gr/dscf
		PM _{2.5}		
		Opacity		5%
SN-47	Annealing Pickling Line Furnace Section	PM	Combustion of Natural gas and Good Combustion Practices (Periodic Equipment Maintenance)	0.013 lb/MMBTU
		PM ₁₀		0.013 lb/MMBTU
		PM _{2.5}		0.013 lb/MMBTU
		Opacity		5%
		SO ₂		0.000588 lb/MMBTU
		VOC		0.0054 lb/MMBTU
		CO		0.0824 lb/MMBTU

BACT Analysis Summary				
Source	Description	Pollutant	Control Technology	BACT Limit
		NO _x	Low NO _x burners SCR Combustion of clean fuel Good Combustion Practices (Periodic Equipment Maintenance)	0.1 lb/MMBTU
		GHG	Good operating Practices (Periodic Equipment Maintenance)	CO ₂ 117 lb/MMBTU CH ₄ 0.0022 lb/MMBTU N ₂ O 0.0002 lb/MMBTU
SN-48, SN-49	Annealing Pickling Line Scale Dust Exhaust and Shotblast	PM	Fabric Filter	0.003 gr/dscf
		PM ₁₀		
		PM _{2.5}		
		Opacity		5%
SN-51	Annealing and Coating Line Furnace Section	PM	Combustion of Natural gas and Good Combustion Practices (Periodic Equipment Maintenance)	0.013 lb/MMBTU
		PM ₁₀		0.013 lb/MMBTU
		PM _{2.5}		0.013 lb/MMBTU
		Opacity		5%
		SO ₂		0.000588 lb/MMBTU
		VOC		0.0054 lb/MMBTU
		CO		0.0824 lb/MMBTU
		NO _x	Low NO _x burners Combustion of clean fuel Good Combustion Practices (Periodic Equipment Maintenance)	0.1 lb/MMBTU

BACT Analysis Summary				
Source	Description	Pollutant	Control Technology	BACT Limit
		GHG	Good operating Practices (Periodic Equipment Maintenance)	CO ₂ 117 lb/MMBTU CH ₄ 0.0022 lb/MMBTU N ₂ O 0.0002 lb/MMBTU
SN-52	Annealing and Coating Line Cleaning Section	PM	Mist Eliminator	0.003 gr/dscf
		PM ₁₀		
		PM _{2.5}		
		Opacity		5%
SN-53	Annealing and Coating Line Drying Furnace & RTO	PM	Combustion of Natural gas and Good Combustion Practices (Periodic Equipment Maintenance)	0.016 lb/MMBTU
		PM ₁₀		0.016 lb/MMBTU
		PM _{2.5}		0.016 lb/MMBTU
		Opacity		5%
		SO ₂		0.000588 lb/MMBTU
		CO		0.45 lb/MMBTU
		VOC Natural gas Combustion	RTO	0.0054 lb/MMBTU
		NO _x	Low NO _x burners Combustion of clean fuel Good Combustion Practices (Periodic Equipment Maintenance)	0.25 lb/MMBTU
		GHG	Good operating Practices (Periodic Equipment Maintenance)	CO ₂ 117 lb/MMBTU CH ₄ 0.0022 lb/MMBTU N ₂ O 0.0002 lb/MMBTU
SN-54, SN-56	Decarburizing and MgO Coating Lines Drying Sections	PM	Combustion of Natural gas and Good Combustion	0.013 lb/MMBTU
		PM ₁₀		0.013 lb/MMBTU
		PM _{2.5}		0.013 lb/MMBTU
		Opacity		5%

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Source	Description	Pollutant	Control Technology	BACT Limit
		SO ₂	Practices (Periodic Equipment Maintenance)	0.000588 lb/MMBTU
		VOC		0.0054 lb/MMBTU
		CO		0.0824 lb/MMBTU
		NO _x	Low NO _x burners Combustion of clean fuel Good Combustion Practices (Periodic Equipment Maintenance)	0.1 lb/MMBTU
		GHG	Good operating Practices (Periodic Equipment Maintenance)	CO ₂ 117 lb/MMBTU CH ₄ 0.0022 lb/MMBTU N ₂ O 0.0002 lb/MMBTU
SN-55, SN-57	Decarburizing and MgO Coating Lines Cleaning Sections	PM	Mist Eliminator	0.003 gr/dscf
		PM ₁₀		
		PM _{2.5}		
		Opacity		5%
SN-58A, SN-58B, SN-60A, SN-60B	Flattening and Coating Lines Furnace Sections	PM	Combustion of Natural gas and Good Combustion Practices (Periodic Equipment Maintenance)	0.013 lb/MMBTU
		PM ₁₀		0.013 lb/MMBTU
		PM _{2.5}		0.013 lb/MMBTU
		Opacity		5%
		SO ₂		0.000588 lb/MMBTU
		VOC		0.0054 lb/MMBTU
		CO		0.0824 lb/MMBTU

BACT Analysis Summary				
Source	Description	Pollutant	Control Technology	BACT Limit
		NO _x	Low NO _x burners SCR Combustion of clean fuel Good Combustion Practices (Periodic Equipment Maintenance)	0.1 lb/MMBTU
		GHG	Good operating Practices (Periodic Equipment Maintenance)	CO ₂ 117 lb/MMBTU CH ₄ 0.0022 lb/MMBTU N ₂ O 0.0002 lb/MMBTU
SN-101	Annealing Pickle Line Boiler	PM	Combustion of Natural gas and Good Combustion Practices (Periodic Equipment Maintenance)	0.0075 lb/MMBTU
		PM ₁₀		0.0075 lb/MMBTU
		PM _{2.5}		0.0075 lb/MMBTU
		Opacity		5%
		SO ₂		0.000588 lb/MMBTU
		VOC		0.0054 lb/MMBTU
		CO		0.0824 lb/MMBTU
		NO _x	Low NO _x burners Combustion of clean fuel Good Combustion Practices (Periodic Equipment Maintenance)	0.035 lb/MMBTU
SN-102	Cold Mill Space Heaters – Natural Gas Fired	PM	Combustion of Natural gas and Good Combustion Practices (Periodic	0.0075 lb/MMBTU
		PM ₁₀		0.0075 lb/MMBTU
		PM _{2.5}		0.0075 lb/MMBTU
		Opacity		5%
		SO ₂		0.000588 lb/MMBTU
		VOC		0.0054 lb/MMBTU

BACT Analysis Summary				
Source	Description	Pollutant	Control Technology	BACT Limit
		CO	Equipment Maintenance)	0.0824 lb/MMBTU
		NO _x	Low NO _x burners Combustion of clean fuel Good Combustion Practices (Periodic Equipment Maintenance)	0.08 lb/MMBTU
		GHG	Good operating Practices (Periodic Equipment Maintenance)	CO ₂ 117 lb/MMBTU CH ₄ 0.0022 lb/MMBTU N ₂ O 0.0002 lb/MMBTU
SN-105, SN-106	Color Coating Line – Pre-Cleaning and Cleaning Sections	PM	Mist eliminator Good operating Practices (Periodic Equipment Maintenance)	0.003 gr/dscf
		PM ₁₀		0.003 gr/dscf
		PM _{2.5}		0.003 gr/dscf
		Opacity		5%
SN-107	Color Coating Line – Prime/Finish Coating	VOC	Enclosed painting system Thermal oxidation Good work practices (Periodic Equipment Maintenance)	152.6 tpy 99% Destruction
SN-108A, SN-108B, SN-108C	Color Coating Line – Chemical Dryer, Primer Oven, and Finish Oven	PM	Good Combustion Practices (Periodic	0.0075 lb/MMBTU
		PM ₁₀		0.0075 lb/MMBTU
		PM _{2.5}		0.0075 lb/MMBTU
		Opacity		5%
		VOC		0.0054 lb/MMBTU

BACT Analysis Summary				
Source	Description	Pollutant	Control Technology	BACT Limit
		NO _x	Equipment Maintenance) Energy efficient burners Combustion of natural gas	0.05 lb/MMBTU
SN-108D	Color Coating Line – Thermal Oxidation	PM	Good Combustion Practices (Periodic Equipment Maintenance) Energy efficient burners Combustion of natural gas only	0.009 lb/MMBTU
		PM ₁₀		0.009 lb/MMBTU
		PM _{2.5}		0.009 lb/MMBTU
		Opacity		5%
		VOC		0.021 lb/MMBTU
		NO _x		0.85 lb/MMBTU
SN-120	ACL, CGL1, CGL2 and RCM Boiler	PM	Good Combustion Practices (Periodic Equipment Maintenance) Energy efficient burners Combustion of natural gas only	0.0075 lb/MMBtu
		PM ₁₀		0.0075 lb/MMBtu
		PM _{2.5}		0.0075 lb/MMBtu
		Opacity		5%
		CO		0.0824 lb/MMBtu
		NO _x		0.035 lb/MMBtu
		GHG		117 lb CO ₂ e/MMBtu
SN-125	Cold Mill Boiler #2	PM	Good Combustion Practices (Periodic Equipment Maintenance) Energy efficient burners Combustion of natural gas only	0.0075 lb/MMBtu
		PM ₁₀		0.0075 lb/MMBtu
		PM _{2.5}		0.0075 lb/MMBtu
		Opacity		5%
		CO		0.0824 lb/MMBtu
		NO _x		0.035 lb/MMBtu

BACT Analysis Summary				
Source	Description	Pollutant	Control Technology	BACT Limit
		GHG	Energy efficient burners Combustion of natural gas only	117 lb CO ₂ e/MMBtu
SN-126	Color Coating Line Boiler	PM	Good Combustion Practices (Periodic Equipment Maintenance)	0.0075 lb/MMBtu
		PM ₁₀		0.0075 lb/MMBtu
		PM _{2.5}		0.0075 lb/MMBtu
		Opacity		5%
		CO		0.0824 lb/MMBtu
		NO _x		0.035 lb/MMBtu
		GHG	Energy efficient burners Combustion of natural gas only	117 lb CO ₂ e/MMBtu
SN-140	High Temperature Annealing	PM	Combustion of Natural gas and Good Combustion Practices (Periodic Equipment Maintenance)	0.0075 lb/MMBTU
		PM ₁₀		0.0075 lb/MMBTU
		PM _{2.5}		0.0075 lb/MMBTU
		Opacity		5%
		CO		0.0824 lb/MMBTU
		NO _x	Low NO _x burners Combustion of clean fuel Good Combustion Practices (Periodic Equipment Maintenance)	0.1 lb/MMBTU
		GHG	Good operating Practices (Periodic Equipment Maintenance)	CO ₂ 117 lb/MMBTU CH ₄ 0.0022 lb/MMBTU N ₂ O 0.0002 lb/MMBTU

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BACT Analysis Summary				
Source	Description	Pollutant	Control Technology	BACT Limit
SN-141 SN-142	Cold Mill Boilers #3 and #4	PM	Good Combustion Practices (Periodic Equipment Maintenance) Energy efficient burners Combustion of natural gas only	0.0075 lb/MMBtu
		PM ₁₀		0.0075 lb/MMBtu
		PM _{2.5}		0.0075 lb/MMBtu
		Opacity		5%
		CO		0.0824 lb/MMBtu
		NO _x		0.035 lb/MMBtu
		GHG		117 lb CO ₂ e/MMBtu

53. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by compliance with Plantwide Condition 5. [8 CAR § 40-701 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
SN-22	ACL, CGL 1, CGL 2, PL and RCM Boiler	Arsenic	0.00002	0.00005
		Cadmium	0.00006	0.0003
		Formaldehyde	0.004	0.02
		Manganese	0.00002	0.00009
		Mercury	0.00002	0.00006
SN-24	Pickling Process with Outside Tanks and Supporting Scrubber	HCl	0.2	0.6
SN-24A	Push Pull Pickle Line (PPPL) and Supporting Scrubbers	HCl	0.2	0.8
SN-26	ACL, CGL 1, CGL 2, PL, and RCM Boiler	Arsenic	0.00002	0.00005
		Cadmium	0.00006	0.0003
		Formaldehyde	0.004	0.02
		Manganese	0.00002	0.00009
		Mercury	0.00002	0.00006

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SN	Description	Pollutant	lb/hr	tpy
SN-27	Cold Mill Boiler #1	Arsenic	0.00002	0.00005
		Cadmium	0.00006	0.0003
		Formaldehyde	0.004	0.02
		Manganese	0.00002	0.00009
		Mercury	0.00002	0.00006
SN-28	Galvanizing Line 1 – Furnace	Arsenic	0.00002	0.00007
		Cadmium	0.00009	0.0004
		Formaldehyde	0.006	0.03
		Manganese	0.00003	0.0002
		Mercury	0.00002	0.00009
		Ammonia	0.64	2.80
SN-29	Galvanizing Line 2 – Furnace	Arsenic	0.00003	0.0002
		Cadmium	0.0002	0.0008
		Formaldehyde	0.02	0.05
		Manganese	0.00006	0.0003
		Mercury	0.00004	0.0002
		Ammonia	1.28	5.61
SN-39	Annealing Furnaces	Arsenic	0.00003	0.0001
		Cadmium	0.0002	0.0006
		Formaldehyde	0.009	0.04
		Manganese	0.00005	0.0002
		Mercury	0.00003	0.0002
SN-40	Decarburizing and MgO Coating Line 1 Furnace Section	Arsenic	0.00002	0.00005
		Cadmium	0.00007	0.0003
		Formaldehyde	0.005	0.02
		Manganese	0.00003	0.0001
		Mercury	0.00002	0.00007
SN-42	Decarburizing and MgO Coating Line 2 Furnace Section	Arsenic	0.00002	0.00005
		Cadmium	0.00007	0.0003
		Formaldehyde	0.005	0.02
		Manganese	0.00003	0.0001
		Mercury	0.00002	0.00007
SN-47	Annealing Pickling Line – Annealing Furnace	Arsenic	0.00002	0.00006
		Cadmium	0.00008	0.00004
		Formaldehyde	0.005	0.003
		Manganese	0.00003	0.0002
		Mercury	0.00002	0.00008
SN-50	Annealing Pickling Line Pickling Section	HCl	0.3	1.2

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SN	Description	Pollutant	lb/hr	tpy
SN-51	Annealing and Coating Line – Annealing Furnace	Arsenic	0.000003	0.00003
		Cadmium	0.00002	0.00007
		Formaldehyde	0.001	0.005
		Manganese	0.000005	0.00003
		Mercury	0.000004	0.00002
SN-53	Annealing and Coating Line – Drying Furnace & RTO	Arsenic	0.000005	0.00002
		Cadmium	0.00003	0.0002
		Formaldehyde	0.002	0.008
		Manganese	0.000009	0.00004
		Mercury	0.000006	0.00003
SN-54	Decarburizing and MgO Coating Line 1 – Drying Furnace	Arsenic	0.000003	0.00002
		Cadmium	0.00002	0.00007
		Formaldehyde	0.001	0.005
		Manganese	0.000005	0.00003
		Mercury	0.000004	0.00002
SN-56	Decarburizing and MgO Coating Line 2 – Drying Furnace	Arsenic	0.000003	0.00002
		Cadmium	0.00002	0.00007
		Formaldehyde	0.001	0.005
		Manganese	0.000005	0.00003
		Mercury	0.000004	0.00002
SN-58A	Flattening and Coating Line 1 – Drying Furnace Process	Arsenic	0.000005	0.00002
		Cadmium	0.00003	0.0001
		Formaldehyde	0.002	0.007
		Manganese	0.000008	0.00004
		Mercury	0.000006	0.00003
SN-58B	Flattening and Coating Line 1 – Annealing Furnace Radiant Tube Process	Arsenic	0.000003	0.00001
		Cadmium	0.00002	0.00006
		Formaldehyde	0.0009	0.004
		Manganese	0.000005	0.00002
		Mercury	0.000003	0.00002
SN-59	Flattening and Coating Line 1 – Cleaning and Steel Activation Process	HCl	0.4	1.8
SN-60A	Flattening and Coating Line 2 – Drying Furnace Process	Arsenic	0.000005	0.00002
		Cadmium	0.00003	0.0001
		Formaldehyde	0.002	0.007
		Manganese	0.000008	0.00004
		Mercury	0.000006	0.00003

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SN	Description	Pollutant	lb/hr	tpy
SN-60B	Flattening and Coating Line 2 – Annealing Furnace Radiant Tube Process	Arsenic	0.000003	0.00001
		Cadmium	0.00002	0.00006
		Formaldehyde	0.0009	0.004
		Manganese	0.000005	0.00002
		Mercury	0.000003	0.00002
SN-61	Flattening and Coating Line 2 – Cleaning and Steel Activation Process	HCl	0.4	1.8
SN-101	Annealing Pickling Line Boiler	Arsenic	0.00002	0.00005
		Cadmium	0.00006	0.0003
		Formaldehyde	0.004	0.02
		Manganese	0.00002	0.00009
		Mercury	0.00002	0.00006
SN-102	Cold Mill Space Heaters – Natural Gas Fired	Arsenic	0.00001	0.0005
		Cadmium	0.0007	0.003
		Formaldehyde	0.04	0.16
		Manganese	0.0002	0.0008
		Mercury	0.0002	0.0006
SN-107	Color Coating Line – Prime/Finish Coating	Isophorone	7.0	30.6
		MIBK	2.7	11.8
		Toluene	2.7	11.8
SN-120	ACL, CGL1, CGL2 and RCM Boiler	Arsenic	0.00002	0.00008
		Cadmium	0.0001	0.0005
		Formaldehyde	0.007	0.03
		Manganese	0.00004	0.0002
		Mercury	0.00003	0.0001
SN-125	Cold Mill Boiler #2	Arsenic	0.00002	0.00008
		Cadmium	0.0001	0.0005
		Formaldehyde	0.007	0.03
		Manganese	0.00004	0.0002
		Mercury	0.00003	0.0001
SN-126	Color Coating Line Boiler	Arsenic	0.000006	0.00003
		Cadmium	0.00004	0.0002
		Formaldehyde	0.003	0.01
		Manganese	0.00002	0.00005
		Mercury	0.000008	0.00004
SN-128	Pickling Section Sedimentation System	HCl	0.1	0.3

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SN	Description	Pollutant	lb/hr	tpy
SN-140	High Temperature Annealing	Arsenic	0.00002	0.00005
		Cadmium	0.00006	0.0003
		Formaldehyde	0.004	0.02
		Manganese	0.00003	0.00009
		Mercury	0.00002	0.00007
SN-141	Cold Mill Boiler #3	Arsenic	0.00002	0.00008
		Cadmium	0.0001	0.0005
		Formaldehyde	0.007	0.03
		Manganese	0.00004	0.0002
		Mercury	0.00003	0.0001
SN-142	Cold Mill Boiler #4	Arsenic	0.00002	0.00005
		Cadmium	0.00006	0.0003
		Formaldehyde	0.004	0.02
		Manganese	0.00003	0.00009
		Mercury	0.00002	0.00007

54. Visible emissions may not exceed the limits specified in the following table of this permit as measured by EPA Reference Method 9. The permittee shall show compliance with this condition by combustion of natural gas only at SN-22, SN-26, SN-27, SN-28, SN-29, SN-39, SN-40, SN-42, SN-47, SN-51, SN-53, SN-54, SN-56, SN-58, SN-60, SN-101, SN-102, SN-108a through SN-108d, SN-120, SN-125, SN-126 and SN-140 through SN-142, and compliance with Specific Condition 55, and Plantwide Condition 5.

Source	Limit	Regulatory Citation
SN-22, SN-23, SN-24A, SN-25, SN-26, SN-27, SN-28, SN-29, SN-34, SN-35, SN-36, SN-37, SN-38, SN-39, SN-40, SN-41, SN-42, SN-43, SN-44, SN-45, SN-46, SN-47, SN-48, SN-49, SN-51, SN-52, SN-53, SN-54, SN-55, SN-56, SN-57, SN-58, SN-60, SN-101, SN-102, SN- 105, SN-106, SN-107, SN- 108A-D, SN- 120, SN-125, SN-126	5%	8 CAR § 41-801 et seq. and 40 C.F.R. § 52 Subpart E

55. The permittee shall conduct weekly observations of the opacity from the buildings and/or process stacks containing the sources listed in Specific Condition 54 except specifically SN-22, SN-26, SN-27, SN-28, SN-29, SN-39, SN-40, SN-42, SN-47, SN-51, SN-53, SN-54, SN-56, SN-58, SN-60, SN-101, SN-102, SN-108a through SN-108d, SN-120, SN-125, SN-126 and SN-140 through SN-142. If visible emissions are detected, then the permittee shall immediately conduct a 6-minute opacity reading in accordance with EPA Reference Method 9. The result of these observations or readings shall be recorded in a log that shall be kept on site and made available for inspection upon request. [8 CAR § 41-801 and 40 CFR 52, Subpart E]
56. The permittee shall record and maintain records of the amounts of natural gas combusted in the boilers, SN-22, SN-26, SN-27, SN-101, SN-120, SN-125, SN-126, SN-141, and SN-142 during each month. These records shall be kept on site and available for inspection upon request. [8 CAR § 41-204 and 40 C.F.R. § 60 Subpart Dc]
57. The permittee, for the annealing coating line dryer, SN-53, the flattening and coating line dryers, SN-58A and SN-60A, and the color coating line, SN-105 through SN-108D, on and after the compliance date on which 40 CFR 60.8 requires the performance test to be completed shall not cause to be discharged to the atmosphere more than: 0.14 kg VOC/l

of coating solids applied or 10% of the VOC's applied (90% emissions reduction) for each calendar month operated at the most recently demonstrated overall efficiency. If the flattening and coating line dryers do not use an emission control device, the permittee shall comply with 0.28 kilogram VOC per liter (kg VOC/l) of coating solids applied for each calendar month. [8 CAR § 41-204 and 40 C.F.R. § 60 Subpart TT]

58. The permittee shall conduct an initial performance test as required under 40 CFR 60.8(a) and thereafter a performance test every calendar month for the annealing coating line (SN-53), the flattening and coating lines (SN-58 and SN-60), and the color coating line (SN-105 through SN-108D) according to the procedures of 40 CFR 60.463. The permittee shall use the procedures specified in 40 CFR 60.463(c) (1) for determining the monthly volume-weighted average emissions of VOCs in kg/l of coating solids applied. The permittee shall use the procedures specified in 40 CFR 60.463(c) (2) to show compliance with the emission limits specified under 40 CFR 60.462(a)(2) or (3) and Specific Condition 57. The permittee shall use the method and procedures outlined in 40 CFR 60.466 during these tests as appropriate. NSPS Subpart TT states section 40 CFR 60.8 (d) and (f) do not apply to this testing. The initial testing must be conducted in accordance with General Provision 3 of this permit. [8 CAR § 41-204 and 40 C.F.R. § 60 Subpart TT]
59. The permittee shall where the compliance with the numerical limit specified in 60.462(a)(2) shall compute and record the average VOC content of the coatings applied during each calendar month for the annealing coating line (SN-53), the flattening and coating lines (SN-58A and SN-60A), and color coating line (SN-105 through SN-107) according to the equations in 40 CFR 60.463. [8 CAR § 41-204 and 40 C.F.R. § 60 Subpart TT]
60. The permittee shall install, calibrate, operate, and maintain a device that continuously records the combustion temperature of the effluent gasses of the RTO on SN-53 and SN-108D. This device shall have an accuracy $\pm 2.5^{\circ}\text{C}$ or ± 0.75 percent of the temperature being measured expressed in degrees Celsius, whichever is greater. The permittee shall record all periods (during actual coating operations) in excess of 3 hours duration which the average temperature in the RTO remains more than 28°C below the temperature at which the compliance was measured in the most recent measurement of the RTOs efficiency required in Specific Condition 58. [8 CAR § 41-204 and 40 C.F.R. § 60 Subpart TT]
61. The permittee shall in the initial compliance report required by 40 CFR 60.8 include the weighted average of the VOC content of coatings used during a period of one calendar month for the annealing coating line (SN-53), the flattening and coating lines (SN-58 and SN-60), and color coating line (SN-105 through SN-107). The permittee shall also include the data outlined in 40 CFR 60.465(b). [8 CAR § 41-204 and 40 C.F.R. § 60 Subpart TT]

62. Upon commencement of operation of SN-107, the facility will be considered a major source of HAPs and be subject to the requirements of NESHAP Subpart SSSS and NESHAP Subpart CCC. Applicable conditions include, but are not limited to, Specific Conditions #63 through #69 below. [8 CAR § 41-204 and 40 C.F.R. §§ 63 Subparts CCC and SSSS]
63. Each annealing coating line (SN-53), each flattening and coating line (SN-58 and SN-60), and color coating line (SN-105 through SN-108D) affected source subject to NESHAP Subpart SSSS must limit organic HAP emissions to the level specified below:
- a. No more than 2 percent of the organic HAP applied for each month during the each 12-month compliance period (98 percent reduction); or
 - b. No more than 0.046 kilogram of organic HAP per liter of solids applied during each 12-month compliance period; or
 - c. If the permittee uses an oxidizer to control organic HAP emissions, operate the oxidizer such that an outlet organic HAP concentration of no greater than 20 parts per million by volume (ppmv) on a dry basis is achieved and the efficiency of the capture system is 100 percent.
[8 CAR § 41-204 and 40 C.F.R. § 63.5120]
64. The permittee must demonstrate compliance with on these following standards for the annealing coating line (SN-53), the flattening and coating lines (SN-58 and SN-60), and the color coating line (SN-105 through SN-108D)
- a. Use of “as purchased” compliant coatings – Each coating material used during the 12- month compliance period does not exceed 0.046 kg HAP per liter solids.
 - b. Use of “as applied” compliant coatings – Each coating material used does not exceed 0.046 kg HAP per liter solids on a rolling 12-month average as applied basis, determined monthly, or average of all coating materials used does not exceed 0.046 kg HAP per liter solids on a rolling 12-month average as applied basis, determined monthly.
 - c. Use of a capture system and control device – Overall organic HAP control efficiency is at least 98 percent on a monthly basis for individual or groups of color coating lines, or overall organic HAP control efficiency is at least 98 percent during performance tests conducted according to Table 1 to § 63.5170 and operating limits are achieved continuously for individual color coating lines, or oxidizer outlet HAP concentration is no greater than 20 ppmv and there is 100-percent capture efficiency during performance tests conducted according to Table 1 to § 63.5170 and operating limits are achieved continuously for individual color coating lines.

- d. Use of a combination of compliant coatings and control devices and maintaining an acceptable equivalent emission rate – Average equivalent emission rate does not exceed 0.046 kg HAP per liter solids on a rolling 12-month average as applied basis, determined monthly.

[8 CAR § 41-204 and Table 1 to NESHAP Subpart SSSS]

65. The permittee must submit the reports and notifications specified in § 63.5180 for the annealing coating line (SN-53), the flattening and coating lines (SN-58 and SN-60), and the color coating line (SN-105 through SN-108D). The facility must submit these notifications and reports to EPA through CEDRI as outlined in § 63.5181. The permittee must maintain all records specified in § 63.5190. [8 CAR § 41-602 and 40 C.F.R. § 63 Subpart SSSS]
66. The facility is subject to the requirements of 40 C.F.R. § 63 Subpart CCC. The requirements of this subpart apply to, at minimum, the following sources: SN-24, SN-24A, SN-50, and SN-128. [8 CAR § 41-602 and 40 C.F.R. 63 Subpart CCC]
67. No owner or operator of a new or reconstructed affected continuous pickling line, SN-24, SN-24A, SN-50, and SN-128, at a steel pickling facility shall cause or allow to be discharged into the atmosphere from the affected pickling line any gases that contain HCl in a concentration in excess of 6 ppmv or HCl at a mass emission rate that corresponds to a collection efficiency of less than 99 percent. [8 CAR § 41-602 and 40 C.F.R. § 63.1158(a)]
68. The permittee must prepare an operation and maintenance plan for each emission control device associated with SN-24, SN-24A, SN-50, and SN-128 as outlined in § 63.1160 (b) including an inspection of each scrubber at intervals of no less than 3 months. The permittee shall conduct an initial performance test for each process or emission control device to determine and demonstrate compliance with the emission limitation according to the requirements in § 63.7 of subpart A. Performance tests shall be conducted using the test methods specified in § 63.1161(d). [8 CAR § 41-602 and 40 C.F.R. § 63 Subpart CCC]
69. The permittee must submit the reports and notifications specified in § 63.1163 for SN-24, SN-24A, SN-50, and SN-128. The facility must submit these notifications and reports to EPA through CEDRI as outlined in §63.1164. The permittee must maintain all records specified in § 63.1165. [8 CAR § 41-602 and 40 C.F.R. § 63 Subpart CCC]
70. The permittee shall test the Boilers SN-22, SN-26, SN-27, SN-101, SN-120, SN-125, SN-126, SN-141, and SN-142 for CO and NO_x emissions. This test shall be conducted in accordance with Plantwide Condition 3 and EPA Reference Method 10 and 7E for CO and NO_x respectively and repeated every 5 years after the initial test. [8 CAR § 41-602 and 40 C.F.R. § 52 Subpart E]

71. The permittee shall test the sources in the table below for PM_{2.5}, and PM₁₀. This test shall be conducted in accordance with Plantwide Condition 3 and EPA Reference Method 202 for PM_{2.5} and PM₁₀. The test for PM_{2.5} shall include filterable and condensable emissions. This test has been performed and passed on all requirements for SN-28 or SN-29. [8 CAR § 41-602 and 40 C.F.R. § 52 Subpart E]

Source
SN-28 or SN-29

72. The permittee shall test SN-24, SN-24A, SN-50, SN-59, SN-61, and SN-128 for HCl emissions. This test shall be conducted in accordance with Plantwide Condition 3 and EPA Reference Method 26. [8 CAR § 40-902 and Ark. Code Ann. § 8-4-203 as referenced by Ark. Code Ann. §§ 8-4-304 and 8-4-311]
73. The permittee shall test SN-28 and SN-29 for NO_x emissions. This test shall be conducted in accordance with Plantwide Condition 3 and EPA Reference Method 7E and repeated annually thereafter. [8 CAR § 41-801 and 40 C.F.R. § 52 Subpart E]
74. Upon commencement of operation of SN-107, the facility will be considered a major source of HAPs and be subject to the requirements of NESHAP Subpart DDDDD. Applicable conditions include, but are not limited to, Specific Conditions #75 through #78 below. [8 CAR § 41-204 and 40 C.F.R. §§ 63 Subparts CCC and SSSS]
75. The facility is subject to the requirements of 40 C.F.R. § 63 Subpart DDDDD. The requirements of this subpart apply to, at minimum, the following sources: Boilers - SN-04, SN-22, SN-26, SN-27, SN-101, SN-120, SN-125, SN-126, SN-134, SN-141, SN-142 and Process Heaters - SN-28, SN-29, SN-39, SN-40, SN-42, SN-47, SN-51, SN-54, SN-56, SN-58B, SN-60B, SN-111a, SN-111b, SN-140, SN-149 and SN-150. [8 CAR § 41-602 and 40 C.F.R. § 63 Subpart DDDDD]
76. The permittee shall conduct a tune-up of the boilers (SN-04, SN-22, SN-26, SN-27, SN-101, SN-120, SN-125, SN-126, SN-134, SN-141, SN-142) or process heaters (SN-28, SN-29, SN-39, SN-40, SN-42, SN-47, SN-51, SN-54, SN-56, SN-58B, SN-60B, SN-111a, SN-111b, SN-140, SN-149 and SN-150) annually as specified in § 63.7540. Units in either the Gas 1 or Metal Process Furnace subcategories will conduct this tune-up as a work practice for all regulated emissions under this subpart. Units in all other subcategories will conduct this tune-up as a work practice for dioxins/furans. [8 CAR § 41-602, 40 C.F.R. § 63.7500(a)(1) and Table 3 to Subpart DDDDD]
77. The permittee must conduct each annual tune-up of each boiler (SN-04, SN-22, SN-26, SN-27, SN-101, SN-120, SN-125, SN-126, SN-134, SN-141, SN-142) or process heater (SN-28, SN-29, SN-39, SN-40, SN-42, SN-47, SN-51, SN-54, SN-56, SN-58B, SN-60B, SN-111a, SN-111b, SN-140, SN-149 and SN-150) no more than 13 months after the previous tune-up. The tune-up must be conducted as follows:

- a. While burning the type of fuel that provided the majority of the heat input to the boiler over the 12 months prior to the tune-up.
- b. As applicable, inspect the burner, and clean or replace any components of the burner as necessary.
- c. Inspect the flame pattern, as applicable, and adjust the burner as necessary to optimize the flame pattern. The adjustment should be consistent with the manufacturer's specifications, if available.
- d. Inspect the system controlling the air-to-fuel ratio as applicable and ensure that it is correctly calibrated and functioning properly.
- e. Optimize total emissions of CO. The optimization should be consistent with the manufacturer's specifications, if available, and with any NOX requirement to which the unit is subject.
- f. Measure the concentrations in the effluent stream of CO in parts per million, by volume, and oxygen in volume percent, before and after the adjustments are made (measurements may be either on a dry or wet basis, as long as it is the same basis before and after the adjustments are made). Measurements may be taken using a portable CO analyzer.
- g. Maintain on-site and submit, if requested by the Division, a report containing the following information:
 - i. The concentrations of CO in the effluent stream in parts per million by volume, and oxygen in volume percent, measured at high fire or typical operating load, before and after the tune-up of the boiler or process heater;
 - ii. A description of any corrective actions taken as a part of the tune-up; and
 - iii. The type and amount of fuel used over the 12 months prior to the tune-up, but only if the unit was physically and legally capable of using more than one type of fuel during that period. Units sharing a fuel meter may estimate the fuel used by each unit.

[8 CAR § 41-602 and 40 C.F.R. § 63.7540]

78. The permittee must submit all notifications and reports as outlined in 40 C.F.R. §§ 63.7545 and 63.7550 respectively for boilers (SN-04, SN-22, SN-26, SN-27, SN-101, SN-120, SN-125, SN-126, SN-134, SN-141, SN-142) and process heaters (SN-28, SN-29, SN-39, SN-40, SN-42, SN-47, SN-51, SN-54, SN-56, SN-58B, SN-60B, SN-111a, SN-111b, SN-140, SN-149 and SN-150) . The permittee must keep a record of each notification and report submitted, including all documentation supporting any notifications or semiannual compliance reports. The records must be in a form suitable and ready for expeditious review and kept for a period of 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record. The permittee must keep each record on site, or they must be accessible from on site, for at least 2 years after the date of each occurrence, measurement, corrective action, report, or record. Records may be kept offsite for the remaining 3 years. [8 CAR § 41-602 and 40 C.F.R. § 63 Subpart DDDDD]

Emergency Engines

SN-62 Emergency Generator 1 (100.1 – Meltshop), Diesel Fired, 500 kW
SN-63 Emergency Generator 2 (600.3 – ColdMill), Diesel Fired, 1600 kW
SN-64 Emergency Generator 3 (400.1 – HSM/CCM), Diesel Fired, 1600 kW
SN-65 Emergency Generator 4 (100.2 – Meltshop), Diesel Fired, 1600 kW

SN-66 Emergency Generator 5 (100.4 – Meltshop), Diesel Fired, 2700 kW
SN-67 Emergency Generator 6 (400.3 – HSM/CCM), Diesel Fired, 1145 kW
SN-67A Emergency Generator 7 (DC Gen 1 – Employee Building), Diesel Fired, 2700 kW
SN-67B Emergency Generator 8 (CGL2.GEN.1 – CGL2/ACL), Diesel Fired, 1600 kW
SN-67C Emergency Generator 9 (800A1.SS3 – RCM/ACL), Diesel Fired, 1600 kW

SN-67D Emergency Generator 10 (400.3 – CGL 2 Zinc Pot), Diesel Fired, 1114 kW

SN-67E Emergency Generator 11 (CGL.GEN.1 – CGL) Diesel Fired, 350 kW

SN-104A Diesel Fired Emergency Water Pump 1 (EP2-A Line HM Tunnel Furnace), 282 hp
SN-104B Diesel Fired Emergency Water Pump 2 (EP3 – ColdMill), 376 hp
SN-104C Diesel Fired Emergency Water Pump 3 (EP6-B Line HM Tunnel Furnace), 282 hp
SN-104D Diesel Fired Emergency Water Pump 4 (FP2 – Fire Line), 376 hp
SN-104E Emergency Water Pump 5 (RCM/ACL Process Line), 210 kW

SN-110a Emergency Generator 12, Diesel Fired, 2700 kW
SN-110b Emergency Generator 13, Diesel Fired, 2700 kW
SN-110c Emergency Generator 14, Diesel Fired, 2700 kW
SN-110d Emergency Generator 15, Diesel Fired, 2700 kW
SN-110e Emergency Generator 16, Diesel Fired, 2700 kW
SN-110f Emergency Generator 17 (CCL Process Line) Diesel Fired, 360 kW
SN-110g Emergency Generator 18 (Guard Station) Diesel Fired, 30 kW

SN-144 Emergency Generator 19, Diesel Fired, 2700 kW
SN-145 Emergency Generator 20, Diesel Fired, 2700 kW
SN-146 Emergency Generator 21, Diesel Fired, 2700 kW
SN-147 Emergency Generator 22, Diesel Fired, 2700 kW
SN-148 Emergency Generator 23, Diesel Fired, 2700 kW

Source Description

The emergency generators are diesel fired generators which provide electrical power in the event of power failure.

Specific Conditions

79. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by compliance Specific Conditions 83 and 85 through 88. [8 CAR § 41-801 et seq. and 40 C.F.R. § 52 Subpart E]

SN	Description	Pollutant	lb/hr	tpy
SN-62	Emergency Generator 1 (100.1 – Meltshop), Diesel Fired, 500 kW	PM	0.3	0.1
		PM ₁₀	0.3	0.1
		PM _{2.5}	0.3	0.1
		SO ₂	5.1	0.3
		VOC	1.5	0.1
		CO	3.6	0.2
		NO _x	3.1	0.2
		CO _{2e}	--	32
SN-63	Emergency Generator 2 (600.3 – ColdMill), Diesel Fired, 1600 kW	PM	0.8	0.1
		PM ₁₀	0.8	0.1
		PM _{2.5}	0.8	0.1
		SO ₂	18.5	1.0
		VOC	5.8	0.3
		CO	13.2	0.7
		NO _x	18.3	1.0
		CO _{2e}	--	145
SN-64	Emergency Generator 3 (400.1 – HSM/CCM), Diesel Fired, 1600 kW	PM	0.8	0.1
		PM ₁₀	0.8	0.1
		PM _{2.5}	0.8	0.1
		SO ₂	18.5	1.0
		VOC	5.8	0.3
		CO	13.2	0.7
		NO _x	18.3	1.0
		CO _{2e}	--	145
SN-65	Emergency Generator 4 (100.2 – Meltshop), Diesel Fired, 1600 kW	PM	0.8	0.1
		PM ₁₀	0.8	0.1
		PM _{2.5}	0.8	0.1
		SO ₂	18.5	1.0
		VOC	5.8	0.3
		CO	13.2	0.7
		NO _x	18.3	1.0
		CO _{2e}	--	145

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SN	Description	Pollutant	lb/hr	tpy
SN-66	Emergency Generator 5 (100.4 – Meltshop), Diesel Fired, 2700 kW	PM	0.9	0.1
		PM ₁₀	0.9	0.1
		PM _{2.5}	0.9	0.1
		SO ₂	0.1	0.1
		VOC	1.1	0.1
		CO	7.3	0.4
		NO _x	31.5	1.6
		CO _{2e}	--	195
SN-67	Emergency Generator 6 (400.3 – HSM/CCM), Diesel Fired, 1145 kW	PM	0.4	0.1
		PM ₁₀	0.4	0.1
		PM _{2.5}	0.4	0.1
		SO ₂	0.1	0.1
		VOC	0.5	0.1
		CO	3.1	0.2
		NO _x	13.4	0.7
		CO _{2e}	--	195
SN-67A	Emergency Generator 7 (DC Gen 1 – Employee Building), Diesel Fired, 2700 kW	PM	0.9	0.1
		PM ₁₀	0.9	0.1
		PM _{2.5}	0.9	0.1
		SO ₂	0.1	0.1
		VOC	1.1	0.1
		CO	7.3	0.4
		NO _x	31.5	1.6
		CO _{2e}	--	195
SN-67B	Emergency Generator 8 (CGL2.GEN.1 – CGL2/ACL), Diesel Fired, 1600 kW	PM	0.4	0.1
		PM ₁₀	0.4	0.1
		PM _{2.5}	0.4	0.1
		SO ₂	0.1	0.1
		VOC	0.3	0.1
		CO	1.9	0.1
		NO _x	22.0	1.1
		CO _{2e}	--	127
SN-67C	Emergency Generator 9 (800A1.SS3 – RCM/ACL), Diesel Fired, 1600 kW	PM	0.4	0.1
		PM ₁₀	0.4	0.1
		PM _{2.5}	0.4	0.1
		SO ₂	0.1	0.1
		VOC	0.3	0.1
		CO	1.8	0.1
		NO _x	20.7	1.0
		CO _{2e}	--	127

SN	Description	Pollutant	lb/hr	tpy
SN-67D	Emergency Generator 10 (400.3 – CGL 2 Zinc Pot), Diesel Fired, 1114 kW	PM	0.1	0.1
		PM ₁₀	0.1	0.1
		PM _{2.5}	0.1	0.1
		SO ₂	0.1	0.1
		VOC	0.1	0.1
		CO	1.3	0.1
		NO _x	13.7	0.7
		CO _{2e}	--	80
SN-67E	Emergency Generator 11 (CGL.GEN.1 – CGL) Diesel Fired, 350 kW	PM	0.1	0.1
		PM ₁₀	0.1	0.1
		PM _{2.5}	0.1	0.1
		SO ₂	1.1	0.1
		VOC	0.1	0.1
		CO	0.5	0.1
		NO _x	2.9	0.1
		CO _{2e}	-	238
SN-104A	Diesel Fired Emergency Water Pump 1 (EP2-A Line HM Tunnel Furnace), 282 hp	PM	0.6	0.1
		PM ₁₀	0.6	0.1
		PM _{2.5}	0.6	0.1
		SO ₂	0.5	0.1
		VOC	0.7	0.1
		CO	1.9	0.1
		NO _x	8.7	0.5
		CO _{2e}	-	6
SN-104B	Diesel Fired Emergency Water Pump 2 (EP3 – ColdMill), 376 hp	PM	0.8	0.1
		PM ₁₀	0.8	0.1
		PM _{2.5}	0.8	0.1
		SO ₂	0.7	0.1
		VOC	0.9	0.1
		CO	2.5	0.2
		NO _x	11.7	0.6
		CO _{2e}	-	8
SN-104C	Diesel Fired Emergency Water Pump 3 (EP6-B Line HM Tunnel Furnace), 282 hp	PM	0.6	0.1
		PM ₁₀	0.6	0.1
		PM _{2.5}	0.6	0.1
		SO ₂	0.5	0.1
		VOC	0.7	0.1
		CO	1.9	0.1
		NO _x	8.7	0.5
		CO _{2e}	-	6

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SN	Description	Pollutant	lb/hr	tpy
SN-104D	Diesel Fired Emergency Water Pump 4 (FP2 – Fire Line), 376 hp	PM	0.8	0.1
		PM ₁₀	0.8	0.1
		PM _{2.5}	0.8	0.1
		SO ₂	0.7	0.1
		VOC	0.9	0.1
		CO	2.5	0.2
		NO _x	11.7	0.6
		CO _{2e}	-	8
SN-104E	Emergency Water Pump 5 (RCM/ACL Process Line), 360 kW	PM	0.7	0.1
		PM ₁₀	0.7	0.1
		PM _{2.5}	0.7	0.1
		SO ₂	0.6	0.1
		VOC	0.7	0.1
		CO	1.9	0.1
		NO _x	8.7	0.5
		CO _{2e}	--	6
SN-110a	Emergency Generator 12, Diesel Fired, 2700 kW	PM	0.9	0.1
		PM ₁₀	0.9	0.1
		PM _{2.5}	0.9	0.1
		SO ₂	0.1	0.1
		VOC	1.1	0.1
		CO	7.3	0.4
		NO _x	31.5	1.6
		CO _{2e}	--	195
SN-110b	Emergency Generator 13, Diesel Fired, 2700 kW	PM	0.9	0.1
		PM ₁₀	0.9	0.1
		PM _{2.5}	0.9	0.1
		SO ₂	0.1	0.1
		VOC	1.1	0.1
		CO	7.3	0.4
		NO _x	31.5	1.6
		CO _{2e}	--	195
SN-110c	Emergency Generator 14, Diesel Fired, 2700 kW	PM	0.9	0.1
		PM ₁₀	0.9	0.1
		PM _{2.5}	0.9	0.1
		SO ₂	0.1	0.1
		VOC	1.1	0.1
		CO	7.3	0.4
		NO _x	31.5	1.6
		CO _{2e}	--	195

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SN	Description	Pollutant	lb/hr	tpy
SN-110d	Emergency Generator 15, Diesel Fired, 2700 kW	PM	0.9	0.1
		PM ₁₀	0.9	0.1
		PM _{2.5}	0.9	0.1
		SO ₂	0.1	0.1
		VOC	1.1	0.1
		CO	7.3	0.4
		NO _x	31.5	1.6
		CO _{2e}	--	195
SN-110e	Emergency Generator 16, Diesel Fired, 2700 kW	PM	0.9	0.1
		PM ₁₀	0.9	0.1
		PM _{2.5}	0.9	0.1
		SO ₂	0.1	0.1
		VOC	1.1	0.1
		CO	7.3	0.4
		NO _x	31.5	1.6
		CO _{2e}	--	195
SN-110f	Emergency Generator 17 (CCL Process Line) Diesel Fired, 360 kW	PM	1.1	0.1
		PM ₁₀	1.1	0.1
		PM _{2.5}	1.1	0.1
		SO ₂	1.0	0.1
		VOC	1.3	0.1
		CO	3.3	0.2
		NO _x	15.0	0.8
		CO _{2e}	--	4
SN-110g	Emergency Generator 18 (Guard Station) Diesel Fired, 30 kW	PM	0.1	0.1
		PM ₁₀	0.1	0.1
		PM _{2.5}	0.1	0.1
		SO ₂	0.1	0.1
		VOC	0.2	0.1
		CO	0.3	0.1
		NO _x	1.4	0.1
		CO _{2e}	--	4
SN-144	Emergency Generator 19, Diesel Fired, 2700 kW	PM	0.9	0.1
		PM ₁₀	0.9	0.1
		PM _{2.5}	0.9	0.1
		SO ₂	0.1	0.1
		VOC	1.1	0.1
		CO	7.3	0.4
		NO _x	31.5	1.6
		CO _{2e}	-	195

SN	Description	Pollutant	lb/hr	tpy
SN-145	Emergency Generator 20, Diesel Fired, 2700 kW	PM	0.9	0.1
		PM ₁₀	0.9	0.1
		PM _{2.5}	0.9	0.1
		SO ₂	0.1	0.1
		VOC	1.1	0.1
		CO	7.3	0.4
		NO _x	31.5	1.6
		CO _{2e}	-	195
SN-146	Emergency Generator 21, Diesel Fired, 2700 kW	PM	0.9	0.1
		PM ₁₀	0.9	0.1
		PM _{2.5}	0.9	0.1
		SO ₂	0.1	0.1
		VOC	1.1	0.1
		CO	7.3	0.4
		NO _x	31.5	1.6
		CO _{2e}	-	195
SN-147	Emergency Generator 22, Diesel Fired, 2700 kW	PM	0.9	0.1
		PM ₁₀	0.9	0.1
		PM _{2.5}	0.9	0.1
		SO ₂	0.1	0.1
		VOC	1.1	0.1
		CO	7.3	0.4
		NO _x	31.5	1.6
		CO _{2e}	-	195
SN-148	Emergency Generator 23, Diesel Fired, 2700 kW	PM	0.9	0.1
		PM ₁₀	0.9	0.1
		PM _{2.5}	0.9	0.1
		SO ₂	0.1	0.1
		VOC	1.1	0.1
		CO	7.3	0.4
		NO _x	31.5	1.6
		CO _{2e}	-	195

80. The permittee shall not exceed the emission rates set forth in the following table and must install the control devices or implement the pollution prevention measures set forth in the following table. Compliance with this condition will be show by compliance with Specific Conditions 83 and 85 through 88. [8 CAR § 41-801 et seq. and 40 C.F.R. § 52 Subpart E]

BACT Analysis Summary				
Source	Description	Pollutant	Control Technology	BACT Limit
SN-62	Emergency Generator #1	PM	Good operating	0.2 g/kW-Hr
		PM ₁₀	Practices (Periodic	0.2 g/kW-Hr

		PM _{2.5}	Equipment Maintenance), limited hours of operation, Compliance with NSPS Subpart IIII	0.2 g/kW-Hr
		Opacity		20%
		SO ₂		<0.0015% sulfur in fuel
		VOC		1.0 g/kW-Hr
		CO		3.5 g/kW-Hr
		NO _x		3.0 g/kW-Hr
		GHG	Good Combustion Practices (Periodic Equipment Maintenance)	CO ₂ 163 lbs/MMBTU CH ₄ 0.0061 lbs/MMBTU N ₂ O 0.0013 lbs/MMBTU
SN-63, SN-64, SN-65, SN-66, SN-67, SN-67A SN-67B, SN-67C, SN-67D, SN-67E, SN-110a, SN-110b, SN-110c, SN-110d, SN-110e, SN-144, SN-145, SN-146, SN-147, SN-148	Emergency Generators 2 through 23	PM	Good operating Practices (Periodic Equipment Maintenance), limited hours of operation, Compliance with NSPS Subpart IIII	0.2 g/kW-Hr
		PM ₁₀		0.2 g/kW-Hr
		PM _{2.5}		0.2 g/kW-Hr
		Opacity		20%
		SO ₂		<0.0015% sulfur in fuel
		VOC		1.55 g/kW-Hr
		CO		3.5 g/kW-Hr
		NO _x		4.86 g/kW-Hr
		GHG	Good Combustion Practices (Periodic Equipment Maintenance)	CO ₂ 163 lbs/MMBTU CH ₄ 0.0061 lbs/MMBTU N ₂ O 0.0013 lbs/MMBTU

81. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by compliance with Specific Conditions 83 and 85 through 88. [8 CAR § 40-701 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
SN-62	Emergency Generator 1 (100.1 – Meltshop), Diesel Fired, 500 kW	H ₂ SO ₄	0.4	0.1
SN-63	Emergency Generator 2 (600.3 – ColdMill), Diesel Fired, 1600 kW	H ₂ SO ₄	1.4	0.1

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SN	Description	Pollutant	lb/hr	tpy
SN-64	Emergency Generator 3 (400.1 – HSM/CCM), Diesel Fired, 1600 kW	H ₂ SO ₄	1.4	0.1
SN-65	Emergency Generator 4 (100.2 – Meltshop), Diesel Fired, 1600 kW	H ₂ SO ₄	1.4	0.1
SN-66	Emergency Generator 5 (100.4 – Meltshop), Diesel Fired, 2700 kW	H ₂ SO ₄	0.1	0.1
SN-67	Emergency Generator 6 (400.3 – HSM/CCM), Diesel Fired, 1145 kW	H ₂ SO ₄	0.1	0.1
SN-67A	Emergency Generator 7 (DC Gen 1 – Employee Building), Diesel Fired, 2700 kW	H ₂ SO ₄	0.1	0.1
SN-67B	Emergency Generator 8 (CGL2.GEN.1 – CGL2/ACL), Diesel Fired, 1600 kW	H ₂ SO ₄	0.1	0.1
SN-67C	Emergency Generator 9 (800A1.SS3 – RCM/ACL), Diesel Fired, 1000 kW	H ₂ SO ₄	0.1	0.1
SN-67D	Emergency Generator 10 (400.3 – CGL 2 Zinc Pot), Diesel Fired, 1114 kW	H ₂ SO ₄	0.1	0.1
SN-67E	Emergency Generator 11 (CGL.GEN.1 – CGL) Diesel Fired, 350 kW	H ₂ SO ₄	0.1	0.1
SN-104A	Diesel Fired Emergency Water Pump 1 (EP2-A Line HM Tunnel Furnace), 282 hp	H ₂ SO ₄	0.1	0.1
SN-104B	Diesel Fired Emergency Water Pump 2 (EP3 – ColdMill), 376 hp	H ₂ SO ₄	0.1	0.1
SN-104C	Diesel Fired Emergency Water Pump 3 (EP6-B Line HM Tunnel Furnace), 282 hp	H ₂ SO ₄	0.1	0.1

SN	Description	Pollutant	lb/hr	tpy
SN-104D	Diesel Fired Emergency Water Pump 4 (FP2 – Fire Line), 376 hp	H ₂ SO ₄	0.1	0.1
SN-104E	Emergency Water Pump 5 (RCM/ACL Process Line), 360 kW	H ₂ SO ₄	0.1	0.1
SN-110a	Emergency Generator 12, Diesel Fired, 2700 kW	H ₂ SO ₄	0.1	0.1
SN-110b	Emergency Generator 13, Diesel Fired, 2700 kW	H ₂ SO ₄	0.1	0.1
SN-110c	Emergency Generator 14, Diesel Fired, 2700 kW	H ₂ SO ₄	0.1	0.1
SN-110d	Emergency Generator 15, Diesel Fired, 2700 kW	H ₂ SO ₄	0.1	0.1
SN-110e	Emergency Generator 16, Diesel Fired, 2700 kW	H ₂ SO ₄	0.1	0.1
SN-110f	Emergency Generator 17 (CCL Process Line) Diesel Fired, 360 kW	H ₂ SO ₄	0.1	0.1
SN-110g	Emergency Generator 18 (Guard Station) Diesel Fired, 30 kW	H ₂ SO ₄	0.1	0.1
SN-144	Emergency Generator 19, Diesel Fired, 2700 kW	H ₂ SO ₄	0.1	0.1
SN-145	Emergency Generator 20, Diesel Fired, 2700 kW	H ₂ SO ₄	0.1	0.1
SN-146	Emergency Generator 21, Diesel Fired, 2700 kW	H ₂ SO ₄	0.1	0.1
SN-147	Emergency Generator 22, Diesel Fired, 2700 kW	H ₂ SO ₄	0.1	0.1
SN-148	Emergency Generator 23, Diesel Fired, 2700 kW	H ₂ SO ₄	0.1	0.1

82. The permittee shall not exceed 20% opacity from the Sources SN-62, SN-63, SN-64, SN-65, SN-66, SN-67, SN-67A, SN-67B, SN-67C, SN-67D, SN-67E, SN-104A, SN-104B, SN-104C, SN-104D, SN-104E, SN-110A, SN-110B, SN-110C, SN-110D, SN-110E, SN-110F, SN-110G, SN-144, SN-145, SN-146, SN-147, and SN-148. Compliance with this condition will be shown by combustion of low sulfur diesel fuel only and Plantwide Condition 5. [8 CAR § 41-801 et seq. and 40 C.F.R. § 52 Subpart E]
83. The permittee shall not operate any single emergency engine, SN-62, SN-63, SN-64, SN-65, SN-66, SN-67, SN-67A, SN-67B, SN-67C, SN-67D, SN-67E, SN-104A, SN-104B, SN-104C, SN-104D, SN-104E, SN-110A, SN-110B, SN-110C, SN-110D, SN-110E, SN-110F, SN-110G, SN-144, SN-145, SN-146, SN-147, and SN-148 more than 100 hours, for maintenance and readiness testing, in any consecutive 12 month period. The permittee shall maintain records of the hours of operation of each generator each month. These records shall be updated by the fifteenth day of the month following the month that the records represent, kept on site, made available to Department personnel upon request and submitted in accordance with General Provision 7. [8 CAR § 41-605, Ark. Code Ann. § 8-4-203 as referenced by Ark. Code Ann. §§ 8-4-304 and 8-4-311, 40 C.F.R. § 70.6, and 40 C.F.R. § 60 Subpart IIII]
84. The permittee shall comply with the provisions of 40 C.F.R. Part 63 Subpart ZZZZ for SN-62, SN-63, SN-64, SN-65, SN-66, SN-67, SN-67A, SN-67B, SN-67C, SN-67D, SN-67E, SN-104A, SN-104B, SN-104C, SN-104D, SN-104E, SN-110A, SN-110B, SN-110C, SN-110D, SN-110E, SN-110F, SN-110G, SN-144, SN-145, SN-146, SN-147, and SN-148 by complying with the provisions of 40 C.F.R. Part 60 Subpart IIII. [8 CAR § 41-204 and 40 C.F.R. § 63 Subpart ZZZZ]
85. The permittee shall comply with the emissions standards specified in § 60.4202 of 40 C.F.R. Part 60 Subpart IIII for SN-62, SN-63, SN-64, SN-65, SN-66, SN-67, SN-67A, SN-67B, SN-67C, SN-67D, SN-67E, SN-104A, SN-104B, SN-104C, SN-104D, SN-104E, SN-110A, SN-110B, SN-110C, SN-110D, SN-110E, SN-110F, and SN-110G. The permittee shall operate and maintain the emergency generators, SN-62, SN-63, SN-64, SN-65, SN-66, SN-67, SN-67A, SN-67B, SN-67C, SN-67D, SN-67E, SN-104A, SN-104B, SN-104C, SN-104D, SN-104E, SN-110A, SN-110B, SN-110C, SN-110D, SN-110E, SN-110F, SN-110G, SN-144, SN-145, SN-146, SN-147, and SN-148 according to the manufacturer's written instruction or procedures developed by the permittee and approved by the generator manufacturer, over the life of the entire engine. [8 CAR § 41-204 and 40 C.F.R. § 60 Subpart IIII]
86. The permittee shall install a non-resettable hour meter on the Emergency Generators, SN-62, SN-63, SN-64, SN-65, SN-66, SN-67, SN-67A, SN-67B, SN-67C, SN-67D, SN-67E, SN-104A, SN-104B, SN-104C, SN-104D, SN-104E, SN-110A, SN-110B, SN-110C, SN-110D, SN-110E, SN-110F, SN-110G, SN-144, SN-145, SN-146, SN-147, and SN-148. [8 CAR § 41-204 and 40 C.F.R. § 60 Subpart IIII]

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87. The permittee shall use a diesel fuel that meets the requirements of 40 C.F.R. 80.510(b) in the generators, SN-62, SN-63, SN-64, SN-65, SN-66, SN-67, SN-67A, SN-67B, SN-67C, SN-67D, SN-67E, SN-104A, SN-104B, SN-104C, SN-104D, SN-104E, SN-110A, SN-110B, SN-110C, SN-110D, SN-110E, SN-110F, SN-110G, SN-144, SN-145, SN-146, SN-147, and SN-148. [8 CAR § 41-204 and 40 C.F.R. § 60 Subpart IIII]
88. If the generators, SN-62, SN-63, SN-64, SN-65, SN-66, SN-67, SN-67A, SN-67B, SN-67C, SN-67D, SN-67E, SN-104A, SN-104B, SN-104C, SN-104D, SN-104E, SN-110A, SN-110B, SN-110C, SN-110D, SN-110E, SN-110F, SN-110G, SN-144, SN-145, SN-146, SN-147, and SN-148 are equipped with a diesel particulate filter to comply with emission standards, the diesel particulate filter must be installed with a back pressure monitor that notifies the permittee when the high backpressure limit of the engine is approached. [8 CAR § 41-204 and 40 C.F.R. § 60 Subpart IIII]

Cooling Towers

- SN-68 Non-Contact Cooling Tower - Tower 1 MS
- SN-69 Non-Contact Cooling Tower - Tower 2 MS: Gas Cleaning Plant (GCP)
- SN-70 Non-Contact Cooling Tower - Tower 3 Caster/HM: Caster (CSP) Hotmill
- SN-71 Non-Contact Cooling Tower – Caster/Hot Mill
- SN-72A Non-Contact Cooling Tower – Cold Mill APL/ACL Anneal and Coating/ RCM + CRL
- SN-72B Non-Contact Cooling Tower – Cold Mill ACL Furnace
- SN-73 Non-Contact Cooling Tower - Cold Mill (PLTCM)
- SN-74 Non-Contact Cooling Tower - Melt Shop Tower 1: Spray Cooled EAF (Duct Only)
- SN-74A Non-Contact Cooling Tower EAF / LMF 2 and DOC Spray Cool
- SN-74B Non-Contact Cooling Tower EAF Closed Loop for Electrode Arms
- SN-75 Contact Cooling Tower - Tower 2 MS: RH Degasser
- SN-76 Contact Cooling Tower - Tower 3 Caster: Caster (CSP) Only
- SN-77 Contact Cooling Tower - Tower 4 HM: Hot Mill (HSM)
- SN-78A Contact Cooling Tower Hot Mill
- SN-78B Contact Cooling Tower Caster
- SN-79 Contact Cooling Tower – Tower 6: Laminar (part of Hot Mill)
- SN-109a Non-Contact Color Coating Line – Cooling Tower #1
- SN-109b Non-Contact Color Coating Line – Cooling Tower #2
- SN-129 Non-Contact Cooling Tower – Annealing Pickling Line (APL)
- SN-130 Non-Contact Cooling Tower – Reversing Cold Mill 3 (RCM3)
- SN-131 Non-Contact Cooling Tower – Decarburizing Coating Line (DCL) and High Temperature Annealing (HTA)
- SN-132 Non-Contact Cooling Tower – Flattening and Coating Line (FCL)

Source Description

The facility has a number of cooling towers which remove heat from process water.

SN-68 is a 499,866 gallon per hour Non-Contact Cooling Tower – Tower 1 MS.

SN-69 is a 885,070 gallon per hour Non-Contact Cooling Tower – Tower 2 MS: Gas Cleaning Plant (GCP).

SN-70 is a 1,104,356 gallon per hour Non-Contact Cooling Tower – Caster and Hot Mill Tower 3 Caster/HM: Caster (CSP) Hot mill.

SN-71 is a 631,438 gallon per hour Non-Contact Cooling Tower – Caster/Hot Mill.

SN-72A (Non-Contact Cooling Tower – Cold Mill APL/ACL Anneal and Coating/ RCM + CRL is a 486,128 gallon per hour Non-Contact Cooling Tower.

SN-72B (Non-Contact Cooling Tower – Cold Mill ACL Furnace is a 333,948 gallon per hour Non-Contact Cooling Tower.

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SN-73 is a 806,775 gallon per hour Non-Contact Cooling Tower – Cold Mill (PLTCM).

SN-74 is a 813,207 gallon per hour Non-Contact Cooling Tower - Melt Shop Tower 1: Spray Cooled EAF (Duct Only).

SN-74A (Non-Contact Cooling Tower EAF / LMF 2 and DOC Spray Cool is a 3,454,943 gallon per hour Non-Contact Cooling Tower.

SN-74B (Non-Contact Cooling Tower – EAF Closed Loop for Electrode Arms is a 449,000 gallon per hour Non-Contact Cooling Tower.

SN-75 is a 224,768 gallon per hour Contact Cooling Tower - Melt Shop Tower 2 MS: RH Degasser.

SN-76 is a 307,793 gallon per hour Contact Cooling Tower - Caster Tower 3 Caster: Caster (CSP) Only.

SN-77 is a 585,670 gallon per hour Contact Cooling Tower - Hot Mill Tower 4 HM: Hot Mill (HM)

SN-78A (Contact Cooling Tower – Hot Mill is a 2,113,600 gallon per hour Contact Induced Cooling Tower.

SN-78B (Contact Cooling Tower – Caster is a 413,433 gallon per hour Contact Cooling Tower.

SN-79 is a 1,001,318 gallon per hour Contact Cooling Tower a – Laminar Tower 6: Laminar (part of Hot Mill).

SN-109a Color Coating Line – Cooling Tower #1 is a 75,000 gallon/hour cooling tower.

SN-109b Color Coating Line – Cooling Tower #2 is a 75,000 gallon/hour cooling tower.

SN-129 Non-Contact Cooling Tower – Annealing Pickling Line (APL) is a 1,500,000 gallon/hour cooling tower.

SN-130 Non-Contact Cooling Tower – Reversing Cold Mill 3 (RCM3) is a 1,500,000 gallon/hour cooling tower.

SN-131 Non-Contact Cooling Tower – Decarburizing Coating Line (DCL) is a 1,500,000 gallon/hour cooling tower.

SN-132 Non-Contact Cooling Tower – Flattening and Coating Line (FCL) is a 1,500,000 gallon/hour cooling tower.

Specific Conditions

89. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by compliance with Specific Conditions #91 and #92. [8 CAR § 41-801 et seq. and 40 C.F.R. § 52 Subpart E]

SN	Description	Pollutant	lb/hr	tpy
SN-68	Non-Contact Cooling Tower - Tower 1 MS	PM	0.2	0.9
		PM ₁₀	0.2	0.7
		PM _{2.5}	0.1	0.1
SN-69	Non-Contact Cooling Tower - Tower 2 MS: Gas Cleaning Plant (GCP)	PM	0.4	1.6
		PM ₁₀	0.3	1.1
		PM _{2.5}	0.1	0.1
SN-70	Non-Contact Cooling Tower - Tower 3 Caster/HM: Caster (CSP) Hotmill	PM	0.5	2.0
		PM ₁₀	0.4	1.4
		PM _{2.5}	0.1	0.1
SN-71	Non-Contact Cooling Tower – Caster/Hot Mill	PM	0.5	2.1
		PM ₁₀	0.4	1.5
		PM _{2.5}	0.1	0.1
SN-72A	Non-Contact Cooling Tower – Cold Mill APL/ACL Anneal and Coating/ RCM + CRL	PM	0.2	0.9
		PM ₁₀	0.2	0.6
		PM _{2.5}	0.1	0.1
SN-72B	Non-Contact Cooling Tower – Cold Mill ACL Furnace	PM	0.2	0.6
		PM ₁₀	0.1	0.5
		PM _{2.5}	0.1	0.1
SN-73	Non-Contact Cooling Tower - Cold Mill (PLTCM)	PM	0.4	1.5
		PM ₁₀	0.3	1.0
		PM _{2.5}	0.1	0.1
SN-74	Non-Contact Cooling Tower - Melt Shop Tower 1: Spray Cooled EAF (Duct Only)	PM	0.4	1.5
		PM ₁₀	0.3	1.0
		PM _{2.5}	0.1	0.1
SN-74A	Non-Contact Cooling Tower EAF / LMF 2 and DOC Spray Cool	PM	2.6	11.2
		PM ₁₀	1.8	7.8
		PM _{2.5}	0.1	0.1
SN-74B	Non-Contact Cooling Tower EAF Closed Loop for Electrode Arms	PM	0.2	0.8
		PM ₁₀	0.2	0.6
		PM _{2.5}	0.1	0.1

SN	Description	Pollutant	lb/hr	tpy
SN-75	Contact Cooling Tower - Tower 2 MS: RH Degasser	PM	0.2	0.5
		PM ₁₀	0.1	0.4
		PM _{2.5}	0.1	0.1
SN-76	Contact Cooling Tower - Tower 3 Caster: Caster (CSP) Only	PM	0.2	0.8
		PM ₁₀	0.2	0.6
		PM _{2.5}	0.1	0.1
SN-77	Contact Cooling Tower - Tower 4 HM: Hot Mill (HSM)	PM	0.3	1.2
		PM ₁₀	0.2	0.9
		PM _{2.5}	0.1	0.1
SN-78A	Contact Cooling Tower Hot Mill	PM	1.6	6.8
		PM ₁₀	1.1	4.8
		PM _{2.5}	0.1	0.1
SN-78B	Contact Cooling Tower – Caster	PM	0.2	0.8
		PM ₁₀	0.2	0.6
		PM _{2.5}	0.1	0.1
SN-79	Contact Cooling Tower Caster	PM	0.5	2.1
		PM ₁₀	0.4	1.5
		PM _{2.5}	0.1	0.1
SN-109a	Non-Contact Color Coating Line – Cooling Tower #1	PM	0.1	0.3
		PM ₁₀	0.1	0.2
		PM _{2.5}	0.1	0.1
SN-109b	Non-Contact Color Coating Line – Cooling Tower #2	PM	0.1	0.2
		PM ₁₀	0.1	0.1
		PM _{2.5}	0.1	0.1
SN-129	Non-Contact Cooling Tower – Annealing Pickling Line (APL)	PM	0.6	2.5
		PM ₁₀	0.4	1.7
		PM _{2.5}	0.1	0.1
SN-130	Non-Contact Cooling Tower – Reversing Cold Mill 3 (RCM3)	PM	0.6	2.5
		PM ₁₀	0.4	1.7
		PM _{2.5}	0.1	0.1
SN-131	Non-Contact Cooling Tower – Decarburizing Coating Line (DCL) and High Temperature Annealing (HTA)	PM	0.6	2.5
		PM ₁₀	0.4	1.7
		PM _{2.5}	0.1	0.1
SN-132	Non-Contact Cooling Tower – Flattening and Coating Line (FCL)	PM	0.6	2.5
		PM ₁₀	0.4	1.7
		PM _{2.5}	0.1	0.1

90. The permittee shall not exceed the emission rates set forth in the following table and must install the control devices or implement the pollution prevention measures set forth in the following table. Compliance with this condition will be show by compliance with Specific Condition #91 and #92. [8 CAR § 41-801 et seq. and 40 C.F.R. § 52 Subpart E]

BACT Analysis Summary				
Source	Description	Pollutant	Control Technology	BACT Limit
SN-68 SN-69, SN-70, SN-71, SN-72A, SN-72B, SN-73, SN-74, SN-74A, SN-74B, SN-109a	Non-Contact Cooling Towers	PM	Drift Eliminators TDS Limits	0.001 percent drift loss
		PM ₁₀		
		PM _{2.5}		
		Opacity		5%
SN-75, SN-76, SN-77, SN-78A, SN-78B, SN-79	Contact Cooling Towers	PM	Drift Eliminators TDS Limits	0.001 percent drift loss
		PM ₁₀		
		PM _{2.5}		
		Opacity		5%
SN-109b, SN-129, SN-130, SN-131, SN-132	Cooling Towers	PM	Drift Eliminators TDS Limits	0.0005 percent drift loss
		PM ₁₀		
		PM _{2.5}		
		Opacity		5%

91. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by compliance with Specific Condition #92. [8 CAR § 41-801 et seq. and 40 C.F.R. § 52 Subpart E]

SN	Description	TDS Limit
SN-68	Non-Contact Cooling Tower - Tower 1 MS	4800
SN-69	Non-Contact Cooling Tower - Tower 2 MS: Gas Cleaning Plant (GCP)	4800

SN	Description	TDS Limit
SN-70	Non-Contact Cooling Tower - Tower 3 Caster/HM: Caster (CSP) Hotmill	4800
SN-71	Non-Contact Cooling Tower – Caster/Hot Mill	8800
SN-72A	Non-Contact Cooling Tower – Cold Mill APL/ACL Anneal and Coating/ RCM + CRL	4800
SN-72B	Non-Contact Cooling Tower – Cold Mill ACL Furnace	4800
SN-73	Non-Contact Cooling Tower - Cold Mill (PLTCM)	4800
SN-74	Non-Contact Cooling Tower - Melt Shop Tower 1: Spray Cooled EAF (Duct Only)	4800
SN-74A	Non-Contact Cooling Tower EAF / LMF 2 and DOC Spray Cool	8800
SN-74B	Non-Contact Cooling Tower EAF Closed Loop for Electrode Arms	4800
SN-75	Contact Cooling Tower - Tower 2 MS: RH Degasser	5600
SN-76	Contact Cooling Tower - Tower 3 Caster: Caster (CSP) Only	6800
SN-77	Contact Cooling Tower - Tower 4 HM: Hot Mill (HSM)	5600
SN-78A	Contact Cooling Tower Hot Mill	8800
SN-78B	Contact Cooling Tower – Caster	4800

SN	Description	TDS Limit
SN-79	Contact Cooling Tower Caster	5600
SN-109a	Non-Contact Color Coating Line – Cooling Tower #1	8800
SN-109b	Non-Contact Color Coating Line – Cooling Tower #2	8800
SN-129	Non-Contact Cooling Tower – Annealing Pickling Line (APL)	8800
SN-130	Non-Contact Cooling Tower – Reversing Cold Mill 3 (RCM3)	8800
SN-131	Non-Contact Cooling Tower – Decarburizing Coating Line (DCL) and High Temperature Annealing (HTA)	8800
SN-132	Non-Contact Cooling Tower – Flattening and Coating Line (FCL)	8800

92. The permittee shall test the TDS of each of the cooling towers following the methodology approved by the Division on April 30, 2019. This testing shall be conducted in accordance with the approved methodology and Plantwide Condition #3. The results of the TDS testing are not required to be submitted to the Division unless specifically requested by the Division. The results shall be kept on site and made available to Division personnel upon request. [8 CAR § 41-605, Ark. Code Ann. § 8-4-203 as referenced by Ark. Code Ann. §§ 8-4-304 and 8-4-311, and 40 C.F.R. § 70.6]
93. Visible emissions may not exceed the limits specified in the following table of this permit as measured by EPA Reference Method 9. Compliance with this condition will be shown by proper maintenance according to the defined maintenance procedures and Plantwide Condition #5.

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Source	Limit	Regulatory Citation
SN-68 SN-69, SN-70, SN-71, SN-72A, SN- 72B, SN-73, SN- 74, SN-74A, SN- 74B, SN-75, SN- 76, SN-77, SN- 78A, SN-78B, SN-79, SN-109a, SN-109b, SN- 129, SN-130, SN-131, and SN- 132	5%	8 CAR § 41-801 et seq. and 40 C.F.R. § 52 Subpart E

Miscellaneous Operations

- SN-80 Charging Crane
- SN-81 Scrap Yard Stockpiling
- SN-82 EAF Flux Receiving System
- SN-83 EAF Flux Storage and Handling System
- SN-84 Carbon Injection Receiving System
- SN-85 Carbon Injection Storage and Handling System
- SN-86 LMF Flux Receiving System
- SN-87 LMF Flux Storage and Handling System
- SN-88 Alloy Receiving System
- SN-89 Alloy Storage and Handling System
- SN-90 Alloy Delivery System – LMF
- SN-92 Inside Drop Point - Spent Refractory and Other Waste
- SN-93 Outside Drop Point - Spent Refractory and Other Waste
- SN-94 Inside Drop Point – EAF Dust
- SN-99A Wind Erosion
- SN-103 EAF I/II Lime Injection Receiving, Storage, and Handling System
- SN-124 Hot Mill Roll Shop Parts Washer
- SN-127a Truck Dump and Silos SMAC Dust Collector
- SN-127b Rail Loading Building SMAC Dust Collector
- SN-127c Cold Mill Coil Entry SMAC Dust Collector

Source Description

Charging Crane, SN-80, loads scrap from the scrap yard for charging into the EAF.

Scrap Yard Stockpiling, SN-81, is the emissions from loading of scrap steel from trucks or railcars to the scrapyards.

The EAF Flux Receiving System, SN-82, includes the truck and rail unloading of the flux materials for the EAF.

The EAF Flux Storage and Handling System, SN-83, includes the transport and storage of the flux materials for the EAF. A total of 10 silos will store HBI/DRI, dolomite, and lime. Each silo will have a capacity of 9,000 ft³ and will be equipped with bin vent filters. HBI from the DRI process at EV has a drop point at BRS so this material can be used in the EAFs.

Carbon Injection Receiving System, SN-84, includes the truck and rail unloading of the carbon to be used in support of the carbon injection into the EAF.

Carbon Injection Storage and Handling System, SN-85, includes the transport and storage of the carbon for the carbon into the EAF. There are four storage silos, each with a capacity of 8,000 ft³.

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LMF Flux Receiving System, SN-86, includes the truck and rail unloading of the flux materials for the LMF.

LMF Flux Storage and Handling System, SN-87, includes the transport and storage of the flux materials for the EAF. Six silos will store bauxite, CAL/A, dolomite, and lime. Each silo will have a capacity of 9,000 ft³ and will be equipped with bin vent filters.

Alloy Receiving System, SN-88, includes the truck and rail unloading of the alloy materials for the LMF.

Alloy Storage and Handling System, SN-89, includes the transport and storage of the alloy materials for the EAF. A total of seven silos will store FeSn, SiMn, FeCr. Each silo will have a capacity of 9,000 ft³ and will be equipped with bin vent filters.

Alloy Delivery System – LMF, SN-90, Alloy materials (FeSn, SiMn, FeCr) will be used to support the LMF operations. A stocking pocket belt conveyor will also be used to transfer the materials from the silos to weight hoppers that will be used to load alloy materials into the LMF stations.

Inside Drop Point - Spent Refractory and Other Waste, SN-92, accounts for the emissions from placing of refractory material into the appropriate storage area/ container.

Outside Drop Point - Spent Refractory and Other Waste, SN-93, accounts for the placement of refractory material into outdoor storage area / container.

Inside Drop Point – EAF Dust, SN-94, accounts for the emissions of transfer of EAF baghouse dust into appropriate storage containers.

Wind Erosion, SN-99, is the emission from outdoor slag and storage piles due to wind erosion.

EAF I/II Lime Injection Receiving, Storage, and Handling System, SN-103, accounts for the emissions from the transport and storage of the various types of lime for injection into EAF I and II.

The Hot Mill Roll Shop Parts Washer, SN-124, is a natural gas fired combustion device with a heat input of 1.0 MMBtu/hr.

Self-Maintaining Air Cleaner (SMAC) dust collectors, SN-127a through SN-127c, are installed in sensitive areas to protect sensitive equipment from unwanted dust that may be present.

Specific Conditions

94. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition compliance with Specific

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Conditions 96 and 97 and Plantwide Condition 5. [8 CAR § 41-801 et seq. and 40 C.F.R. § 52 Subpart E]

SN	Description	Pollutant	lb/hr	tpy
SN-80	Charging Crane	PM	0.1	0.1
		PM ₁₀	0.1	0.1
		PM _{2.5}	0.1	0.1
SN-81	Scrap Yard Stockpiling	PM	0.1	0.5
		PM ₁₀	0.1	0.2
		PM _{2.5}	0.1	0.1
SN-82	EAF Flux Receiving System	PM	0.1	0.1
		PM ₁₀	0.1	0.1
		PM _{2.5}	0.1	0.1
SN-83	EAF Flux Storage and Handling System	PM	0.2	0.6
		PM ₁₀	0.1	0.3
		PM _{2.5}	0.1	0.1
SN-84	Carbon Injection Receiving System	PM	0.1	0.1
		PM ₁₀	0.1	0.1
		PM _{2.5}	0.1	0.1
SN-85	Carbon Injection Storage and Handling System	PM	0.1	0.2
		PM ₁₀	0.1	0.1
		PM _{2.5}	0.1	0.1
SN-86	LMF Flux Receiving System	PM	0.1	0.1
		PM ₁₀	0.1	0.1
		PM _{2.5}	0.1	0.1
SN-87	LMF Flux Storage and Handling System	PM	0.2	0.6
		PM ₁₀	0.1	0.3
		PM _{2.5}	0.1	0.1
SN-88	Alloy Receiving System	PM	0.1	0.1
		PM ₁₀	0.1	0.1
		PM _{2.5}	0.1	0.1
SN-89	Alloy Storage and Handling System	PM	0.1	0.1
		PM ₁₀	0.1	0.1
		PM _{2.5}	0.1	0.1
SN-90	Alloy Delivery System – LMF	PM	0.1	0.1
		PM ₁₀	0.1	0.1
		PM _{2.5}	0.1	0.1
SN-92	Inside Drop Point - Spent Refractory and Other Waste	PM	0.1	0.1
		PM ₁₀	0.1	0.1
		PM _{2.5}	0.1	0.1
SN-93	Outside Drop Point - Spent Refractory and Other Waste	PM	0.1	0.1
		PM ₁₀	0.1	0.1
		PM _{2.5}	0.1	0.1

SN	Description	Pollutant	lb/hr	tpy
SN-94	Inside Drop Point – EAF Dust	PM	0.1	0.1
		PM ₁₀	0.1	0.1
		PM _{2.5}	0.1	0.1
SN-99A	Feed Stock Piles - Wind Erosion	PM	0.9	3.7
		PM ₁₀	0.5	1.9
		PM _{2.5}	0.1	0.3
SN-103	EAF I/II Lime Injection Receiving, Storage, and Handling System	PM	0.1	0.4
		PM ₁₀	0.1	0.4
		PM _{2.5}	0.1	0.4
SN-124	Hot Mill Roll Shop Parts Washer	PM	0.1	0.1
		PM ₁₀	0.1	0.1
		PM _{2.5}	0.1	0.1
		SO ₂	0.1	0.1
		VOC	0.1	0.1
		CO	0.1	0.4
		NO _x	0.1	0.4
		Lead	0.0000005	0.0000022
		CO _{2e}	-	513
SN-127a	Truck Dump and Silos SMAC Dust Collector	PM	2.0	8.5
		PM ₁₀	2.0	8.5
		PM _{2.5}	2.0	8.5
SN-127b	Rail Loading Building SMAC Dust Collector	PM	0.6	2.7
		PM ₁₀	0.6	2.7
		PM _{2.5}	0.6	2.7
SN-127c	Cold Mill Coil Entry SMAC Dust Collector	PM	0.4	1.7
		PM ₁₀	0.4	1.7
		PM _{2.5}	0.4	1.7

95. The permittee shall not exceed the emission rates set forth in the following table and must install the control devices or implement the pollution prevention measures set forth in the following table. Compliance with this condition will be show by compliance with Specific Conditions 96 and 97 and Plantwide Condition 5. [8 CAR § 41-801 et seq. and 40 C.F.R. § 52 Subpart E]

BACT Analysis Summary				
Source	Description	Pollutant	Control Technology	BACT Limit
SN-82	EAF Flux Receiving System	PM	Dust Control Plan Enclosed Receiving System with Fabric Filter	0.003 gr/dscf
		PM ₁₀		
		PM _{2.5}		
		Opacity		5%

BACT Analysis Summary				
Source	Description	Pollutant	Control Technology	BACT Limit
SN-83	EAF Flux Storage and Handling System	PM	Dust Control Plan, Enclosed Conveyors with Fabric Filters Silos with Bin Vent Filters	0.003 gr/dscf
		PM ₁₀		0.01 gr/dscf
		PM _{2.5}		5%
SN-84	Carbon Injection Receiving	PM	Dust Control Plan Enclosed Receiving System with Fabric Filter	0.003 gr/dscf
		PM ₁₀		
		PM _{2.5}		
		Opacity		5%
SN-85	Carbon Injection Storage and Handling System	PM	Dust Control Plan, Enclosed Conveyors with Fabric Filters Silos with Bin Vent Filters	0.003 gr/dscf
		PM ₁₀		
		PM _{2.5}		0.01 gr/dscf
		Opacity		5%
SN-86	LMF Flux Receiving	PM	Dust Control Plan Enclosed Receiving System with Fabric Filter	0.003 gr/dscf
		PM ₁₀		
		PM _{2.5}		
		Opacity		5%
SN-87	LMF Flux Storage and Handling System	PM	Dust Control Plan, Enclosed Conveyors with Fabric Filters Silos with Bin Vent Filters	0.003 gr/dscf
		PM ₁₀		
		PM _{2.5}		0.01 gr/dscf
		Opacity		5%
SN-88	Alloy Receiving System	PM	Dust Control Plan Enclosed Receiving System with Fabric Filter	0.003 gr/dscf
		PM ₁₀		
		PM _{2.5}		
		Opacity		5%
SN-89	Alloy Storage and Handling System	PM	Dust Control Plan, Enclosed Conveyors with Fabric Filters Silos with Bin Vent Filters	0.003 gr/dscf
		PM ₁₀		
		PM _{2.5}		0.01 gr/dscf
		Opacity		5%
SN-90	Alloy Delivery System – LMF	PM		0.003 gr/dscf
		PM ₁₀		

BACT Analysis Summary				
Source	Description	Pollutant	Control Technology	BACT Limit
		PM _{2.5}	Dust Control Plan, Enclosed Conveyors with Fabric Filters Enclosed Receiving System with Fabric Filter Fabric Filters	0.003 gr/dscf
		Opacity	Silos with Bin Vent Filters	0.01 gr/dscf
				5%
SN-92	Inside Drop Point - Spent Refractory and Other Waste	PM	Dust Control Plan	0.1 lb/hr, 0.1 tpy
		PM ₁₀		0.1 lb/hr, 0.1 tpy
		PM _{2.5}		0.1 lb/hr, 0.1 tpy
		Opacity		20%
SN-93	Outside Drop Point - Spent Refractory and Other Waste	PM	Dust Control Plan	0.1 lb/hr, 0.1 tpy
		PM ₁₀		0.1 lb/hr, 0.1 tpy
		PM _{2.5}		0.1 lb/hr, 0.1 tpy
		Opacity		20%
SN-94	Inside Drop Point – EAF Dust	PM	Dust Control Plan	0.1 lb/hr, 0.1 tpy
		PM ₁₀		0.1 lb/hr, 0.1 tpy
		PM _{2.5}		0.1 lb/hr, 0.1 tpy
		Opacity		20%
SN-99A	Feed Stock Piles - Wind Erosion	PM	Dust Control Plan	0.9 lb/hr, 3.7 tpy
		PM ₁₀		0.5 lb/hr, 1.9 tpy
		PM _{2.5}		0.1 lb/hr, 0.3 tpy
		Opacity		20%
SN-103	EAF I/II Lime Injection Receiving, Storage, and Handling System	PM	Fabric Filter Enclosed Conveyors with Compressed Air Dust Control Plan Bin Vent Filter on Each Silo	0.1 lb/hr, 0.4 tpy
		PM ₁₀		0.1 lb/hr, 0.4 tpy
		PM _{2.5}		0.1 lb/hr, 0.4 tpy
		Opacity		5%
SN-124	Hot Mill Roll Shop Parts Washer	PM	Good Combustion Practices (Periodic Equipment Maintenance) Energy efficient burners Combustion of natural gas only	0.0075 lb/MMBtu
		PM ₁₀		0.0075 lb/MMBtu
		PM _{2.5}		0.0075 lb/MMBtu
		Opacity		5%
		CO		0.0824 lb/MMBtu
		NO _x		0.08 lb/MMBtu
		GHG		117 lb CO ₂ e/MMBtu
SN-127a	SMAC Dust Collectors	PM	Good operating Practices (Periodic	0.002 gr/dscf
SN-127b		PM ₁₀		0.002 gr/dscf

BACT Analysis Summary				
Source	Description	Pollutant	Control Technology	BACT Limit
SN-127c		PM _{2.5}	Equipment Maintenance)	0.002 gr/dscf
		Opacity		5%

96. The permittee shall not receive more than material than in the table below in any consecutive rolling 12-month period. [8 CAR § 41-801 et seq. and 40 C.F.R. § 52 Subpart E]

Source	Consecutive rolling 12-month limit (tons/year)
SN-82	175,830
SN-84	79,204
SN-86	175,830
SN-88	680,000
SN-90	680,000
SN-103	210,240

97. The permittee shall maintain monthly records of the amount of materials received in the sources in Specific Condition 96. These records shall include the monthly total of material received and the rolling 12-month total of material received. These records shall be updated by the 15th day of the month following the month to which the records pertain, kept on site, made available to Department personnel upon request, and submitted in accordance with General Provision 7. [8 CAR § 41-801 et seq. and 40 C.F.R. § 52 Subpart E]
98. Visible emissions may not exceed the limits specified in the following table of this permit as measured by EPA Reference Method 9. For SN-103, compliance with this condition shall be shown by compliance with the opacity requirements for the melt shop. For all other listed sources, compliance with this condition will be shown by implementation of the fugitive dust control plan to operate this equipment to minimize excessive fugitive dust and compliance with Specific Condition #99 and Plantwide Condition 5.

Source	Limit	Regulatory Citation
SN-82, SN-83, SN-84, SN-85, SN-86, SN-87, SN-88, SN-89, SN-90, SN-103, and SN-124	5%	8 CAR § 41-801 et seq. and 40 C.F.R. § 52 Subpart E
SN-92, SN-93, SN-94, and SN-99A	20%	8 CAR § 41-801 et seq. and 40 C.F.R. § 52 Subpart E

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99. The permittee shall conduct weekly observations of the opacity from the buildings or storage locations containing SN-82 through SN-94. If visible emissions are detected, the permittee shall conduct a 6-minute opacity reading in accordance with Method 9 at the point where visible emissions were detected. The results of these observations shall be recorded in a log which shall be kept on site and made available for inspection upon request. [8 CAR § 41-801 et seq. and 40 C.F.R. § 52 Subpart E]
100. The permittee may install sealed conveyors or sealed pneumatic conveyors that have no vents to the atmosphere. The permittee is not required to vent the conveyors to a baghouse if no vent is needed. [8 CAR § 41-605, Ark. Code Ann. § 8-4-203 as referenced by Ark. Code Ann. §§ 8-4-304 and 8-4-311, and 40 C.F.R. § 70.6]
101. The permittee shall implement a fugitive emission dust control plan to control dust emissions from the sources specified to require a dust control plan in Specific Condition 95. [8 CAR § 41-605, Ark. Code Ann. § 8-4-203 as referenced by Ark. Code Ann. §§ 8-4-304 and 8-4-311, and 40 C.F.R. § 70.6]

Slag Handling

SN-95 Drop Points Slag
 SN- 96 Slag Handling and Conveying
 SN-99B Slag Storage Piles

Source Description

SN-95 and SN-96 include conveyors, screening and crushing equipment used to primarily handle slag however on occasion, other miscellaneous solids may be processed. This process also includes various miscellaneous support processes, such as the use of torches to process slag material.

Wind Erosion, SN-99, is the emission from outdoor slag and storage piles due to wind erosion.

Specific Conditions

102. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by compliance with Specific Conditions 103 and 104. [8 CAR § 41-801 et seq. and 40 C.F.R. § 52 Subpart E]

SN	Description	Pollutant	lb/hr	tpy
SN-95	Drop Points Slag	PM	5.3	3.4
		PM ₁₀	2.6	1.7
		PM _{2.5}	0.9	0.6
SN-96	Slag Handling and Conveying	PM	1.1	1.2
		PM ₁₀	0.4	0.4
		PM _{2.5}	0.1	0.1
SN-99B	Slag Storage Piles	PM	0.2	0.6
		PM ₁₀	0.1	0.3
		PM _{2.5}	0.1	0.1

103. The permittee shall not process more than 650,000 tons of slag in any consecutive rolling 12-month period. [8 CAR § 41-801 et seq. and 40 C.F.R. § 52 Subpart E]
104. The permittee shall maintain monthly records of the amount of slag processed. These records shall include the monthly total of slag processed and the rolling 12-month total of slag processed. These records shall be updated by the 15th day of the month following the month to which the records pertain, kept on site, made available to Department personnel upon request, and submitted in accordance with General Provision 7. [8 CAR § 41-801 et seq. and 40 C.F.R. § 52 Subpart E]
105. Visible emissions may not exceed the limits specified in the following table of this permit as measured by EPA Reference Method 9.

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Source	Limit	Regulatory Citation
SN-95 SN-96 SN-99B	20%	8 CAR § 41-801 et seq. and 40 C.F.R. § 52 Subpart E

106. The permittee shall conduct weekly observations of the opacity from each slag processing transfer point and conveyor at the slag processing area. If visible emissions are detected, the permittee shall conduct a 6-minute opacity reading in accordance with Method 9 at the point where visible emissions were detected. The results of these observations shall be recorded in a log which shall be kept on site and made available for inspection upon request. [8 CAR § 41-801 et seq. and 40 C.F.R. § 52 Subpart E]

Roadway Sources

SN-97 Paved Roads
 SN-98 Unpaved Roads

Source Description

SN-97 accounts for emissions from paved roadways and SN-98 accounts for emissions from unpaved roadways.

Specific Conditions

107. The permittee shall not exceed the emission rates set forth in the following table. Compliance with this condition will be shown by application of dust suppressant as necessary to control dust emissions and by compliance with Specific Condition #109. [8 CAR § 41-801 et seq. and 40 C.F.R. § 52 Subpart E]

SN	Description	Pollutant	lb/hr	tpy
SN-97	Paved Roads	PM	0.7	2.9
		PM ₁₀	0.2	0.6
		PM _{2.5}	0.1	0.2
SN-98	Unpaved Roads	PM	2.2	9.6
		PM ₁₀	0.6	2.6
		PM _{2.5}	0.1	0.3

108. Dust suppression activities should be conducted in a manner and at a rate of application that will not cause runoff from the area being applied. Best Management Practices (40 CFR §122.44(k)) should be used around streams and waterbodies to prevent the dust suppression agent from entering Waters of the State. Except for potable water, no agent shall be applied within 100 feet of wetlands, lakes, ponds, springs, streams, or sinkholes. Failure to meet this condition may require the permittee to obtain a National Pollutant Discharge Elimination System (NPDES) permit in accordance with 40 CFR §122.1(b). [Ark. Code Ann. § 8-4-203 as referenced by Ark. Code Ann. §§ 8-4-304 and 8-4-311]
109. The permittee shall implement a fugitive emission dust control plan to control dust emissions from the roadways. [8 CAR § 41-605, Ark. Code Ann. § 8-4-203 as referenced by Ark. Code Ann. §§ 8-4-304 and 8-4-311, and 40 C.F.R. § 70.6]

Gasoline Storage Tanks and Dispensing Operation

SN-100 Gasoline Storage and Dispensing

Source Description

SN-100 accounts for emissions from gasoline storage tanks and refueling operations.

Specific Conditions

110. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by compliance with Specific Conditions #111 and #112. [8 CAR § 41-401 et seq. and 40 C.F.R. § 52 Subpart E]

SN	Pollutant	lb/hr	tpy
SN-100	VOC	0.3	0.8

111. The permittee shall maintain a throughput of no more than 500,000 gallons of gasoline through SN-100 per rolling 12-month period. [8 CAR § 41-605 and Ark. Code. Ann. § 8-4-203 as referenced by §§ 8-4-304 and 8-4-311]
112. The permittee shall maintain monthly records to demonstrate compliance with Specific Condition #111. Material Data Safety Sheets or other equivalent documents for gasoline shall be maintained on-site and made available upon request. The permittee shall update these records by the fifteenth day of the month following the month to which the records pertain. The twelve-month rolling totals and each individual month's data for gasoline usage shall be maintained on-site and made available to Department personnel upon request. [8 CAR § 41-605 and Ark. Code Ann. § 8-4-203 as referenced by §§ 8-4-304 and 8-4-311]
113. The facility has been determined to be subject to a Case-by-Case Maximum Achievable Control Technology (MACT) determination for the gasoline storage tanks and dispensing operations associated with the EV facility (SN-115). As a result of this Case-by-Case analysis, the facility must meet the following requirements:
- Install and use submerged fill pipes in operations of the source and
 - Maintain the following best management practices during operation of the source:
 - Minimize gasoline spills;
 - Clean up spills as expeditiously as practicable;
 - Cover all open gasoline containers and all gasoline storage tank fill-pipes with a gasketed seal when not in use; and
 - Minimize gasoline sent to open waste collection systems that collect and transport gasoline to reclamation and recycling devices, such as oil/water separators.

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[8 CAR § 41-204, 40 C.F.R. § 63.55, and Ark. Code Ann. § 8-4-203 as referenced by
Ark. Code Ann. §§ 8-4-304 and 8-4-311]

Hydrogen Plant

SN-111a Hydrogen Plant Methane Reformer #1 (PHG830)
SN-111b Hydrogen Plant Methane Reformer #2 (PHG250)
SN-149 Hydrogen Plant Methane Reformer #3
SN-150 Hydrogen Plant Methane Reformer #4

Source Description

Hydrogen Plant Methane Reformer #1 (PHG830) and Hydrogen Plant Methane Reformer #2 (PHG 250), SN-111a and SN-111b, are a 12.5 MMBtu/hr furnace and a 2.6 MMBtu/hr furnace that support the hydrogen plant. Hydrogen Plant Methane Reformers #3 and #4, SN-149 and SN-150, are both 11.7 MMBtu/hr furnaces that support the hydrogen plant.

Specific Conditions

114. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by combustion of only natural gas. [8 CAR § 41-401 et seq. and 40 C.F.R. § 52 Subpart E]

SN	Description	Pollutant	lb/hr	tpy
SN-111a	Hydrogen Plant Methane Reformer #1 (PHG830)	PM	0.1	0.5
		PM ₁₀	0.1	0.5
		PM _{2.5}	0.1	0.5
		SO ₂	0.1	0.1
		VOC	0.1	0.3
		CO	1.1	4.5
		NO _x	1.3	5.5
		Lead	0.00001	0.00003
		CO _{2e}	--	6,396
SN-111b	Hydrogen Plant Methane Reformer #2 (PHG250)	PM	0.1	0.1
		PM ₁₀	0.1	0.1
		PM _{2.5}	0.1	0.1
		SO ₂	0.1	0.1
		VOC	0.1	0.1
		CO	0.3	1.0
		NO _x	0.3	1.2
		Lead	0.00000127	0.00000558
		CO _{2e}	-	1,333
SN-149	Hydrogen Plant Reformer Furnace #3	PM	0.1	0.4
		PM ₁₀	0.1	0.4
		PM _{2.5}	0.1	0.4
		SO ₂	0.1	0.1
		VOC	0.1	0.3

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		CO	1.0	4.3
		NO _x	1.2	5.2
		Lead	0.0000058	0.000026
		CO ₂ e	-	6,007
SN-150	Hydrogen Plant Reformer Furnace #4	PM	0.1	0.4
		PM ₁₀	0.1	0.4
		PM _{2.5}	0.1	0.4
		SO ₂	0.1	0.1
		VOC	0.1	0.3
		CO	1.0	4.3
		NO _x	1.2	5.2
		Lead	0.0000058	0.000026
		CO ₂ e	-	6,007

115. The permittee shall not exceed the emission rates set forth in the following table. Compliance with this condition will be show by compliance with Plantwide Condition 5. [8 CAR § 41-801 et seq. and 40 C.F.R. § 52 Subpart E]

BACT Analysis Summary				
Source	Description	Pollutant	Control Technology	BACT Limit
SN-111a, SN-111b, SN-149, SN-150	Hydrogen Plant Reformer Furnaces	PM	Combustion of Natural gas and Good Combustion Practices (Periodic Equipment Maintenance)	0.0075 lb/MMBTU
		PM ₁₀		0.0075 lb/MMBTU
		PM _{2.5}		0.0075 lb/MMBTU
		Opacity		5%
		VOC	Low NO _x burners Combustion of clean fuel Good Combustion Practices (Periodic Equipment Maintenance)	0.0054 lb/MMBTU
		NO _x		0.1 lb/MMBTU

116. Visible emissions may not exceed the limits specified in the following table of this permit as measured by EPA Reference Method 9. Compliance with this condition will be shown by combustion of natural gas only and Plantwide Condition 5.

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Source	Limit	Regulatory Citation
SN-111a,SN-111b, SN-149, SN-150	5%	8 CAR § 41-801 et seq. and 40 C.F.R. § 52 Subpart E

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SECTION V: COMPLIANCE PLAN AND SCHEDULE

Big River Steel LLC will continue to operate in compliance with those identified regulatory provisions. The facility will examine and analyze future rules and regulations that may apply and determine their applicability with any necessary action taken on a timely basis.

SECTION VI: PLANTWIDE CONDITIONS

1. The permittee shall notify the Director in writing within thirty (30) days after commencing construction, completing construction, first placing the equipment and/or facility in operation, and reaching the equipment and/or facility target production rate. [8 CAR § 41-604, 40 C.F.R. § 52 Subpart E, and Ark. Code Ann. § 8-4-203 as referenced by Ark. Code Ann. §§ 8-4-304 and 8-4-311]
2. If the permittee fails to start construction within eighteen months or suspends construction for eighteen months or more, the Director may cancel all or part of this permit. [8 CAR § 41-310(b) and 40 C.F.R. § 52 Subpart E]
3. The permittee must test any equipment scheduled for testing, unless otherwise stated in the Specific Conditions of this permit or by any federally regulated requirements, within the following time frames: (1) new equipment or newly modified equipment within sixty (60) days of achieving the maximum production rate, but no later than 180 days after initial start up of the permitted source or (2) operating equipment according to the time frames set forth by the Division of Environmental Quality or within 180 days of permit issuance if no date is specified. 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 shall submit the compliance test results to the Division of Environmental Quality within sixty (60) calendar days after completing the testing. [8 CAR § 41-602 and/or 8 CAR § 40-902 and Ark. Code Ann. § 8-4-203 as referenced by Ark. Code Ann. §§ 8-4-304 and 8-4-311]
4. The permittee must provide:
 - a. Sampling ports adequate for applicable test methods;
 - b. Safe sampling platforms;
 - c. Safe access to sampling platforms; and
 - d. Utilities for sampling and testing equipment.

[8 CAR § 41-602 and/or 8 CAR § 40-902 and Ark. Code Ann. § 8-4-203 as referenced by Ark. Code Ann. §§ 8-4-304 and 8-4-311]
5. The permittee must operate the equipment, control apparatus and emission monitoring equipment within the design limitations. The permittee shall maintain the equipment in good condition at all times. [8 CAR § 41-203 and Ark. Code Ann. § 8-4-203 as referenced by Ark. Code Ann. §§ 8-4-304 and 8-4-311]
6. This permit subsumes and incorporates all previously issued air permits for this facility. [8 CAR pt. 42 and Ark. Code Ann. § 8-4-203 as referenced by Ark. Code Ann. §§ 8-4-304 and 8-4-311]

7. Unless otherwise specified in the permit, approval to construct any new major stationary source or a major modification subject to 40 C.F.R. § 52.21 shall become invalid if construction is not commenced within 18 months after receipt of such approval, if construction is discontinued for a period of 18 months or more, or if construction is not completed within a reasonable time. The Division of Environmental Quality may extend the 18-month period upon a satisfactory showing that an extension is justified. [8 CAR § 41-801 et seq. and 40 C.F.R. § 52 Subpart E]
8. The permittee shall install, operate, and maintain ambient air monitors for PM₁₀, PM_{2.5}, and NO₂. The permittee shall submit a monitoring protocol to the Department within 180 days of the anticipated startup date of the facility. The Department must approve of the monitoring protocol prior to installation of the monitors. The monitors shall be installed and operating within 180 days of the startup of the EAFs. [8 CAR § 41-801 et seq. and 40 C.F.R. Part 52, Subpart E]
9. The following table summarizes the applicability dates for the 40 C.F.R. Part 63 subparts which apply to the facility as a major source of HAPs. The facility will comply with each subpart by the applicability timeline listed. Appendix M contains a more specific list by source showing applicability. [8 CAR § 41-801 et seq. and 40 C.F.R. Part 52, Subpart E]

40 C.F.R. Part 63 Subpart	Equipment	Applicability
Subpart DDDDD Boilers and Process Heaters	Boilers and Process Heaters which construction commenced prior to startup of the CCL (SN-107) including SN-04, SN-22, SN-26, SN-28, SN-29, SN-39, SN-47, SN-51, SN-53, SN-111a, and SN-120	A boiler or process heater is new if you commence construction of the boiler or process heater after June 4, 2010, and you meet the applicability criteria [one of which is major source status] at the time you commence construction. New units must comply “upon startup.” This would be immediately upon startup of SN-107. 40 C.F.R. §§ 63.7490(b) and 63.7495(c)(1)

40 C.F.R. Part 63 Subpart	Equipment	Applicability
	Boilers and Process Heaters which construction commenced after startup of the CCL (SN-107) including SN-27, SN-40, SN-42, SN-47, SN-54, SN-56, SN-58B, SN-60B, SN-101, SN-125, SN-126, SN-111b, SN-134, SN-140, SN-141, SN-142, SN-149, SN-150	A boiler or process heater is existing if it is “not new or reconstructed.” Existing units must comply “within 3 years after the source becomes a major source.” This would be 3 years after startup of SN-107 40 C.F.R. §§ 63.7490(d) and 63.7495(c)(2)
Subpart SSSS Coil Coating	Color Coating Line (SN-107)	Any source that commenced construction after July 18,2000 is a new source, and MACT applies “immediately upon start-up of the affected source.” This would be immediately upon startup of SN-107. 40 C.F.R. § 63.5130
	Annealing Coating Line (SN-53)	
	Flattening and Coating Line – Drying Furnace Process (SN-58A and SN-60A)	
Subpart CCC Steel Pickling	Steel Pickling Lines including SN-24, SN-50, and SN-128	Any source that commences construction after September 18, 1997, shall achieve compliance “immediately upon startup of operations.” This would be immediately upon startup of SN-107. 40 C.F.R. § 63.1160.
Subpart ZZZZ RICE/ Emergency Generators	Emergency Generators	Any stationary RICE for which construction or reconstruction is commenced before your area source becomes a major source of HAP must be in compliance with the provisions of this subpart... within 3 years after the area source becomes a major source of HAP. Any new units comply upon startup. 40 C.F.R. §§ 63.6595(b)(1) and 63.6595(b)(2)

SECTION VII: 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 8 CAR pt. 40 and pt. 41 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 April 29, 2024. [8 CAR § 42-204 and Ark. Code Ann. § 8-4-203 as referenced by Ark. Code Ann. §§ 8-4-304 and 8-4-311]

Description	Category
Water Bath Vaporizer	A-1
Tundish Dryer	A-1
Continuous Galvanizing Line Dryer	A-1
Laboratory Test Furnace	A-1
Diesel Fuel Tanks	A-3
Engine Oil Tank	A-3
Steel Cutting	A-7
Railcar Cutting Operation	A-7
Tundish Cutting Operation	A-7
Slag Yard Shredder	A-7
Mechanical Cooling Tower	A-13
7,000 and 500 gal Diesel Exhaust Fluid Storage Tank	A-13
Air Products Cooling Towers BRS #1 and #2	A-13
Three Zinc Storage Area Heaters (2.17 MMBtu/hr each)	B-2

SECTION VIII: GENERAL PROVISIONS

1. Any terms or conditions included in this permit which specify and reference Arkansas Pollution Control & Ecology Commission 8 CAR pt. 40 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 8 CAR pt. 40 was adopted pursuant to the Arkansas Water and Air Pollution Control Act (Ark. Code Ann. § 8-4-101 et seq.). Any terms or conditions included in this permit which specify and reference Arkansas Pollution Control & Ecology Commission 8 CAR pt. 40 or the Arkansas Water and Air Pollution Control Act (Ark. Code Ann. § 8-4-101 et seq.) as the origin of and authority for the terms or conditions are enforceable under this Arkansas statute. [40 C.F.R. § 70.6(b)(2)]
2. This permit shall be valid for a period of five (5) years beginning on the date this permit becomes effective and ending five (5) years later. [40 C.F.R. § 70.6(a)(2) and 8 CAR § 42-601(2)]
3. The permittee must submit a complete application for permit renewal at least six (6) months before permit expiration. Permit expiration terminates the permittee's right to operate unless the permittee submitted a complete renewal application at least six (6) months before permit expiration. If the permittee submits a complete application, the existing permit will remain in effect until the Division of Environmental Quality takes final action on the renewal application. The Division of Environmental Quality will not necessarily notify the permittee when the permit renewal application is due. [8 CAR § 42-306]
4. Where an applicable requirement of the Clean Air Act, as amended, 42 U.S.C. 7401, et seq. (Act) is more stringent than an applicable requirement of regulations promulgated under Title IV of the Act, the permit incorporates both provisions into the permit, and the Director or the Administrator can enforce both provisions. [40 C.F.R. § 70.6(a)(1)(ii) and 8 CAR § 42-601(1)(C)]
5. The permittee must maintain the following records of monitoring information as required by this permit.
 - a. The date, place as defined in this permit, and time of sampling or measurements;
 - b. The date(s) analyses performed;
 - c. The company or entity performing the analyses;
 - d. The analytical techniques or methods used;
 - e. The results of such analyses; and
 - f. The operating conditions existing at the time of sampling or measurement.

[40 C.F.R. § 70.6(a)(3)(ii)(A) and 8 CAR § 42-601(3)(C)]

6. The permittee must retain the records of all required monitoring data and support information for at least five (5) years from the date of the monitoring sample, measurement, report, or application. Support information includes all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, and copies of all reports required by this permit. [40 C.F.R. § 70.6(a)(3)(ii)(B) and 8 CAR § 42-601(3)(C)(ii)]
7. The permittee must submit reports of all required monitoring every six (6) months. If the permit establishes no other reporting period, the reporting period shall end on the last day of the month six months after the issuance of the initial Title V permit and every six months thereafter. The report is due on the first day of the second month after the end of the reporting period. The first report due after issuance of the initial Title V permit shall contain six months of data and each report thereafter shall contain 12 months of data. The report shall contain data for all monitoring requirements in effect during the reporting period. If a monitoring requirement is not in effect for the entire reporting period, only those months of data in which the monitoring requirement was in effect are required to be reported. The report must clearly identify all instances of deviations from permit requirements. A responsible official as defined in 8 CAR § 42-104 must certify all required reports. The permittee will send the reports electronically using <https://portal.adeq.state.ar.us> or mail them to the address below:

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

[40 C.F.R. § 70.6(a)(3)(iii)(A) and 8 CAR § 42-601(3)(D)(i)]

8. The permittee shall report to the Division of Environmental Quality all deviations from permit requirements, including those attributable to upset conditions as defined in the permit.
 - a. For all upset conditions (as defined in 8 CAR § 41-501), the permittee will make an initial report to the Division of Environmental Quality by the next business day after the discovery of the occurrence. The initial report may be made by telephone and shall include:
 - i. The facility name and location;
 - ii. The process unit or emission source deviating from the permit limit;
 - iii. The permit limit, including the identification of pollutants, from which deviation occurs;
 - iv. The date and time the deviation started;
 - v. The duration of the deviation;

- vi. The emissions during the deviation;
- vii. The probable cause of such deviations;
- viii. Any corrective actions or preventive measures taken or being taken to prevent such deviations in the future; and
- ix. The name of the person submitting the report.

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

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

[8 CAR § 41-501, 8 CAR § 41-502, 8 CAR § 42-601(3)(D)(ii), and 40 C.F.R. § 70.6(a)(3)(iii)(B)]

- 9. If any provision of the permit or the application thereof to any person or circumstance is held invalid, such invalidity will not affect other provisions or applications hereof which can be given effect without the invalid provision or application, and to this end, provisions of this Rule are declared to be separable and severable. [40 C.F.R. § 70.6(a)(5), Rule 8 CAR § 42-601(5), and Ark. Code Ann. § 8-4-203 as referenced by Ark. Code Ann. §§ 8-4-304 and 8-4-311]
- 10. The permittee must comply with all conditions of this Part 70 permit. Any permit noncompliance with applicable requirements as defined in 8 CAR pt. 42 constitutes a violation of the Clean Air Act, as amended, 42 U.S.C. § 7401, et seq. and is grounds for enforcement action; for permit termination, revocation and reissuance, for permit modification; or for denial of a permit renewal application. [40 C.F.R. § 70.6(a)(6)(i) and 8 CAR § 42-601(6)(A)]
- 11. It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity to maintain compliance with the conditions of this permit. [40 C.F.R. § 70.6(a)(6)(ii) and 8 CAR § 42-601(6)(B)]
- 12. The Division of Environmental Quality may modify, revoke, reopen and reissue the permit or terminate the permit for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, termination, or of a notification of

- planned changes or anticipated noncompliance does not stay any permit condition. [40 C.F.R. § 70.6(a)(6)(iii) and 8 CAR § 42-601(6)(C)]
13. This permit does not convey any property rights of any sort, or any exclusive privilege. [40 C.F.R. § 70.6(a)(6)(iv) and 8 CAR § 42-601(6)(D)]
 14. The permittee must furnish to the Director, within the time specified by the Director, any information that the Director may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating the permit or to determine compliance with the permit. Upon request, the permittee must also furnish to the Director copies of records required by the permit. For information the permittee claims confidentiality, the Division of Environmental Quality may require the permittee to furnish such records directly to the Director along with a claim of confidentiality. [40 C.F.R. § 70.6(a)(6)(v) and 8 CAR § 42-601(6)(E)]
 15. The permittee must pay all permit fees in accordance with the procedures established in 8 CAR pt. 12. [40 C.F.R. § 70.6(a)(7) and 8 CAR § 42-601(7)]
 16. No permit revision shall be required, under any approved economic incentives, marketable permits, emissions trading and other similar programs or processes for changes provided for elsewhere in this permit. [40 C.F.R. § 70.6(a)(8) and 8 CAR § 42-601(8)]
 17. If the permit allows different operating scenarios, the permittee shall, contemporaneously with making a change from one operating scenario to another, record in a log at the permitted facility a record of the operational scenario. [40 C.F.R. § 70.6(a)(9)(i) and 8 CAR § 42-601(9)(B)(i)]
 18. The Administrator and citizens may enforce under the Act all terms and conditions in this permit, including any provisions designed to limit a source's potential to emit, unless the Division of Environmental Quality specifically designates terms and conditions of the permit as being federally unenforceable under the Act or under any of its applicable requirements. [40 C.F.R. § 70.6(b) and 8 CAR § 42-602(a) and (b)]
 19. Any document (including reports) required by this permit pursuant to 40 C.F.R. § 70 must contain a certification by a responsible official as defined in 8 CAR § 42-104. [40 C.F.R. § 70.6(c)(1) and 8 CAR § 42-603(1)]
 20. The permittee must allow an authorized representative of the Division of Environmental Quality, upon presentation of credentials, to perform the following: [40 C.F.R. § 70.6(c)(2) and 8 CAR § 42-603(2)]
 - a. Enter upon the permittee's premises where the permitted source is located or emissions related activity is conducted, or where records must be kept under the conditions of this permit;

- b. Have access to and copy, at reasonable times, any records required under the conditions of this permit;
 - c. Inspect at reasonable times any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit; and
 - d. As authorized by the Act, sample or monitor at reasonable times substances or parameters for assuring compliance with this permit or applicable requirements.
- 21. The permittee shall submit a compliance certification with the terms and conditions contained in the permit, including emission limitations, standards, or work practices. The permittee must submit the compliance certification annually. If the permit establishes no other reporting period, the reporting period shall end on the last day of the anniversary month of the initial Title V permit. The report is due on the first day of the second month after the end of the reporting period. The permittee must also submit the compliance certification to the Administrator as well as to the Division of Environmental Quality. All compliance certifications required by this permit must include the following: [40 C.F.R. § 70.6(c)(5) and 8 CAR § 42-603(5)(B)(iii)]
 - a. The identification of each term or condition of the permit that is the basis of the certification;
 - b. The compliance status;
 - c. Whether compliance was continuous or intermittent;
 - d. The method(s) used for determining the compliance status of the source, currently and over the reporting period established by the monitoring requirements of this permit; and
 - e. Such other facts as the Division of Environmental Quality may require elsewhere in this permit or by § 114(a)(3) and § 504(b) of the Act.
- 22. Nothing in this permit will alter or affect the following: [8 CAR § 42-604(c)]
 - a. The provisions of Section 303 of the Act (emergency orders), including the authority of the Administrator under that section;
 - b. The liability of the permittee for any violation of applicable requirements prior to or at the time of permit issuance;
 - c. The applicable requirements of the acid rain program, consistent with § 408(a) of the Act; or
 - d. The ability of EPA to obtain information from a source pursuant to § 114 of the Act.
- 23. This permit authorizes only those pollutant emitting activities addressed in this permit. [Ark. Code Ann. § 8-4-203 as referenced by Ark. Code Ann. §§ 8-4-304 and 8-4-311]
- 24. The permittee may request in writing and at least 15 days in advance of the deadline, an extension to any testing, compliance or other dates in this permit. No such extensions are authorized until the permittee receives written 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.

[8 CAR § 40-214(a), 8 CAR § 41-316(a), 8 CAR § 42-913(a), Ark. Code Ann. § 8-4-203 as referenced by Ark. Code Ann. §§ 8-4-304 and 8-4-311, and 40 C.F.R. § 52 Subpart E]

25. The permittee may request in writing and at least 30 days in advance, temporary emissions and/or testing that would otherwise exceed an emission rate, throughput requirement, or other limit in this permit. No such activities are authorized until the permittee receives written 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.

[8 CAR § 40-214(b), 8 CAR § 41-316(b), 8 CAR § 42-913(b), Ark. Code Ann. § 8-4-203 as referenced by Ark. Code Ann. §§ 8-4-304 and 8-4-311, and 40 C.F.R. § 52 Subpart E]

26. The permittee may request in writing and at least 30 days in advance, an alternative to the specified monitoring in this permit. No such alternatives are authorized until the permittee receives written 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.

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AFIN: 47-00991

[8 CAR § 40-214(c), 8 CAR § 41-316(c), 8 CAR § 42-913(c), Ark. Code Ann. § 8-4-203 as referenced by Ark. Code Ann. §§ 8-4-304 and 8-4-311, and 40 C.F.R. § 52 Subpart E]

27. Any credible evidence based on sampling, monitoring, and reporting may be used to determine violations of applicable emission limitations. [8 CAR § 40-901, 8 CAR § 41-601, 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***

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

Source: [72 FR 32759](#), June 13, 2007, unless otherwise noted.

§ 60.40c Applicability and delegation of authority.

- (a) Except as provided in [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]

§ 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]

§ 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:

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

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]

§ 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]

§ 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_{hoO}) is used in Equation 19-19 of Method 19 of [appendix A of this part](#) to compute the adjusted E_{ao} (E_{aoO}). The E_{hoO} is computed using the following formula:

$$E_{hoO} = \frac{E_{ho} - E_w(1 - X_k)}{X_k}$$

Where:

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

E_{ho} = Hourly SO₂ emission rate, ng/J (lb/MMBtu);

E_w = SO₂ 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 SO₂ 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 SO₂ emission rate is computed using the following formula:

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

Where:

%P_s = Potential SO₂ emission rate, in percent;

%R_g = SO₂ removal efficiency of the control device as determined by Method 19 of [appendix A of this part](#), in percent; and

%R_f = SO₂ 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_{go}) is computed from E_{ao} from [paragraph \(e\)\(1\)](#) of this section and an adjusted average SO₂ inlet rate (E_{ai}) using the following formula:

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

Where:

%R_{go} = Adjusted %R_g, in percent;

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

E_{ai} = Adjusted average SO₂ inlet rate, ng/J (lb/MMBtu).

(ii) To compute E_{ai}, an adjusted hourly SO₂ inlet rate (E_{hio}) is used. The E_{hio} is computed using the following formula:

$$E_{hio} = \frac{E_h - E_o (1 - X_v)}{X_v}$$

Where:

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

E_{hi} = Hourly SO₂ inlet rate, ng/J (lb/MMBtu);

E_w = SO₂ 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 SO₂ 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 SO₂ 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_{ho} under [paragraphs \(d\)](#), [\(e\)](#), or [\(f\)](#) of this section, as applicable, whether or not the minimum emissions data requirements under [§ 60.46c\(f\)](#) are achieved. All valid emissions data, including valid data collected during periods of startup, shutdown, and malfunction, shall be used in calculating %P_s or E_{ho} pursuant to [paragraphs \(d\)](#), [\(e\)](#), or [\(f\)](#) of this section, as applicable.

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

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

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

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

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

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

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

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

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

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

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

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

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

(i) The O₂ or CO₂ measurements and PM measurements obtained under this section,

(ii) The dry basis F factor, and

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

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

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

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

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

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

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

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

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

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

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

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

(ii) [Reserved]

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

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

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

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

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

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

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

(13) When PM emissions data are not obtained because of CEMS breakdowns, repairs, calibration checks, and zero and span adjustments, emissions data shall be obtained by using other monitoring systems as approved by the Administrator or EPA Reference Method 19 of

[appendix A of this part](#) to provide, as necessary, valid emissions data for a minimum of 75 percent of total operating hours on a 30-day rolling average.

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

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

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

§ 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.

§ 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\(c\)](#).

[[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]

§ 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]

Appendix B

40 C.F.R. Part 60 Subpart AAa

***Standards of Performance for Electric Arc Furnaces and Argon-Oxygen Decarburization
Vessels Constructed After August 7, 1983, and on or Before May 16, 2022***

Subpart AAa—Standards of Performance for Steel Plants: Electric Arc Furnaces and Argon-Oxygen Decarbonization Vessels Constructed After August 17, 1983, and On or Before May 16, 2022

Source:[49 FR 43845](#), Oct. 31, 1984, unless otherwise noted.

§ 60.270a Applicability and designation of affected facility.

(a) The provisions of this subpart are applicable to the following affected facilities in steel plants that produce carbon, alloy, or specialty steels: electric arc furnaces, argon-oxygen decarburization vessels, and dust-handling systems.

(b) The provisions of this subpart apply to each affected facility identified in [paragraph \(a\)](#) of this section that commences construction, modification, or reconstruction after August 17, 1983 and on or before May 16, 2022, where a modification is any physical change in, or change in the method of operation of, an existing facility which increases the amount of any air pollutant (to which this standard applies) emitted into the atmosphere by that facility or which results in the emission of any air pollutant (to which this standard applies) into the atmosphere not previously emitted.

[[49 FR 43845](#), Oct. 31, 1984, as amended at [88 FR 58481](#), Aug. 25, 2023]

§ 60.271a Definitions.

As used in this subpart, all terms not defined herein shall have the meaning given them in the Act and in [subpart A of this part](#).

Argon-oxygen decarburization vessel (AOD vessel) means any closed-bottom, refractory-lined converter vessel with submerged tuyeres through which gaseous mixtures containing argon and oxygen or nitrogen may be blown into molten steel for further refining.

Bag leak detection system means a system that is capable of continuously monitoring relative particulate matter (dust) loadings in the exhaust of a baghouse to detect bag leaks and other conditions that result in increases in particulate loadings. A bag leak detection system includes, but is not limited to, an instrument that operates on triboelectric, electrodynamic, light scattering, light transmittance, or other effect to continuously monitor relative particulate matter loadings.

Capture system means the equipment (including ducts, hoods, fans, dampers, etc.) used to capture particulate matter generated by the operation of an electric arc furnace or AOD vessel and transport captured particulate matter to the air pollution control device.

Charge means the addition of iron and steel scrap or other materials into the shell of an electric arc furnace or the addition of molten steel or other materials into the top of an AOD vessel.

Charging period means the time period when iron and steel scrap or other materials are added into the top of an electric arc furnace until the melting and refining period commences.

Control device means the air pollution control equipment used to remove particulate matter from the effluent gas stream generated by an electric arc furnace or AOD vessel.

Damper means any device used to open, close or throttle a DEC system or hood designed to capture emissions from an EAF or AOD vessel and route them to the associated control device(s). It does not include isolation dampers used to isolate a fan or baghouse compartment for repair or cleaning, or dampers controlling collection of emissions from equipment other than an EAF or AOD vessel.

Direct-shell evacuation control system (DEC system) means a system that creates and maintains a negative pressure within the electric arc furnace shell during melting and refining, and transports emissions to the control device.

Dust-handling system means equipment used to handle particulate matter collected by the control device for an electric arc furnace or AOD vessel subject to this subpart. For the purposes of this subpart, the dust-handling system shall consist of the control device dust hoppers, the dust-conveying equipment, any silo, dust storage equipment, the dust-treating equipment (*e.g.*, pug mill, pelletizer), dust transfer equipment (including, but not limited to transfers from a silo to a truck or rail car), and any secondary control devices used with the dust transfer equipment.

Electric arc furnace (EAF) means a furnace that produces molten steel and heats the charge materials with electricity using-carbon electrodes. For the purposes of this subpart, an EAF shall consist of the furnace shell and roof and the transformer. Furnaces that continuously feed direct-reduced iron ore pellets as the primary source of iron are not affected facilities within the scope of this definition.

Heat cycle means the period beginning when scrap is charged to an EAF shell and ending when the EAF tap is completed or beginning when molten steel is charged to an AOD vessel and ending when the AOD vessel tap is completed.

Melting and refining period means the time period commencing at the initial energizing of the electrode to begin the melting process and ending at the initiation of the tapping period, excluding any intermediate times when the electrodes are not energized as part of the melting process.

Melting means that phase of steel production cycle during which the iron and steel scrap is heated to the molten state.

Negative-pressure fabric filter means a fabric filter with the fans on the downstream side of the filter bags.

Positive-pressure fabric filter means a fabric filter with the fans on the upstream side of the filter bags.

Refining means that phase of the steel production cycle during which impurities are removed from the molten steel and alloys are added to reach the final metal chemistry.

Shop means the building that houses one or more EAF's or AOD vessels and serves as the point from which compliance with [§ 60.272a\(a\)\(3\)](#), "Standard for Particulate Matter," is measured.

Shop opacity means the arithmetic average of 24 observations of the opacity of any EAF or AOD emissions emanating from, and not within, the shop, taken in accordance with EPA Method 9 of [appendix A of this part](#). Alternatively, ASTM D7520-16 (incorporated by reference, see [§ 60.17](#)), may be used with the following five conditions:

- (1) During the digital camera opacity technique (DCOT) certification procedure outlined in [Section 9.2](#) of ASTM D7520-16 (incorporated by reference, see [§ 60.17](#)), the owner or operator or the DCOT vendor must present the plumes in front of various backgrounds of color and contrast representing conditions anticipated during field use such as blue sky, trees, and mixed backgrounds (clouds and/or a sparse tree stand);
- (2) The owner or operator must also have standard operating procedures in place including daily or other frequency quality checks to ensure the equipment is within manufacturing specifications as outlined in [Section 8.1](#) of ASTM D7520-16 (incorporated by reference, see [§ 60.17](#));
- (3) The owner or operator must follow the recordkeeping procedures outlined in [§ 60.7\(f\)](#) for the DCOT certification, compliance report, data sheets, and all raw unaltered JPEGs used for opacity and certification determination;
- (4) The owner or operator or the DCOT vendor must have a minimum of four independent technology users apply the software to determine the visible opacity of the 300 certification plumes. For each set of 25 plumes, the user may not exceed 15 percent opacity of anyone reading and the average error must not exceed 7.5 percent opacity;
- (5) Use of this approved alternative does not provide or imply a certification or validation of any vendor's hardware or software. The onus to maintain and verify the certification and/or training of the DCOT camera, software, and operator in accordance with ASTM D7520-16 (incorporated by reference, see [§ 60.17](#)) and these requirements is on the facility, DCOT operator, and DCOT vendor.

Tap means the pouring of molten steel from an EAF or AOD vessel.

Tapping period means the time period commencing at the moment an EAF begins to pour molten steel and ending either three minutes after steel ceases to flow from an EAF, or six minutes after steel begins to flow, whichever is longer.

[[49 FR 43845](#), Oct. 31, 1984, as amended at [64 FR 10110](#), Mar. 2, 1999; [70 FR 8532](#), Feb. 22, 2005; [88 FR 58481](#), Aug. 25, 2023]

§ 60.272a Standard for particulate matter.

(a) On and after the date of which the performance test required to be conducted by [§ 60.8](#) is completed, no owner or operator subject to the provisions of this subpart shall cause to be discharged into the atmosphere from an EAF or an AOD vessel any gases which:

(1) Exit from a control device and contain particulate matter in excess of 12 mg/dscm (0.0052 gr/dscf);

(2) Exit from a control device and exhibit 3 percent opacity or greater, as measured in accordance with EPA Method 9 of [appendix A of this part](#), or, as an alternative, according to ASTM D7520-16 (incorporated by reference, see [§ 60.17](#)), with the caveats described under *Shop opacity* in [§ 60.271](#); and

(3) Exit from a shop and, due solely to the operations of any affected EAF(s) or AOD vessel(s), exhibit 6 percent opacity or greater, as measured in accordance with EPA Method 9 of [appendix A of this part](#), or, as an alternative, according to ASTM D7520-16 (incorporated by reference, see [§ 60.17](#)), with the caveats described under *Shop opacity* in [§ 60.271](#). Shop opacity shall be recorded for any point(s) where visible emissions are observed. Where it is possible to determine that a number of visible emission sites relate to only one incident of visible emissions, only one observation of shop opacity will be required. In this case, the shop opacity observations must be made for the site of highest opacity that directly relates to the cause (or location) of visible emissions observed during a single incident.

(b) On and after the date on which the performance test required to be conducted by [§ 60.8](#) is completed, no owner or operator subject to the provisions of this subpart shall cause to be discharged into the atmosphere from the dust-handling system any gases that exhibit 10 percent opacity or greater, as measured in accordance with EPA Method 9 of [appendix A of this part](#), or, as an alternative, according to ASTM D7520-16 (incorporated by reference, see [§ 60.17](#)), with the caveats described under *Shop opacity* in [§ 60.271](#).

[[88 FR 58482](#), Aug. 25, 2023]

§ 60.273a Emission monitoring.

(a) Except as provided under [paragraphs \(b\) and \(c\)](#) of this section, a continuous monitoring system for the measurement of the opacity of emissions discharged into the atmosphere from the control device(s) shall be installed, calibrated, maintained, and operated by the owner or operator subject to the provisions of this subpart.

(b) No continuous monitoring system shall be required on any control device serving the dust-handling system.

(c)

(1) A continuous monitoring system for the measurement of the opacity of emissions discharged into the atmosphere from the control device(s) is not required:

(i) On any modular, multistack, negative-pressure or positive-pressure fabric filter if observations of the opacity of the visible emission from the control device are performed by a certified visible emission observer; or

(ii) On any single-stack fabric filter if observations of the opacity of the visible emissions from the control device are performed by a certified visible emission observer and the owner installs and operates a bag leak detection system according to [paragraph \(e\)](#) of this section whenever the control device is being used to remove particulate matter from the EAF or AOD.

(2) Visible emission observations shall be conducted at least once per day of the control device for at least three 6-minute periods when the furnace is operating in the melting and refining period. All visible emissions observations shall be conducted in accordance with EPA Method 9 of appendix A to this part, or, as an alternative, according to ASTM D7520-16 (incorporated by reference, see [§ 60.17](#)), with the caveats described under *Shop opacity* in [§ 60.271](#).

(3) If visible emissions occur from more than one point, the opacity shall be recorded for any points where visible emissions are observed. Where it is possible to determine that a number of visible emission points relate to only one incident of the visible emission, only one set of three 6-minute observations will be required. In that case, EPA Method 9 observations must be made for the point of highest opacity that directly relates to the cause (or location) of visible emissions observed during a single incident. Records shall be maintained of any 6-minute average that is in excess of the emission limit specified in [§ 60.272\(a\)\(2\)](#).

(d) A furnace static pressure monitoring device is not required on any EAF equipped with a DEC system if observations of shop opacity are performed by a certified visible emission observer as follows:

(1) At least once per day when the furnace is operating.

(2) No less than once per week, during the heat cycle as defined in [§ 60.271a](#), melt shop with more than one EAF shall conduct these readings while all EAFs are in operation. All EAFs are not required to be on the same schedule for tapping.

(3) Shop opacity shall be determined as the arithmetic average of 24 consecutive 15-second opacity observations of emissions from the shop taken in accordance with EPA Method 9, or, as an alternative, according to ASTM D7520-16 (incorporated by reference, see [§ 60.17](#)), with the

caveats described under *Shop opacity* in [§ 60.271](#). Shop opacity shall be recorded for any point(s) where visible emissions are observed. Where it is possible to determine that a number of visible emission points relate to only one incident of visible emissions, only one observation of shop opacity will be required. In this case, the shop opacity observations must be made for the point of highest opacity that directly relates to the cause (or location) of visible emissions observed during a single incident.

(e) A bag leak detection system must be installed on all single-stack fabric filters and operated whenever the control device is being used to remove particulate matter from the EAF or AOD vessel if the owner or operator elects not to install and operate a continuous opacity monitoring system as provided for under [paragraph \(c\)](#) of this section. In addition, the owner or operator shall meet the visible emissions observation requirements in [paragraph \(c\)](#) of this section. The bag leak detection system must meet the specifications and requirements of [paragraphs \(e\)\(1\) through \(8\)](#) of this section.

(1) The bag leak detection system must be certified by the manufacturer to be capable of detecting particulate matter emissions at concentrations of 1 milligram per actual cubic meter (0.00044 grains per actual cubic foot) or less.

(2) The bag leak detection system sensor must provide output of relative particulate matter loadings and the owner or operator shall continuously record the output from the bag leak detection system using electronic or other means (*e.g.*, using a strip chart recorder or a data logger.)

(3) The bag leak detection system must be equipped with an alarm system that will activate when an increase in relative particulate loading is detected over the alarm set point established according to [paragraph \(e\)\(4\)](#) of this section, and the alarm must be located such that it can be identified by the appropriate plant personnel.

(4) For each bag leak detection system required by [paragraph \(e\)](#) of this section, the owner or operator shall develop and submit to the Administrator or delegated authority, for approval, a site-specific monitoring plan that addresses the items identified in paragraphs (i) through (v) of this [paragraph \(e\)\(4\)](#). For each bag leak detection system that operates based on the triboelectric effect, the monitoring plan shall be consistent with the recommendations contained in EPA-454/R-98-015, Fabric Filter Bag Leak Detection Guidance (incorporated by reference, see [§ 60.17](#)). The owner or operator shall operate and maintain the bag leak detection system according to the site-specific monitoring plan at all times. The plan shall describe the following:

(i) Installation of the bag leak detection system;

(ii) Initial and periodic adjustment of the bag leak detection system including how the alarm set-point will be established;

- (iii) Operation of the bag leak detection system including quality assurance procedures;
 - (iv) How the bag leak detection system will be maintained including a routine maintenance schedule and spare parts inventory list; and
 - (v) How the bag leak detection system output shall be recorded and stored.
- (5) The initial adjustment of the system shall, at a minimum, consist of establishing the baseline output by adjusting the sensitivity (range) and the averaging period of the device, and establishing the alarm set points and the alarm delay time (if applicable).
- (6) Following initial adjustment, the owner or operator shall not adjust the averaging period, alarm set point, or alarm delay time without approval from the Administrator or delegated authority except as provided for in [paragraphs \(e\)\(6\)\(i\)](#) and [\(ii\)](#) of this section.
- (i) Once per quarter, the owner or operator may adjust the sensitivity of the bag leak detection system to account for seasonal effects including temperature and humidity according to the procedures identified in the site-specific monitoring plan required under [paragraph \(e\)\(4\)](#) of this section.
- (ii) If opacities greater than zero percent are observed over four consecutive 15-second observations during the daily opacity observations required under [paragraph \(c\)](#) of this section and the alarm on the bag leak detection system alarm is not activated, the owner or operator shall lower the alarm set point on the bag leak detection system to a point where the alarm would have been activated during the period when the opacity observations were made.
- (7) For negative pressure, induced air baghouses, and positive pressure baghouses that are discharged to the atmosphere through a stack, the bag leak detection sensor must be installed downstream of the baghouse or upstream of any wet scrubber.
- (8) Where multiple detectors are required, the system's instrumentation and alarm may be shared among detectors.
- (f) For each bag leak detection system installed according to [paragraph \(e\)](#) of this section, the owner or operator shall initiate procedures to determine the cause of all alarms within 1 hour of an alarm. The cause of the alarm must be alleviated within 24 hours of the time the alarm occurred by taking whatever response action(s) are necessary. Response actions may include, but are not limited to, the following:
- (1) Inspecting the baghouse for air leaks, torn or broken bags or filter media, or any other condition that may have caused an increase in particulate emissions;
 - (2) Sealing off defective bags or filter media;
 - (3) Replacing defective bags or filter media or otherwise repairing the control device;

- (4) Sealing off a defective baghouse compartment;
 - (5) Cleaning the bag leak detection system probe or otherwise repairing the bag leak detection system;
 - (6) Establishing to the extent acceptable by the delegated authority that the alarm was a false alarm and not caused by a bag leak or other malfunction that could reasonably result in excess particulate emissions; and
 - (7) Shutting down the process producing the particulate emissions.
- (g) In approving the site-specific monitoring plan required in [paragraph \(e\)\(4\)](#) of this section, the Administrator or delegated authority may allow owners or operators more than 24 hours to alleviate specific conditions that cause an alarm if the owner or operator identifies the condition that could lead to an alarm in the monitoring plan, adequately explains why it is not feasible to alleviate the condition within 24 hours of the time the alarm occurred, and demonstrates that the requested additional time will ensure alleviation of the condition as expeditiously as practicable.
- [[49 FR 43845](#), Oct. 31, 1984, as amended at [54 FR 6672](#), Feb. 14, 1989; [64 FR 10111](#), Mar. 2, 1999; [70 FR 8532](#), Feb. 22, 2005; [88 FR 58482](#), Aug. 25, 2023; [89 FR 11205](#), Feb. 14, 2024]

§ 60.274a Monitoring of operations.

- (a) The owner or operator subject to the provisions of this subpart shall maintain records of the following information:
- (1) All data obtained under [paragraph \(b\)](#) of this section; and
 - (2) All monthly operational status inspections performed under [paragraph \(c\)](#) of this section.
- (b) Except as provided under [paragraph \(e\)](#) of this section, the owner or operator subject to the provisions of this subpart shall:
- (1) Monitor and record once per shift the block 15-minute average furnace static pressure (if a DEC system is in use, and a furnace static pressure gauge is installed according to [paragraph \(f\)](#) of this section) and either:
 - (i) Install, calibrate, and maintain a monitoring device that continuously records the capture system fan motor amperes and damper position(s);
 - (ii) Monitor and record as no greater than 15-minute integrated block average basis the volumetric flow rate through each separately ducted hood; or
 - (iii) Install, calibrate, and maintain a monitoring device that continuously records the volumetric flow rate at the control device inlet and record damper positions(s).

(2) The volumetric flow monitoring device(s) may be installed in any appropriate location in the capture system such that reproducible flow rate monitoring will result. The flow rate monitoring device(s) shall have an accuracy of ± 10 percent over its normal operating range and shall be calibrated according to the manufacturer's instructions. The Administrator may require the owner or operator to demonstrate the accuracy of the monitoring device(s) relative to EPA Methods 1 and 2 of [appendix A of this part](#).

(3) Parameters monitored pursuant to this paragraph, excluding damper position, shall be recorded as integrated block averages not to exceed 15 minutes.

(c)

(1) When the owner or operator of an affected facility is required to demonstrate compliance with the standards under [§ 60.272a\(a\)\(3\)](#) and at any other time that the Administrator may require (under section 114 of the CAA, as amended), the owner or operator shall, during periods in which a hood is operated for the purpose of capturing emissions from the affected facility subject to [paragraph \(b\)](#) of this section, either:

(i) Install, calibrate, and maintain a monitoring device that continuously records the fan motor amperes at each damper position, and damper position consistent with [paragraph \(h\)\(5\)](#) of this section; or

(ii) Monitor and record as no greater than 15-minute integrated block average basis the volumetric flow rate through each separately ducted hood; or

(iii) Install, calibrate, and maintain a monitoring device that continuously records the volumetric flow rate at the control device inlet and monitor and record the damper position consistent with [paragraph \(h\)\(5\)](#) of this section.

(2) Parameters monitored pursuant to this paragraph, excluding damper position, shall be recorded as integrated block averages not to exceed 15 minutes.

(3) The owner or operator may petition the Administrator or delegated authority for reestablishment of these parameters whenever the owner or operator can demonstrate to the Administrator's or delegated authority's satisfaction that the affected facility operating conditions upon which the parameters were previously established are no longer applicable. The values of the parameters as determined during the most recent demonstration of compliance shall be the appropriate operational range or control set point throughout each applicable period. Operation at values beyond the accepted operational range or control set point may be subject to the requirements of [§ 60.276a\(c\)](#).

(d) Except as provided under [paragraph \(e\)](#) of this section, the owner or operator shall perform monthly operational status inspections of the equipment that is important to the performance of the capture system (i.e., pressure sensors, dampers, and damper switches). This inspection shall

include observations of the physical appearance of the equipment (*e.g.*, presence of holes in ductwork or hoods, flow constrictions caused by dents or excess accumulations of dust in ductwork, and fan erosion) and building inspections to ensure that the building does not have any holes or other openings for particulate matter laden air to escape. Any deficiencies that are determined by the operator to materially impact the efficacy of the capture system shall be noted and proper maintenance performed.

(e) The owner or operator may petition the Administrator or delegated authority to approve any alternative to either the monitoring requirements specified in [paragraph \(b\)](#) of this section or the monthly operational status inspections specified in [paragraph \(d\)](#) of this section if the alternative will provide a continuous record of operation of each emission capture system.

(f) Except as provided for under [§ 60.273a\(d\)](#), if emissions during any phase of the heat cycle are controlled by the use of a DEC system, the owner or operator shall install, calibrate, and maintain a monitoring device that allows the pressure in the free space inside the EAF to be monitored. The pressure shall be recorded as no greater than 15-minute integrated block averages. The monitoring device may be installed in any appropriate location in the EAF or DEC duct prior to the introduction of ambient air such that reproducible results will be obtained. The pressure monitoring device shall have an accuracy of ± 5 mm of water gauge over its normal operating range and shall be calibrated according to the manufacturer's instructions.

(g) Except as provided for under [§ 60.273a\(d\)](#), when the owner or operator of an EAF controlled by a DEC is required to demonstrate compliance with the standard under [§ 60.272a\(a\)\(3\)](#), and at any other time the Administrator may require (under section 114 of the Clean Air Act, as amended), the pressure in the free space inside the furnace shall be determined during the melting and refining period(s) using the monitoring device required under [paragraph \(f\)](#) of this section. The owner or operator may petition the Administrator or delegated authority for reestablishment of the pressure whenever the owner or operator can demonstrate to the Administrator's or delegated authority's satisfaction that the EAF operating conditions upon which the pressures were previously established are no longer applicable. The pressure range or control setting during the most recent demonstration of compliance shall be maintained at all times when the EAF is operating in a melting and refining period. Continuous operation at pressures higher than the operational range or control setting may be considered by the Administrator or delegated authority to be unacceptable operation and maintenance of the affected facility.

(h) During any performance test required under [§ 60.8](#), and for any report thereof required by [§ 60.276a\(f\) of this subpart](#), or to determine compliance with [§ 60.272a\(a\)\(3\) of this subpart](#), the owner or operator shall monitor the following information for all heats covered by the test:

(1) Charge weights and materials, and tap weights and materials;

- (2) Heat times, including start and stop times, and a log of process operation, including periods of no operation during testing and, if a furnace static pressure monitoring device is operated pursuant to [paragraph \(f\)](#) of this section, the pressure inside an EAF when DEC systems are used;
- (3) Control device operation log;
- (4) Continuous opacity monitor or EPA Method 9 data, or, as an alternative to EPA Method 9, according to ASTM D7520-16 (incorporated by reference, see [§ 60.17](#)), with the caveats described under *Shop opacity* in [§ 60.271](#);
- (5) All damper positions, no less frequently than performed in the latest melt shop opacity compliance test for a full heat, if selected as a method to demonstrate compliance under [paragraph \(b\)](#) of this section;
- (6) Fan motor amperes at each damper position, if selected as a method to demonstrate compliance under [paragraph \(b\)](#) of this section;
- (7) Volumetric air flow rate through each separately ducted hood, if selected as a method to demonstrate compliance under [paragraph \(b\)](#) of this section; and
- (8) Static pressure at each separately ducted hood, if selected as a method to demonstrate compliance under [paragraph \(b\)](#) of this section.
- (9) Parameters monitored pursuant to [paragraphs \(h\)\(6\)](#) through [\(8\)](#) of this section shall be recorded as integrated block averages not to exceed 15 minutes.

[[49 FR 43845](#), Oct. 31, 1984, as amended at [64 FR 10111](#), Mar. 2, 1999; [65 FR 61758](#), Oct. 17, 2000; [70 FR 8533](#), Feb. 22, 2005; [88 FR 58483](#), Aug. 25, 2023; [89 FR 11205](#), Feb. 14, 2024]

§ 60.275a Test methods and procedures.

- (a) During performance tests required in [§ 60.8](#), the owner or operator shall not add gaseous diluents to the effluent gas stream after the fabric filter in any pressurized fabric filter collector, unless the amount of dilution is separately determined and considered in the determination of emissions.
- (b) When emissions from any EAF(s) or AOD vessel(s) are combined with emissions from facilities not subject to the provisions of this subpart but controlled by a common capture system and control device, the owner or operator shall use either or both of the following procedures during a performance test (see also [§ 60.276a\(e\)](#)):
- (1) Determine compliance using the combined emissions.

(2) Use a method that is acceptable to the Administrator or delegated authority and that compensates for the emissions from the facilities not subject to the provisions of this subpart.

(3) Any combination of the criteria of [paragraphs \(b\)\(1\)](#) and [\(b\)\(2\)](#) of this section.

(c) When emission from any EAF(s) or AOD vessel(s) are combined with emissions from facilities not subject to the provisions of this subpart, compliance with [§ 60.272a\(a\)\(3\)](#) will be based on emissions from only the affected facility(ies). The owner or operator may use operational knowledge to determine the facilities that are the sources, in whole or in part, of any emissions observed in demonstrations of compliance with [§ 60.272a\(a\)\(3\)](#)

(d) In conducting the performance tests required in [§ 60.8](#), the owner or operator shall use as reference methods and procedures the test methods in [appendix A of this part](#) or other methods and procedures as specified in this section, except as provided in [§ 60.8\(b\)](#).

(e) The owner or operator shall determine compliance with the particulate matter standards in [§ 60.272a](#) as follows:

(1) EPA Method 5 (and referenced EPA Methods 1, 2, 3, 3A, 3B, and 4) shall be used for negative-pressure fabric filters and other types of control devices and EPA Method 5D (and referenced EPA Method 5) shall be used for positive-pressure fabric filters to determine the particulate matter concentration and volumetric flow rate of the effluent gas. The sampling time and sample volume for each run shall be at least 4 hours and 4.50 dscm (160 dscf) and, when a single EAF or AOD vessel is sampled, the sampling time shall include an integral number of heats. The manual portions only and not the instrumental portion of the voluntary consensus standard ANSI/ASME PTC 19.10-1981 (incorporated by reference, see [§ 60.17](#)) is an acceptable alternative to EPA Methods 3, 3A, and 3B.

(2) When more than one control device serves the EAF(s) being tested, the concentration of particulate matter shall be determined using the following equation:

$$c_{st} = \left[\sum_{i=1}^n (c_{si} Q_{sdi}) \right] / \sum_{i=1}^n Q_{sdi}$$

Where:

c_{st} = average concentration of particulate matter, mg/dscm (gr/dscf).

c_{si} = concentration of particulate matter from control device “i”, mg/dscm (gr/dscf).

n = total number of control devices tested.

Q_{sdi} = volumetric flow rate of stack gas from control device “i”, dscm/hr (dscf/hr).

(3) EPA Method 9 or, as an alternative, ASTM D7520-16 (incorporated by reference, see [§ 60.17](#)), with the caveats described under *Shop opacity* in [§ 60.271](#), and the procedures of [§ 60.11](#) shall be used to determine opacity.

(4) To demonstrate compliance with [§ 60.272a\(a\) \(1\)](#), [\(2\)](#), and [\(3\)](#), the EPA Method 9 test runs shall be conducted concurrently with the particulate matter test runs, unless inclement weather interferes.

(f) To comply with [§ 60.274a \(c\)](#), [\(f\)](#), [\(g\)](#), and [\(h\)](#), the owner or operator shall obtain the information required in these paragraphs during the particulate matter runs.

(g) Any control device subject to the provisions of the subpart shall be designed and constructed to allow measurement of emissions using applicable test methods and procedures.

(h) Where emissions from any EAF(s) or AOD vessel(s) are combined with emissions from facilities not subject to the provisions of this subpart, determinations of compliance with [§ 60.272a\(a\)\(3\)](#) will only be based upon emissions originating from the affected facility(ies), except if the combined emissions are controlled by a common capture system and control device, in which case the owner or operator may use any of the following procedures during an opacity performance test and during shop opacity observations:

(1) Base compliance on control of the combined emissions; or

(2) Utilize a method acceptable to the Administrator that compensates for the emissions from the facilities not subject to the provisions of this subpart.

(i) Unless the presence of inclement weather makes concurrent testing infeasible, the owner or operator shall conduct concurrently the performance tests required under [§ 60.8](#) to demonstrate compliance with [§ 60.272a\(a\) \(1\)](#), [\(2\)](#), and [\(3\) of this subpart](#).

[[49 FR 43845](#), Oct. 31, 1984, as amended at [54 FR 6673](#), Feb. 14, 1989; [54 FR 21344](#), May 17, 1989; [65 FR 61758](#), Oct. 17, 2000; [88 FR 58484](#), Aug. 25, 2023]

§ 60.276a Recordkeeping and reporting requirements.

(a) Records of the measurements required in [§ 60.274a](#) must be retained for at least 5 years following the date of the measurement.

(b) Each owner or operator shall submit a written report of exceedances of the control device opacity to the Administrator or delegated authority semi-annually. For the purposes of these reports, exceedances are defined as all 6-minute periods during which the average opacity of emissions from the control device is 3 percent or greater.

(c) Continuous operation at a furnace static pressure that exceeds the operational range or control setting under [§ 60.274a\(g\)](#), for owners and operators that elect to install a furnace static pressure

monitoring device under [§ 60.274a\(f\)](#) and either operation of control system fan motor amperes at values exceeding ± 15 percent of the value established under [§ 60.274a\(c\)](#) or operation at flow rates lower than those established under [§ 60.274a\(c\)](#) may be considered by the Administrator or delegated authority to be unacceptable operation and maintenance of the affected facility. Operation at such values shall be reported to the Administrator or delegated authority semiannually.

(d) The requirements of this section remain in force until and unless EPA, in delegating enforcement authority to a State under section 111(c) of the Act, approves reporting requirements or an alternative means of compliance surveillance adopted by such State. In that event, affected sources within the State will be relieved of the obligation to comply with this section, provided that they comply with the requirements established by the State.

(e) When the owner or operator of an EAF or AOD is required to demonstrate compliance with the standard under [§ 60.275a\(b\)\(2\)](#) or a combination of [§ 60.275a\(b\)\(1\)](#) and [\(b\)\(2\)](#) the owner or operator shall provide notice to the Administrator or delegated authority of the procedure(s) that will be used to determine compliance. Notification of the procedure(s) to be used must be postmarked at least 30 days prior to the performance test.

(f) For the purpose of this subpart, the owner or operator shall conduct the demonstration of compliance with [§ 60.272a\(a\) of this subpart](#) and furnish the Administrator or delegated authority with a written report of the results of the test. This report shall include the following information:

- (1) Facility name and address;
- (2) Plant representative;
- (3) Make and model of the control device, and continuous opacity monitoring equipment, if applicable;
- (4) Flow diagram of process and emission capture system including other equipment or process(es) ducted to the same control device;
- (5) Rated (design) capacity of process equipment;
- (6) Those data required under [§ 60.274a\(h\) of this subpart](#);
 - (i) List of charge and tap weights and materials;
 - (ii) Heat times and process log;
 - (iii) Control device operation log; and

(iv) Continuous opacity monitor or EPA Method 9 data, or, as an alternative to EPA Method 9, according to ASTM D7520-16 (incorporated by reference, see [§ 60.17](#)), with the caveats described under *Shop opacity* in [§ 60.271](#).

(7) Test dates and test times;

(8) Test company;

(9) Test company representative;

(10) Test observers from any outside agency;

(11) Description of test methodology used, including any deviation from standard reference methods;

(12) Schematic of sampling location;

(13) Number of sampling points;

(14) Description of sampling equipment;

(15) Listing of sampling equipment calibrations and procedures;

(16) Field and laboratory data sheets;

(17) Description of sample recovery procedures;

(18) Sampling equipment leak check results;

(19) Description of quality assurance procedures;

(20) Description of analytical procedures;

(21) Notation of sample blank corrections; and

(22) Sample emission calculations.

(g) The owner or operator shall maintain records of all shop opacity observations made in accordance with [§ 60.273a\(d\)](#). All shop opacity observations in excess of the emission limit specified in [§ 60.272a\(a\)\(3\) of this subpart](#) shall indicate a period of excess emissions and shall be reported to the Administrator or delegated authority semi-annually, according to [§ 60.7\(c\)](#) and submitted according to [paragraph \(j\)](#) of this section. In addition to the information required at [§ 60.7\(c\)](#), the report shall include the following information:

(1) The company name and address of the affected facility.

(2) An identification of each affected facility being included in the report.

- (3) Beginning and ending dates of the reporting period.
- (4) A certification by a certifying official of truth, accuracy, and completeness. This certification shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.
- (h) The owner or operator shall maintain the following records for each bag leak detection system required under [§ 60.273a\(e\)](#):
- (1) Records of the bag leak detection system output;
 - (2) Records of bag leak detection system adjustments, including the date and time of the adjustment, the initial bag leak detection system settings, and the final bag leak detection system settings; and
 - (3) An identification of the date and time of all bag leak detection system alarms, the time that procedures to determine the cause of the alarm were initiated, if procedures were initiated within 1 hour of the alarm, the cause of the alarm, an explanation of the actions taken, the date and time the cause of the alarm was alleviated, and if the alarm was alleviated within 24 hours of the alarm.
- (i) Within 60 days after the date of completing each performance test or demonstration of compliance required by this subpart, you must submit the results of the performance test following the procedures specified in [paragraphs \(i\)\(1\)](#) through [\(3\)](#) of this section.
- (1) Data collected using test methods supported by the EPA's Electronic Reporting Tool (ERT) as listed on the EPA's ERT website (<https://www.epa.gov/electronic-reporting-air-emissions/electronic-reporting-tool-ert>) at the time of the test. Submit the results of the performance test to the EPA via the Compliance and Emissions Data Reporting Interface (CEDRI), which can be accessed through the EPA's Central Data Exchange (CDX) (<https://cdx.epa.gov/>). The data must be submitted in a file format generated using the EPA's ERT. Alternatively, you may submit an electronic file consistent with the extensible markup language (XML) schema listed on the EPA's ERT website.
 - (2) Data collected using test methods that are not supported by the EPA's ERT as listed on the EPA's ERT website at the time of the test. The results of the performance test must be included as an attachment in the ERT or an alternate electronic file consistent with the XML schema listed on the EPA's ERT website. Submit the ERT generated package or alternative file to the EPA via CEDRI.
 - (3) Confidential business information (CBI). Do not use CEDRI to submit information you claim as CBI. Anything submitted using CEDRI cannot later be claimed CBI. Although we do not expect persons to assert a claim of CBI, if you wish to assert a CBI claim for some of the information submitted under [paragraph \(i\)\(1\)](#) or [\(2\)](#) of this section, you must submit a complete

file, including information claimed to be CBI, to the EPA. The file must be generated using the EPA's ERT or an alternate electronic file consistent with the XML schema listed on the EPA's ERT website. The preferred method to submit CBI is for it to be transmitted electronically using email attachments, File Transfer Protocol (FTP), or other online file sharing services (*e.g.*, Dropbox, OneDrive, Google Drive). Electronic submissions must be transmitted directly to the OAQPS CBI Office at the email address oaqpscbi@epa.gov, and should include clear CBI markings and note the docket ID. If assistance is needed with submitting large electronic files that exceed the file size limit for email attachments, and if you do not have your own file sharing service, please email oaqpscbi@epa.gov to request a file transfer link. If sending CBI information through the postal service, submit the file on a compact disc, flash drive, or other commonly used electronic storage medium and clearly mark the medium as CBI. Mail the electronic medium to U.S. EPA/OAQPS/CORE CBI Office, Attention: Group Leader, Measurement Policy Group, MD C404-02, 4930 Old Page Rd., Durham, NC 27703. The same file with the CBI omitted must be submitted to the EPA via the EPA's CDX as described in [paragraphs \(i\)\(1\)](#) and [\(2\)](#) of this section. All CBI claims must be asserted at the time of submission. Furthermore, under CAA section 114(c), emissions data is not entitled to confidential treatment, and the EPA is required to make emissions data available to the public. Thus, emissions data will not be protected as CBI and will be made publicly available.

(j) You must submit a report of excess emissions and monitoring systems performance report according to [§ 60.7\(c\)](#) to the Administrator semiannually. Submit all reports to the EPA via CEDRI, which can be accessed through the EPA's CDX (<https://cdx.epa.gov/>). The EPA will make all the information submitted through CEDRI available to the public without further notice to you. Do not use CEDRI to submit information you claim as CBI. Anything submitted using CEDRI cannot later be claimed CBI. You must use the appropriate electronic report template on the CEDRI website (<https://www.epa.gov/electronic-reporting-air-emissions/cedri>) for this subpart. The date report templates become available will be listed on the CEDRI website. The report must be submitted by the deadline specified in this subpart, regardless of the method in which the report is submitted. Although we do not expect persons to assert a claim of CBI, if you wish to assert a CBI claim, follow [paragraph \(i\)\(3\)](#) of this section except send to the attention of the Electric Arc Furnace Sector Lead. The same file with the CBI omitted must be submitted to the EPA via the EPA's CDX as described earlier in this [paragraph \(j\)](#). All CBI claims must be asserted at the time of submission. Furthermore, under CAA section 114(c), emissions data is not entitled to confidential treatment, and the EPA is required to make emissions data available to the public. Thus, emissions data will not be protected as CBI and will be made publicly available.

(k) If you are required to electronically submit a report through CEDRI in the EPA's CDX, you may assert a claim of EPA system outage for failure to timely comply with that reporting requirement. To assert a claim of EPA system outage, you must meet the requirements outlined in [paragraphs \(k\)\(1\)](#) through [\(7\)](#) of this section.

- (1) You must have been or will be precluded from accessing CEDRI and submitting a required report within the time prescribed due to an outage of either the EPA's CEDRI or CDX systems.
- (2) The outage must have occurred within the period of time beginning five business days prior to the date that the submission is due.
- (3) The outage may be planned or unplanned.
- (4) You must submit notification to the Administrator in writing as soon as possible following the date you first knew, or through due diligence should have known, that the event may cause or has caused a delay in reporting.
- (5) You must provide to the Administrator a written description identifying:
 - (i) The date(s) and time(s) when CDX or CEDRI was accessed and the system was unavailable;
 - (ii) A rationale for attributing the delay in reporting beyond the regulatory deadline to EPA system outage;
 - (iii) A description of measures taken or to be taken to minimize the delay in reporting; and
 - (iv) The date by which you propose to report, or if you have already met the reporting requirement at the time of the notification, the date you reported.
- (6) The decision to accept the claim of EPA system outage and allow an extension to the reporting deadline is solely within the discretion of the Administrator.
- (7) In any circumstance, the report must be submitted electronically as soon as possible after the outage is resolved.
- (l) If you are required to electronically submit a report through CEDRI in the EPA's CDX, you may assert a claim of force majeure for failure to timely comply with that reporting requirement. To assert a claim of force majeure, you must meet the requirements outlined in [paragraphs \(l\)\(1\) through \(5\)](#) of this section.
- (1) You may submit a claim if a force majeure event is about to occur, occurs, or has occurred or there are lingering effects from such an event within the period of time beginning five business days prior to the date the submission is due. For the purposes of this section, a force majeure event is defined as an event that will be or has been caused by circumstances beyond the control of the affected facility, its contractors, or any entity controlled by the affected facility that prevents you from complying with the requirement to submit a report electronically within the time period prescribed. Examples of such events are acts of nature (*e.g.*, hurricanes, earthquakes, or floods), acts of war or terrorism, or equipment failure or safety hazard beyond the control of the affected facility (*e.g.*, large scale power outage).

(2) You must submit notification to the Administrator in writing as soon as possible following the date you first knew, or through due diligence should have known, that the event may cause or has caused a delay in reporting.

(3) You must provide to the Administrator:

(i) A written description of the force majeure event;

(ii) A rationale for attributing the delay in reporting beyond the regulatory deadline to the force majeure event;

(iii) A description of measures taken or to be taken to minimize the delay in reporting; and

(iv) The date by which you propose to report, or if you have already met the reporting requirement at the time of the notification, the date you reported.

(4) The decision to accept the claim of force majeure and allow an extension to the reporting deadline is solely within the discretion of the Administrator.

(5) In any circumstance, the reporting must occur as soon as possible after the force majeure event occurs.

(m) Any records required to be maintained by this subpart that are submitted electronically via the EPA's CEDRI may be maintained in electronic format. This ability to maintain electronic copies does not affect the requirement for facilities to make records, data, and reports available upon request to a delegated air agency or the EPA as part of an on-site compliance evaluation.

[[49 FR 43845](#), Oct. 31, 1984, as amended at [54 FR 6673](#), Feb. 14, 1989; [64 FR 10111](#), Mar. 2, 1999; [65 FR 61758](#)

preview citation details

, Oct. 17, 2000; [70 FR 8533](#), Feb. 22, 2005; [88 FR 58485](#), Aug. 25, 2023; [89 FR 11206](#), Feb. 14, 2024]

Appendix C

40 C.F.R. Part 60 Subpart TT

Standards of Performance for Metal Coil Surface Coating

Subpart TT—Standards of Performance for Metal Coil Surface Coating

Source: [47 FR 49612](#), Nov. 1, 1982, unless otherwise noted.

§ 60.460 Applicability and designation of affected facility.

(a) The provisions of this subpart apply to the following affected facilities in a metal coil surface coating operation: each prime coat operation, each finish coat operation, and each prime and finish coat operation combined when the finish coat is applied wet on wet over the prime coat and both coatings are cured simultaneously.

(b) This subpart applies to any facility identified in [paragraph \(a\)](#) of this section that commences construction, modification, or reconstruction after January 5, 1981.

§ 60.461 Definitions.

(a) All terms used in this subpart not defined below are given the same meaning as in the Act or in [subpart A of this part](#).

Coating means any organic material that is applied to the surface of metal coil.

Coating application station means that portion of the metal coil surface coating operation where the coating is applied to the surface of the metal coil. Included as part of the coating application station is the flashoff area between the coating application station and the curing oven.

Curing oven means the device that uses heat or radiation to dry or cure the coating applied to the metal coil.

Finish coat operation means the coating application station, curing oven, and quench station used to apply and dry or cure the final coating(s) on the surface of the metal coil. Where only a single coating is applied to the metal coil, that coating is considered a finish coat.

Metal coil surface coating operation means the application system used to apply an organic coating to the surface of any continuous metal strip with thickness of 0.15 millimeter (mm) (0.006 in.) or more that is packaged in a roll or coil.

Prime coat operation means the coating application station, curing oven, and quench station used to apply and dry or cure the initial coating(s) on the surface of the metal coil.

Quench station means that portion of the metal coil surface coating operation where the coated metal coil is cooled, usually by a water spray, after baking or curing.

VOC content means the quantity, in kilograms per liter of coating solids, of volatile organic compounds (VOC's) in a coating.

(b) All symbols used in this subpart not defined below are given the same meaning as in the Act and in [subpart A of this part](#).

C_a = the VOC concentration in each gas stream leaving the control device and entering the atmosphere (parts per million by volume, as carbon).

C_b = the VOC concentration in each gas stream entering the control device (parts per million by volume, as carbon).

C_f = the VOC concentration in each gas stream emitted directly to the atmosphere (parts per million by volume, as carbon).

D_c = density of each coating, as received (kilograms per liter).

D_d = density of each VOC-solvent added to coatings (kilograms per liter).

D_r = density of VOC-solvent recovered by an emission control device (kilograms per liter).

E = VOC destruction efficiency of the control device (fraction).

F = the proportion of total VOC's emitted by an affected facility that enters the control device (fraction).

G = volume-weighted average mass of VOC's in coatings consumed in a calendar month per unit volume of coating solids applied (kilograms per liter).

L_c = the volume of each coating consumed, as received (liters).

L_d = the volume of each VOC-solvent added to coatings (liters).

L_r = the volume of VOC-solvent recovered by an emission control device (liters).

L_s = the volume of coating solids consumed (liters).

M_d = the mass of VOC-solvent added to coatings (kilograms).

M_o = the mass of VOC's in coatings consumed, as received (kilograms).

M_r = the mass of VOC's recovered by an emission control device (kilograms).

N = the volume-weighted average mass of VOC emissions to the atmosphere per unit volume of coating solids applied (kilograms per liter).

Q_a = the volumetric flow rate of each gas stream leaving the control device and entering the atmosphere (dry standard cubic meters per hour).

Q_b = the volumetric flow rate of each gas stream entering the control device (dry standard cubic meters per hour).

Q_f = the volumetric flow rate of each gas stream emitted directly to the atmosphere (dry standard cubic meters per hour).

R = the overall VOC emission reduction achieved for an affected facility (fraction).

S = the calculated monthly allowable emission limit (kilograms of VOC per liter of coating solids applied).

V_s = the proportion of solids in each coating, as received (fraction by volume).

W_o = the proportion of VOC's in each coating, as received (fraction by weight).

§ 60.462 Standards for volatile organic compounds.

(a) On and after the date on which [§ 60.8](#) requires a performance test to be completed, each owner or operator subject to this subpart shall not cause to be discharged into the atmosphere more than:

(1) 0.28 kilogram VOC per liter (kg VOC/l) of coating solids applied for each calendar month for each affected facility that does not use an emission control device(s); or

(2) 0.14 kg VOC/l of coating solids applied for each calendar month for each affected facility that continuously uses an emission control device(s) operated at the most recently demonstrated overall efficiency; or

(3) 10 percent of the VOC's applied for each calendar month (90 percent emission reduction) for each affected facility that continuously uses an emission control device(s) operated at the most recently demonstrated overall efficiency; or

(4) A value between 0.14 (or a 90-percent emission reduction) and 0.28 kg VOC/l of coating solids applied for each calendar month for each affected facility that intermittently uses an emission control device operated at the most recently demonstrated overall efficiency.

§ 60.463 Performance test and compliance provisions.

(a) Section 60.8(d) and (f) do not apply to the performance test.

(b) The owner or operator of an affected facility shall conduct an initial performance test as required under [§ 60.8\(a\)](#) and thereafter a performance test for each calendar month for each affected facility according to the procedures in this section.

(c) The owner or operator shall use the following procedures for determining monthly volume-weighted average emissions of VOC's in kg/l of coating solids applied.

(1) An owner or operator shall use the following procedures for each affected facility that does not use a capture system and control device to comply with the emission limit specified under [§ 60.462\(a\)\(1\)](#). The owner or operator shall determine the composition of the coatings by formulation data supplied by the manufacturer of the coating or by an analysis of each coating, as received, using Method 24. The Administrator may require the owner or operator who uses formulation data supplied by the manufacturer of the coatings to determine the VOC content of coatings using Method 24 or an equivalent or alternative method. The owner or operator shall determine the volume of coating and the mass of VOC-solvent added to coatings from company records on a monthly basis. If a common coating distribution system serves more than one affected facility or serves both affected and existing facilities, the owner or operator shall estimate the volume of coating used at each affected facility by using the average dry weight of coating and the surface area coated by each affected and existing facility or by other procedures acceptable to the Administrator.

(i) Calculate the volume-weighted average of the total mass of VOC's consumed per unit volume of coating solids applied during each calendar month for each affected facility, except as provided under [paragraph \(c\)\(1\)\(iv\)](#) of this section. The weighted average of the total mass of VOC's used per unit volume of coating solids applied each calendar month is determined by the following procedures.

(A) Calculate the mass of VOC's used ($M_o + M_d$) during each calendar month for each affected facility by the following equation:

$$M_o + M_d = \sum_{i=1}^n L_{ci} D_{ci} W_{oi} + \sum_{j=1}^m L_{dj} D_{dj} \quad \text{Equation 1}$$

($\sum L_{dj} D_{dj}$ will be 0 if no VOC solvent is added to the coatings, as received)

where

n is the number of different coatings used during the calendar month, and

m is the number of different VOC solvents added to coatings used during the calendar month.

(B) Calculate the total volume of coating solids used (L_s) in each calendar month for each affected facility by the following equation:

$$L_s = \sum_{i=1}^n V_{si} L_{ci} \quad \text{Equation 2}$$

Where:

n is the number of different coatings used during the calendar month.

(C) Calculate the volume-weighted average mass of VOC's used per unit volume of coating solids applied (G) during the calendar month for each affected facility by the following equation:

$$G = \frac{M_o + M_d}{L_s} \quad \text{Equation 3}$$

(ii) Calculate the volume-weighted average of VOC emissions to the atmosphere (N) during the calendar month for each affected facility by the following equation:

$$N = G \quad \text{Equation 4}$$

(iii) Where the volume-weighted average mass of VOC's discharged to the atmosphere per unit volume of coating solids applied (N) is equal to or less than 0.28 kg/l, the affected facility is in compliance.

(iv) If each individual coating used by an affected facility has a VOC content, as received, that is equal to or less than 0.28 kg/l of coating solids, the affected facility is in compliance provided no VOC's are added to the coatings during distribution or application.

(2) An owner or operator shall use the following procedures for each affected facility that continuously uses a capture system and a control device that destroys VOC's (e.g., incinerator) to comply with the emission limit specified under [§ 60.462\(a\) \(2\)](#) or [\(3\)](#).

(i) Determine the overall reduction efficiency (R) for the capture system and control device.

For the initial performance test, the overall reduction efficiency (R) shall be determined as prescribed in [paragraphs \(c\)\(2\)\(i\) \(A\), \(B\), and \(C\)](#) of this section. In subsequent months, the owner or operator may use the most recently determined overall reduction efficiency (R) for the performance test, providing control device and capture system operating conditions have not changed. The procedure in [paragraphs \(c\)\(2\)\(i\) \(A\), \(B\), and \(C\)](#) of this section, shall be repeated when directed by the Administrator or when the owner or operator elects to operate the control device or capture system at conditions different from the initial performance test.

(A) Determine the fraction (F) of total VOC's emitted by an affected facility that enters the control device using the following equation:

$$F = \frac{\sum_{i=1}^I C_{bi} Q_{bi}}{\sum_{i=1}^I C_{bi} Q_{bi} + \sum_{n=1}^P C_n Q_n}$$

Equation 5

Where:

l is the number of gas streams entering the control device, and

p is the number of gas streams emitted directly to the atmosphere.

(B) Determine the destruction efficiency of the control device (E) using values of the volumetric flow rate of each of the gas streams and the VOC content (as carbon) of each of the gas streams in and out of the device by the following equation:

$$E = \frac{\sum_{i=1}^n Q_{bi}C_{bi} - \sum_{j=1}^m Q_{aj}C_{aj}}{\sum_{i=1}^n Q_{bi}C_{bi}}$$

Equation 6

Where:

n is the number of gas streams entering the control device, and

m is the number of gas streams leaving the control device and entering the atmosphere.

The owner or operator of the affected facility shall construct the VOC emission reduction system so that all volumetric flow rates and total VOC emissions can be accurately determined by the applicable test methods and procedures specified in [§ 60.466](#). The owner or operator of the affected facility shall construct a temporary enclosure around the coating applicator and flashoff area during the performance test for the purpose of evaluating the capture efficiency of the system. The enclosure must be maintained at a negative pressure to ensure that all VOC emissions are measurable. If a permanent enclosure exists in the affected facility prior to the performance test and the Administrator is satisfied that the enclosure is adequately containing VOC emissions, no additional enclosure is required for the performance test.

(C) Determine overall reduction efficiency (R) using the following equation:

$$R = EF \quad \text{Equation 7}$$

If the overall reduction efficiency (R) is equal to or greater than 0.90, the affected facility is in compliance and no further computations are necessary. If the overall reduction efficiency (R) is less than 0.90, the average total VOC emissions to the atmosphere per unit volume of coating solids applied (N) shall be computed as follows.

(ii) Calculate the volume-weighted average of the total mass of VOC's per unit volume of coating solids applied (G) during each calendar month for each affected facility using equations in [paragraphs \(c\)\(1\)\(i\) \(A\), \(B\), and \(C\)](#) of this section.

(iii) Calculate the volume-weighted average of VOC emissions to the atmosphere (N) during each calendar month by the following equation:

$$N = G(1 - R) \quad \text{Equation 8}$$

(iv) If the volume-weighted average mass of VOC's emitted to the atmosphere for each calendar month (N) is less than or equal to 0.14 kg/l of coating solids applied, the affected facility is in compliance. Each monthly calculation is a performance test.

(3) An owner or operator shall use the following procedure for each affected facility that uses a control device that recovers the VOC's (e.g., carbon adsorber) to comply with the applicable emission limit specified under [§ 60.462\(a\) \(2\)](#) or [\(3\)](#).

(i) Calculate the total mass of VOC's consumed ($M_o + M_d$) during each calendar month for each affected facility using equation (1).

(ii) Calculate the total mass of VOC's recovered (M_r) during each calendar month using the following equation:

$$M_r = L_r D_r \quad \text{Equation 9}$$

(iii) Calculate the overall reduction efficiency of the control device (R) for each calendar month for each affected facility using the following equation:

$$R = \frac{M_r}{M_o + M_d} \quad \text{Equation 10}$$

If the overall reduction efficiency (R) is equal to or greater than 0.90, the affected facility is in compliance and no further computations are necessary. If the overall reduction efficiency (R) is less than 0.90, the average total VOC emissions to the atmosphere per unit volume of coating solids applied (N) must be computed as follows.

(iv) Calculate the total volume of coating solids consumed (L_s) and the volume-weighted average of the total mass of VOC's per unit volume of coating solids applied (G) during each calendar month for each affected facility using equations in [paragraphs \(c\)\(1\)\(i\) \(B\) and \(C\)](#) of this section.

(v) Calculate the volume-weighted average mass of VOC's emitted to the atmosphere (N) for each calendar month for each affected facility using equation (8).

(vi) If the weighted average mass of VOC's emitted to the atmosphere for each calendar month (N) is less than or equal to 0.14 kg/l of coating solids applied, the affected facility is in compliance. Each monthly calculation is a performance test.

(4) An owner or operator shall use the following procedures for each affected facility that intermittently uses a capture system and a control device to comply with the emission limit specified in [§ 60.462\(a\)\(4\)](#).

(i) Calculate the total volume of coating solids applied without the control device in operation (L_{sn}) during each calendar month for each affected facility using the following equation:

$$L_{sn} = \sum_{i=1}^n V_{si} L_{ci} \quad \text{Equation 11}$$

Where:

n is the number of coatings used during the calendar month without the control device in operation.

(ii) Calculate the total volume of coating solids applied with the control device in operation (L_{sc}) during each calendar month for each affected facility using the following equation:

$$L_{sc} = \sum_{i=1}^n V_{si} L_{ci} \quad \text{Equation 12}$$

Where:

n is the number of coatings used during the calendar month with the control device in operation.

(iii) Calculate the mass of VOC's used without the control device in operation ($M_{on} + M_{dn}$) during each calendar month for each affected facility using the following equation:

$$M_{on} + M_{dn} + \sum_{i=1}^n L_{ci} D_{ci} W_{oi} + \sum_{j=1}^m L_{dj} D_{dj} \quad \text{Equation 13}$$

Where:

n is the number of different coatings used without the control device in operation during the calendar month, and

m is the number of different VOC-solvents added to coatings used without the control device in operation during the calendar month.

(iv) Calculate the volume-weighted average of the total mass of VOC's consumed per unit volume of coating solids applied without the control device in operation (G_n) during each calendar month for each affected facility using the following equation:

$$G_n = \frac{M_{on} + M_{dn}}{L_{sn}} \quad \text{Equation 14}$$

(v) Calculate the mass of VOC's used with the control device in operation ($M_{oc} + M_{dc}$) during each calendar month for each affected facility using the following equation:

$$M_{oc} + M_{dc} = \sum_{i=1}^n L_{ci} D_{ci} W_{oi} + \sum_{j=1}^m L_{dj} D_{dj} \quad \text{Equation 15}$$

Where:

n is the number of different coatings used with the control device in operation during the calendar month, and

m is the number of different VOC-solvents added to coatings used with the control device in operation during the calendar month.

(vi) Calculate the volume-weighted average of the total mass of VOC's used per unit volume of coating solids applied with the control device in operation (G_c) during each calendar month for each affected facility using the following equation:

$$G = \frac{M_{oc} + M_{dc}}{L_{sn}} \quad \text{Equation 16}$$

(vii) Determine the overall reduction efficiency (R) for the capture system and control device using the procedures in paragraphs (c)(2)(i) (A), (B), and (C) or [paragraphs \(c\)\(3\) \(i\), \(ii\), and \(iii\)](#) of this section, whichever is applicable.

(viii) Calculate the volume-weighted average of VOC emissions to the atmosphere (N) during each calendar month for each affected facility using the following equation:

$$N = \frac{G_n L_{sn} + G_c L_{sc} (1 - R)}{L_{sn} + L_{sc}} \quad \text{Equation 17}$$

Equation 17

(ix) Calculate the emission limit(s) for each calendar month for each affected facility using the following equation:

$$S = \frac{0.28 L_{sn} + 0.1 G_c L_{sc}}{L_{ns} + L_{sc}}$$

or

$$\frac{0.28 L_{sn} + 0.14 L_{sc}}{L_{sn} + L_{sc}} \quad \text{Equation 18}$$

whichever is greater.

(x) If the volume-weighted average mass of VOC's emitted to the atmosphere for each calendar month (N) is less than or equal to the calculated emission limit (S) for the calendar month, the affected facility is in compliance. Each monthly calculation is a performance test.

[[47 FR 49612](#), Nov. 1, 1982; [48 FR 1056](#), Jan. 10, 1983, as amended at [65 FR 61761](#), Oct. 17, 2000]

§ 60.464 Monitoring of emissions and operations.

(a) Where compliance with the numerical limit specified in [§ 60.462\(a\) \(1\)](#) or [\(2\)](#) is achieved through the use of low VOC-content coatings without the use of emission control devices or through the use of higher VOC-content coatings in conjunction with emission control devices, the owner or operator shall compute and record the average VOC content of coatings applied during each calendar month for each affected facility, according to the equations provided in [§ 60.463](#).

(b) Where compliance with the limit specified in [§ 60.462\(a\)\(4\)](#) is achieved through the intermittent use of emission control devices, the owner or operator shall compute and record for each affected facility the average VOC content of coatings applied during each calendar month according to the equations provided in [§ 60.463](#).

(c) If thermal incineration is used, each owner or operator subject to the provisions of this subpart shall install, calibrate, operate, and maintain a device that continuously records the combustion temperature of any effluent gases incinerated to achieve compliance with [§ 60.462\(a\)\(2\)](#), [\(3\)](#), or [\(4\)](#). This device shall have an accuracy of ± 2.5 °C. or ± 0.75 percent of the temperature being measured expressed in degrees Celsius, whichever is greater. Each owner or operator shall also record all periods (during actual coating operations) in excess of 3 hours

during which the average temperature in any thermal incinerator used to control emissions from an affected facility remains more than 28 °C (50 °F) below the temperature at which compliance with [§ 60.462\(a\)\(2\)](#), [\(3\)](#), or [\(4\)](#) was demonstrated during the most recent measurement of incinerator efficiency required by [§ 60.8](#). The records required by [§ 60.7](#) shall identify each such occurrence and its duration. If catalytic incineration is used, the owner or operator shall install, calibrate, operate, and maintain a device to monitor and record continuously the gas temperature both upstream and downstream of the incinerator catalyst bed. This device shall have an accuracy of ± 2.5 °C. or ± 0.75 percent of the temperature being measured expressed in degrees Celsius, whichever is greater. During coating operations, the owner or operator shall record all periods in excess of 3 hours where the average difference between the temperature upstream and downstream of the incinerator catalyst bed remains below 80 percent of the temperature difference at which compliance was demonstrated during the most recent measurement of incinerator efficiency or when the inlet temperature falls more than 28 °C (50 °F) below the temperature at which compliance with [§ 60.462\(a\)\(2\)](#), [\(3\)](#), or [\(4\)](#) was demonstrated during the most recent measurement of incinerator efficiency required by [§ 60.8](#). The records required by [§ 60.7](#) shall identify each such occurrence and its duration.

[[47 FR 49612](#), Nov. 1, 1982; [48 FR 1056](#), Jan. 10, 1983, as amended at [65 FR 61761](#), Oct. 17, 2000]

§ 60.465 Reporting and recordkeeping requirements.

(a) Where compliance with the numerical limit specified in [§ 60.462\(a\)\(1\)](#), [\(2\)](#), or [\(4\)](#) is achieved through the use of low VOC-content coatings without emission control devices or through the use of higher VOC-content coatings in conjunction with emission control devices, each owner or operator subject to the provisions of this subpart shall include in the initial compliance report required by [§ 60.8](#) the weighted average of the VOC content of coatings used during a period of one calendar month for each affected facility. Where compliance with [§ 60.462\(a\)\(4\)](#) is achieved through the intermittent use of a control device, reports shall include separate values of the weighted average VOC content of coatings used with and without the control device in operation.

(b) Where compliance with [§ 60.462\(a\)\(2\)](#), [\(3\)](#), or [\(4\)](#) is achieved through the use of an emission control device that destroys VOC's, each owner or operator subject to the provisions of this subpart shall include the following data in the initial compliance report required by [§ 60.8](#):

(1) The overall VOC destruction rate used to attain compliance with [§ 60.462\(a\)\(2\)](#), [\(3\)](#), or [\(4\)](#) and the calculated emission limit used to attain compliance with [§ 60.462\(a\)\(4\)](#); and

(2) The combustion temperature of the thermal incinerator or the gas temperature, both upstream and downstream of the incinerator catalyst bed, used to attain compliance with [§ 60.462\(a\)\(2\)](#), [\(3\)](#), or [\(4\)](#).

(c) Following the initial performance test, the owner or operator of an affected facility shall identify, record, and submit a written report to the Administrator every calendar quarter of each instance in which the volume-weighted average of the local mass of VOC's emitted to the atmosphere per volume of applied coating solids (N) is greater than the limit specified under [§ 60.462](#). If no such instances have occurred during a particular quarter, a report stating this shall be submitted to the Administrator semiannually.

(d) The owner or operator of each affected facility shall also submit reports at the frequency specified in [§ 60.7\(c\)](#) when the incinerator temperature drops as defined under [§ 60.464\(c\)](#). If no such periods occur, the owner or operator shall state this in the report.

(e) Each owner or operator subject to the provisions of this subpart shall maintain at the source, for a period of at least 2 years, records of all data and calculations used to determine monthly VOC emissions from each affected facility and to determine the monthly emission limit, where applicable. Where compliance is achieved through the use of thermal incineration, each owner or operator shall maintain, at the source, daily records of the incinerator combustion temperature. If catalytic incineration is used, the owner or operator shall maintain at the source daily records of the gas temperature, both upstream and downstream of the incinerator catalyst bed.

[[47 FR 49612](#), Nov. 1, 1982, as amended at [55 FR 51383](#), Dec. 13, 1990; [56 FR 20497](#), May 3, 1991; [65 FR 61761](#), Oct. 17, 2000]

§ 60.466 Test methods and procedures.

(a) The reference methods in appendix A to this part, except as provided under [§ 60.8\(b\)](#), shall be used to determine compliance with [§ 60.462](#) as follows:

(1) Method 24, or data provided by the formulator of the coating, shall be used for determining the VOC content of each coating as applied to the surface of the metal coil. In the event of a dispute, Method 24 shall be the reference method. When VOC content of waterborne coatings, determined by Method 24, is used to determine compliance of affected facilities, the results of the Method 24 analysis shall be adjusted as described in [Section 12.6](#) of Method 24;

(2) Method 25, both for measuring the VOC concentration in each gas stream entering and leaving the control device on each stack equipped with an emission control device and for measuring the VOC concentration in each gas stream emitted directly to the atmosphere;

(3) Method 1 for sample and velocity traverses;

(4) Method 2 for velocity and volumetric flow rate;

(5) Method 3 for gas analysis; and

(6) Method 4 for stack gas moisture.

(b) For Method 24, the coating sample must be at least a 1-liter sample taken at a point where the sample will be representative of the coating as applied to the surface of the metal coil.

(c) For Method 25, the sampling time for each of three runs is to be at least 60 minutes, and the minimum sampling volume is to be at least 0.003 dscm (0.11 dscf); however, shorter sampling times or smaller volumes, when necessitated by process variables or other factors, may be approved by the Administrator.

(d) The Administrator will approve testing of representative stacks on a case-by-case basis if the owner or operator can demonstrate to the satisfaction of the Administrator that testing of representative stacks yields results comparable to those that would be obtained by testing all stacks.

[[47 FR 49612](#), Nov. 1, 1982, as amended at [51 FR 22938](#), June 24, 1986; [65 FR 61761](#), Oct. 17, 2000]

Appendix D

40 C.F.R. Part 60 Subpart IIII

Standards of Performance for Stationary Compression Ignition Internal Combustion Engines

Subpart III—Standards of Performance for Stationary Compression Ignition Internal Combustion Engines

Source: [71 FR 39172](#), July 11, 2006, unless otherwise noted.

What This Subpart Covers

§ 60.4200 Am I subject to this subpart?

(a) The provisions of this subpart are applicable to manufacturers, owners, and operators of stationary compression ignition (CI) internal combustion engines (ICE) and other persons as specified in [paragraphs \(a\)\(1\)](#) through [\(4\)](#) of this section. For the purposes of this subpart, the date that construction commences is the date the engine is ordered by the owner or operator.

(1) Manufacturers of stationary CI ICE with a displacement of less than 30 liters per cylinder where the model year is:

(i) 2007 or later, for engines that are not fire pump engines;

(ii) The model year listed in Table 3 to this subpart or later model year, for fire pump engines.

(2) Owners and operators of stationary CI ICE that commence construction after July 11, 2005, where the stationary CI ICE are:

(i) Manufactured after April 1, 2006, and are not fire pump engines, or

(ii) Manufactured as a certified National Fire Protection Association (NFPA) fire pump engine after July 1, 2006.

(3) Owners and operators of any stationary CI ICE that are modified or reconstructed after July 11, 2005 and any person that modifies or reconstructs any stationary CI ICE after July 11, 2005.

(4) The provisions of [§ 60.4208 of this subpart](#) are applicable to all owners and operators of stationary CI ICE that commence construction after July 11, 2005.

(b) The provisions of this subpart are not applicable to stationary CI ICE being tested at a stationary CI ICE test cell/stand.

(c) If you are an owner or operator of an area source subject to this subpart, you are exempt from the obligation to obtain a permit under [40 CFR part 70](#) or [40 CFR part 71](#), provided you are not required to obtain a permit under [40 CFR 70.3\(a\)](#) or [40 CFR 71.3\(a\)](#) for a reason other than your status as an area source under this subpart. Notwithstanding the previous sentence, you must continue to comply with the provisions of this subpart applicable to area sources.

(d) Stationary CI ICE may be eligible for exemption from the requirements of this subpart as described in [40 CFR part 1068, subpart C](#), except that owners and operators, as well as manufacturers, may be eligible to request an exemption for national security.

(e) Owners and operators of facilities with CI ICE that are acting as temporary replacement units and that are located at a stationary source for less than 1 year and that have been properly certified as meeting the standards that would be applicable to such engine under the appropriate nonroad engine provisions, are not required to meet any other provisions under this subpart with regard to such engines.

[[71 FR 39172](#), July 11, 2006, as amended at [76 FR 37967](#), June 28, 2011; [86 FR 34357](#), June 29, 2021]

Emission Standards for Manufacturers

§ 60.4201 What emission standards must I meet for non-emergency engines if I am a stationary CI internal combustion engine manufacturer?

(a) Stationary CI internal combustion engine manufacturers must certify their 2007 model year and later non-emergency stationary CI ICE with a maximum engine power less than or equal to 2,237 kilowatt (KW) (3,000 horsepower (HP)) and a displacement of less than 10 liters per cylinder to the certification emission standards for new nonroad CI engines in [40 CFR 1039.101](#), [1039.102](#), [1039.104](#), [1039.105](#), [1039.107](#), and [1039.115](#) and [40 CFR part 1039, appendix I](#), as applicable, for all pollutants, for the same model year and maximum engine power.

(b) Stationary CI internal combustion engine manufacturers must certify their 2007 through 2010 model year non-emergency stationary CI ICE with a maximum engine power greater than 2,237 KW (3,000 HP) and a displacement of less than 10 liters per cylinder to the emission standards in table 1 to this subpart, for all pollutants, for the same maximum engine power.

(c) Stationary CI internal combustion engine manufacturers must certify their 2011 model year and later non-emergency stationary CI ICE with a maximum engine power greater than 2,237 KW (3,000 HP) and a displacement of less than 10 liters per cylinder to the certification emission standards for new nonroad CI engines in [40 CFR 1039.101](#), [40 CFR 1039.102](#), [40 CFR 1039.104](#), [40 CFR 1039.105](#), [40 CFR 1039.107](#), and [40 CFR 1039.115](#), as applicable, for all pollutants, for the same maximum engine power.

(d) Stationary CI internal combustion engine manufacturers must certify the following non-emergency stationary CI ICE to the appropriate Tier 2 emission standards for new marine CI engines as described in [40 CFR part 1042, appendix I](#), for all pollutants, for the same displacement and rated power:

(1) Their 2007 model year through 2012 non-emergency stationary CI ICE with a displacement of greater than or equal to 10 liters per cylinder and less than 30 liters per cylinder;

(2) Their 2013 model year non-emergency stationary CI ICE with a maximum engine power greater than or equal to 3,700 KW (4,958 HP) and a displacement of greater than or equal to 10 liters per cylinder and less than 15 liters per cylinder; and

(3) Their 2013 model year non-emergency stationary CI ICE with a displacement of greater than or equal to 15 liters per cylinder and less than 30 liters per cylinder.

(e) Stationary CI internal combustion engine manufacturers must certify the following non-emergency stationary CI ICE to the certification emission standards and other requirements for new marine CI engines in [40 CFR 1042.101](#), [40 CFR 1042.107](#), [40 CFR 1042.110](#), [40 CFR 1042.115](#), [40 CFR 1042.120](#), and [40 CFR 1042.145](#), as applicable, for all pollutants, for the same displacement and maximum engine power:

(1) Their 2013 model year non-emergency stationary CI ICE with a maximum engine power less than 3,700 KW (4,958 HP) and a displacement of greater than or equal to 10 liters per cylinder and less than 15 liters per cylinder; and

(2) Their 2014 model year and later non-emergency stationary CI ICE with a displacement of greater than or equal to 10 liters per cylinder and less than 30 liters per cylinder.

(f) Notwithstanding the requirements in [paragraphs \(a\)](#) through [\(c\)](#) of this section, stationary non-emergency CI ICE identified in [paragraphs \(a\)](#) and [\(c\)](#) of this section may be certified to the provisions of [40 CFR part 1042](#) for commercial engines that are applicable for the engine's model year, displacement, power density, and maximum engine power if the engines will be used solely in either or both of the following locations:

(1) Remote areas of Alaska; and

(2) Marine offshore installations.

(g) Notwithstanding the requirements in [paragraphs \(a\)](#) through [\(f\)](#) of this section, stationary CI internal combustion engine manufacturers are not required to certify reconstructed engines; however manufacturers may elect to do so. The reconstructed engine must be certified to the emission standards specified in [paragraphs \(a\)](#) through [\(e\)](#) of this section that are applicable to the model year, maximum engine power, and displacement of the reconstructed stationary CI ICE.

(h) Stationary CI ICE certified to the standards in [40 CFR part 1039](#) and equipped with auxiliary emission control devices (AECDs) as specified in [40 CFR 1039.665](#) must meet the Tier 1 certification emission standards for new nonroad CI engines in [40 CFR part 1039, appendix I](#), while the AECD is activated during a qualified emergency situation. A qualified emergency situation is defined in [40 CFR 1039.665](#). When the qualified emergency situation has ended and the AECD is deactivated, the engine must resume meeting the otherwise applicable emission standard specified in this section.

[[71 FR 39172](#), July 11, 2006, as amended at [76 FR 37967](#), June 28, 2011; [81 FR 44219](#), July 7, 2016; [86 FR 34357](#), June 29, 2021]

§ 60.4202 What emission standards must I meet for emergency engines if I am a stationary CI internal combustion engine manufacturer?

(a) Stationary CI internal combustion engine manufacturers must certify their 2007 model year and later emergency stationary CI ICE with a maximum engine power less than or equal to 2,237 KW (3,000 HP) and a displacement of less than 10 liters per cylinder that are not fire pump engines to the emission standards specified in [paragraphs \(a\)\(1\)](#) through [\(2\)](#) of this section.

(1) For engines with a maximum engine power less than 37 KW (50 HP):

(i) The Tier 2 emission standards for new nonroad CI engines for the appropriate rated power as described in [40 CFR part 1039, appendix I](#), for all pollutants and the smoke standards as specified in [40 CFR 1039.105](#) for model year 2007 engines; and

(ii) The certification emission standards for new nonroad CI engines in [40 CFR 1039.104](#), [40 CFR 1039.105](#), [40 CFR 1039.107](#), [40 CFR 1039.115](#), and table 2 to this subpart, for 2008 model year and later engines.

(2) For engines with a rated power greater than or equal to 37 KW (50 HP), the Tier 2 or Tier 3 emission standards for new nonroad CI engines for the same rated power as described in [40 CFR part 1039, appendix I](#), for all pollutants and the smoke standards as specified in [40 CFR 1039.105](#) beginning in model year 2007.

(b) Stationary CI internal combustion engine manufacturers must certify their 2007 model year and later emergency stationary CI ICE with a maximum engine power greater than 2,237 KW (3,000 HP) and a displacement of less than 10 liters per cylinder that are not fire pump engines to the emission standards specified in [paragraphs \(b\)\(1\)](#) through [\(2\)](#) of this section.

(1) For 2007 through 2010 model years, the emission standards in table 1 to this subpart, for all pollutants, for the same maximum engine power.

(2) For 2011 model year and later, the Tier 2 emission standards as described in [40 CFR part 1039, appendix I](#), for all pollutants and the smoke standards as specified in [40 CFR 1039.105](#).

(c) [Reserved]

(d) Beginning with the model years in table 3 to this subpart, stationary CI internal combustion engine manufacturers must certify their fire pump stationary CI ICE to the emission standards in table 4 to this subpart, for all pollutants, for the same model year and NFPA nameplate power.

(e) Stationary CI internal combustion engine manufacturers must certify the following emergency stationary CI ICE that are not fire pump engines to the appropriate Tier 2 emission

standards for new marine CI engines as described in [40 CFR part 1042, appendix I](#), for all pollutants, for the same displacement and rated power:

- (1) Their 2007 model year through 2012 emergency stationary CI ICE with a displacement of greater than or equal to 10 liters per cylinder and less than 30 liters per cylinder;
- (2) Their 2013 model year and later emergency stationary CI ICE with a maximum engine power greater than or equal to 3,700 KW (4,958 HP) and a displacement of greater than or equal to 10 liters per cylinder and less than 15 liters per cylinder;
- (3) Their 2013 model year emergency stationary CI ICE with a displacement of greater than or equal to 15 liters per cylinder and less than 30 liters per cylinder; and
- (4) Their 2014 model year and later emergency stationary CI ICE with a maximum engine power greater than or equal to 2,000 KW (2,682 HP) and a displacement of greater than or equal to 15 liters per cylinder and less than 30 liters per cylinder.

(f) Stationary CI internal combustion engine manufacturers must certify the following emergency stationary CI ICE to the certification emission standards and other requirements applicable to Tier 3 new marine CI engines in [40 CFR 1042.101](#), [40 CFR 1042.107](#), [40 CFR 1042.115](#), [40 CFR 1042.120](#), and [40 CFR 1042.145](#), for all pollutants, for the same displacement and maximum engine power:

- (1) Their 2013 model year and later emergency stationary CI ICE with a maximum engine power less than 3,700 KW (4,958 HP) and a displacement of greater than or equal to 10 liters per cylinder and less than 15 liters per cylinder; and
- (2) Their 2014 model year and later emergency stationary CI ICE with a maximum engine power less than 2,000 KW (2,682 HP) and a displacement of greater than or equal to 15 liters per cylinder and less than 30 liters per cylinder.

(g) Notwithstanding the requirements in [paragraphs \(a\)](#) through [\(d\)](#) of this section, stationary emergency CI ICE identified in [paragraphs \(a\)](#) and [\(c\)](#) of this section may be certified to the provisions of [40 CFR part 1042](#) for commercial engines that are applicable for the engine's model year, displacement, power density, and maximum engine power if the engines will be used solely in either or both of the locations identified in [paragraphs \(g\)\(1\)](#) and [\(2\)](#) of this section. Engines that would be subject to the Tier 4 standards in [40 CFR part 1042](#) that are used solely in either or both of the locations identified in [paragraphs \(g\)\(1\)](#) and [\(2\)](#) of this section may instead continue to be certified to the previous tier of standards in [40 CFR part 1042](#). The previous tier is Tier 3 in most cases; however, the previous tier is Tier 2 if there are no Tier 3 standards specified for engines of a certain size or power rating.

- (1) Remote areas of Alaska; and

(2) Marine offshore installations.

(h) Notwithstanding the requirements in [paragraphs \(a\)](#) through [\(f\)](#) of this section, stationary CI internal combustion engine manufacturers are not required to certify reconstructed engines; however manufacturers may elect to do so. The reconstructed engine must be certified to the emission standards specified in [paragraphs \(a\)](#) through [\(f\)](#) of this section that are applicable to the model year, maximum engine power and displacement of the reconstructed emergency stationary CI ICE.

[[71 FR 39172](#), July 11, 2006, as amended at [76 FR 37968](#), June 28, 2011; [81 FR 44219](#), July 7, 2016; [86 FR 34358](#), June 29, 2021; [88 FR 4471](#), Jan. 24, 2023]

§ 60.4203 How long must my engines meet the emission standards if I am a manufacturer of stationary CI internal combustion engines?

Engines manufactured by stationary CI internal combustion engine manufacturers must meet the emission standards as required in [§§ 60.4201](#) and [60.4202](#) during the certified emissions life of the engines.

[[76 FR 37968](#), June 28, 2011]

Emission Standards for Owners and Operators

§ 60.4204 What emission standards must I meet for non-emergency engines if I am an owner or operator of a stationary CI internal combustion engine?

(a) Owners and operators of pre-2007 model year non-emergency stationary CI ICE with a displacement of less than 10 liters per cylinder must comply with the emission standards in table 1 to this subpart. Owners and operators of pre-2007 model year non-emergency stationary CI ICE with a displacement of greater than or equal to 10 liters per cylinder and less than 30 liters per cylinder must comply with the Tier 1 emission standards in [40 CFR part 1042, appendix I](#).

(b) Owners and operators of 2007 model year and later non-emergency stationary CI ICE with a displacement of less than 30 liters per cylinder must comply with the emission standards for new CI engines in [§ 60.4201](#) for their 2007 model year and later stationary CI ICE, as applicable.

(c) Owners and operators of non-emergency stationary CI engines with a displacement of greater than or equal to 30 liters per cylinder must meet the following requirements:

(1) For engines installed prior to January 1, 2012, limit the emissions of NO_x in the stationary CI internal combustion engine exhaust to the following:

(i) 17.0 grams per kilowatt-hour (g/KW-hr) (12.7 grams per horsepower-hr (g/HP-hr)) when maximum engine speed is less than 130 revolutions per minute (rpm);

(ii) $45 \cdot n^{-0.2}$ g/KW-hr ($34 \cdot n^{-0.2}$ g/HP-hr) when maximum engine speed is 130 or more but less than 2,000 rpm, where n is maximum engine speed; and

(iii) 9.8 g/KW-hr (7.3 g/HP-hr) when maximum engine speed is 2,000 rpm or more.

(2) For engines installed on or after January 1, 2012 and before January 1, 2016, limit the emissions of NO_x in the stationary CI internal combustion engine exhaust to the following:

(i) 14.4 g/KW-hr (10.7 g/HP-hr) when maximum engine speed is less than 130 rpm;

(ii) $44 \cdot n^{-0.23}$ g/KW-hr ($33 \cdot n^{-0.23}$ g/HP-hr) when maximum engine speed is greater than or equal to 130 but less than 2,000 rpm and where n is maximum engine speed; and

(iii) 7.7 g/KW-hr (5.7 g/HP-hr) when maximum engine speed is greater than or equal to 2,000 rpm.

(3) For engines installed on or after January 1, 2016, limit the emissions of NO_x in the stationary CI internal combustion engine exhaust to the following:

(i) 3.4 g/KW-hr (2.5 g/HP-hr) when maximum engine speed is less than 130 rpm;

(ii) $9.0 \cdot n^{-0.20}$ g/KW-hr ($6.7 \cdot n^{-0.20}$ g/HP-hr) where n (maximum engine speed) is 130 or more but less than 2,000 rpm; and

(iii) 2.0 g/KW-hr (1.5 g/HP-hr) where maximum engine speed is greater than or equal to 2,000 rpm.

(4) Reduce particulate matter (PM) emissions by 60 percent or more, or limit the emissions of PM in the stationary CI internal combustion engine exhaust to 0.15 g/KW-hr (0.11 g/HP-hr).

(d) Owners and operators of non-emergency stationary CI ICE with a displacement of less than 30 liters per cylinder who conduct performance tests in-use must meet the not-to-exceed (NTE) standards as indicated in [§ 60.4212](#).

(e) Owners and operators of any modified or reconstructed non-emergency stationary CI ICE subject to this subpart must meet the emission standards applicable to the model year, maximum engine power, and displacement of the modified or reconstructed non-emergency stationary CI ICE that are specified in [paragraphs \(a\) through \(d\)](#) of this section.

(f) Owners and operators of stationary CI ICE certified to the standards in [40 CFR part 1039](#) and equipped with AECDs as specified in [40 CFR 1039.665](#) must meet the Tier 1 certification emission standards for new nonroad CI engines in [40 CFR part 1039, appendix I](#), while the AECD is activated during a qualified emergency situation. A qualified emergency situation is defined in [40 CFR 1039.665](#). When the qualified emergency situation has ended and the AECD

is deactivated, the engine must resume meeting the otherwise applicable emission standard specified in this section.

[[71 FR 39172](#), July 11, 2006, as amended at [76 FR 37968](#), June 28, 2011; [81 FR 44219](#), July 7, 2016; [86 FR 34358](#), June 29, 2021]

§ 60.4205 What emission standards must I meet for emergency engines if I am an owner or operator of a stationary CI internal combustion engine?

(a) Owners and operators of pre-2007 model year emergency stationary CI ICE with a displacement of less than 10 liters per cylinder that are not fire pump engines must comply with the emission standards in Table 1 to this subpart. Owners and operators of pre-2007 model year emergency stationary CI ICE with a displacement of greater than or equal to 10 liters per cylinder and less than 30 liters per cylinder that are not fire pump engines must comply with the Tier 1 emission standards in [40 CFR part 1042, appendix I](#).

(b) Owners and operators of 2007 model year and later emergency stationary CI ICE with a displacement of less than 30 liters per cylinder that are not fire pump engines must comply with the emission standards for new nonroad CI engines in [§ 60.4202](#), for all pollutants, for the same model year and maximum engine power for their 2007 model year and later emergency stationary CI ICE.

(c) Owners and operators of fire pump engines with a displacement of less than 30 liters per cylinder must comply with the emission standards in table 4 to this subpart, for all pollutants.

(d) Owners and operators of emergency stationary CI engines with a displacement of greater than or equal to 30 liters per cylinder must meet the requirements in this section.

(1) For engines installed prior to January 1, 2012, limit the emissions of NO_x in the stationary CI internal combustion engine exhaust to the following:

(i) 17.0 g/KW-hr (12.7 g/HP-hr) when maximum engine speed is less than 130 rpm;

(ii) $45 \cdot n^{-0.2}$ g/KW-hr ($34 \cdot n^{-0.2}$ g/HP-hr) when maximum engine speed is 130 or more but less than 2,000 rpm, where n is maximum engine speed; and

(iii) 9.8 g/kW-hr (7.3 g/HP-hr) when maximum engine speed is 2,000 rpm or more.

(2) For engines installed on or after January 1, 2012, limit the emissions of NO_x in the stationary CI internal combustion engine exhaust to the following:

(i) 14.4 g/KW-hr (10.7 g/HP-hr) when maximum engine speed is less than 130 rpm;

(ii) $44 \cdot n^{-0.23}$ g/KW-hr ($33 \cdot n^{-0.23}$ g/HP-hr) when maximum engine speed is greater than or equal to 130 but less than 2,000 rpm and where n is maximum engine speed; and

(iii) 7.7 g/KW-hr (5.7 g/HP-hr) when maximum engine speed is greater than or equal to 2,000 rpm.

(3) Limit the emissions of PM in the stationary CI internal combustion engine exhaust to 0.40 g/KW-hr (0.30 g/HP-hr).

(e) Owners and operators of emergency stationary CI ICE with a displacement of less than 30 liters per cylinder who conduct performance tests in-use must meet the NTE standards as indicated in [§ 60.4212](#).

(f) Owners and operators of any modified or reconstructed emergency stationary CI ICE subject to this subpart must meet the emission standards applicable to the model year, maximum engine power, and displacement of the modified or reconstructed CI ICE that are specified in [paragraphs \(a\) through \(e\)](#) of this section.

[[71 FR 39172](#), July 11, 2006, as amended at [76 FR 37969](#), June 28, 2011; [86 FR 34358](#), June 29, 2021]

§ 60.4206 How long must I meet the emission standards if I am an owner or operator of a stationary CI internal combustion engine?

Owners and operators of stationary CI ICE must operate and maintain stationary CI ICE that achieve the emission standards as required in [§§ 60.4204](#) and [60.4205](#) over the entire life of the engine.

[[76 FR 37969](#), June 28, 2011]

Fuel Requirements for Owners and Operators

§ 60.4207 What fuel requirements must I meet if I am an owner or operator of a stationary CI internal combustion engine subject to this subpart?

(a) [Reserved]

(b) Beginning October 1, 2010, owners and operators of stationary CI ICE subject to this subpart with a displacement of less than 30 liters per cylinder that use diesel fuel must use diesel fuel that meets the requirements of [40 CFR 1090.305](#) for nonroad diesel fuel, except that any existing diesel fuel purchased (or otherwise obtained) prior to October 1, 2010, may be used until depleted.

(c) [Reserved]

(d) Beginning June 1, 2012, owners and operators of stationary CI ICE subject to this subpart with a displacement of greater than or equal to 30 liters per cylinder must use diesel fuel that meets a maximum per-gallon sulfur content of 1,000 parts per million (ppm).

(e) Stationary CI ICE that have a national security exemption under [§ 60.4200\(d\)](#) are also exempt from the fuel requirements in this section.

[[71 FR 39172](#), July 11, 2006, as amended at [76 FR 37969](#), June 28, 2011; [78 FR 6695](#), Jan. 30, 2013; [85 FR 78463](#), Dec. 4, 2020]

Other Requirements for Owners and Operators

§ 60.4208 What is the deadline for importing or installing stationary CI ICE produced in previous model years?

(a) After December 31, 2008, owners and operators may not install stationary CI ICE (excluding fire pump engines) that do not meet the applicable requirements for 2007 model year engines.

(b) After December 31, 2009, owners and operators may not install stationary CI ICE with a maximum engine power of less than 19 KW (25 HP) (excluding fire pump engines) that do not meet the applicable requirements for 2008 model year engines.

(c) After December 31, 2014, owners and operators may not install non-emergency stationary CI ICE with a maximum engine power of greater than or equal to 19 KW (25 HP) and less than 56 KW (75 HP) that do not meet the applicable requirements for 2013 model year non-emergency engines.

(d) After December 31, 2013, owners and operators may not install non-emergency stationary CI ICE with a maximum engine power of greater than or equal to 56 KW (75 HP) and less than 130 KW (175 HP) that do not meet the applicable requirements for 2012 model year non-emergency engines.

(e) After December 31, 2012, owners and operators may not install non-emergency stationary CI ICE with a maximum engine power of greater than or equal to 130 KW (175 HP), including those above 560 KW (750 HP), that do not meet the applicable requirements for 2011 model year non-emergency engines.

(f) After December 31, 2016, owners and operators may not install non-emergency stationary CI ICE with a maximum engine power of greater than or equal to 560 KW (750 HP) that do not meet the applicable requirements for 2015 model year non-emergency engines.

(g) After December 31, 2018, owners and operators may not install non-emergency stationary CI ICE with a maximum engine power greater than or equal to 600 KW (804 HP) and less than 2,000 KW (2,680 HP) and a displacement of greater than or equal to 10 liters per cylinder and less than 30 liters per cylinder that do not meet the applicable requirements for 2017 model year non-emergency engines.

(h) In addition to the requirements specified in [§§ 60.4201](#), [60.4202](#), [60.4204](#), and [60.4205](#), it is prohibited to import stationary CI ICE with a displacement of less than 30 liters per cylinder that

do not meet the applicable requirements specified in [paragraphs \(a\)](#) through [\(g\)](#) of this section after the dates specified in [paragraphs \(a\)](#) through [\(g\)](#) of this section.

(i) The requirements of this section do not apply to owners or operators of stationary CI ICE that have been modified, reconstructed, and do not apply to engines that were removed from one existing location and reinstalled at a new location.

[[71 FR 39172](#), July 11, 2006, as amended at [76 FR 37969](#), June 28, 2011]

§ 60.4209 What are the monitoring requirements if I am an owner or operator of a stationary CI internal combustion engine?

If you are an owner or operator, you must meet the monitoring requirements of this section. In addition, you must also meet the monitoring requirements specified in [§ 60.4211](#).

(a) If you are an owner or operator of an emergency stationary CI internal combustion engine that does not meet the standards applicable to non-emergency engines, you must install a non-resettable hour meter prior to startup of the engine.

(b) If you are an owner or operator of a stationary CI internal combustion engine equipped with a diesel particulate filter to comply with the emission standards in [§ 60.4204](#), the diesel particulate filter must be installed with a backpressure monitor that notifies the owner or operator when the high backpressure limit of the engine is approached.

[[71 FR 39172](#), July 11, 2006, as amended at [76 FR 37969](#), June 28, 2011]

Compliance Requirements

§ 60.4210 What are my compliance requirements if I am a stationary CI internal combustion engine manufacturer?

(a) Stationary CI internal combustion engine manufacturers must certify their stationary CI ICE with a displacement of less than 10 liters per cylinder to the emission standards specified in [§§ 60.4201\(a\)](#) through [\(c\)](#) and [60.4202\(a\)](#), [\(b\)](#), and [\(d\)](#) using the certification procedures required in [40 CFR part 1039, subpart C](#), and [must](#) test their engines as specified in [40 CFR part 1039](#). For the purposes of this subpart, engines certified to the standards in Table 1 to this subpart shall be subject to the same certification procedures required for engines certified to the Tier 1 standards in [40 CFR part 1039, appendix I](#). For the purposes of this subpart, engines certified to the standards in Table 4 to this subpart shall be subject to the same certification procedures required for engines certified to the Tier 1 standards in [40 CFR part 1039, appendix I](#), except that engines with NFPA nameplate power of less than 37 KW (50 HP) certified to model year 2011 or later standards shall be subject to the same requirements as engines certified to the standards in [40 CFR part 1039](#).

(b) Stationary CI internal combustion engine manufacturers must certify their stationary CI ICE with a displacement of greater than or equal to 10 liters per cylinder and less than 30 liters per cylinder to the emission standards specified in [§§ 60.4201\(d\)](#) and [\(e\)](#) and [60.4202\(e\)](#) and [\(f\)](#) using the certification procedures required in [40 CFR part 1042, subpart C](#), and must test their engines as specified in [40 CFR part 1042](#).

(c) Stationary CI internal combustion engine manufacturers must meet the requirements of [40 CFR 1039.120](#), [1039.125](#), [1039.130](#), and [1039.135](#) and [40 CFR part 1068](#) for engines that are certified to the emission standards in [40 CFR part 1039](#). Stationary CI internal combustion engine manufacturers must meet the corresponding provisions of [40 CFR part 1042](#) for engines that would be covered by that part if they were nonroad (including marine) engines. Labels on such engines must refer to stationary engines, rather than or in addition to nonroad or marine engines, as appropriate. Stationary CI internal combustion engine manufacturers must label their engines according to [paragraphs \(c\)\(1\)](#) through [\(3\)](#) of this section.

(1) Stationary CI internal combustion engines manufactured from January 1, 2006 to March 31, 2006 (January 1, 2006 to June 30, 2006 for fire pump engines), other than those that are part of certified engine families under the nonroad CI engine regulations, must be labeled according to [40 CFR 1039.20](#).

(2) Stationary CI internal combustion engines manufactured from April 1, 2006 to December 31, 2006 (or, for fire pump engines, July 1, 2006 to December 31 of the year preceding the year listed in table 3 to this subpart) must be labeled according to [paragraphs \(c\)\(2\)\(i\)](#) through [\(iii\)](#) of this section:

(i) Stationary CI internal combustion engines that are part of certified engine families under the nonroad regulations must meet the labeling requirements for nonroad CI engines, but do not have to meet the labeling requirements in [40 CFR 1039.20](#).

(ii) Stationary CI internal combustion engines that meet Tier 1 requirements (or requirements for fire pumps) under this subpart, but do not meet the requirements applicable to nonroad CI engines must be labeled according to [40 CFR 1039.20](#). The engine manufacturer may add language to the label clarifying that the engine meets Tier 1 requirements (or requirements for fire pumps) of this subpart.

(iii) Stationary CI internal combustion engines manufactured after April 1, 2006 that do not meet Tier 1 requirements of this subpart, or fire pumps engines manufactured after July 1, 2006 that do not meet the requirements for fire pumps under this subpart, may not be used in the U.S. If any such engines are manufactured in the U.S. after April 1, 2006 (July 1, 2006 for fire pump engines), they must be exported or must be brought into compliance with the appropriate standards prior to initial operation. The export provisions of [40 CFR 1068.230](#) would apply to engines for export and the manufacturers must label such engines according to [40 CFR 1068.230](#).

(3) Stationary CI internal combustion engines manufactured after January 1, 2007 (for fire pump engines, after January 1 of the year listed in table 3 to this subpart, as applicable) must be labeled according to [paragraphs \(c\)\(3\)\(i\)](#) through [\(iii\)](#) of this section.

(i) Stationary CI internal combustion engines that meet the requirements of this subpart and the corresponding requirements for nonroad (including marine) engines of the same model year and HP must be labeled according to the provisions in [40 CFR part 1039](#) or [1042](#), as appropriate.

(ii) Stationary CI internal combustion engines that meet the requirements of this subpart, but are not certified to the standards applicable to nonroad (including marine) engines of the same model year and HP must be labeled according to the provisions in [40 CFR part 1039](#) or [1042](#), as appropriate, but the words “stationary” must be included instead of “nonroad” or “marine” on the label. In addition, such engines must be labeled according to [40 CFR 1039.20](#).

(iii) Stationary CI internal combustion engines that do not meet the requirements of this subpart must be labeled according to [40 CFR 1068.230](#) and must be exported under the provisions of [40 CFR 1068.230](#).

(d) An engine manufacturer certifying an engine family or families to standards under this subpart that are identical to standards applicable under [40 CFR part 1039](#) or [1042](#) for that model year may certify any such family that contains both nonroad (including marine) and stationary engines as a single engine family and/or may include any such family containing stationary engines in the averaging, banking, and trading provisions applicable for such engines under those parts.

(e) Manufacturers of engine families discussed in [paragraph \(d\)](#) of this section may meet the labeling requirements referred to in [paragraph \(c\)](#) of this section for stationary CI ICE by either adding a separate label containing the information required in [paragraph \(c\)](#) of this section or by adding the words “and stationary” after the word “nonroad” or “marine,” as appropriate, to the label.

(f) Starting with the model years shown in table 5 to this subpart, stationary CI internal combustion engine manufacturers must add a permanent label stating that the engine is for stationary emergency use only to each new emergency stationary CI internal combustion engine greater than or equal to 19 KW (25 HP) that meets all the emission standards for emergency engines in [§ 60.4202](#) but does not meet all the emission standards for non-emergency engines in [§ 60.4201](#). The label must be added according to the labeling requirements specified in [40 CFR 1039.135\(b\)](#). Engine manufacturers must specify in the owner's manual that operation of emergency engines is limited to emergency operations and required maintenance and testing.

(g) Manufacturers of fire pump engines may use the test cycle in table 6 to this subpart for testing fire pump engines and may test at the NFPA certified nameplate HP, provided that the engine is labeled as “Fire Pump Applications Only”.

(h) Engine manufacturers, including importers, may introduce into commerce uncertified engines or engines certified to earlier standards that were manufactured before the new or changed standards took effect until inventories are depleted, as long as such engines are part of normal inventory. For example, if the engine manufacturers' normal industry practice is to keep on hand a one-month supply of engines based on its projected sales, and a new tier of standards starts to apply for the 2009 model year, the engine manufacturer may manufacture engines based on the normal inventory requirements late in the 2008 model year, and sell those engines for installation. The engine manufacturer may not circumvent the provisions of [§ 60.4201](#) or [§ 60.4202](#) by stockpiling engines that are built before new or changed standards take effect. Stockpiling of such engines beyond normal industry practice is a violation of this subpart.

(i) The replacement engine provisions of [40 CFR 1068.240](#) are applicable to stationary CI engines replacing existing equipment that is less than 15 years old.

(j) Stationary CI ICE manufacturers may equip their stationary CI internal combustion engines certified to the emission standards in [40 CFR part 1039](#) with AECDs for qualified emergency situations according to the requirements of [40 CFR 1039.665](#). Manufacturers of stationary CI ICE equipped with AECDs as allowed by [40 CFR 1039.665](#) must meet all the requirements in [40 CFR 1039.665](#) that apply to manufacturers. Manufacturers must document that the engine complies with the Tier 1 standard in [40 CFR part 1039, appendix I](#), when the AECD is activated. Manufacturers must provide any relevant testing, engineering analysis, or other information in sufficient detail to support such statement when applying for certification (including amending an existing certificate) of an engine equipped with an AECD as allowed by [40 CFR 1039.665](#).

(k) Manufacturers of any size may certify their emergency stationary CI internal combustion engines under this section using assigned deterioration factors established by EPA, consistent with [40 CFR 1039.240](#) and [1042.240](#).

[[71 FR 39172](#), July 11, 2006, as amended at [76 FR 37969](#), June 28, 2011; [81 FR 44219](#), July 7, 2016; [86 FR 34358](#), June 29, 2021]

§ 60.4211 What are my compliance requirements if I am an owner or operator of a stationary CI internal combustion engine?

(a) If you are an owner or operator and must comply with the emission standards specified in this subpart, you must do all of the following, except as permitted under [paragraph \(g\)](#) of this section:

(1) Operate and maintain the stationary CI internal combustion engine and control device according to the manufacturer's emission-related written instructions;

(2) Change only those emission-related settings that are permitted by the manufacturer; and

(3) Meet the requirements of [40 CFR part 1068](#), as they apply to you.

(b) If you are an owner or operator of a pre-2007 model year stationary CI internal combustion engine and must comply with the emission standards specified in [§ 60.4204\(a\)](#) or [§ 60.4205\(a\)](#), or if you are an owner or operator of a CI fire pump engine that is manufactured prior to the model years in table 3 to this subpart and must comply with the emission standards specified in [§ 60.4205\(c\)](#), you must demonstrate compliance according to one of the methods specified in [paragraphs \(b\)\(1\)](#) through [\(5\)](#) of this section.

(1) Purchasing an engine certified to emission standards for the same model year and maximum engine power as described in [40 CFR parts 1039](#) and [1042](#), as applicable. The engine must be installed and configured according to the manufacturer's specifications.

(2) Keeping records of performance test results for each pollutant for a test conducted on a similar engine. The test must have been conducted using the same methods specified in this subpart and these methods must have been followed correctly.

(3) Keeping records of engine manufacturer data indicating compliance with the standards.

(4) Keeping records of control device vendor data indicating compliance with the standards.

(5) Conducting an initial performance test to demonstrate compliance with the emission standards according to the requirements specified in [§ 60.4212](#), as applicable.

(c) If you are an owner or operator of a 2007 model year and later stationary CI internal combustion engine and must comply with the emission standards specified in [§ 60.4204\(b\)](#) or [§ 60.4205\(b\)](#), or if you are an owner or operator of a CI fire pump engine that is manufactured during or after the model year that applies to your fire pump engine power rating in table 3 to this subpart and must comply with the emission standards specified in [§ 60.4205\(c\)](#), you must comply by purchasing an engine certified to the emission standards in [§ 60.4204\(b\)](#), or [§ 60.4205\(b\)](#) or [\(c\)](#), as applicable, for the same model year and maximum (or in the case of fire pumps, NFPA nameplate) engine power. The engine must be installed and configured according to the manufacturer's emission-related specifications, except as permitted in [paragraph \(g\)](#) of this section.

(d) If you are an owner or operator and must comply with the emission standards specified in [§ 60.4204\(c\)](#) or [§ 60.4205\(d\)](#), you must demonstrate compliance according to the requirements specified in [paragraphs \(d\)\(1\)](#) through [\(3\)](#) of this section.

(1) Conducting an initial performance test to demonstrate initial compliance with the emission standards as specified in [§ 60.4213](#).

(2) Establishing operating parameters to be monitored continuously to ensure the stationary internal combustion engine continues to meet the emission standards. The owner or operator must petition the Administrator for approval of operating parameters to be monitored

continuously. The petition must include the information described in [paragraphs \(d\)\(2\)\(i\) through \(v\)](#) of this section.

- (i) Identification of the specific parameters you propose to monitor continuously;
- (ii) A discussion of the relationship between these parameters and NO_x and PM emissions, identifying how the emissions of these pollutants change with changes in these parameters, and how limitations on these parameters will serve to limit NO_x and PM emissions;
- (iii) A discussion of how you will establish the upper and/or lower values for these parameters which will establish the limits on these parameters in the operating limitations;
- (iv) A discussion identifying the methods and the instruments you will use to monitor these parameters, as well as the relative accuracy and precision of these methods and instruments; and
- (v) A discussion identifying the frequency and methods for recalibrating the instruments you will use for monitoring these parameters.

(3) For non-emergency engines with a displacement of greater than or equal to 30 liters per cylinder, conducting annual performance tests to demonstrate continuous compliance with the emission standards as specified in [§ 60.4213](#).

(e) If you are an owner or operator of a modified or reconstructed stationary CI internal combustion engine and must comply with the emission standards specified in [§ 60.4204\(e\)](#) or [§ 60.4205\(f\)](#), you must demonstrate compliance according to one of the methods specified in [paragraphs \(e\)\(1\) or \(2\)](#) of this section.

(1) Purchasing, or otherwise owning or operating, an engine certified to the emission standards in [§ 60.4204\(e\)](#) or [§ 60.4205\(f\)](#), as applicable.

(2) Conducting a performance test to demonstrate initial compliance with the emission standards according to the requirements specified in [§ 60.4212](#) or [§ 60.4213](#), as appropriate. The test must be conducted within 60 days after the engine commences operation after the modification or reconstruction.

(f) If you own or operate an emergency stationary ICE, you must operate the emergency stationary ICE according to the requirements in [paragraphs \(f\)\(1\) through \(3\)](#) of this section. In order for the engine to be considered an emergency stationary ICE under this subpart, any operation other than emergency operation, maintenance and testing, and operation in non-emergency situations for 50 hours per year, as described in paragraphs (f)(1) through (3), is prohibited. If you do not operate the engine according to the requirements in paragraphs (f)(1) through (3), the engine will not be considered an emergency engine under this subpart and must meet all requirements for non-emergency engines.

(1) There is no time limit on the use of emergency stationary ICE in emergency situations.

(2) You may operate your emergency stationary ICE for the purpose specified in [paragraph \(f\)\(2\)\(i\)](#) of this section for a maximum of 100 hours per calendar year. Any operation for non-emergency situations as allowed by [paragraph \(f\)\(3\)](#) of this section counts as part of the 100 hours per calendar year allowed by this [paragraph \(f\)\(2\)](#).

(i) Emergency stationary ICE may be operated for maintenance checks and readiness testing, provided that the tests are recommended by federal, state or local government, the manufacturer, the vendor, the regional transmission organization or equivalent balancing authority and transmission operator, or the insurance company associated with the engine. The owner or operator may petition the Administrator for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the owner or operator maintains records indicating that federal, state, or local standards require maintenance and testing of emergency ICE beyond 100 hours per calendar year.

(ii)-(iii) [Reserved]

(3) Emergency stationary ICE may be operated for up to 50 hours per calendar year in non-emergency situations. The 50 hours of operation in non-emergency situations are counted as part of the 100 hours per calendar year for maintenance and testing provided in [paragraph \(f\)\(2\)](#) of this section. Except as provided in [paragraph \(f\)\(3\)\(i\)](#) of this section, the 50 hours per calendar year for non-emergency situations cannot be used for peak shaving or non-emergency demand response, or to generate income for a facility to an electric grid or otherwise supply power as part of a financial arrangement with another entity.

(i) The 50 hours per year for non-emergency situations can be used to supply power as part of a financial arrangement with another entity if all of the following conditions are met:

(A) The engine is dispatched by the local balancing authority or local transmission and distribution system operator;

(B) The dispatch is intended to mitigate local transmission and/or distribution limitations so as to avert potential voltage collapse or line overloads that could lead to the interruption of power supply in a local area or region.

(C) The dispatch follows reliability, emergency operation or similar protocols that follow specific NERC, regional, state, public utility commission or local standards or guidelines.

(D) The power is provided only to the facility itself or to support the local transmission and distribution system.

(E) The owner or operator identifies and records the entity that dispatches the engine and the specific NERC, regional, state, public utility commission or local standards or guidelines that are being followed for dispatching the engine. The local balancing authority or local transmission

and distribution system operator may keep these records on behalf of the engine owner or operator.

(ii) [Reserved]

(g) If you do not install, configure, operate, and maintain your engine and control device according to the manufacturer's emission-related written instructions, or you change emission-related settings in a way that is not permitted by the manufacturer, you must demonstrate compliance as follows:

(1) If you are an owner or operator of a stationary CI internal combustion engine with maximum engine power less than 100 HP, you must keep a maintenance plan and records of conducted maintenance to demonstrate compliance and must, to the extent practicable, maintain and operate the engine in a manner consistent with good air pollution control practice for minimizing emissions. In addition, if you do not install and configure the engine and control device according to the manufacturer's emission-related written instructions, or you change the emission-related settings in a way that is not permitted by the manufacturer, you must conduct an initial performance test to demonstrate compliance with the applicable emission standards within 1 year of such action.

(2) If you are an owner or operator of a stationary CI internal combustion engine greater than or equal to 100 HP and less than or equal to 500 HP, you must keep a maintenance plan and records of conducted maintenance and must, to the extent practicable, maintain and operate the engine in a manner consistent with good air pollution control practice for minimizing emissions. In addition, you must conduct an initial performance test to demonstrate compliance with the applicable emission standards within 1 year of startup, or within 1 year after an engine and control device is no longer installed, configured, operated, and maintained in accordance with the manufacturer's emission-related written instructions, or within 1 year after you change emission-related settings in a way that is not permitted by the manufacturer.

(3) If you are an owner or operator of a stationary CI internal combustion engine greater than 500 HP, you must keep a maintenance plan and records of conducted maintenance and must, to the extent practicable, maintain and operate the engine in a manner consistent with good air pollution control practice for minimizing emissions. In addition, you must conduct an initial performance test to demonstrate compliance with the applicable emission standards within 1 year of startup, or within 1 year after an engine and control device is no longer installed, configured, operated, and maintained in accordance with the manufacturer's emission-related written instructions, or within 1 year after you change emission-related settings in a way that is not permitted by the manufacturer. You must conduct subsequent performance testing every 8,760 hours of engine operation or 3 years, whichever comes first, thereafter to demonstrate compliance with the applicable emission standards.

(h) The requirements for operators and prohibited acts specified in [40 CFR 1039.665](#) apply to owners or operators of stationary CI ICE equipped with AECDs for qualified emergency situations as allowed by [40 CFR 1039.665](#).

[[71 FR 39172](#), July 11, 2006, as amended at [76 FR 37970](#), June 28, 2011; [78 FR 6695](#), Jan. 30, 2013; [81 FR 44219](#), July 7, 2016; [86 FR 34359](#), June 29, 2021; [87 FR 48605](#), Aug. 10, 2022]

Testing Requirements for Owners and Operators

§ 60.4212 What test methods and other procedures must I use if I am an owner or operator of a stationary CI internal combustion engine with a displacement of less than 30 liters per cylinder?

Owners and operators of stationary CI ICE with a displacement of less than 30 liters per cylinder who conduct performance tests pursuant to this subpart must do so according to [paragraphs \(a\)](#) through [\(e\)](#) of this section.

(a) The performance test must be conducted according to the in-use testing procedures in [40 CFR part 1039, subpart F](#), for stationary CI ICE with a displacement of less than 10 liters per cylinder, and according to [40 CFR part 1042, subpart F](#), for stationary CI ICE with a displacement of greater than or equal to 10 liters per cylinder and less than 30 liters per cylinder. Alternatively, stationary CI ICE that are complying with Tier 2 or Tier 3 emission standards as described in [40 CFR part 1039, appendix I](#), or with Tier 2 emission standards as described in [40 CFR part 1042, appendix I](#), may follow the testing procedures specified in [§ 60.4213](#), as appropriate.

(b) Exhaust emissions from stationary CI ICE that are complying with the emission standards for new CI engines in [40 CFR part 1039](#) must not exceed the not-to-exceed (NTE) standards for the same model year and maximum engine power as required in [40 CFR 1039.101\(e\)](#) and [40 CFR 1039.102\(g\)\(1\)](#), except as specified in [40 CFR 1039.104\(d\)](#). This requirement starts when NTE requirements take effect for nonroad diesel engines under [40 CFR part 1039](#).

(c) Exhaust emissions from stationary CI ICE subject to Tier 2 or Tier 3 emission standards as described in [40 CFR part 1039, appendix I](#), or Tier 2 emission standards as described in [40 CFR part 1042, appendix I](#), must not exceed the NTE numerical requirements, rounded to the same number of decimal places as the applicable standard, determined from the following equation:

$$\text{NTE requirement for each pollutant} = (1.25) \times (\text{STD}) \text{ (Eq. 1)}$$

Where:

STD = The standard specified for that pollutant in [40 CFR part 1039](#) or [1042](#), as applicable.

(d) Exhaust emissions from stationary CI ICE that are complying with the emission standards for pre-2007 model year engines in [§ 60.4204\(a\)](#), [§ 60.4205\(a\)](#), or [§ 60.4205\(c\)](#) must not exceed the

NTE numerical requirements, rounded to the same number of decimal places as the applicable standard in [§ 60.4204\(a\)](#), [§ 60.4205\(a\)](#), or [§ 60.4205\(c\)](#), determined from the equation in [paragraph \(c\)](#) of this section.

Where:

STD = The standard specified for that pollutant in [§ 60.4204\(a\)](#), [§ 60.4205\(a\)](#), or [§ 60.4205\(c\)](#).

Alternatively, stationary CI ICE that are complying with the emission standards for pre-2007 model year engines in [§ 60.4204\(a\)](#), [§ 60.4205\(a\)](#), or [§ 60.4205\(c\)](#) may follow the testing procedures specified in [§ 60.4213](#), as appropriate.

(e) Exhaust emissions from stationary CI ICE that are complying with the emission standards for new CI engines in [40 CFR part 1042](#) must not exceed the NTE standards for the same model year and maximum engine power as required in [40 CFR 1042.101\(c\)](#).

[[71 FR 39172](#), July 11, 2006, as amended at [76 FR 37971](#), June 28, 2011; [86 FR 34359](#), June 29, 2021]

§ 60.4213 What test methods and other procedures must I use if I am an owner or operator of a stationary CI internal combustion engine with a displacement of greater than or equal to 30 liters per cylinder?

Owners and operators of stationary CI ICE with a displacement of greater than or equal to 30 liters per cylinder must conduct performance tests according to [paragraphs \(a\)](#) through [\(f\)](#) of this section.

(a) Each performance test must be conducted according to the requirements in [§ 60.8](#) and under the specific conditions that this subpart specifies in table 7. The test must be conducted within 10 percent of 100 percent peak (or the highest achievable) load.

(b) You may not conduct performance tests during periods of startup, shutdown, or malfunction, as specified in [§ 60.8\(c\)](#).

(c) You must conduct three separate test runs for each performance test required in this section, as specified in [§ 60.8\(f\)](#). Each test run must last at least 1 hour.

(d) To determine compliance with the percent reduction requirement, you must follow the requirements as specified in [paragraphs \(d\)\(1\)](#) through [\(3\)](#) of this section.

(1) You must use Equation 2 of this section to determine compliance with the percent reduction requirement:

$$\frac{C_i - C_o}{C_i} \times 100 = R \quad (\text{Eq. 2})$$

Where:

C_i = concentration of NO_x or PM at the control device inlet,

C_o = concentration of NO_x or PM at the control device outlet, and

R = percent reduction of NO_x or PM emissions.

(2) You must normalize the NO_x or PM concentrations at the inlet and outlet of the control device to a dry basis and to 15 percent oxygen (O₂) using Equation 3 of this section, or an equivalent percent carbon dioxide (CO₂) using the procedures described in [paragraph \(d\)\(3\)](#) of this section.

$$C_{\text{adj}} = C_d \frac{5.9}{20.9 - \% \text{ O}_2} \quad (\text{Eq. 3})$$

Where:

C_{adj} = Calculated NO_x or PM concentration adjusted to 15 percent O₂.

C_d = Measured concentration of NO_x or PM, uncorrected.

5.9 = 20.9 percent O₂–15 percent O₂, the defined O₂ correction value, percent.

%O₂ = Measured O₂ concentration, dry basis, percent.

(3) If pollutant concentrations are to be corrected to 15 percent O₂ and CO₂ concentration is measured in lieu of O₂ concentration measurement, a CO₂ correction factor is needed. Calculate the CO₂ correction factor as described in [paragraphs \(d\)\(3\)\(i\)](#) through [\(iii\)](#) of this section.

(i) Calculate the fuel-specific F_o value for the fuel burned during the test using values obtained from Method 19, [Section 5.2](#), and the following equation:

$$F_o = \frac{0.209_{F_d}}{F_c} \quad (\text{Eq. 4})$$

Where:

F_o = Fuel factor based on the ratio of O_2 volume to the ultimate CO_2 volume produced by the fuel at zero percent excess air.

0.209 = Fraction of air that is O_2 , percent/100.

F_d = Ratio of the volume of dry effluent gas to the gross calorific value of the fuel from Method 19, dm^3/J ($dscf/10^6$ Btu).

F_c = Ratio of the volume of CO_2 produced to the gross calorific value of the fuel from Method 19, dm^3/J ($dscf/10^6$ Btu).

(ii) Calculate the CO_2 correction factor for correcting measurement data to 15 percent O_2 , as follows:

$$X_{CO_2} = \frac{5.9}{F_o} \quad (\text{Eq. 5})$$

Where:

X_{CO_2} = CO_2 correction factor, percent.

5.9 = 20.9 percent O_2 –15 percent O_2 , the defined O_2 correction value, percent.

(iii) Calculate the NO_x and PM gas concentrations adjusted to 15 percent O_2 using CO_2 as follows:

$$C_{adj} = C_d \frac{X_{CO_2}}{\%CO_2} \quad (\text{Eq. 6})$$

Where:

C_{adj} = Calculated NO_x or PM concentration adjusted to 15 percent O_2 .

C_d = Measured concentration of NO_x or PM, uncorrected.

$\%CO_2$ = Measured CO_2 concentration, dry basis, percent.

(e) To determine compliance with the NO_x mass per unit output emission limitation, convert the concentration of NO_x in the engine exhaust using Equation 7 of this section:

$$ER = \frac{C_d \times 1.912 \times 10^{-3} \times Q \times T}{KW\text{-hour}} \quad (\text{Eq. 7})$$

Where:

ER = Emission rate in grams per KW-hour.

C_d = Measured NO_x concentration in ppm.

1.912x10⁻³ = Conversion constant for ppm NO_x to grams per standard cubic meter at 25 degrees Celsius.

Q = Stack gas volumetric flow rate, in standard cubic meter per hour.

T = Time of test run, in hours.

KW-hour = Brake work of the engine, in KW-hour.

(f) To determine compliance with the PM mass per unit output emission limitation, convert the concentration of PM in the engine exhaust using Equation 8 of this section:

$$ER = \frac{C_{adj} \times Q \times T}{KW\text{-hour}} \quad (\text{Eq. 8})$$

Where:

ER = Emission rate in grams per KW-hour.

C_{adj} = Calculated PM concentration in grams per standard cubic meter.

Q = Stack gas volumetric flow rate, in standard cubic meter per hour.

T = Time of test run, in hours.

KW-hour = Energy output of the engine, in KW.

[[71 FR 39172](#), July 11, 2006, as amended at [76 FR 37971](#), June 28, 2011]

Notification, Reports, and Records for Owners and Operators

§ 60.4214 What are my notification, reporting, and recordkeeping requirements if I am an owner or operator of a stationary CI internal combustion engine?

(a) Owners and operators of non-emergency stationary CI ICE that are greater than 2,237 KW (3,000 HP), or have a displacement of greater than or equal to 10 liters per cylinder, or are pre-2007 model year engines that are greater than 130 KW (175 HP) and not certified, must meet the requirements of [paragraphs \(a\)\(1\)](#) and [\(2\)](#) of this section.

(1) Submit an initial notification as required in [§ 60.7\(a\)\(1\)](#). The notification must include the information in [paragraphs \(a\)\(1\)\(i\) through \(v\)](#) of this section. Beginning on February 26, 2025, submit the notification electronically according to [paragraph \(g\)](#) of this section.

(i) Name and address of the owner or operator;

(ii) The address of the affected source;

(iii) Engine information including make, model, engine family, serial number, model year, maximum engine power, and engine displacement;

(iv) Emission control equipment; and

(v) Fuel used.

(2) Keep records of the information in [paragraphs \(a\)\(2\)\(i\) through \(iv\)](#) of this section.

(i) All notifications submitted to comply with this subpart and all documentation supporting any notification.

(ii) Maintenance conducted on the engine.

(iii) If the stationary CI internal combustion is a certified engine, documentation from the manufacturer that the engine is certified to meet the emission standards.

(iv) If the stationary CI internal combustion is not a certified engine, documentation that the engine meets the emission standards.

(b) If the stationary CI internal combustion engine is an emergency stationary internal combustion engine, the owner or operator is not required to submit an initial notification. Starting with the model years in table 5 to this subpart, if the emergency engine does not meet the standards applicable to non-emergency engines in the applicable model year, the owner or operator must keep records of the operation of the engine in emergency and non-emergency service that are recorded through the non-resettable hour meter. The owner must record the time of operation of the engine and the reason the engine was in operation during that time.

(c) If the stationary CI internal combustion engine is equipped with a diesel particulate filter, the owner or operator must keep records of any corrective action taken after the backpressure monitor has notified the owner or operator that the high backpressure limit of the engine is approached.

(d) If you own or operate an emergency stationary CI ICE with a maximum engine power more than 100 HP that operates for the purpose specified in [§ 60.4211\(f\)\(3\)\(i\)](#), you must submit an annual report according to the requirements in [paragraphs \(d\)\(1\) through \(3\)](#) of this section.

(1) The report must contain the following information:

- (i) Company name and address where the engine is located.
 - (ii) Date of the report and beginning and ending dates of the reporting period.
 - (iii) Engine site rating and model year.
 - (iv) Latitude and longitude of the engine in decimal degrees reported to the fifth decimal place.
 - (v)-(vi) [Reserved]
 - (vii) Hours spent for operation for the purposes specified in [§ 60.4211\(f\)\(3\)\(i\)](#), including the date, start time, and end time for engine operation for the purposes specified in [§ 60.4211\(f\)\(3\)\(i\)](#). The report must also identify the entity that dispatched the engine and the situation that necessitated the dispatch of the engine.
- (2) The first annual report must cover the calendar year 2015 and must be submitted no later than March 31, 2016. Subsequent annual reports for each calendar year must be submitted no later than March 31 of the following calendar year.
- (3) The annual report must be submitted electronically using the subpart specific reporting form in the Compliance and Emissions Data Reporting Interface (CEDRI) that is accessed through EPA's Central Data Exchange (CDX) (<https://cdx.epa.gov/>). However, if the reporting form specific to this subpart is not available in CEDRI at the time that the report is due, the written report must be submitted to the Administrator at the appropriate address listed in [§ 60.4](#). Beginning on February 26, 2025, submit annual report electronically according to [paragraph \(g\)](#) of this section.
- (e) Owners or operators of stationary CI ICE equipped with AECDs pursuant to the requirements of [40 CFR 1039.665](#) must report the use of AECDs as required by [40 CFR 1039.665\(e\)](#).
- (f) Beginning on February 26, 2025, within 60 days after the date of completing each performance test required by this subpart, you must submit the results of the performance test required under this section following the procedures specified in [paragraphs \(f\)\(1\) and \(2\)](#) of this section.
- (1) Data collected using test methods supported by the EPA's Electronic Reporting Tool (ERT) as listed on the EPA's ERT website (<https://www.epa.gov/electronic-reporting-air-emissions/electronic-reporting-tool-ert>) at the time of the test.** Submit the results of the performance test to the EPA via the Compliance and Emissions Data Reporting Interface (CEDRI), according to [paragraph \(g\)](#) of this section. The data must be submitted in a file format generated using the EPA's ERT. Alternatively, you may submit an electronic file consistent with the extensible markup language (XML) schema listed on the EPA's ERT website.
- (2) Data collected using test methods that are not supported by the EPA's ERT as listed on the EPA's ERT website at the time of the test.** The results of the performance test must be included

as an attachment in the ERT or an alternate electronic file consistent with the XML schema listed on the EPA's ERT website. Submit the ERT generated package or alternative file to the EPA via CEDRI according to [paragraph \(g\)](#) of this section.

(g) If you are required to submit notifications or reports following the procedure specified in this [paragraph \(g\)](#), you must submit notifications or reports to the EPA via the Compliance and Emissions Data Reporting Interface (CEDRI), which can be accessed through the EPA's Central Data Exchange (CDX) (<https://cdx.epa.gov/>). The EPA will make all the information submitted through CEDRI available to the public without further notice to you. Do not use CEDRI to submit information you claim as CBI. Although we do not expect persons to assert a claim of CBI, if you wish to assert a CBI claim for some of the information in the report or notification, you must submit a complete file in the format specified in this subpart, including information claimed to be CBI, to the EPA following the procedures in [paragraphs \(g\)\(1\)](#) and [\(2\)](#) of this section. Clearly mark the part or all of the information that you claim to be CBI. Information not marked as CBI may be authorized for public release without prior notice. Information marked as CBI will not be disclosed except in accordance with procedures set forth in [40 CFR part 2](#). All CBI claims must be asserted at the time of submission. Anything submitted using CEDRI cannot later be claimed CBI. Furthermore, under CAA section 114(c), emissions data is not entitled to confidential treatment, and the EPA is required to make emissions data available to the public. Thus, emissions data will not be protected as CBI and will be made publicly available. You must submit the same file submitted to the CBI office with the CBI omitted to the EPA via the EPA's CDX as described earlier in this [paragraph \(g\)](#).

(1) The preferred method to receive CBI is for it to be transmitted electronically using email attachments, File Transfer Protocol, or other online file sharing services. Electronic submissions must be transmitted directly to the OAQPS CBI Office at the email address oaqpscbi@epa.gov, and as described in [paragraph \(g\)](#) of this section, should include clear CBI markings. ERT files should be flagged to the attention of the Group Leader, Measurement Policy Group; all other files should be flagged to the attention of the Stationary Compression Ignition Internal Combustion Engine Sector Lead. If assistance is needed with submitting large electronic files that exceed the file size limit for email attachments, and if you do not have your own file sharing service, please email oaqpscbi@epa.gov to request a file transfer link.

(2) If you cannot transmit the file electronically, you may send CBI information through the postal service to the following address: OAQPS Document Control Officer (C404-02), OAQPS, U.S. Environmental Protection Agency, 109 T.W. Alexander Drive, P.O. Box 12055, Research Triangle Park, North Carolina 27711. ERT files should be sent to the attention of the Group Leader, Measurement Policy Group, and all other files should be sent to the attention of the Stationary Compression Ignition Internal Combustion Engine Sector Lead. The mailed CBI material should be double wrapped and clearly marked. Any CBI markings should not show through the outer envelope.

(h) If you are required to electronically submit a report through CEDRI in the EPA's CDX, you may assert a claim of EPA system outage for failure to timely comply with that reporting requirement. To assert a claim of EPA system outage, you must meet the requirements outlined in [paragraphs \(h\)\(1\)](#) through [\(7\)](#) of this section.

(1) You must have been or will be precluded from accessing CEDRI and submitting a required report within the time prescribed due to an outage of either the EPA's CEDRI or CDX systems.

(2) The outage must have occurred within the period of time beginning five business days prior to the date that the submission is due.

(3) The outage may be planned or unplanned.

(4) You must submit notification to the Administrator in writing as soon as possible following the date you first knew, or through due diligence should have known, that the event may cause or has caused a delay in reporting.

(5) You must provide to the Administrator a written description identifying:

(i) The date(s) and time(s) when CDX or CEDRI was accessed and the system was unavailable;

(ii) A rationale for attributing the delay in reporting beyond the regulatory deadline to EPA system outage;

(iii) A description of measures taken or to be taken to minimize the delay in reporting; and

(iv) The date by which you propose to report, or if you have already met the reporting requirement at the time of the notification, the date you reported.

(6) The decision to accept the claim of EPA system outage and allow an extension to the reporting deadline is solely within the discretion of the Administrator.

(7) In any circumstance, the report must be submitted electronically as soon as possible after the outage is resolved.

(i) If you are required to electronically submit a report through CEDRI in the EPA's CDX, you may assert a claim of force majeure for failure to timely comply with that reporting requirement. To assert a claim of force majeure, you must meet the requirements outlined in [paragraphs \(i\)\(1\)](#) through [\(5\)](#) of this section.

(1) You may submit a claim if a force majeure event is about to occur, occurs, or has occurred or there are lingering effects from such an event within the period of time beginning five business days prior to the date the submission is due. For the purposes of this section, a force majeure event is defined as an event that will be or has been caused by circumstances beyond the control of the affected facility, its contractors, or any entity controlled by the affected facility that

prevents you from complying with the requirement to submit a report electronically within the time period prescribed. Examples of such events are acts of nature (*e.g.*, hurricanes, earthquakes, or floods), acts of war or terrorism, or equipment failure or safety hazard beyond the control of the affected facility (*e.g.*, large scale power outage).

(2) You must submit notification to the Administrator in writing as soon as possible following the date you first knew, or through due diligence should have known, that the event may cause or has caused a delay in reporting.

(3) You must provide to the Administrator:

(i) A written description of the force majeure event;

(ii) A rationale for attributing the delay in reporting beyond the regulatory deadline to the force majeure event;

(iii) A description of measures taken or to be taken to minimize the delay in reporting; and

(iv) The date by which you propose to report, or if you have already met the reporting requirement at the time of the notification, the date you reported.

(4) The decision to accept the claim of force majeure and allow an extension to the reporting deadline is solely within the discretion of the Administrator.

(5) In any circumstance, the reporting must occur as soon as possible after the force majeure event occurs.

(j) Any records required to be maintained by this subpart that are submitted electronically via the EPA's CEDRI may be maintained in electronic format. This ability to maintain electronic copies does not affect the requirement for facilities to make records, data, and reports available upon request to a delegated air agency or the EPA as part of an on-site compliance evaluation.

[[71 FR 39172](#), July 11, 2006, as amended at [78 FR 6696](#), Jan. 30, 2013; [81 FR 44219](#), July 7, 2016; [87 FR 48606](#), Aug. 10, 2022; [89 FR 70512](#), Aug. 30, 2024]

Special Requirements

§ 60.4215 What requirements must I meet for engines used in Guam, American Samoa, or the Commonwealth of the Northern Mariana Islands?

(a) Stationary CI ICE with a displacement of less than 30 liters per cylinder that are used in Guam, American Samoa, or the Commonwealth of the Northern Mariana Islands are required to meet the applicable emission standards in [§§ 60.4202](#) and [60.4205](#).

(b) Stationary CI ICE that are used in Guam, American Samoa, or the Commonwealth of the Northern Mariana Islands are not required to meet the fuel requirements in [§ 60.4207](#).

(c) Stationary CI ICE with a displacement of greater than or equal to 30 liters per cylinder that are used in Guam, American Samoa, or the Commonwealth of the Northern Mariana Islands are required to meet the following emission standards:

(1) For engines installed prior to January 1, 2012, limit the emissions of NO_x in the stationary CI internal combustion engine exhaust to the following:

(i) 17.0 g/KW-hr (12.7 g/HP-hr) when maximum engine speed is less than 130 rpm;

(ii) $45 \cdot n^{-0.2}$ g/KW-hr ($34 \cdot n^{-0.2}$ g/HP-hr) when maximum engine speed is 130 or more but less than 2,000 rpm, where n is maximum engine speed; and

(iii) 9.8 g/KW-hr (7.3 g/HP-hr) when maximum engine speed is 2,000 rpm or more.

(2) For engines installed on or after January 1, 2012, limit the emissions of NO_x in the stationary CI internal combustion engine exhaust to the following:

(i) 14.4 g/KW-hr (10.7 g/HP-hr) when maximum engine speed is less than 130 rpm;

(ii) $44 \cdot n^{-0.23}$ g/KW-hr ($33 \cdot n^{-0.23}$ g/HP-hr) when maximum engine speed is greater than or equal to 130 but less than 2,000 rpm and where n is maximum engine speed; and

(iii) 7.7 g/KW-hr (5.7 g/HP-hr) when maximum engine speed is greater than or equal to 2,000 rpm.

(3) Limit the emissions of PM in the stationary CI internal combustion engine exhaust to 0.40 g/KW-hr (0.30 g/HP-hr).

[[71 FR 39172](#), July 11, 2006, as amended at [76 FR 37971](#), June 28, 2011]

§ 60.4216 What requirements must I meet for engines used in Alaska?

(a) Prior to December 1, 2010, owners and operators of stationary CI ICE with a displacement of less than 30 liters per cylinder located in areas of Alaska not accessible by the FAHS should refer to [40 CFR part 69](#) to determine the diesel fuel requirements applicable to such engines.

(b) Except as indicated in [paragraph \(c\)](#) of this section, manufacturers, owners and operators of stationary CI ICE with a displacement of less than 10 liters per cylinder located in remote areas of Alaska may meet the requirements of this subpart by manufacturing and installing engines meeting the Tier 2 or Tier 3 emission standards described in [40 CFR part 1042](#) for the same model year, displacement, and maximum engine power, as appropriate, rather than the otherwise applicable requirements of [40 CFR part 1039](#), as indicated in [§§ 60.4201\(f\)](#) and [60.4202\(g\)](#).

(c) Manufacturers, owners, and operators of stationary CI ICE that are located in remote areas of Alaska may choose to meet the applicable emission standards for emergency engines in [§§ 60.4202](#) and [60.4205](#), and not those for non-emergency engines in [§§ 60.4201](#) and [60.4204](#),

except that for 2014 model year and later nonemergency CI ICE, the owner or operator of any such engine must have that engine certified as meeting at least the Tier 3 PM standards identified in appendix I of [40 CFR part 1039](#) or in [40 CFR 1042.101](#).

(d) The provisions of [§ 60.4207](#) do not apply to owners and operators of pre-2014 model year stationary CI ICE subject to this subpart that are located in remote areas of Alaska.

(e) The provisions of [§ 60.4208\(a\)](#) do not apply to owners and operators of stationary CI ICE subject to this subpart that are located in areas of Alaska not accessible by the FAHS until after December 31, 2009.

(f) The provisions of this section and [§ 60.4207](#) do not prevent owners and operators of stationary CI ICE subject to this subpart that are located in remote areas of Alaska from using fuels mixed with used lubricating oil, in volumes of up to 1.75 percent of the total fuel. The sulfur content of the used lubricating oil must be less than 200 parts per million. The used lubricating oil must meet the on-specification levels and properties for used oil in [40 CFR 279.11](#).

[[76 FR 37971](#), June 28, 2011, as amended at [81 FR 44219](#), July 7, 2016; [86 FR 34359](#), June 29, 2021]

§ 60.4217 What emission standards must I meet if I am an owner or operator of a stationary internal combustion engine using special fuels?

Owners and operators of stationary CI ICE that do not use diesel fuel may petition the Administrator for approval of alternative emission standards, if they can demonstrate that they use a fuel that is not the fuel on which the manufacturer of the engine certified the engine and that the engine cannot meet the applicable standards required in [§ 60.4204](#) or [§ 60.4205](#) using such fuels and that use of such fuel is appropriate and reasonably necessary, considering cost, energy, technical feasibility, human health and environmental, and other factors, for the operation of the engine.

[[76 FR 37972](#), June 28, 2011]

General Provisions

§ 60.4218 What General Provisions and confidential information provisions apply to me?

(a) Table 8 to this subpart shows which parts of the General Provisions in [§§ 60.1](#) through [60.19](#) apply to you.

(b) The provisions of [40 CFR 1068.10](#) and [1068.11](#) apply for engine manufacturers. For others, the general confidential business information (CBI) provisions apply as described in [40 CFR part 2](#).

[[88 FR 4471](#), Jan. 24, 2023]

Definitions

§ 60.4219 What definitions apply to this subpart?

As used in this subpart, all terms not defined herein shall have the meaning given them in the CAA and in [subpart A of this part](#).

Alaska Railbelt Grid means the service areas of the six regulated public utilities that extend from Fairbanks to Anchorage and the Kenai Peninsula. These utilities are Golden Valley Electric Association; Chugach Electric Association; Matanuska Electric Association; Homer Electric Association; Anchorage Municipal Light & Power; and the City of Seward Electric System.

Certified emissions life means the period during which the engine is designed to properly function in terms of reliability and fuel consumption, without being remanufactured, specified as a number of hours of operation or calendar years, whichever comes first. The values for certified emissions life for stationary CI ICE with a displacement of less than 10 liters per cylinder are given in [40 CFR 1039.101\(g\)](#). The values for certified emissions life for stationary CI ICE with a displacement of greater than or equal to 10 liters per cylinder and less than 30 liters per cylinder are given in [40 CFR 1042.101\(e\)](#).

Combustion turbine means all equipment, including but not limited to the turbine, the fuel, air, lubrication and exhaust gas systems, control systems (except emissions control equipment), and any ancillary components and sub-components comprising any simple cycle combustion turbine, any regenerative/recuperative cycle combustion turbine, the combustion turbine portion of any cogeneration cycle combustion system, or the combustion turbine portion of any combined cycle steam/electric generating system.

Compression ignition means relating to a type of stationary internal combustion engine that is not a spark ignition engine.

Date of manufacture means one of the following things:

- (1) For freshly manufactured engines and modified engines, date of manufacture means the date the engine is originally produced.
- (2) For reconstructed engines, date of manufacture means the date the engine was originally produced, except as specified in paragraph (3) of this definition.
- (3) Reconstructed engines are assigned a new date of manufacture if the fixed capital cost of the new and refurbished components exceeds 75 percent of the fixed capital cost of a comparable entirely new facility. An engine that is produced from a previously used engine block does not retain the date of manufacture of the engine in which the engine block was previously used if the

engine is produced using all new components except for the engine block. In these cases, the date of manufacture is the date of reconstruction or the date the new engine is produced.

Diesel fuel means any liquid obtained from the distillation of petroleum with a boiling point of approximately 150 to 360 degrees Celsius. One commonly used form is number 2 distillate oil.

Diesel particulate filter means an emission control technology that reduces PM emissions by trapping the particles in a flow filter substrate and periodically removes the collected particles by either physical action or by oxidizing (burning off) the particles in a process called regeneration.

Emergency stationary internal combustion engine means any stationary reciprocating internal combustion engine that meets all of the criteria in paragraphs (1) through (3) of this definition. All emergency stationary ICE must comply with the requirements specified in [§ 60.4211\(f\)](#) in order to be considered emergency stationary ICE. If the engine does not comply with the requirements specified in [§ 60.4211\(f\)](#), then it is not considered to be an emergency stationary ICE under this subpart.

(1) The stationary ICE is operated to provide electrical power or mechanical work during an emergency situation. Examples include stationary ICE used to produce power for critical networks or equipment (including power supplied to portions of a facility) when electric power from the local utility (or the normal power source, if the facility runs on its own power production) is interrupted, or stationary ICE used to pump water in the case of fire or flood, etc.

(2) The stationary ICE is operated under limited circumstances for situations not included in paragraph (1) of this definition, as specified in [§ 60.4211\(f\)](#).

(3) The stationary ICE operates as part of a financial arrangement with another entity in situations not included in paragraph (1) of this definition only as allowed in [§ 60.4211\(f\)\(3\)\(i\)](#).

Engine manufacturer means the manufacturer of the engine. See the definition of “manufacturer” in this section.

Fire pump engine means an emergency stationary internal combustion engine certified to NFPA requirements that is used to provide power to pump water for fire suppression or protection.

Freshly manufactured engine means an engine that has not been placed into service. An engine becomes freshly manufactured when it is originally produced.

Installed means the engine is placed and secured at the location where it is intended to be operated.

Manufacturer has the meaning given in section 216(1) of the Act. In general, this term includes any person who manufactures a stationary engine for sale in the United States or otherwise introduces a new stationary engine into commerce in the United States. This includes importers who import stationary engines for sale or resale.

Maximum engine power means maximum engine power as defined in [40 CFR 1039.801](#).

Model year means the calendar year in which an engine is manufactured (see “date of manufacture”), except as follows:

(1) Model year means the annual new model production period of the engine manufacturer in which an engine is manufactured (see “date of manufacture”), if the annual new model production period is different than the calendar year and includes January 1 of the calendar year for which the model year is named. It may not begin before January 2 of the previous calendar year and it must end by December 31 of the named calendar year.

(2) For an engine that is converted to a stationary engine after being placed into service as a nonroad or other non-stationary engine, model year means the calendar year or new model production period in which the engine was manufactured (see “date of manufacture”).

Other internal combustion engine means any internal combustion engine, except combustion turbines, which is not a reciprocating internal combustion engine or rotary internal combustion engine.

Reciprocating internal combustion engine means any internal combustion engine which uses reciprocating motion to convert heat energy into mechanical work.

Remote areas of Alaska means areas of Alaska that meet either paragraph (1) or (2) of this definition.

(1) Areas of Alaska that are not accessible by the Federal Aid Highway System (FAHS).

(2) Areas of Alaska that meet all of the following criteria:

(i) The only connection to the FAHS is through the Alaska Marine Highway System, or the stationary CI ICE operation is within an isolated grid in Alaska that is not connected to the statewide electrical grid referred to as the Alaska Railbelt Grid.

(ii) At least 10 percent of the power generated by the stationary CI ICE on an annual basis is used for residential purposes.

(iii) The generating capacity of the source is less than 12 megawatts, or the stationary CI ICE is used exclusively for backup power for renewable energy.

Rotary internal combustion engine means any internal combustion engine which uses rotary motion to convert heat energy into mechanical work.

Spark ignition means relating to a gasoline, natural gas, or liquefied petroleum gas fueled engine or any other type of engine with a spark plug (or other sparking device) and with operating characteristics significantly similar to the theoretical Otto combustion cycle. Spark ignition

engines usually use a throttle to regulate intake air flow to control power during normal operation. Dual-fuel engines in which a liquid fuel (typically diesel fuel) is used for CI and gaseous fuel (typically natural gas) is used as the primary fuel at an annual average ratio of less than 2 parts diesel fuel to 100 parts total fuel on an energy equivalent basis are spark ignition engines.

Stationary internal combustion engine means any internal combustion engine, except combustion turbines, that converts heat energy into mechanical work and is not mobile. Stationary ICE differ from mobile ICE in that a stationary internal combustion engine is not a nonroad engine as defined at [40 CFR 1068.30](#) (excluding paragraph (2)(ii) of that definition), and is not used to propel a motor vehicle, aircraft, or a vehicle used solely for competition. Stationary ICE include reciprocating ICE, rotary ICE, and other ICE, except combustion turbines.

Subpart means [40 CFR part 60, subpart IIII](#).

[[71 FR 39172](#), July 11, 2006, as amended at [76 FR 37972](#), June 28, 2011; [78 FR 6696](#), Jan. 30, 2013; [81 FR 44219](#), July 7, 2016; [86 FR 34360](#), June 29, 2021; [87 FR 48606](#), Aug. 10, 2022]

Table 1 to Subpart IIII of Part 60—Emission Standards for Stationary Pre-2007 Model Year Engines With a Displacement of <10 Liters per Cylinder and 2007-2010 Model Year Engines >2,237 KW (3,000 HP) and With a Displacement of <10 Liters per Cylinder

[As stated in [§§ 60.4201\(b\)](#), [60.4202\(b\)](#), [60.4204\(a\)](#), and [60.4205\(a\)](#), you must comply with the following emission standards]

Maximum engine power	Emission standards for stationary pre-2007 model year engines with a displacement of <10 liters per cylinder and 2007-2010 model year engines >2,237 KW (3,000 HP) and with a displacement of <10 liters per cylinder in g/KW-hr (g/HP-hr)				
	NMHC + NO _x	HC	NO _x	CO	PM
KW<8 (HP<11)	10.5 (7.8)			8.0 (6.0)	1.0 (0.75)
8≤KW<19 (11≤HP<25)	9.5 (7.1)			6.6 (4.9)	0.80 (0.60)
19≤KW<37 (25≤HP<50)	9.5 (7.1)			5.5 (4.1)	0.80 (0.60)

[As stated in [§§ 60.4201\(b\)](#), [60.4202\(b\)](#), [60.4204\(a\)](#), and [60.4205\(a\)](#), you must comply with the following emission standards]

Maximum engine power	Emission standards for stationary pre-2007 model year engines with a displacement of <10 liters per cylinder and 2007-2010 model year engines >2,237 KW (3,000 HP) and with a displacement of <10 liters per cylinder in g/KW-hr (g/HP-hr)				
	NMHC + NO _x	HC	NO _x	CO	PM
37≤KW<56 (50≤HP<75)			9.2 (6.9)		
56≤KW<75 (75≤HP<100)			9.2 (6.9)		
75≤KW<130 (100≤HP<175)			9.2 (6.9)		
130≤KW<225 (175≤HP<300)		1.3 (1.0)	9.2 (6.9)	11.4 (8.5)	0.54 (0.40)
225≤KW<450 (300≤HP<600)		1.3 (1.0)	9.2 (6.9)	11.4 (8.5)	0.54 (0.40)
450≤KW≤560 (600≤HP≤750)		1.3 (1.0)	9.2 (6.9)	11.4 (8.5)	0.54 (0.40)
KW>560 (HP>750)		1.3 (1.0)	9.2 (6.9)	11.4 (8.5)	0.54 (0.40)

Table 2 to Subpart IIII of Part 60—Emission Standards for 2008 Model Year and Later Emergency Stationary CI ICE <37 KW (50 HP) With a Displacement of <10 Liters per Cylinder

[As stated in [§ 60.4202\(a\)\(1\)](#), you must comply with the following emission standards]

Engine power	Emission standards for 2008 model year and later emergency stationary CI ICE <37 KW (50 HP) with a displacement of <10 liters per cylinder in g/KW-hr (g/HP-hr)			
	Model year(s)	NO _x + NMHC	CO	PM
KW<8 (HP<11)	2008 +	7.5 (5.6)	8.0 (6.0)	0.40 (0.30)
8≤KW<19 (11≤HP<25)	2008 +	7.5 (5.6)	6.6 (4.9)	0.40 (0.30)
19≤KW<37 (25≤HP<50)	2008 +	7.5 (5.6)	5.5 (4.1)	0.30 (0.22)

Table 3 to Subpart IIII of Part 60—Certification Requirements for Stationary Fire Pump Engines

As stated in [§ 60.4202\(d\)](#), you must certify new stationary fire pump engines beginning with the following model years:

Engine power	Starting model year engine manufacturers must certify new stationary fire pump engines according to § 60.4202(d) ¹
KW<75 (HP<100)	2011
75≤KW<130 (100≤HP<175)	2010
130≤KW≤560 (175≤HP≤750)	2009
KW>560 (HP>750)	2008

As stated in [§ 60.4202\(d\)](#), you must certify new stationary fire pump engines beginning with the following model years:

Engine power	Starting model year engine manufacturers must certify new stationary fire pump engines according to § 60.4202(d)¹

¹ Manufacturers of fire pump stationary CI ICE with a maximum engine power greater than or equal to 37 kW (50 HP) and less than 450 KW (600 HP) and a rated speed of greater than 2,650 revolutions per minute (rpm) are not required to certify such engines until three model years following the model year indicated in this Table 3 for engines in the applicable engine power category.

[[71 FR 39172](#), July 11, 2006, as amended at [76 FR 37972](#), June 28, 2011]

Table 4 to Subpart IIII of Part 60—Emission Standards for Stationary Fire Pump Engines

[As stated in [§§ 60.4202\(d\)](#) and [60.4205\(c\)](#), you must comply with the following emission standards for stationary fire pump engines]

Maximum engine power	Model year(s)	Emission standards for stationary fire pump engines in g/KW-hr (g/HP-hr)		
		NMHC + NO_x	CO	PM
KW<8 (HP<11)	2010 and earlier	10.5 (7.8)	8.0 (6.0)	1.0 (0.75)
KW<8 (HP<11)	2011 +	7.5 (5.6)	8.0 (6.0)	0.40 (0.30)
8≤KW<19 (11≤HP<25)	2010 and earlier	9.5 (7.1)	6.6 (4.9)	0.80 (0.60)
8≤KW<19 (11≤HP<25)	2011 +	7.5 (5.6)	6.6 (4.9)	0.40 (0.30)
19≤KW<37 (25≤HP<50)	2010 and earlier	9.5 (7.1)	5.5 (4.1)	0.80 (0.60)
19≤KW<37 (25≤HP<50)	2011 +	7.5 (5.6)	5.5 (4.1)	0.30 (0.22)

[As stated in §§ 60.4202(d) and 60.4205(c), you must comply with the following emission standards for stationary fire pump engines]

Maximum engine power	Model year(s)	Emission standards for stationary fire pump engines in g/KW-hr (g/HP-hr)		
		NMHC + NO _x	CO	PM
37≤KW<56 (50≤HP<75)	2010 and earlier	10.5 (7.8)	5.0 (3.7)	0.80 (0.60)
37≤KW<56 (50≤HP<75)	2011 + ¹	4.7 (3.5)	5.0 (3.7)	0.40 (0.30)
56≤KW<75 (75≤HP<100)	2010 and earlier	10.5 (7.8)	5.0 (3.7)	0.80 (0.60)
56≤KW<75 (75≤HP<100)	2011 + ¹	4.7 (3.5)	5.0 (3.7)	0.40 (0.30)
75≤KW<130 (100≤HP<175)	2009 and earlier	10.5 (7.8)	5.0 (3.7)	0.80 (0.60)
75≤KW<130 (100≤HP<175)	2010 + ²	4.0 (3.0)	5.0 (3.7)	0.30 (0.22)
130≤KW<225 (175≤HP<300)	2008 and earlier	10.5 (7.8)	3.5 (2.6)	0.54 (0.40)
130≤KW<225 (175≤HP<300)	2009 + ³	4.0 (3.0)	3.5 (2.6)	0.20 (0.15)
225≤KW<450 (300≤HP<600)	2008 and earlier	10.5 (7.8)	3.5 (2.6)	0.54 (0.40)
225≤KW<450 (300≤HP<600)	2009 + ³	4.0 (3.0)	3.5 (2.6)	0.20 (0.15)
450≤KW≤560 (600≤HP≤750)	2008 and earlier	10.5 (7.8)	3.5 (2.6)	0.54 (0.40)
450≤KW≤560 (600≤HP≤750)	2009 +	4.0 (3.0)	3.5 (2.6)	0.20 (0.15)
KW>560 (HP>750)	2007 and earlier	10.5 (7.8)	3.5 (2.6)	0.54 (0.40)
KW>560 (HP>750)	2008 +	6.4 (4.8)	3.5 (2.6)	0.20 (0.15)

¹ For model years 2011-2013, manufacturers, owners and operators of fire pump stationary CI ICE in this engine power category with a rated speed of greater than 2,650 revolutions per minute (rpm) may comply with the emission limitations for 2010 model year engines.

[As stated in §§ 60.4202(d) and 60.4205(c), you must comply with the following emission standards for stationary fire pump engines]

Maximum engine power	Model year(s)	Emission standards for stationary fire pump engines in g/KW-hr (g/HP-hr)		
		NMHC + NO _x	CO	PM

² For model years 2010-2012, manufacturers, owners and operators of fire pump stationary CI ICE in this engine power category with a rated speed of greater than 2,650 rpm may comply with the emission limitations for 2009 model year engines.

³ In model years 2009-2011, manufacturers of fire pump stationary CI ICE in this engine power category with a rated speed of greater than 2,650 rpm may comply with the emission limitations for 2008 model year engines.

[89 FR 70513, Aug. 30, 2024]

Table 5 to Subpart IIII of Part 60—Labeling and Recordkeeping Requirements for New Stationary Emergency Engines

[You must comply with the labeling requirements in § 60.4210(f) and the recordkeeping requirements in § 60.4214(b) for new emergency stationary CI ICE beginning in the following model years:]

Engine power	Starting model year
19≤KW<56 (25≤HP<75)	2013
56≤KW<130 (75≤HP<175)	2012
KW≥130 (HP≥175)	2011

Table 6 to Subpart IIII of Part 60—Optional 3-Mode Test Cycle for Stationary Fire Pump Engines

[As stated in [§ 60.4210\(g\)](#), manufacturers of fire pump engines may use the following test cycle for testing fire pump engines:]

Mode No.	Engine speed ¹	Torque (percent) ²	Weighting factors
1	Rated	100	0.30
2	Rated	75	0.50
3	Rated	50	0.20

¹ Engine speed: ± 2 percent of point.

² Torque: NFPA certified nameplate HP for 100 percent point. All points should be ± 2 percent of engine percent load value.

Table 7 to Subpart IIII of Part 60—Requirements for Performance Tests for Stationary CI ICE With a Displacement of ≥ 30 Liters per Cylinder

As stated in [§ 60.4213](#), you must comply with the following requirements for performance tests for stationary CI ICE with a displacement of ≥ 30 liters per cylinder:

Each	Complying with the requirement to	You must	Using	According to the following requirements
1. Stationary CI internal combustion engine with a displacement of ≥ 30 liters per cylinder	a. Reduce NO _x emissions by 90 percent or more;	i. Select the sampling port location and number/location of traverse points at the inlet and outlet of the control device;		(a) For NO _x , O ₂ , and moisture measurement, ducts ≤ 6 inches in diameter may be sampled at a single point located at the duct centroid and ducts > 6 and ≤ 12 inches in diameter may be sampled at 3 traverse points located at 16.7, 50.0, and 83.3% of the measurement line ('3-point long line'). If the

Each	Complying with the requirement to	You must	Using	According to the following requirements
				duct is >12 inches in diameter <i>and</i> the sampling port location meets the two and half-diameter criterion of Section 11.1.1 of Method 1 of 40 CFR part 60, appendix A-1 , the duct may be sampled at '3-point long line'; otherwise, conduct the stratification testing and select sampling points according to Section 8.1.2 of Method 7E of 40 CFR part 60, appendix A-4 .
		ii. Measure O ₂ at the inlet and outlet of the control device;	(1) Method 3, 3A, or 3B of 40 CFR part 60, appendix A-2	(b) Measurements to determine O ₂ concentration must be made at the same time as the measurements for NO _x concentration.
		iii. If necessary, measure moisture content at the inlet and outlet of the control device; and	(2) Method 4 of 40 CFR part 60, appendix A-3 , Method 320 of 40 CFR part 63, appendix A , or ASTM D 6348-03 (incorporated	(c) Measurements to determine moisture content must be made at the same time as the measurements for NO _x concentration.

Each	Complying with the requirement to	You must	Using	According to the following requirements
			by reference, see § 60.17)	
		iv. Measure NO _x at the inlet and outlet of the control device.	(3) Method 7E of 40 CFR part 60, appendix A-4 , Method 320 of 40 CFR part 63, appendix A , or ASTM D 6348-03 (incorporated by reference, see § 60.17)	(d) NO _x concentration must be at 15 percent O ₂ , dry basis. Results of this test consist of the average of the three 1-hour or longer runs.
	b. Limit the concentration of NO _x in the stationary CI internal combustion engine exhaust.	i. Select the sampling port location and number/location of traverse points at the exhaust of the stationary internal combustion engine;		(a) For NO _x , O ₂ , and moisture measurement, ducts ≤6 inches in diameter may be sampled at a single point located at the duct centroid and ducts >6 and ≤12 inches in diameter may be sampled at 3 traverse points located at 16.7, 50.0, and 83.3% of the measurement line ('3-point long line'). If the duct is >12 inches in diameter <i>and</i> the sampling port location meets the two and half-diameter criterion of Section 11.1.1 of Method 1 of 40 CFR

Each	Complying with the requirement to	You must	Using	According to the following requirements
				part 60, appendix A-1 , the duct may be sampled at '3-point long line'; otherwise, conduct the stratification testing and select sampling points according to Section 8.1.2 of Method 7E of 40 CFR part 60, appendix A-4 .
		ii. Determine the O ₂ concentration of the stationary internal combustion engine exhaust at the sampling port location;	(1) Method 3, 3A, or 3B of 40 CFR part 60, appendix A-2	(b) Measurements to determine O ₂ concentration must be made at the same time as the measurement for NO _x concentration.
		iii. If necessary, measure moisture content of the stationary internal combustion engine exhaust at the sampling port location; and	(2) Method 4 of 40 CFR part 60, appendix A-3 , Method 320 of 40 CFR part 63, appendix A , or ASTM D 6348-03 (incorporated by reference, see § 60.17)	(c) Measurements to determine moisture content must be made at the same time as the measurement for NO _x concentration.
		iv. Measure NO _x at the exhaust of the stationary internal combustion engine;	(3) Method 7E of 40 CFR part 60, appendix A-4 , Method 320 of	(d) NO _x concentration must be at 15 percent O ₂ , dry basis. Results of this test consist of

Each	Complying with the requirement to	You must	Using	According to the following requirements
		if using a control device, the sampling site must be located at the outlet of the control device.	40 CFR part 63, appendix A , or ASTM D 6348-03 (incorporated by reference, see § 60.17)	the average of the three 1-hour or longer runs.
	c. Reduce PM emissions by 60 percent or more	i. Select the sampling port location and the number of traverse points;	(1) Method 1 or 1A of 40 CFR part 60, appendix A-1	(a) Sampling sites must be located at the inlet and outlet of the control device.
		ii. Measure O ₂ at the inlet and outlet of the control device;	(2) Method 3, 3A, or 3B of 40 CFR part 60, appendix A-2	(b) Measurements to determine O ₂ concentration must be made at the same time as the measurements for PM concentration.
		iii. If necessary, measure moisture content at the inlet and outlet of the control device; and	(3) Method 4 of 40 CFR part 60, appendix A-3	(c) Measurements to determine and moisture content must be made at the same time as the measurements for PM concentration.
		iv. Measure PM at the inlet and outlet of the control device.	(4) Method 5 of 40 CFR part 60, appendix A-3	(d) PM concentration must be at 15 percent O ₂ , dry basis. Results of this test consist of the average of the three 1-hour or longer runs.
	d. Limit the concentration	i. Select the sampling port	(1) Method 1 or 1A of 40 CFR	(a) If using a control device, the sampling

Each	Complying with the requirement to	You must	Using	According to the following requirements
	of PM in the stationary CI internal combustion engine exhaust	location and the number of traverse points;	part 60, appendix A-1	site must be located at the outlet of the control device.
		ii. Determine the O ₂ concentration of the stationary internal combustion engine exhaust at the sampling port location;	(2) Method 3, 3A, or 3B of 40 CFR part 60, appendix A-2	(b) Measurements to determine O ₂ concentration must be made at the same time as the measurements for PM concentration.
		iii. If necessary, measure moisture content of the stationary internal combustion engine exhaust at the sampling port location; and	(3) Method 4 of 40 CFR part 60, appendix A-3	(c) Measurements to determine moisture content must be made at the same time as the measurements for PM concentration.
		iv. Measure PM at the exhaust of the stationary internal combustion engine.	(4) Method 5 of 40 CFR part 60, appendix A-3	(d) PM concentration must be at 15 percent O ₂ , dry basis. Results of this test consist of the average of the three 1-hour or longer runs.

[[79 FR 11251](#), Feb. 27, 2014]

Table 8 to Subpart IIII of Part 60—Applicability of General Provisions to Subpart IIII

[As stated in [§ 60.4218](#), you must comply with the following applicable General Provisions:]

General Provisions citation	Subject of citation	Applies to subpart	Explanation
§ 60.1	General applicability of the General Provisions	Yes	
§ 60.2	Definitions	Yes	Additional terms defined in § 60.4219 .
§ 60.3	Units and abbreviations	Yes	
§ 60.4	Address	Yes	
§ 60.5	Determination of construction or modification	Yes	
§ 60.6	Review of plans	Yes	
§ 60.7	Notification and Recordkeeping	Yes	Except that § 60.7 only applies as specified in § 60.4214(a) .
§ 60.8	Performance tests	Yes	Except that § 60.8 only applies to stationary CI ICE with a displacement of ($\geq$ 30 liters per cylinder and engines that are not certified.
§ 60.9	Availability of information	Yes	
§ 60.10	State Authority	Yes	
§ 60.11	Compliance with standards and maintenance requirements	No	Requirements are specified in subpart IIII.
§ 60.12	Circumvention	Yes	

[As stated in [§ 60.4218](#), you must comply with the following applicable General Provisions:]

General Provisions citation	Subject of citation	Applies to subpart	Explanation
§ 60.13	Monitoring requirements	Yes	Except that § 60.13 only applies to stationary CI ICE with a displacement of ($\geq$ 30 liters per cylinder.
§ 60.14	Modification	Yes	
§ 60.15	Reconstruction	Yes	
§ 60.16	Priority list	Yes	
§ 60.17	Incorporations by reference	Yes	
§ 60.18	General control device requirements	No	
§ 60.19	General notification and reporting requirements	Yes	

Appendix E

40 C.F.R. Part 63 Subpart ZZZZ

***National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating
Internal Combustion Engines***

Subpart ZZZZ—National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines

Source: [69 FR 33506](#), June 15, 2004, unless otherwise noted.

What This Subpart Covers

§ 63.6580 What is the purpose of subpart ZZZZ?

Subpart ZZZZ establishes national emission limitations and operating limitations for hazardous air pollutants (HAP) emitted from stationary reciprocating internal combustion engines (RICE) located at major and area sources of HAP emissions. This subpart also establishes requirements to demonstrate initial and continuous compliance with the emission limitations and operating limitations.

[[73 FR 3603](#), Jan. 18, 2008]

§ 63.6585 Am I subject to this subpart?

You are subject to this subpart if you own or operate a stationary RICE at a major or area source of HAP emissions, except if the stationary RICE is being tested at a stationary RICE test cell/stand.

(a) A stationary RICE is any internal combustion engine which uses reciprocating motion to convert heat energy into mechanical work and which is not mobile. Stationary RICE differ from mobile RICE in that a stationary RICE is not a non-road engine as defined at [40 CFR 1068.30](#), and is not used to propel a motor vehicle or a vehicle used solely for competition.

(b) A major source of HAP emissions is a plant site that emits or has the potential to emit any single HAP at a rate of 10 tons (9.07 megagrams) or more per year or any combination of HAP at a rate of 25 tons (22.68 megagrams) or more per year, except that for oil and gas production facilities, a major source of HAP emissions is determined for each surface site.

(c) An area source of HAP emissions is a source that is not a major source.

(d) If you are an owner or operator of an area source subject to this subpart, your status as an entity subject to a standard or other requirements under this subpart does not subject you to the obligation to obtain a permit under [40 CFR part 70](#) or [71](#), provided you are not required to obtain a permit under [40 CFR 70.3\(a\)](#) or [40 CFR 71.3\(a\)](#) for a reason other than your status as an area source under this subpart. Notwithstanding the previous sentence, you must continue to comply with the provisions of this subpart as applicable.

(e) If you are an owner or operator of a stationary RICE used for national security purposes, you may be eligible to request an exemption from the requirements of this subpart as described in [40 CFR part 1068, subpart C](#).

(f) The emergency stationary RICE listed in [paragraphs \(f\)\(1\) through \(3\)](#) of this section are not subject to this subpart. The stationary RICE must meet the definition of an emergency stationary RICE in [§ 63.6675](#), which includes operating according to the provisions specified in [§ 63.6640\(f\)](#).

(1) Existing residential emergency stationary RICE located at an area source of HAP emissions that do not operate for the purpose specified in [§ 63.6640\(f\)\(4\)\(ii\)](#).

(2) Existing commercial emergency stationary RICE located at an area source of HAP emissions that do not operate for the purpose specified in [§ 63.6640\(f\)\(4\)\(ii\)](#).

(3) Existing institutional emergency stationary RICE located at an area source of HAP emissions that do not operate for the purpose specified in [§ 63.6640\(f\)\(4\)\(ii\)](#).

[[69 FR 33506](#), June 15, 2004, as amended at [73 FR 3603](#), Jan. 18, 2008; [78 FR 6700](#), Jan. 30, 2013; [87 FR 48607](#), Aug. 10, 2022]

§ 63.6590 What parts of my plant does this subpart cover?

This subpart applies to each affected source.

(a) **Affected source.** An affected source is any existing, new, or reconstructed stationary RICE located at a major or area source of HAP emissions, excluding stationary RICE being tested at a stationary RICE test cell/stand.

(1) Existing stationary RICE.

(i) For stationary RICE with a site rating of more than 500 brake horsepower (HP) located at a major source of HAP emissions, a stationary RICE is existing if you commenced construction or reconstruction of the stationary RICE before December 19, 2002.

(ii) For stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions, a stationary RICE is existing if you commenced construction or reconstruction of the stationary RICE before June 12, 2006.

(iii) For stationary RICE located at an area source of HAP emissions, a stationary RICE is existing if you commenced construction or reconstruction of the stationary RICE before June 12, 2006.

(iv) A change in ownership of an existing stationary RICE does not make that stationary RICE a new or reconstructed stationary RICE.

(2) New stationary RICE.

(i) A stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions is new if you commenced construction of the stationary RICE on or after December 19, 2002.

(ii) A stationary RICE with a site rating of equal to or less than 500 brake HP located at a major source of HAP emissions is new if you commenced construction of the stationary RICE on or after June 12, 2006.

(iii) A stationary RICE located at an area source of HAP emissions is new if you commenced construction of the stationary RICE on or after June 12, 2006.

(3) *Reconstructed stationary RICE.*

(i) A stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions is reconstructed if you meet the definition of reconstruction in [§ 63.2](#) and reconstruction is commenced on or after December 19, 2002.

(ii) A stationary RICE with a site rating of equal to or less than 500 brake HP located at a major source of HAP emissions is reconstructed if you meet the definition of reconstruction in [§ 63.2](#) and reconstruction is commenced on or after June 12, 2006.

(iii) A stationary RICE located at an area source of HAP emissions is reconstructed if you meet the definition of reconstruction in [§ 63.2](#) and reconstruction is commenced on or after June 12, 2006.

(b) *Stationary RICE subject to limited requirements.*

(1) An affected source which meets either of the criteria in [paragraphs \(b\)\(1\)\(i\)](#) through [\(ii\)](#) of this section does not have to meet the requirements of this subpart and of [subpart A of this part](#) except for the initial notification requirements of [§ 63.6645\(f\)](#).

(i) The stationary RICE is a new or reconstructed emergency stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions.

(ii) The stationary RICE is a new or reconstructed limited use stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions.

(2) A new or reconstructed stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions which combusts landfill or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis must meet the initial notification requirements of [§ 63.6645\(f\)](#) and the requirements of [§§ 63.6625\(c\)](#), [63.6650\(g\)](#), and [63.6655\(c\)](#). These stationary RICE do not have to meet the emission limitations and operating limitations of this subpart.

(3) The following stationary RICE do not have to meet the requirements of this subpart and of [subpart A of this part](#), including initial notification requirements:

- (i) Existing spark ignition 2 stroke lean burn (2SLB) stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions;
- (ii) Existing spark ignition 4 stroke lean burn (4SLB) stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions;
- (iii) Existing emergency stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions.
- (iv) Existing limited use stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions;
- (v) Existing stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions that combusts landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis;

(c) ***Stationary RICE subject to Regulations under [40 CFR Part 60](#)***. An affected source that meets any of the criteria in [paragraphs \(c\)\(1\)](#) through [\(7\)](#) of this section must meet the requirements of this part by meeting the requirements of [40 CFR part 60 subpart IIII](#), for compression ignition engines or [40 CFR part 60 subpart JJJJ](#), for spark ignition engines. No further requirements apply for such engines under this part.

- (1) A new or reconstructed stationary RICE located at an area source;
- (2) A new or reconstructed 2SLB stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions;
- (3) A new or reconstructed 4SLB stationary RICE with a site rating of less than 250 brake HP located at a major source of HAP emissions;
- (4) A new or reconstructed spark ignition 4 stroke rich burn (4SRB) stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions;
- (5) A new or reconstructed stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions which combusts landfill or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis;
- (6) A new or reconstructed emergency or limited use stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions;
- (7) A new or reconstructed compression ignition (CI) stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions.

[[69 FR 33506](#), June 15, 2004, as amended at [73 FR 3604](#), Jan. 18, 2008; [75 FR 9674](#), Mar. 3, 2010; [75 FR 37733](#), June 30, 2010; [75 FR 51588](#), Aug. 20, 2010; [78 FR 6700](#), Jan. 30, 2013; [87 FR 48607](#), Aug. 10, 2022]

§ 63.6595 When do I have to comply with this subpart?

(a) *Affected sources.*

(1) If you have an existing stationary RICE, excluding existing non-emergency CI stationary RICE, with a site rating of more than 500 brake HP located at a major source of HAP emissions, you must comply with the applicable emission limitations, operating limitations and other requirements no later than June 15, 2007. If you have an existing non-emergency CI stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, an existing stationary CI RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions, or an existing stationary CI RICE located at an area source of HAP emissions, you must comply with the applicable emission limitations, operating limitations, and other requirements no later than May 3, 2013. If you have an existing stationary SI RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions, or an existing stationary SI RICE located at an area source of HAP emissions, you must comply with the applicable emission limitations, operating limitations, and other requirements no later than October 19, 2013.

(2) If you start up your new or reconstructed stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions before August 16, 2004, you must comply with the applicable emission limitations and operating limitations in this subpart no later than August 16, 2004.

(3) If you start up your new or reconstructed stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions after August 16, 2004, you must comply with the applicable emission limitations and operating limitations in this subpart upon startup of your affected source.

(4) If you start up your new or reconstructed stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions before January 18, 2008, you must comply with the applicable emission limitations and operating limitations in this subpart no later than January 18, 2008.

(5) If you start up your new or reconstructed stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions after January 18, 2008, you must comply with the applicable emission limitations and operating limitations in this subpart upon startup of your affected source.

(6) If you start up your new or reconstructed stationary RICE located at an area source of HAP emissions before January 18, 2008, you must comply with the applicable emission limitations and operating limitations in this subpart no later than January 18, 2008.

(7) If you start up your new or reconstructed stationary RICE located at an area source of HAP emissions after January 18, 2008, you must comply with the applicable emission limitations and operating limitations in this subpart upon startup of your affected source.

(b) ***Area sources that become major sources.*** If you have an area source that increases its emissions or its potential to emit such that it becomes a major source of HAP, the compliance dates in [paragraphs \(b\)\(1\)](#) and [\(2\)](#) of this section apply to you.

(1) Any stationary RICE for which construction or reconstruction is commenced after the date when your area source becomes a major source of HAP must be in compliance with this subpart upon startup of your affected source.

(2) Any stationary RICE for which construction or reconstruction is commenced before your area source becomes a major source of HAP must be in compliance with the provisions of this subpart that are applicable to RICE located at major sources within 3 years after your area source becomes a major source of HAP.

(c) If you own or operate an affected source, you must meet the applicable notification requirements in [§ 63.6645](#) and in [40 CFR part 63, subpart A](#).

[[69 FR 33506](#), June 15, 2004, as amended at [73 FR 3604](#), Jan. 18, 2008; [75 FR 9675](#), Mar. 3, 2010; [75 FR 51589](#), Aug. 20, 2010; [78 FR 6701](#), Jan. 30, 2013]

Emission and Operating Limitations

§ 63.6600 What emission limitations and operating limitations must I meet if I own or operate a stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions?

Compliance with the numerical emission limitations established in this subpart is based on the results of testing the average of three 1-hour runs using the testing requirements and procedures in [§ 63.6620](#) and Table 4 to this subpart.

(a) If you own or operate an existing, new, or reconstructed spark ignition 4SRB stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, you must comply with the emission limitations in Table 1a to this subpart and the operating limitations in Table 1b to this subpart which apply to you.

(b) If you own or operate a new or reconstructed 2SLB stationary RICE with a site rating of more than 500 brake HP located at major source of HAP emissions, a new or reconstructed 4SLB stationary RICE with a site rating of more than 500 brake HP located at major source of

HAP emissions, or a new or reconstructed CI stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, you must comply with the emission limitations in Table 2a to this subpart and the operating limitations in Table 2b to this subpart which apply to you.

(c) If you own or operate any of the following stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, you do not need to comply with the emission limitations in Tables 1a, 2a, 2c, and 2d to this subpart or operating limitations in Tables 1b and 2b to this subpart: an existing 2SLB stationary RICE; an existing 4SLB stationary RICE; a stationary RICE that combusts landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis; an emergency stationary RICE; or a limited use stationary RICE.

(d) If you own or operate an existing non-emergency stationary CI RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, you must comply with the emission limitations in Table 2c to this subpart and the operating limitations in Table 2b to this subpart which apply to you.

[[73 FR 3605](#), Jan. 18, 2008, as amended at [75 FR 9675](#), Mar. 3, 2010]

§ 63.6601 What emission limitations must I meet if I own or operate a new or reconstructed 4SLB stationary RICE with a site rating of greater than or equal to 250 brake HP and less than or equal to 500 brake HP located at a major source of HAP emissions?

Compliance with the numerical emission limitations established in this subpart is based on the results of testing the average of three 1-hour runs using the testing requirements and procedures in [§ 63.6620](#) and Table 4 to this subpart. If you own or operate a new or reconstructed 4SLB stationary RICE with a site rating of greater than or equal to 250 and less than or equal to 500 brake HP located at major source of HAP emissions manufactured on or after January 1, 2008, you must comply with the emission limitations in Table 2a to this subpart and the operating limitations in Table 2b to this subpart which apply to you.

[[73 FR 3605](#), Jan. 18, 2008, as amended at [75 FR 9675](#), Mar. 3, 2010; [75 FR 51589](#), Aug. 20, 2010]

§ 63.6602 What emission limitations and other requirements must I meet if I own or operate an existing stationary RICE with a site rating of equal to or less than 500 brake HP located at a major source of HAP emissions?

If you own or operate an existing stationary RICE with a site rating of equal to or less than 500 brake HP located at a major source of HAP emissions, you must comply with the emission limitations and other requirements in Table 2c to this subpart which apply to you. Compliance with the numerical emission limitations established in this subpart is based on the results of

testing the average of three 1-hour runs using the testing requirements and procedures in [§ 63.6620](#) and Table 4 to this subpart.

[[78 FR 6701](#), Jan. 30, 2013]

§ 63.6603 What emission limitations, operating limitations, and other requirements must I meet if I own or operate an existing stationary RICE located at an area source of HAP emissions?

Compliance with the numerical emission limitations established in this subpart is based on the results of testing the average of three 1-hour runs using the testing requirements and procedures in [§ 63.6620](#) and Table 4 to this subpart.

(a) If you own or operate an existing stationary RICE located at an area source of HAP emissions, you must comply with the requirements in Table 2d to this subpart and the operating limitations in Table 2b to this subpart that apply to you.

(b) If you own or operate an existing stationary non-emergency CI RICE with a site rating of more than 300 HP located at an area source of HAP that meets either [paragraph \(b\)\(1\)](#) or [\(2\)](#) of this section, you do not have to meet the numerical CO emission limitations specified in Table 2d of this subpart. Existing stationary non-emergency CI RICE with a site rating of more than 300 HP located at an area source of HAP that meet either [paragraph \(b\)\(1\)](#) or [\(2\)](#) of this section must meet the management practices that are shown for stationary non-emergency CI RICE with a site rating of less than or equal to 300 HP in Table 2d of this subpart.

(1) The area source is located in an area of Alaska that is not accessible by the Federal Aid Highway System (FAHS).

(2) The stationary RICE is located at an area source that meets [paragraphs \(b\)\(2\)\(i\)](#), [\(ii\)](#), and [\(iii\)](#) of this section.

(i) The only connection to the FAHS is through the Alaska Marine Highway System (AMHS), or the stationary RICE operation is within an isolated grid in Alaska that is not connected to the statewide electrical grid referred to as the Alaska Railbelt Grid.

(ii) At least 10 percent of the power generated by the stationary RICE on an annual basis is used for residential purposes.

(iii) The generating capacity of the area source is less than 12 megawatts, or the stationary RICE is used exclusively for backup power for renewable energy.

(c) If you own or operate an existing stationary non-emergency CI RICE with a site rating of more than 300 HP located on an offshore vessel that is an area source of HAP and is a nonroad vehicle that is an Outer Continental Shelf (OCS) source as defined in [40 CFR 55.2](#), you do not

have to meet the numerical CO emission limitations specified in Table 2d of this subpart. You must meet all of the following management practices:

(1) Change oil every 1,000 hours of operation or within 1 year + 30 days of the previous change, whichever comes first. Sources have the option to utilize an oil analysis program as described in [§ 63.6625\(i\)](#) in order to extend the specified oil change requirement.

(2) Inspect and clean air filters every 750 hours of operation or within 1 year + 30 days of the previous inspection, whichever comes first, and replace as necessary.

(3) Inspect fuel filters and belts, if installed, every 750 hours of operation or within 1 year + 30 days of the previous inspection, whichever comes first, and replace as necessary.

(4) Inspect all flexible hoses every 1,000 hours of operation or within 1 year + 30 days of the previous inspection, whichever comes first, and replace as necessary.

(d) If you own or operate an existing non-emergency CI RICE with a site rating of more than 300 HP located at an area source of HAP emissions that is certified to the Tier 1 or Tier 2 emission standards in Table 1 of [40 CFR 89.112](#) and that is subject to an enforceable state or local standard that requires the engine to be replaced no later than June 1, 2018, you may until January 1, 2015, or 12 years after the installation date of the engine (whichever is later), but not later than June 1, 2018, choose to comply with the management practices that are shown for stationary non-emergency CI RICE with a site rating of less than or equal to 300 HP in Table 2d of this subpart instead of the applicable emission limitations in Table 2d, operating limitations in Table 2b, and crankcase ventilation system requirements in [§ 63.6625\(g\)](#). You must comply with the emission limitations in Table 2d and operating limitations in Table 2b that apply for non-emergency CI RICE with a site rating of more than 300 HP located at an area source of HAP emissions by January 1, 2015, or 12 years after the installation date of the engine (whichever is later), but not later than June 1, 2018. You must also comply with the crankcase ventilation system requirements in [§ 63.6625\(g\)](#) by January 1, 2015, or 12 years after the installation date of the engine (whichever is later), but not later than June 1, 2018.

(e) If you own or operate an existing non-emergency CI RICE with a site rating of more than 300 HP located at an area source of HAP emissions that is certified to the Tier 3 (Tier 2 for engines above 560 kilowatt (kW)) emission standards in Table 1 of [40 CFR 89.112](#), you may comply with the requirements under this part by meeting the requirements for Tier 3 engines (Tier 2 for engines above 560 kW) in [40 CFR part 60 subpart IIII](#) instead of the emission limitations and other requirements that would otherwise apply under this part for existing non-emergency CI RICE with a site rating of more than 300 HP located at an area source of HAP emissions.

(f) An existing non-emergency SI 4SLB and 4SRB stationary RICE with a site rating of more than 500 HP located at area sources of HAP must meet the definition of remote stationary RICE in [§ 63.6675](#) on the initial compliance date for the engine, October 19, 2013, in order to be

considered a remote stationary RICE under this subpart. Owners and operators of existing non-emergency SI 4SLB and 4SRB stationary RICE with a site rating of more than 500 HP located at area sources of HAP that meet the definition of remote stationary RICE in [§ 63.6675 of this subpart](#) as of October 19, 2013 must evaluate the status of their stationary RICE every 12 months. Owners and operators must keep records of the initial and annual evaluation of the status of the engine. If the evaluation indicates that the stationary RICE no longer meets the definition of remote stationary RICE in [§ 63.6675 of this subpart](#), the owner or operator must comply with all of the requirements for existing non-emergency SI 4SLB and 4SRB stationary RICE with a site rating of more than 500 HP located at area sources of HAP that are not remote stationary RICE within 1 year of the evaluation.

[[75 FR 9675](#), Mar. 3, 2010, as amended at [75 FR 51589](#), Aug. 20, 2010; [76 FR 12866](#), Mar. 9, 2011; [78 FR 6701](#), Jan. 30, 2013; [89 FR 70515](#), Aug. 30, 2024]

§ 63.6604 What fuel requirements must I meet if I own or operate a stationary CI RICE?

(a) If you own or operate an existing non-emergency, non-black start CI stationary RICE with a site rating of more than 300 brake HP with a displacement of less than 30 liters per cylinder that uses diesel fuel, you must use diesel fuel that meets the requirements in [40 CFR 1090.305](#) for nonroad diesel fuel.

(b) Beginning January 1, 2015, if you own or operate an existing emergency CI stationary RICE with a site rating of more than 100 brake HP and a displacement of less than 30 liters per cylinder that uses diesel fuel and operates for the purpose specified in [§ 63.6640\(f\)\(4\)\(ii\)](#), you must use diesel fuel that meets the requirements in [40 CFR 1090.305](#) for nonroad diesel fuel, except that any existing diesel fuel purchased (or otherwise obtained) prior to January 1, 2015, may be used until depleted.

(c) [Reserved]

(d) Existing CI stationary RICE located in Guam, American Samoa, the Commonwealth of the Northern Mariana Islands, at area sources in areas of Alaska that meet either [§ 63.6603\(b\)\(1\)](#) or [§ 63.6603\(b\)\(2\)](#), or are on offshore vessels that meet [§ 63.6603\(c\)](#) are exempt from the requirements of this section.

[[78 FR 6702](#), Jan. 30, 2013, as amended at [85 FR 78463](#), Dec. 4, 2020; [87 FR 48607](#), Aug. 10, 2022]

General Compliance Requirements

§ 63.6605 What are my general requirements for complying with this subpart?

(a) You must be in compliance with the emission limitations, operating limitations, and other requirements in this subpart that apply to you at all times.

(b) At all times you must operate and maintain any affected source, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. The general duty to minimize emissions does not require you to make any further efforts to reduce emissions if levels required by this standard have been achieved. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Administrator which may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source.

[[75 FR 9675](#), Mar. 3, 2010, as amended at [78 FR 6702](#), Jan. 30, 2013]

Testing and Initial Compliance Requirements

§ 63.6610 By what date must I conduct the initial performance tests or other initial compliance demonstrations if I own or operate a stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions?

If you own or operate a stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions you are subject to the requirements of this section.

(a) You must conduct the initial performance test or other initial compliance demonstrations in Table 4 to this subpart that apply to you within 180 days after the compliance date that is specified for your stationary RICE in [§ 63.6595](#) and according to the provisions in [§ 63.7\(a\)\(2\)](#).

(b) If you commenced construction or reconstruction between December 19, 2002 and June 15, 2004 and own or operate stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, you must demonstrate initial compliance with either the proposed emission limitations or the promulgated emission limitations no later than February 10, 2005 or no later than 180 days after startup of the source, whichever is later, according to [§ 63.7\(a\)\(2\)\(ix\)](#).

(c) If you commenced construction or reconstruction between December 19, 2002 and June 15, 2004 and own or operate stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, and you chose to comply with the proposed emission limitations when demonstrating initial compliance, you must conduct a second performance test to demonstrate compliance with the promulgated emission limitations by December 13, 2007 or after startup of the source, whichever is later, according to [§ 63.7\(a\)\(2\)\(ix\)](#).

(d) An owner or operator is not required to conduct an initial performance test on units for which a performance test has been previously conducted, but the test must meet all of the conditions described in [paragraphs \(d\)\(1\) through \(5\)](#) of this section.

(1) The test must have been conducted using the same methods specified in this subpart, and these methods must have been followed correctly.

- (2) The test must not be older than 2 years.
- (3) The test must be reviewed and accepted by the Administrator.
- (4) Either no process or equipment changes must have been made since the test was performed, or the owner or operator must be able to demonstrate that the results of the performance test, with or without adjustments, reliably demonstrate compliance despite process or equipment changes.
- (5) The test must be conducted at any load condition within plus or minus 10 percent of 100 percent load.

[[69 FR 33506](#), June 15, 2004, as amended at [73 FR 3605](#), Jan. 18, 2008]

§ 63.6611 By what date must I conduct the initial performance tests or other initial compliance demonstrations if I own or operate a new or reconstructed 4SLB SI stationary RICE with a site rating of greater than or equal to 250 and less than or equal to 500 brake HP located at a major source of HAP emissions?

If you own or operate a new or reconstructed 4SLB stationary RICE with a site rating of greater than or equal to 250 and less than or equal to 500 brake HP located at a major source of HAP emissions, you must conduct an initial performance test within 240 days after the compliance date that is specified for your stationary RICE in [§ 63.6595](#) and according to the provisions specified in Table 4 to this subpart, as appropriate.

[[73 FR 3605](#), Jan. 18, 2008, as amended at [75 FR 51589](#), Aug. 20, 2010]

§ 63.6612 By what date must I conduct the initial performance tests or other initial compliance demonstrations if I own or operate an existing stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions or an existing stationary RICE located at an area source of HAP emissions?

If you own or operate an existing stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions or an existing stationary RICE located at an area source of HAP emissions you are subject to the requirements of this section.

(a) You must conduct any initial performance test or other initial compliance demonstration according to Tables 4 and 5 to this subpart that apply to you within 180 days after the compliance date that is specified for your stationary RICE in [§ 63.6595](#) and according to the provisions in [§ 63.7\(a\)\(2\)](#).

(b) An owner or operator is not required to conduct an initial performance test on a unit for which a performance test has been previously conducted, but the test must meet all of the conditions described in [paragraphs \(b\)\(1\) through \(4\)](#) of this section.

- (1) The test must have been conducted using the same methods specified in this subpart, and these methods must have been followed correctly.
- (2) The test must not be older than 2 years.
- (3) The test must be reviewed and accepted by the Administrator.
- (4) Either no process or equipment changes must have been made since the test was performed, or the owner or operator must be able to demonstrate that the results of the performance test, with or without adjustments, reliably demonstrate compliance despite process or equipment changes.

[[75 FR 9676](#), Mar. 3, 2010, as amended at [75 FR 51589](#), Aug. 20, 2010]

§ 63.6615 When must I conduct subsequent performance tests?

If you must comply with the emission limitations and operating limitations, you must conduct subsequent performance tests as specified in Table 3 of this subpart.

§ 63.6620 What performance tests and other procedures must I use?

- (a) You must conduct each performance test in Tables 3 and 4 of this subpart that applies to you.
- (b) Each performance test must be conducted according to the requirements that this subpart specifies in Table 4 to this subpart. If you own or operate a non-operational stationary RICE that is subject to performance testing, you do not need to start up the engine solely to conduct the performance test. Owners and operators of a non-operational engine can conduct the performance test when the engine is started up again. The test must be conducted at any load condition within plus or minus 10 percent of 100 percent load for the stationary RICE listed in [paragraphs \(b\)\(1\) through \(4\)](#) of this section.
 - (1) Non-emergency 4SRB stationary RICE with a site rating of greater than 500 brake HP located at a major source of HAP emissions.
 - (2) New non-emergency 4SLB stationary RICE with a site rating of greater than or equal to 250 brake HP located at a major source of HAP emissions.
 - (3) New non-emergency 2SLB stationary RICE with a site rating of greater than 500 brake HP located at a major source of HAP emissions.
 - (4) New non-emergency CI stationary RICE with a site rating of greater than 500 brake HP located at a major source of HAP emissions.
- (c) [Reserved]

(d) You must conduct three separate test runs for each performance test required in this section, as specified in [§ 63.7\(e\)\(3\)](#). Each test run must last at least 1 hour, unless otherwise specified in this subpart.

(e)

(1) You must use Equation 1 of this section to determine compliance with the percent reduction requirement:

$$\frac{C_i - C_o}{C_i} \times 100 = R \quad (\text{Eq. 1})$$

Where:

C_i = concentration of carbon monoxide (CO), total hydrocarbons (THC), or formaldehyde at the control device inlet,

C_o = concentration of CO, THC, or formaldehyde at the control device outlet, and

R = percent reduction of CO, THC, or formaldehyde emissions.

(2) You must normalize the CO, THC, or formaldehyde concentrations at the inlet and outlet of the control device to a dry basis and to 15 percent oxygen, or an equivalent percent carbon dioxide (CO₂). If pollutant concentrations are to be corrected to 15 percent oxygen and CO₂ concentration is measured in lieu of oxygen concentration measurement, a CO₂ correction factor is needed. Calculate the CO₂ correction factor as described in [paragraphs \(e\)\(2\)\(i\)](#) through [\(iii\)](#) of this section.

(i) Calculate the fuel-specific F_o value for the fuel burned during the test using values obtained from Method 19, [Section 5.2](#), and the following equation:

$$F_o = \frac{0.209 F_d}{F_c} \quad (\text{Eq. 2})$$

Where:

F_o = Fuel factor based on the ratio of oxygen volume to the ultimate CO₂ volume produced by the fuel at zero percent excess air.

0.209 = Fraction of air that is oxygen, percent/100.

F_d = Ratio of the volume of dry effluent gas to the gross calorific value of the fuel from Method 19, dsm³/J (dscf/10⁶ Btu).

F_c = Ratio of the volume of CO₂ produced to the gross calorific value of the fuel from Method 19, dsm³/J (dscf/10⁶ Btu)

(ii) Calculate the CO₂ correction factor for correcting measurement data to 15 percent O₂, as follows:

$$X_{CO_2} = \frac{5.9}{F_O} \quad (Eq. 3)$$

Where:

X_{CO_2} = CO₂ correction factor, percent.

5.9 = 20.9 percent O₂—15 percent O₂, the defined O₂ correction value, percent.

(iii) Calculate the CO, THC, and formaldehyde gas concentrations adjusted to 15 percent O₂ using CO₂ as follows:

$$C_{adj} = C_d \frac{X_{CO_2}}{\%CO_2} \quad (Eq. 4)$$

Where:

C_{adj} = Calculated concentration of CO, THC, or formaldehyde adjusted to 15 percent O₂.

C_d = Measured concentration of CO, THC, or formaldehyde, uncorrected.

X_{CO_2} = CO₂ correction factor, percent.

%CO₂ = Measured CO₂ concentration measured, dry basis, percent.

(f) If you comply with the emission limitation to reduce CO and you are not using an oxidation catalyst, if you comply with the emission limitation to reduce formaldehyde and you are not using NSCR, or if you comply with the emission limitation to limit the concentration of formaldehyde in the stationary RICE exhaust and you are not using an oxidation catalyst or NSCR, you must petition the Administrator for operating limitations to be established during the initial performance test and continuously monitored thereafter; or for approval of no operating limitations. You must not conduct the initial performance test until after the petition has been approved by the Administrator.

(g) If you petition the Administrator for approval of operating limitations, your petition must include the information described in [paragraphs \(g\)\(1\) through \(5\)](#) of this section.

(1) Identification of the specific parameters you propose to use as operating limitations;

- (2) A discussion of the relationship between these parameters and HAP emissions, identifying how HAP emissions change with changes in these parameters, and how limitations on these parameters will serve to limit HAP emissions;
- (3) A discussion of how you will establish the upper and/or lower values for these parameters which will establish the limits on these parameters in the operating limitations;
- (4) A discussion identifying the methods you will use to measure and the instruments you will use to monitor these parameters, as well as the relative accuracy and precision of these methods and instruments; and
- (5) A discussion identifying the frequency and methods for recalibrating the instruments you will use for monitoring these parameters.
- (h) If you petition the Administrator for approval of no operating limitations, your petition must include the information described in [paragraphs \(h\)\(1\) through \(7\)](#) of this section.
- (1) Identification of the parameters associated with operation of the stationary RICE and any emission control device which could change intentionally (*e.g.*, operator adjustment, automatic controller adjustment, etc.) or unintentionally (*e.g.*, wear and tear, error, etc.) on a routine basis or over time;
- (2) A discussion of the relationship, if any, between changes in the parameters and changes in HAP emissions;
- (3) For the parameters which could change in such a way as to increase HAP emissions, a discussion of whether establishing limitations on the parameters would serve to limit HAP emissions;
- (4) For the parameters which could change in such a way as to increase HAP emissions, a discussion of how you could establish upper and/or lower values for the parameters which would establish limits on the parameters in operating limitations;
- (5) For the parameters, a discussion identifying the methods you could use to measure them and the instruments you could use to monitor them, as well as the relative accuracy and precision of the methods and instruments;
- (6) For the parameters, a discussion identifying the frequency and methods for recalibrating the instruments you could use to monitor them; and
- (7) A discussion of why, from your point of view, it is infeasible or unreasonable to adopt the parameters as operating limitations.
- (i) The engine percent load during a performance test must be determined by documenting the calculations, assumptions, and measurement devices used to measure or estimate the percent load

in a specific application. A written report of the average percent load determination must be included in the notification of compliance status. The following information must be included in the written report: the engine model number, the engine manufacturer, the year of purchase, the manufacturer's site-rated brake horsepower, the ambient temperature, pressure, and humidity during the performance test, and all assumptions that were made to estimate or calculate percent load during the performance test must be clearly explained. If measurement devices such as flow meters, kilowatt meters, beta analyzers, stain gauges, etc. are used, the model number of the measurement device, and an estimate of its accurate in percentage of true value must be provided.

(j) Beginning on February 26, 2025, within 60 days after the date of completing each performance test required by this subpart, you must submit the results of the performance test following the procedure specified in [§ 63.9\(k\)](#). Data collected using test methods supported by the EPA's Electronic Reporting Tool (ERT) as listed on the EPA's ERT website (<https://www.epa.gov/electronic-reporting-air-emissions/electronic-reporting-tool-ert>) at the time of the test must be submitted in a file format generated using the EPA's ERT. Alternatively, you may submit an electronic file consistent with the extensible markup language (XML) schema listed on the EPA's ERT website. Data collected using test methods that are not supported by the EPA's ERT as listed on the EPA's ERT website at the time of the test must be included as an attachment in the ERT or alternate electronic file.

[[69 FR 33506](#), June 15, 2004, as amended at [75 FR 9676](#), Mar. 3, 2010; [78 FR 6702](#), Jan. 30, 2013; [89 FR 70516](#), Aug. 30, 2024]

§ 63.6625 What are my monitoring, installation, collection, operation, and maintenance requirements?

(a) If you elect to install a CEMS as specified in Table 5 of this subpart, you must install, operate, and maintain a CEMS to monitor CO and either O₂ or CO₂ according to the requirements in [paragraphs \(a\)\(1\) through \(4\)](#) of this section. If you are meeting a requirement to reduce CO emissions, the CEMS must be installed at both the inlet and outlet of the control device. If you are meeting a requirement to limit the concentration of CO, the CEMS must be installed at the outlet of the control device.

(1) Each CEMS must be installed, operated, and maintained according to the applicable performance specifications of [40 CFR part 60, appendix B](#).

(2) You must conduct an initial performance evaluation and an annual relative accuracy test audit (RATA) of each CEMS according to the requirements in [§ 63.8](#) and according to the applicable performance specifications of [40 CFR part 60, appendix B](#) as well as daily and periodic data quality checks in accordance with [40 CFR part 60, appendix F](#), procedure 1.

(3) As specified in [§ 63.8\(c\)\(4\)\(ii\)](#), each CEMS must complete a minimum of one cycle of operation (sampling, analyzing, and data recording) for each successive 15-minute period. You must have at least two data points, with each representing a different 15-minute period, to have a valid hour of data.

(4) The CEMS data must be reduced as specified in [§ 63.8\(g\)\(2\)](#) and recorded in parts per million or parts per billion (as appropriate for the applicable limitation) at 15 percent oxygen or the equivalent CO₂ concentration.

(5) Beginning on February 26, 2025, within 60 days after the date of completing each continuous emissions monitoring system (CEMS) performance evaluation (as defined in [§ 63.2](#)) that includes a relative accuracy test audit (RATA), you must submit the results of the performance evaluation following the procedures specified in [§ 63.9\(k\)](#). The results of performance evaluations of CEMS measuring RATA pollutants that are supported by the EPA's ERT as listed on the EPA's ERT website at the time of the evaluation must be submitted in a file format generated using the EPA's ERT. Alternatively, you may submit an electronic file consistent with the XML schema listed on the EPA's ERT website. The results of performance evaluations of CEMS measuring RATA pollutants that are not supported by the EPA's ERT as listed on the EPA's ERT website at the time of the evaluation must be included as an attachment in the ERT or alternate electronic file.

(b) If you are required to install a continuous parameter monitoring system (CPMS) as specified in Table 5 of this subpart, you must install, operate, and maintain each CPMS according to the requirements in [paragraphs \(b\)\(1\)](#) through [\(6\)](#) of this section. For an affected source that is complying with the emission limitations and operating limitations on March 9, 2011, the requirements in [paragraph \(b\)](#) of this section are applicable September 6, 2011.

(1) You must prepare a site-specific monitoring plan that addresses the monitoring system design, data collection, and the quality assurance and quality control elements outlined in [paragraphs \(b\)\(1\)\(i\)](#) through [\(v\)](#) of this section and in [§ 63.8\(d\)](#). As specified in [§ 63.8\(f\)\(4\)](#), you may request approval of monitoring system quality assurance and quality control procedures alternative to those specified in [paragraphs \(b\)\(1\)](#) through [\(5\)](#) of this section in your site-specific monitoring plan.

(i) The performance criteria and design specifications for the monitoring system equipment, including the sample interface, detector signal analyzer, and data acquisition and calculations;

(ii) Sampling interface (*e.g.*, thermocouple) location such that the monitoring system will provide representative measurements;

(iii) Equipment performance evaluations, system accuracy audits, or other audit procedures;

- (iv) Ongoing operation and maintenance procedures in accordance with provisions in [§ 63.8\(c\)\(1\)\(ii\)](#) and [\(c\)\(3\)](#); and
 - (v) Ongoing reporting and recordkeeping procedures in accordance with provisions in [§ 63.10\(c\)](#), [\(e\)\(1\)](#), and [\(e\)\(2\)\(i\)](#).
- (2) You must install, operate, and maintain each CPMS in continuous operation according to the procedures in your site-specific monitoring plan.
 - (3) The CPMS must collect data at least once every 15 minutes (see also [§ 63.6635](#)).
 - (4) For a CPMS for measuring temperature range, the temperature sensor must have a minimum tolerance of 2.8 degrees Celsius (5 degrees Fahrenheit) or 1 percent of the measurement range, whichever is larger.
 - (5) You must conduct the CPMS equipment performance evaluation, system accuracy audits, or other audit procedures specified in your site-specific monitoring plan at least annually.
 - (6) You must conduct a performance evaluation of each CPMS in accordance with your site-specific monitoring plan.
- (c) If you are operating a new or reconstructed stationary RICE which fires landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis, you must monitor and record your fuel usage daily with separate fuel meters to measure the volumetric flow rate of each fuel. In addition, you must operate your stationary RICE in a manner which reasonably minimizes HAP emissions.
 - (d) If you are operating a new or reconstructed emergency 4SLB stationary RICE with a site rating of greater than or equal to 250 and less than or equal to 500 brake HP located at a major source of HAP emissions, you must install a non-resettable hour meter prior to the startup of the engine.
 - (e) If you own or operate any of the following stationary RICE, you must operate and maintain the stationary RICE and after-treatment control device (if any) according to the manufacturer's emission-related written instructions or develop your own maintenance plan which must provide to the extent practicable for the maintenance and operation of the engine in a manner consistent with good air pollution control practice for minimizing emissions:
 - (1) An existing stationary RICE with a site rating of less than 100 HP located at a major source of HAP emissions;
 - (2) An existing emergency or black start stationary RICE with a site rating of less than or equal to 500 HP located at a major source of HAP emissions;

- (3) An existing emergency or black start stationary RICE located at an area source of HAP emissions;
 - (4) An existing non-emergency, non-black start stationary CI RICE with a site rating less than or equal to 300 HP located at an area source of HAP emissions;
 - (5) An existing non-emergency, non-black start 2SLB stationary RICE located at an area source of HAP emissions;
 - (6) An existing non-emergency, non-black start stationary RICE located at an area source of HAP emissions which combusts landfill or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis.
 - (7) An existing non-emergency, non-black start 4SLB stationary RICE with a site rating less than or equal to 500 HP located at an area source of HAP emissions;
 - (8) An existing non-emergency, non-black start 4SRB stationary RICE with a site rating less than or equal to 500 HP located at an area source of HAP emissions;
 - (9) An existing, non-emergency, non-black start 4SLB stationary RICE with a site rating greater than 500 HP located at an area source of HAP emissions that is operated 24 hours or less per calendar year; and
 - (10) An existing, non-emergency, non-black start 4SRB stationary RICE with a site rating greater than 500 HP located at an area source of HAP emissions that is operated 24 hours or less per calendar year.
- (f) If you own or operate an existing emergency stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions or an existing emergency stationary RICE located at an area source of HAP emissions, you must install a non-resettable hour meter if one is not already installed.
- (g) If you own or operate an existing non-emergency, non-black start CI engine greater than or equal to 300 HP that is not equipped with a closed crankcase ventilation system, you must comply with either paragraph (g)(1) or [paragraph \(2\)](#) of this section. Owners and operators must follow the manufacturer's specified maintenance requirements for operating and maintaining the open or closed crankcase ventilation systems and replacing the crankcase filters, or can request the Administrator to approve different maintenance requirements that are as protective as manufacturer requirements. Existing CI engines located at area sources in areas of Alaska that meet either [§ 63.6603\(b\)\(1\)](#) or [§ 63.6603\(b\)\(2\)](#) do not have to meet the requirements of this [paragraph \(g\)](#). Existing CI engines located on offshore vessels that meet [§ 63.6603\(c\)](#) do not have to meet the requirements of this [paragraph \(g\)](#).

- (1) Install a closed crankcase ventilation system that prevents crankcase emissions from being emitted to the atmosphere, or
- (2) Install an open crankcase filtration emission control system that reduces emissions from the crankcase by filtering the exhaust stream to remove oil mist, particulates and metals.
- (h) If you operate a new, reconstructed, or existing stationary engine, you must minimize the engine's time spent at idle during startup and minimize the engine's startup time to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the emission standards applicable to all times other than startup in Tables 1a, 2a, 2c, and 2d to this subpart apply.
- (i) If you own or operate a stationary CI engine that is subject to the work, operation or management practices in items 1 or 2 of table 2c to this subpart or in items 1 or 4 of table 2d to this subpart, you have the option of utilizing an oil analysis program in order to extend the specified oil and filter change requirement in tables 2c and 2d to this subpart. The oil analysis must be performed at the same frequency specified for changing the oil and filter in table 2c or 2d to this subpart. The analysis program must at a minimum analyze the following three parameters: Total Base Number, viscosity, and percent water content. The condemning limits for these parameters are as follows: Total Base Number is less than 30 percent of the Total Base Number of the oil when new; viscosity of the oil has changed by more than 20 percent from the viscosity of the oil when new; or percent water content (by volume) is greater than 0.5. If all of these condemning limits are not exceeded, the engine owner or operator is not required to change the oil and filter. If any of the limits are exceeded, the engine owner or operator must change the oil and filter within 2 business days of receiving the results of the analysis; if the engine is not in operation when the results of the analysis are received, the engine owner or operator must change the oil and filter within 2 business days or before commencing operation, whichever is later. The owner or operator must keep records of the parameters that are analyzed as part of the program, the results of the analysis, and the oil and filter changes for the engine. The analysis program must be part of the maintenance plan for the engine.
- (j) If you own or operate a stationary SI engine that is subject to the work, operation or management practices in items 6, 7, or 8 of table 2c to this subpart or in items 5, 6, 7, 8, 10, 11, or 13 of table 2d to this subpart, you have the option of utilizing an oil analysis program in order to extend the specified oil and filter change requirement in tables 2c and 2d to this subpart. The oil analysis must be performed at the same frequency specified for changing the oil and filter in table 2c or 2d to this subpart. The analysis program must at a minimum analyze the following three parameters: Total Acid Number, viscosity, and percent water content. The condemning limits for these parameters are as follows: Total Acid Number increases by more than 3.0 milligrams of potassium hydroxide (KOH) per gram from Total Acid Number of the oil when new; viscosity of the oil has changed by more than 20 percent from the viscosity of the oil when new; or percent water content (by volume) is greater than 0.5. If all of these condemning limits

are not exceeded, the engine owner or operator is not required to change the oil and filter. If any of the limits are exceeded, the engine owner or operator must change the oil and filter within 2 business days of receiving the results of the analysis; if the engine is not in operation when the results of the analysis are received, the engine owner or operator must change the oil and filter within 2 business days or before commencing operation, whichever is later. The owner or operator must keep records of the parameters that are analyzed as part of the program, the results of the analysis, and the oil and filter changes for the engine. The analysis program must be part of the maintenance plan for the engine.

[[69 FR 33506](#), June 15, 2004, as amended at [73 FR 3606](#), Jan. 18, 2008; [75 FR 9676](#), Mar. 3, 2010; [75 FR 51589](#), Aug. 20, 2010; [76 FR 12866](#), Mar. 9, 2011; [78 FR 6703](#), Jan. 30, 2013; [89 FR 70516](#), Aug. 30, 2024]

§ 63.6630 How do I demonstrate initial compliance with the emission limitations, operating limitations, and other requirements?

- (a) You must demonstrate initial compliance with each emission limitation, operating limitation, and other requirement that applies to you according to Table 5 of this subpart.
- (b) During the initial performance test, you must establish each operating limitation in Tables 1b and 2b of this subpart that applies to you.
- (c) You must submit the Notification of Compliance Status containing the results of the initial compliance demonstration according to the requirements in [§ 63.6645](#).
- (d) Non-emergency 4SRB stationary RICE complying with the requirement to reduce formaldehyde emissions by 76 percent or more can demonstrate initial compliance with the formaldehyde emission limit by testing for THC instead of formaldehyde. The testing must be conducted according to the requirements in Table 4 of this subpart. The average reduction of emissions of THC determined from the performance test must be equal to or greater than 30 percent.
- (e) The initial compliance demonstration required for existing non-emergency 4SLB and 4SRB stationary RICE with a site rating of more than 500 HP located at an area source of HAP that are not remote stationary RICE and that are operated more than 24 hours per calendar year must be conducted according to the following requirements:
 - (1) The compliance demonstration must consist of at least three test runs.
 - (2) Each test run must be of at least 15 minute duration, except that each test conducted using the method in appendix A to this subpart must consist of at least one measurement cycle and include at least 2 minutes of test data phase measurement.

- (3) If you are demonstrating compliance with the CO concentration or CO percent reduction requirement, you must measure CO emissions using one of the CO measurement methods specified in Table 4 of this subpart, or using appendix A to this subpart.
- (4) If you are demonstrating compliance with the THC percent reduction requirement, you must measure THC emissions using Method 25A, reported as propane, of [40 CFR part 60, appendix A](#).
- (5) You must measure O₂ using one of the O₂ measurement methods specified in Table 4 of this subpart. Measurements to determine O₂ concentration must be made at the same time as the measurements for CO or THC concentration.
- (6) If you are demonstrating compliance with the CO or THC percent reduction requirement, you must measure CO or THC emissions and O₂ emissions simultaneously at the inlet and outlet of the control device.

[[69 FR 33506](#), June 15, 2004, as amended at [78 FR 6704](#), Jan. 30, 2013]

Continuous Compliance Requirements

§ 63.6635 How do I monitor and collect data to demonstrate continuous compliance?

- (a) If you must comply with emission and operating limitations, you must monitor and collect data according to this section.
- (b) Except for monitor malfunctions, associated repairs, required performance evaluations, and required quality assurance or control activities, you must monitor continuously at all times that the stationary RICE is operating. A monitoring malfunction is any sudden, infrequent, not reasonably preventable failure of the monitoring to provide valid data. Monitoring failures that are caused in part by poor maintenance or careless operation are not malfunctions.
- (c) You may not use data recorded during monitoring malfunctions, associated repairs, and required quality assurance or control activities in data averages and calculations used to report emission or operating levels. You must, however, use all the valid data collected during all other periods.

[[69 FR 33506](#), June 15, 2004, as amended at [76 FR 12867](#), Mar. 9, 2011]

§ 63.6640 How do I demonstrate continuous compliance with the emission limitations, operating limitations, and other requirements?

- (a) You must demonstrate continuous compliance with each emission limitation, operating limitation, and other requirements in Tables 1a and 1b, Tables 2a and 2b, Table 2c, and Table 2d to this subpart that apply to you according to methods specified in Table 6 to this subpart.

(b) You must report each instance in which you did not meet each emission limitation or operating limitation in Tables 1a and 1b, Tables 2a and 2b, Table 2c, and Table 2d to this subpart that apply to you. These instances are deviations from the emission and operating limitations in this subpart. These deviations must be reported according to the requirements in [§ 63.6650](#). If you change your catalyst, you must reestablish the values of the operating parameters measured during the initial performance test. When you reestablish the values of your operating parameters, you must also conduct a performance test to demonstrate that you are meeting the required emission limitation applicable to your stationary RICE.

(c) The annual compliance demonstration required for existing non-emergency 4SLB and 4SRB stationary RICE with a site rating of more than 500 HP located at an area source of HAP that are not remote stationary RICE and that are operated more than 24 hours per calendar year must be conducted according to the following requirements:

(1) The compliance demonstration must consist of at least one test run.

(2) Each test run must be of at least 15 minute duration, except that each test conducted using the method in appendix A to this subpart must consist of at least one measurement cycle and include at least 2 minutes of test data phase measurement.

(3) If you are demonstrating compliance with the CO concentration or CO percent reduction requirement, you must measure CO emissions using one of the CO measurement methods specified in Table 4 of this subpart, or using appendix A to this subpart.

(4) If you are demonstrating compliance with the THC percent reduction requirement, you must measure THC emissions using Method 25A, reported as propane, of [40 CFR part 60, appendix A](#).

(5) You must measure O₂ using one of the O₂ measurement methods specified in Table 4 of this subpart. Measurements to determine O₂ concentration must be made at the same time as the measurements for CO or THC concentration.

(6) If you are demonstrating compliance with the CO or THC percent reduction requirement, you must measure CO or THC emissions and O₂ emissions simultaneously at the inlet and outlet of the control device.

(7) If the results of the annual compliance demonstration show that the emissions exceed the levels specified in Table 6 of this subpart, the stationary RICE must be shut down as soon as safely possible, and appropriate corrective action must be taken (e.g., repairs, catalyst cleaning, catalyst replacement). The stationary RICE must be retested within 7 days of being restarted and the emissions must meet the levels specified in Table 6 of this subpart. If the retest shows that the emissions continue to exceed the specified levels, the stationary RICE must again be shut down as soon as safely possible, and the stationary RICE may not operate, except for purposes of

startup and testing, until the owner/operator demonstrates through testing that the emissions do not exceed the levels specified in Table 6 of this subpart.

(d) For new, reconstructed, and rebuilt stationary RICE, deviations from the emission or operating limitations that occur during the first 200 hours of operation from engine startup (engine burn-in period) are not violations. Rebuilt stationary RICE means a stationary RICE that has been rebuilt as that term is defined in [40 CFR 94.11\(a\)](#).

(e) You must also report each instance in which you did not meet the requirements in Table 8 to this subpart that apply to you. If you own or operate a new or reconstructed stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions (except new or reconstructed 4SLB engines greater than or equal to 250 and less than or equal to 500 brake HP), a new or reconstructed stationary RICE located at an area source of HAP emissions, or any of the following RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, you do not need to comply with the requirements in Table 8 to this subpart: An existing 2SLB stationary RICE, an existing 4SLB stationary RICE, an existing emergency stationary RICE, an existing limited use stationary RICE, or an existing stationary RICE which fires landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis. If you own or operate any of the following RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, you do not need to comply with the requirements in Table 8 to this subpart, except for the initial notification requirements: a new or reconstructed stationary RICE that combusts landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis, a new or reconstructed emergency stationary RICE, or a new or reconstructed limited use stationary RICE.

(f) If you own or operate an emergency stationary RICE, you must operate the emergency stationary RICE according to the requirements in [paragraphs \(f\)\(1\) through \(4\)](#) of this section. In order for the engine to be considered an emergency stationary RICE under this subpart, any operation other than emergency operation, maintenance and testing, and operation in non-emergency situations for 50 hours per year, as described in paragraphs (f)(1) through (4), is prohibited. If you do not operate the engine according to the requirements in paragraphs (f)(1) through (4), the engine will not be considered an emergency engine under this subpart and must meet all requirements for non-emergency engines.

(1) There is no time limit on the use of emergency stationary RICE in emergency situations.

(2) You may operate your emergency stationary RICE for the purpose specified in [paragraph \(f\)\(2\)\(i\)](#) of this section for a maximum of 100 hours per calendar year. Any operation for non-emergency situations as allowed by [paragraphs \(f\)\(3\) and \(4\)](#) of this section counts as part of the 100 hours per calendar year allowed by this [paragraph \(f\)\(2\)](#).

(i) Emergency stationary RICE may be operated for maintenance checks and readiness testing, provided that the tests are recommended by federal, state or local government, the manufacturer,

the vendor, the regional transmission organization or equivalent balancing authority and transmission operator, or the insurance company associated with the engine. The owner or operator may petition the Administrator for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the owner or operator maintains records indicating that federal, state, or local standards require maintenance and testing of emergency RICE beyond 100 hours per calendar year.

(ii)-(iii) [Reserved]

(3) Emergency stationary RICE located at major sources of HAP may be operated for up to 50 hours per calendar year in non-emergency situations. The 50 hours of operation in non-emergency situations are counted as part of the 100 hours per calendar year for maintenance and testing provided in [paragraph \(f\)\(2\)](#) of this section. The 50 hours per year for non-emergency situations cannot be used for peak shaving or non-emergency demand response, or to generate income for a facility to supply power to an electric grid or otherwise supply power as part of a financial arrangement with another entity.

(4) Emergency stationary RICE located at area sources of HAP may be operated for up to 50 hours per calendar year in non-emergency situations. The 50 hours of operation in non-emergency situations are counted as part of the 100 hours per calendar year for maintenance and testing provided in [paragraph \(f\)\(2\)](#) of this section. Except as provided in [paragraphs \(f\)\(4\)\(i\)](#) and [\(ii\)](#) of this section, the 50 hours per year for non-emergency situations cannot be used for peak shaving or non-emergency demand response, or to generate income for a facility to an electric grid or otherwise supply power as part of a financial arrangement with another entity.

(i) Prior to May 3, 2014, the 50 hours per year for non-emergency situations can be used for peak shaving or non-emergency demand response to generate income for a facility, or to otherwise supply power as part of a financial arrangement with another entity if the engine is operated as part of a peak shaving (load management program) with the local distribution system operator and the power is provided only to the facility itself or to support the local distribution system.

(ii) The 50 hours per year for non-emergency situations can be used to supply power as part of a financial arrangement with another entity if all of the following conditions are met:

(A) The engine is dispatched by the local balancing authority or local transmission and distribution system operator.

(B) The dispatch is intended to mitigate local transmission and/or distribution limitations so as to avert potential voltage collapse or line overloads that could lead to the interruption of power supply in a local area or region.

(C) The dispatch follows reliability, emergency operation or similar protocols that follow specific NERC, regional, state, public utility commission or local standards or guidelines.

(D) The power is provided only to the facility itself or to support the local transmission and distribution system.

(E) The owner or operator identifies and records the entity that dispatches the engine and the specific NERC, regional, state, public utility commission or local standards or guidelines that are being followed for dispatching the engine. The local balancing authority or local transmission and distribution system operator may keep these records on behalf of the engine owner or operator.

[[69 FR 33506](#), June 15, 2004, as amended at [71 FR 20467](#), Apr. 20, 2006; [73 FR 3606](#), Jan. 18, 2008; [75 FR 9676](#), Mar. 3, 2010; [75 FR 51591](#), Aug. 20, 2010; [78 FR 6704](#), Jan. 30, 2013; [87 FR 48607](#), Aug. 10, 2022]

Notifications, Reports, and Records

§ 63.6645 What notifications must I submit and when?

(a) You must submit all of the notifications in [§§ 63.7\(b\)](#) and [\(c\)](#), [63.8\(e\)](#), [\(f\)\(4\)](#) and [\(f\)\(6\)](#), [63.9\(b\)](#) through [\(e\)](#), and [\(g\)](#) and [\(h\)](#) that apply to you by the dates specified if you own or operate any of the following;

(1) An existing stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions.

(2) An existing stationary RICE located at an area source of HAP emissions.

(3) A stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions.

(4) A new or reconstructed 4SLB stationary RICE with a site rating of greater than or equal to 250 HP located at a major source of HAP emissions.

(5) This requirement does not apply if you own or operate an existing stationary RICE less than 100 HP, an existing stationary emergency RICE, or an existing stationary RICE that is not subject to any numerical emission standards.

(b) As specified in [§ 63.9\(b\)\(2\)](#), if you start up your stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions before the effective date of this subpart, you must submit an initial notification not later than December 13, 2004, or no later than 120 days after the source becomes subject to this subpart, whichever is later. Beginning on February 26, 2025, submit the notification electronically in portable document format (PDF) consistent with [§ 63.9\(k\)](#).

(c) If you start up your new or reconstructed stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions on or after August 16, 2004, you must

submit an initial notification not later than 120 days after you become subject to this subpart. Beginning on February 26, 2025, submit the notification electronically in PDF consistent with [§ 63.9\(k\)](#).

(d) As specified in [§ 63.9\(b\)\(2\)](#), if you start up your stationary RICE with a site rating of equal to or less than 500 brake HP located at a major source of HAP emissions before the effective date of this subpart and you are required to submit an initial notification, you must submit an initial notification not later than July 16, 2008, or no later than 120 days after the source becomes subject to this subpart, whichever is later. Beginning on February 26, 2025, submit the notification electronically in PDF consistent with [§ 63.9\(k\)](#).

(e) If you start up your new or reconstructed stationary RICE with a site rating of equal to or less than 500 brake HP located at a major source of HAP emissions on or after March 18, 2008, and you are required to submit an initial notification, you must submit an initial notification not later than 120 days after you become subject to this subpart. Beginning on February 26, 2025, submit the notification electronically in PDF consistent with [§ 63.9\(k\)](#).

(f) If you are required to submit an Initial Notification but are otherwise not affected by the requirements of this subpart, in accordance with [§ 63.6590\(b\)](#), your notification should include the information in [§ 63.9\(b\)\(2\)\(i\)](#) through [\(v\)](#), and a statement that your stationary RICE has no additional requirements and explain the basis of the exclusion (for example, that it operates exclusively as an emergency stationary RICE if it has a site rating of more than 500 brake HP located at a major source of HAP emissions).

(g) If you are required to conduct a performance test, you must submit a Notification of Intent to conduct a performance test at least 60 days before the performance test is scheduled to begin as required in [§ 63.7\(b\)\(1\)](#).

(h) If you are required to conduct a performance test or other initial compliance demonstration as specified in Tables 4 and 5 to this subpart, you must submit a Notification of Compliance Status according to [§ 63.9\(h\)\(2\)\(ii\)](#).

(1) For each initial compliance demonstration required in Table 5 to this subpart that does not include a performance test, you must submit the Notification of Compliance Status before the close of business on the 30th day following the completion of the initial compliance demonstration.

(2) Before February 26, 2025, for each initial compliance demonstration required in table 5 to this subpart that includes a performance test conducted according to the requirements in table 3 to this subpart, you must submit the Notification of Compliance Status, including the performance test results, before the close of business on the 60th day following the completion of the performance test according to [§ 63.10\(d\)\(2\)](#). Beginning on February 26, 2025, for each initial compliance demonstration required in table 5 to this subpart that includes a performance test

conducted according to the requirements in table 3 to this subpart, you must submit the Notification of Compliance Status, including a summary of the performance test results, in PDF to the EPA via the Compliance and Emissions Data Reporting Interface (CEDRI), before the close of business on the 60th day following the completion of the performance test following the procedure specified in [§ 63.9\(k\)](#), except any Confidential Business Information (CBI) is to be submitted according to [paragraphs \(h\)\(2\)\(i\)](#) and [\(ii\)](#) of this section. Do not use CEDRI to submit information you claim as CBI. Although we do not expect persons to assert a claim of CBI, if you wish to assert a CBI claim for some of the information in the report, you must submit a complete file, including information claimed to be CBI, to the EPA following the procedures in [paragraphs \(h\)\(2\)\(i\)](#) and [\(ii\)](#) of this section. Clearly mark the part or all of the information that you claim to be CBI. Information not marked as CBI may be authorized for public release without prior notice. Information marked as CBI will not be disclosed except in accordance with procedures set forth in [40 CFR part 2](#). All CBI claims must be asserted at the time of submission. Anything submitted using CEDRI cannot later be claimed CBI. Furthermore, under CAA section 114(c), emissions data is not entitled to confidential treatment, and the EPA is required to make emissions data available to the public. Thus, emissions data will not be protected as CBI and will be made publicly available. You must submit the same file submitted to the CBI office with the CBI omitted to the EPA via the EPA's CDX as described earlier in this [paragraph \(h\)\(2\)](#).

(i) The preferred method to receive CBI is for it to be transmitted electronically using email attachments, File Transfer Protocol, or other online file sharing services. Electronic submissions must be transmitted directly to the OAQPS CBI Office at the email address oaqpscbi@epa.gov, and as described in [paragraph \(h\)\(2\)](#) of this section, should include clear CBI markings and be flagged to the attention of the Reciprocating Internal Combustion Engine Sector Lead. If assistance is needed with submitting large electronic files that exceed the file size limit for email attachments, and if you do not have your own file sharing service, please email oaqpscbi@epa.gov to request a file transfer link.

(ii) If you cannot transmit the file electronically, you may send CBI information through the postal service to the following address: OAQPS Document Control Officer (C404-02), OAQPS, U.S. Environmental Protection Agency, 109 T.W. Alexander Drive, P.O. Box 12055, Research Triangle Park, North Carolina 27711, Attention Reciprocating Internal Combustion Engine Sector Lead. The mailed CBI material should be double wrapped and clearly marked. Any CBI markings should not show through the outer envelope.

(i) If you own or operate an existing non-emergency CI RICE with a site rating of more than 300 HP located at an area source of HAP emissions that is certified to the Tier 1 or Tier 2 emission standards in Table 1 of [40 CFR 89.112](#) and subject to an enforceable state or local standard requiring engine replacement and you intend to meet management practices rather than emission limits, as specified in [§ 63.6603\(d\)](#), you must submit a notification by March 3, 2013, stating that you intend to use the provision in [§ 63.6603\(d\)](#) and identifying the state or local regulation that the engine is subject to.

[[73 FR 3606](#), Jan. 18, 2008, as amended at [75 FR 9677](#), Mar. 3, 2010; [75 FR 51591](#), Aug. 20, 2010; [78 FR 6705](#), Jan. 30, 2013; [85 FR 73912](#), Nov. 19, 2020; [89 FR 70516](#), Aug. 30, 2024]

§ 63.6650 What reports must I submit and when?

(a) You must submit each report in Table 7 of this subpart that applies to you.

(b) Unless the Administrator has approved a different schedule for submission of reports under [§ 63.10\(a\)](#), you must submit each report by the date in Table 7 of this subpart and according to the requirements in [paragraphs \(b\)\(1\) through \(b\)\(9\)](#) of this section.

(1) For semiannual Compliance reports, the first Compliance report must cover the period beginning on the compliance date that is specified for your affected source in [§ 63.6595](#) and ending on June 30 or December 31, whichever date is the first date following the end of the first calendar half after the compliance date that is specified for your source in [§ 63.6595](#).

(2) For semiannual Compliance reports, the first Compliance report must be postmarked or delivered no later than July 31 or January 31, whichever date follows the end of the first calendar half after the compliance date that is specified for your affected source in [§ 63.6595](#).

(3) For semiannual Compliance reports, each subsequent Compliance report must cover the semiannual reporting period from January 1 through June 30 or the semiannual reporting period from July 1 through December 31.

(4) For semiannual Compliance reports, each subsequent Compliance report must be postmarked or delivered no later than July 31 or January 31, whichever date is the first date following the end of the semiannual reporting period.

(5) For each stationary RICE that is subject to permitting regulations pursuant to [40 CFR part 70](#) or [71](#), and if the permitting authority has established dates for submitting semiannual reports pursuant to [40 CFR 70.6\(a\)\(3\)\(iii\)\(A\)](#) or [40 CFR 71.6 \(a\)\(3\)\(iii\)\(A\)](#), you may submit the first and subsequent Compliance reports according to the dates the permitting authority has established instead of according to the dates in [paragraphs \(b\)\(1\) through \(b\)\(4\)](#) of this section.

(6) For annual Compliance reports, the first Compliance report must cover the period beginning on the compliance date that is specified for your affected source in [§ 63.6595](#) and ending on December 31.

(7) For annual Compliance reports, the first Compliance report must be postmarked or delivered no later than January 31 following the end of the first calendar year after the compliance date that is specified for your affected source in [§ 63.6595](#).

(8) For annual Compliance reports, each subsequent Compliance report must cover the annual reporting period from January 1 through December 31.

(9) For annual Compliance reports, each subsequent Compliance report must be postmarked or delivered no later than January 31.

(c) The Compliance report must contain the information in [paragraphs \(c\)\(1\)](#) through [\(8\)](#) of this section.

(1) Company name and address.

(2) Statement by a responsible official, with that official's name, title, and signature, certifying the accuracy of the content of the report.

(3) Date of report and beginning and ending dates of the reporting period.

(4) If you had a malfunction during the reporting period, the compliance report must include the starting and ending date and time, the duration (in hours), and a brief description for each malfunction which occurred during the reporting period and which caused or may have caused any applicable emission limitation to be exceeded. The report must also include a description of actions taken by an owner or operator during a malfunction of an affected source to minimize emissions in accordance with [§ 63.6605\(b\)](#), including actions taken to correct a malfunction.

(5) If there are no deviations from any emission or operating limitations that apply to you, a statement that there were no deviations from the emission or operating limitations during the reporting period.

(6) If there were no periods during which the continuous monitoring system (CMS), including CEMS and CPMS, was out-of-control, as specified in [§ 63.8\(c\)\(7\)](#), a statement that there were no periods during which the CMS was out-of-control during the reporting period.

(7) Engine site rating in brake HP, year construction of the engine commenced (as defined in [§ 63.2](#), where the exact year is not known, provide the best estimate), and type of engine (CI, SI 2SLB, SI 4SLB, or SI 4SRB).

(8) Latitude and longitude of the engine in decimal degrees reported to the fifth decimal place.

(9) An engine can be claimed as exempt from reporting coordinates (latitude/longitude) via CEDRI if:

(i) During the reporting period, the engine will be owned by, or operated by or for, an agency of the Federal Government responsible for national defense; and

(ii) The agency determines that disclosing the coordinates to the general public would be a threat to national security.

(d) For each deviation from an emission or operating limitation that occurs for a stationary RICE where you are not using a CMS to comply with the emission or operating limitations in this

subpart, the Compliance report must contain the information in [paragraphs \(c\)\(1\) through \(8\)](#) of this section and the information in [paragraphs \(d\)\(1\) and \(2\)](#) of this section.

(1) The total operating time (in hours) of the stationary RICE at which the deviation occurred during the reporting period.

(2) Information on the number, duration (in hours), and cause of deviations (including unknown cause, if applicable), as applicable, and the corrective action taken.

(3) A description of any changes in processes, or controls since the last reporting period.

(e) For each deviation from an emission or operating limitation occurring for a stationary RICE where you are using a CMS to comply with the emission and operating limitations in this subpart, you must include information in [paragraphs \(c\)\(1\) through \(8\)](#) and [\(e\)\(1\) through \(13\)](#) of this section.

(1) The date and time that each malfunction started and stopped.

(2) The start and end date and time and the duration (in hours) that each CMS was inoperative, except for zero (low-level) and high-level checks.

(3) The start and end date and time and the duration (in hours) that each CMS was out-of-control, including the information in [§ 63.8\(c\)\(8\)](#).

(4) The date and time that each deviation started and stopped, and whether each deviation occurred during a period of malfunction or during another period.

(5) A summary of the total duration (in hours) of the deviation during the reporting period, and the total duration as a percent of the total source operating time during that reporting period.

(6) A breakdown of the total duration (in hours) of the deviations during the reporting period into those that are due to control equipment problems, process problems, other known causes, and other unknown causes.

(7) A summary of the total duration (in hours) of CMS downtime during the reporting period, and the total duration of CMS downtime as a percent of the total operating time of the stationary RICE at which the CMS downtime occurred during that reporting period.

(8) An identification of each parameter and pollutant (CO or formaldehyde) that was monitored at the stationary RICE.

(9) [Reserved]

(10) A brief description of the CMS.

(11) The date of the latest CMS certification or audit.

(12) A description of any changes in CMS, processes, or controls since the last reporting period.

(13) The total operating time of the stationary RICE at which the deviation occurred during the reporting period.

(f) Each affected source that has obtained a title V operating permit pursuant to [40 CFR part 70](#) or [71](#) must report all deviations as defined in this subpart in the semiannual monitoring report required by [40 CFR 70.6 \(a\)\(3\)\(iii\)\(A\)](#) or [40 CFR 71.6\(a\)\(3\)\(iii\)\(A\)](#). If an affected source submits a Compliance report pursuant to table 7 of this subpart along with, or as part of, the semiannual monitoring report required by [40 CFR 70.6\(a\)\(3\)\(iii\)\(A\)](#) or [40 CFR 71.6\(a\)\(3\)\(iii\)\(A\)](#), and the Compliance report includes all required information concerning deviations from any emission or operating limitation in this subpart, submission of the Compliance report shall be deemed to satisfy any obligation to report the same deviations in the semiannual monitoring report. However, submission of a Compliance report shall not otherwise affect any obligation the affected source may have to report deviations from permit requirements to the permit authority. Beginning on February 26, 2025, the semiannual and annual compliance report required in table 7 of this subpart must be submitted according to [paragraph \(i\)](#) of this section. Only those elements required under this subpart are required to be submitted according to [paragraph \(i\)](#) of this section.

(g) If you are operating as a new or reconstructed stationary RICE which fires landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis, you must submit an annual report according to Table 7 of this subpart by the date specified unless the Administrator has approved a different schedule, according to the information described in [paragraphs \(b\)\(1\)](#) through [\(b\)\(5\)](#) of this section. You must report the data specified in [\(g\)\(1\)](#) through [\(g\)\(3\)](#) of this section.

(1) Fuel flow rate of each fuel and the heating values that were used in your calculations. You must also demonstrate that the percentage of heat input provided by landfill gas or digester gas is equivalent to 10 percent or more of the total fuel consumption on an annual basis.

(2) The operating limits provided in your federally enforceable permit, and any deviations from these limits.

(3) Any problems or errors suspected with the meters.

(h) If you own or operate an emergency stationary RICE with a site rating of more than 100 brake HP that operates for the purpose specified in [§ 63.6640\(f\)\(4\)\(ii\)](#), you must submit an annual report according to the requirements in [paragraphs \(h\)\(1\)](#) through [\(3\)](#) of this section.

(1) The report must contain the following information:

(i) Company name and address where the engine is located.

- (ii) Date of the report and beginning and ending dates of the reporting period.
 - (iii) Engine site rating in brake HP, year construction of the engine commenced (as defined in [§ 63.2](#), where the exact year is not known, provide the best estimate), and type of engine (CI, SI 2SLB, SI 4SLB, or SI 4SRB).
 - (iv) Latitude and longitude of the engine in decimal degrees reported to the fifth decimal place.
 - (v)-(vi) [Reserved]
 - (vii) Hours spent for operation for the purpose specified in [§ 63.6640\(f\)\(4\)\(ii\)](#), including the date, start time, and end time for engine operation for the purposes specified in [§ 63.6640\(f\)\(4\)\(ii\)](#). The report must also identify the entity that dispatched the engine and the situation that necessitated the dispatch of the engine.
 - (viii) If there were no deviations from the fuel requirements in [§ 63.6604](#) that apply to the engine (if any), a statement that there were no deviations from the fuel requirements during the reporting period.
 - (ix) If there were deviations from the fuel requirements in [§ 63.6604](#) that apply to the engine (if any), information on the number, duration (in hours), and cause of deviations, and the corrective action taken.
- (2) The first annual report must cover the calendar year 2015 and must be submitted no later than March 31, 2016. Subsequent annual reports for each calendar year must be submitted no later than March 31 of the following calendar year.
- (3) Before February 26, 2025, the annual report must be submitted electronically using the subpart specific reporting form in the Compliance and Emissions Data Reporting Interface (CEDRI) that is accessed through EPA's Central Data Exchange (CDX) (<https://cdx.epa.gov/>). However, if the reporting form specific to this subpart is not available in CEDRI at the time that the report is due, the written report must be submitted to the Administrator at the appropriate address listed in [§ 63.13](#). Beginning on February 26, 2025, the annual report must be submitted according to [paragraph \(i\)](#) of this section.
- (i) Beginning on February 26, 2025 for the annual report specified in [§ 63.6650\(h\)](#) and February 26, 2025 or one year after the report becomes available in CEDRI, whichever is later for all other semiannual or annual reports, submit all semiannual and annual subsequent compliance reports using the appropriate electronic report template on the CEDRI website (<https://www.epa.gov/electronic-reporting-air-emissions/cedri>) for this subpart and following the procedure specified in [§ 63.9\(k\)](#), except any CBI must be submitted according to the procedures in [§ 63.6645\(h\)](#). The date report templates become available will be listed on the CEDRI website. Unless the Administrator or delegated state agency or other authority has approved a

different schedule for submission of reports, the report must be submitted by the deadline specified in this subpart, regardless of the method in which the report is submitted.

[[69 FR 33506](#), June 15, 2004, as amended at [75 FR 9677](#), Mar. 3, 2010; [78 FR 6705](#), Jan. 30, 2013; [87 FR 48607](#), Aug. 10, 2022; [89 FR 70517](#), Aug. 30, 2024]

§ 63.6655 What records must I keep?

(a) If you must comply with the emission and operating limitations, you must keep the records described in [paragraphs \(a\)\(1\) through \(a\)\(5\)](#), [\(b\)\(1\) through \(b\)\(3\)](#) and [\(c\)](#) of this section.

(1) A copy of each notification and report that you submitted to comply with this subpart, including all documentation supporting any Initial Notification or Notification of Compliance Status that you submitted, according to the requirement in [§ 63.10\(b\)\(2\)\(xiv\)](#).

(2) Records of the occurrence and duration (in hours) of each malfunction of operation (*i.e.*, process equipment) or the air pollution control and monitoring equipment.

(3) Records of performance tests and performance evaluations as required in [§ 63.10\(b\)\(2\)\(viii\)](#).

(4) Records of all required maintenance performed on the air pollution control and monitoring equipment.

(5) Records of actions taken during periods of malfunction to minimize emissions in accordance with [§ 63.6605\(b\)](#), including corrective actions to restore malfunctioning process and air pollution control and monitoring equipment to its normal or usual manner of operation.

(b) For each CEMS or CPMS, you must keep the records listed in [paragraphs \(b\)\(1\) through \(3\)](#) of this section.

(1) Records described in [§ 63.10\(b\)\(2\)\(vi\)](#) through [\(xi\)](#).

(2) Previous (*i.e.*, superseded) versions of the performance evaluation plan as required in [§ 63.8\(d\)\(3\)](#).

(3) Requests for alternatives to the relative accuracy test for CEMS or CPMS as required in [§ 63.8\(f\)\(6\)\(i\)](#), if applicable.

(c) If you are operating a new or reconstructed stationary RICE which fires landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis, you must keep the records of your daily fuel usage monitors.

(d) You must keep the records required in Table 6 of this subpart to show continuous compliance with each emission or operating limitation that applies to you.

(e) You must keep records of the maintenance conducted on the stationary RICE in order to demonstrate that you operated and maintained the stationary RICE and after-treatment control device (if any) according to your own maintenance plan if you own or operate any of the following stationary RICE;

(1) An existing stationary RICE with a site rating of less than 100 brake HP located at a major source of HAP emissions.

(2) An existing stationary emergency RICE.

(3) An existing stationary RICE located at an area source of HAP emissions subject to management practices as shown in Table 2d to this subpart.

(f) If you own or operate any of the stationary RICE in [paragraphs \(f\)\(1\) through \(2\)](#) of this section, you must keep records of the hours of operation of the engine that is recorded through the non-resettable hour meter. The owner or operator must document how many hours are spent for emergency operation, including what classified the operation as emergency and how many hours are spent for non-emergency operation. If the engine is used for the purpose specified in [§ 63.6640\(f\)\(4\)\(ii\)](#), the owner or operator must keep records of the notification of the emergency situation, and the date, start time, and end time of engine operation for these purposes.

(1) An existing emergency stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions that does not meet the standards applicable to non-emergency engines.

(2) An existing emergency stationary RICE located at an area source of HAP emissions that does not meet the standards applicable to non-emergency engines.

[[69 FR 33506](#), June 15, 2004, as amended at [75 FR 9678](#), Mar. 3, 2010; [75 FR 51592](#), Aug. 20, 2010; [78 FR 6706](#), Jan. 30, 2013; [87 FR 48607](#), Aug. 10, 2022; [89 FR 70518](#), Aug. 30, 2024]

§ 63.6660 In what form and how long must I keep my records?

(a) Your records must be in a form suitable and readily available for expeditious review according to [§ 63.10\(b\)\(1\)](#).

(b) As specified in [§ 63.10\(b\)\(1\)](#), you must keep each record for 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record.

(c) You must keep each record readily accessible in hard copy or electronic form for at least 5 years after the date of each occurrence, measurement, maintenance, corrective action, report, or record, according to [§ 63.10\(b\)\(1\)](#).

[[69 FR 33506](#), June 15, 2004, as amended at [75 FR 9678](#), Mar. 3, 2010]

Other Requirements and Information

§ 63.6665 What parts of the General Provisions apply to me?

Table 8 to this subpart shows which parts of the General Provisions in §§ 63.1 through 63.15 apply to you. If you own or operate a new or reconstructed stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions (except new or reconstructed 4SLB engines greater than or equal to 250 and less than or equal to 500 brake HP), a new or reconstructed stationary RICE located at an area source of HAP emissions, or any of the following RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, you do not need to comply with any of the requirements of the General Provisions specified in Table 8: An existing 2SLB stationary RICE, an existing 4SLB stationary RICE, an existing stationary RICE that combusts landfill or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis, an existing emergency stationary RICE, or an existing limited use stationary RICE. If you own or operate any of the following RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, you do not need to comply with the requirements in the General Provisions specified in Table 8 except for the initial notification requirements: A new stationary RICE that combusts landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis, a new emergency stationary RICE, or a new limited use stationary RICE.

[[75 FR 9678](#), Mar. 3, 2010]

§ 63.6670 Who implements and enforces this subpart?

(a) This subpart is implemented and enforced by the U.S. EPA, or a delegated authority such as your State, local, or tribal agency. If the U.S. EPA Administrator has delegated authority to your State, local, or tribal agency, then that agency (as well as the U.S. EPA) has the authority to implement and enforce this subpart. You should contact your U.S. EPA Regional Office to find out whether this subpart is delegated to your State, local, or tribal agency.

(b) In delegating implementation and enforcement authority of this subpart to a State, local, or tribal agency under [40 CFR part 63, subpart E](#), the authorities contained in [paragraph \(c\)](#) of this section are retained by the Administrator of the U.S. EPA and are not transferred to the State, local, or tribal agency.

(c) The authorities that will not be delegated to State, local, or tribal agencies are:

(1) Approval of alternatives to the non-opacity emission limitations and operating limitations in [§ 63.6600](#) under [§ 63.6\(g\)](#).

(2) Approval of major alternatives to test methods under [§ 63.7\(e\)\(2\)\(ii\)](#) and [\(f\)](#) and as defined in [§ 63.90](#).

- (3) Approval of major alternatives to monitoring under [§ 63.8\(f\)](#) and as defined in [§ 63.90](#).
- (4) Approval of major alternatives to recordkeeping and reporting under [§ 63.10\(f\)](#) and as defined in [§ 63.90](#).
- (5) Approval of a performance test which was conducted prior to the effective date of the rule, as specified in [§ 63.6610\(b\)](#).
- (6) Approval of an alternative to any electronic reporting to the EPA required by this subpart.

[[69 FR 33506](#), June 15, 2004, as amended at [89 FR 70518](#), Aug. 30, 2024]

§ 63.6675 What definitions apply to this subpart?

Terms used in this subpart are defined in the Clean Air Act (CAA); in [40 CFR 63.2](#), the General Provisions of this part; and in this section as follows:

Alaska Railbelt Grid means the service areas of the six regulated public utilities that extend from Fairbanks to Anchorage and the Kenai Peninsula. These utilities are Golden Valley Electric Association; Chugach Electric Association; Matanuska Electric Association; Homer Electric Association; Anchorage Municipal Light & Power; and the City of Seward Electric System.

Area source means any stationary source of HAP that is not a major source as defined in part 63.

Associated equipment as used in this subpart and as referred to in section 112(n)(4) of the CAA, means equipment associated with an oil or natural gas exploration or production well, and includes all equipment from the well bore to the point of custody transfer, except glycol dehydration units, storage vessels with potential for flash emissions, combustion turbines, and stationary RICE.

Backup power for renewable energy means an engine that provides backup power to a facility that generates electricity from renewable energy resources, as that term is defined in Alaska Statute 42.45.045(l)(5) (incorporated by reference, see [§ 63.14](#)).

Black start engine means an engine whose only purpose is to start up a combustion turbine.

CAA means the Clean Air Act ([42 U.S.C. 7401](#) *et seq.*, as amended by Public Law 101-549, 104 Stat. 2399).

Commercial emergency stationary RICE means an emergency stationary RICE used in commercial establishments such as office buildings, hotels, stores, telecommunications facilities, restaurants, financial institutions such as banks, doctor's offices, and sports and performing arts facilities.

Compression ignition means relating to a type of stationary internal combustion engine that is not a spark ignition engine.

Custody transfer means the transfer of hydrocarbon liquids or natural gas: After processing and/or treatment in the producing operations, or from storage vessels or automatic transfer facilities or other such equipment, including product loading racks, to pipelines or any other forms of transportation. For the purposes of this subpart, the point at which such liquids or natural gas enters a natural gas processing plant is a point of custody transfer.

Deviation means any instance in which an affected source subject to this subpart, or an owner or operator of such a source:

- (1) Fails to meet any requirement or obligation established by this subpart, including but not limited to any emission limitation or operating limitation;
- (2) Fails to meet any term or condition that is adopted to implement an applicable requirement in this subpart and that is included in the operating permit for any affected source required to obtain such a permit; or
- (3) Fails to meet any emission limitation or operating limitation in this subpart during malfunction, regardless of whether or not such failure is permitted by this subpart.
- (4) Fails to satisfy the general duty to minimize emissions established by [§ 63.6\(e\)\(1\)\(i\)](#).

Diesel engine means any stationary RICE in which a high boiling point liquid fuel injected into the combustion chamber ignites when the air charge has been compressed to a temperature sufficiently high for auto-ignition. This process is also known as compression ignition.

Diesel fuel means any liquid obtained from the distillation of petroleum with a boiling point of approximately 150 to 360 degrees Celsius. One commonly used form is fuel oil number 2. Diesel fuel also includes any non-distillate fuel with comparable physical and chemical properties (e.g. biodiesel) that is suitable for use in compression ignition engines.

Digester gas means any gaseous by-product of wastewater treatment typically formed through the anaerobic decomposition of organic waste materials and composed principally of methane and CO₂.

Dual-fuel engine means any stationary RICE in which a liquid fuel (typically diesel fuel) is used for compression ignition and gaseous fuel (typically natural gas) is used as the primary fuel.

Emergency stationary RICE means any stationary reciprocating internal combustion engine that meets all of the criteria in paragraphs (1) through (3) of this definition. All emergency stationary RICE must comply with the requirements specified in [§ 63.6640\(f\)](#) in order to be considered emergency stationary RICE. If the engine does not comply with the requirements specified in [§ 63.6640\(f\)](#), then it is not considered to be an emergency stationary RICE under this subpart.

- (1) The stationary RICE is operated to provide electrical power or mechanical work during an emergency situation. Examples include stationary RICE used to produce power for critical

networks or equipment (including power supplied to portions of a facility) when electric power from the local utility (or the normal power source, if the facility runs on its own power production) is interrupted, or stationary RICE used to pump water in the case of fire or flood, etc.

(2) The stationary RICE is operated under limited circumstances for situations not included in paragraph (1) of this definition, as specified in [§ 63.6640\(f\)](#).

(3) The stationary RICE operates as part of a financial arrangement with another entity in situations not included in paragraph (1) of this definition only as allowed in [§ 63.6640\(f\)\(4\)\(i\)](#) or [\(ii\)](#).

Engine startup means the time from initial start until applied load and engine and associated equipment reaches steady state or normal operation. For stationary engine with catalytic controls, engine startup means the time from initial start until applied load and engine and associated equipment, including the catalyst, reaches steady state or normal operation.

Four-stroke engine means any type of engine which completes the power cycle in two crankshaft revolutions, with intake and compression strokes in the first revolution and power and exhaust strokes in the second revolution.

Gaseous fuel means a material used for combustion which is in the gaseous state at standard atmospheric temperature and pressure conditions.

Gasoline means any fuel sold in any State for use in motor vehicles and motor vehicle engines, or nonroad or stationary engines, and commonly or commercially known or sold as gasoline.

Glycol dehydration unit means a device in which a liquid glycol (including, but not limited to, ethylene glycol, diethylene glycol, or triethylene glycol) absorbent directly contacts a natural gas stream and absorbs water in a contact tower or absorption column (absorber). The glycol contacts and absorbs water vapor and other gas stream constituents from the natural gas and becomes “rich” glycol. This glycol is then regenerated in the glycol dehydration unit reboiler. The “lean” glycol is then recycled.

Hazardous air pollutants (HAP) means any air pollutants listed in or pursuant to section 112(b) of the CAA.

Institutional emergency stationary RICE means an emergency stationary RICE used in institutional establishments such as medical centers, nursing homes, research centers, institutions of higher education, correctional facilities, elementary and secondary schools, libraries, religious establishments, police stations, and fire stations.

ISO standard day conditions means 288 degrees Kelvin (15 degrees Celsius), 60 percent relative humidity and 101.3 kilopascals pressure.

Landfill gas means a gaseous by-product of the land application of municipal refuse typically formed through the anaerobic decomposition of waste materials and composed principally of methane and CO₂.

Lean burn engine means any two-stroke or four-stroke spark ignited engine that does not meet the definition of a rich burn engine.

Limited use stationary RICE means any stationary RICE that operates less than 100 hours per year.

Liquefied petroleum gas means any liquefied hydrocarbon gas obtained as a by-product in petroleum refining of natural gas production.

Liquid fuel means any fuel in liquid form at standard temperature and pressure, including but not limited to diesel, residual/crude oil, kerosene/naphtha (jet fuel), and gasoline.

Major Source, as used in this subpart, shall have the same meaning as in [§ 63.2](#), except that:

- (1) Emissions from any oil or gas exploration or production well (with its associated equipment (as defined in this section)) and emissions from any pipeline compressor station or pump station shall not be aggregated with emissions from other similar units, to determine whether such emission points or stations are major sources, even when emission points are in a contiguous area or under common control;
- (2) For oil and gas production facilities, emissions from processes, operations, or equipment that are not part of the same oil and gas production facility, as defined in [§ 63.1271](#) of [subpart HHH of this part](#), shall not be aggregated;
- (3) For production field facilities, only HAP emissions from glycol dehydration units, storage vessel with the potential for flash emissions, combustion turbines and reciprocating internal combustion engines shall be aggregated for a major source determination; and
- (4) Emissions from processes, operations, and equipment that are not part of the same natural gas transmission and storage facility, as defined in [§ 63.1271](#) of [subpart HHH of this part](#), shall not be aggregated.

Malfunction means any sudden, infrequent, and not reasonably preventable failure of air pollution control equipment, process equipment, or a process to operate in a normal or usual manner which causes, or has the potential to cause, the emission limitations in an applicable standard to be exceeded. Failures that are caused in part by poor maintenance or careless operation are not malfunctions.

Natural gas means a naturally occurring mixture of hydrocarbon and non-hydrocarbon gases found in geologic formations beneath the Earth's surface, of which the principal constituent is methane. Natural gas may be field or pipeline quality.

Non-selective catalytic reduction (NSCR) means an add-on catalytic nitrogen oxides (NO_x) control device for rich burn engines that, in a two-step reaction, promotes the conversion of excess oxygen, NO_x, CO, and volatile organic compounds (VOC) into CO₂, nitrogen, and water.

Oil and gas production facility as used in this subpart means any grouping of equipment where hydrocarbon liquids are processed, upgraded (*i.e.*, remove impurities or other constituents to meet contract specifications), or stored prior to the point of custody transfer; or where natural gas is processed, upgraded, or stored prior to entering the natural gas transmission and storage source category. For purposes of a major source determination, facility (including a building, structure, or installation) means oil and natural gas production and processing equipment that is located within the boundaries of an individual surface site as defined in this section. Equipment that is part of a facility will typically be located within close proximity to other equipment located at the same facility. Pieces of production equipment or groupings of equipment located on different oil and gas leases, mineral fee tracts, lease tracts, subsurface or surface unit areas, surface fee tracts, surface lease tracts, or separate surface sites, whether or not connected by a road, waterway, power line or pipeline, shall not be considered part of the same facility. Examples of facilities in the oil and natural gas production source category include, but are not limited to, well sites, satellite tank batteries, central tank batteries, a compressor station that transports natural gas to a natural gas processing plant, and natural gas processing plants.

Oxidation catalyst means an add-on catalytic control device that controls CO and VOC by oxidation.

Peaking unit or engine means any standby engine intended for use during periods of high demand that are not emergencies.

Percent load means the fractional power of an engine compared to its maximum manufacturer's design capacity at engine site conditions. Percent load may range between 0 percent to above 100 percent.

Potential to emit means the maximum capacity of a stationary source to emit a pollutant under its physical and operational design. Any physical or operational limitation on the capacity of the stationary source to emit a pollutant, including air pollution control equipment and restrictions on hours of operation or on the type or amount of material combusted, stored, or processed, shall be treated as part of its design if the limitation or the effect it would have on emissions is federally enforceable. For oil and natural gas production facilities subject to [subpart HH of this part](#), the potential to emit provisions in [§ 63.760\(a\)](#) may be used. For natural gas transmission and storage facilities subject to [subpart HHH of this part](#), the maximum annual facility gas throughput for storage facilities may be determined according to [§ 63.1270\(a\)\(1\)](#) and the maximum annual throughput for transmission facilities may be determined according to [§ 63.1270\(a\)\(2\)](#).

Production field facility means those oil and gas production facilities located prior to the point of custody transfer.

Production well means any hole drilled in the earth from which crude oil, condensate, or field natural gas is extracted.

Propane means a colorless gas derived from petroleum and natural gas, with the molecular structure C_3H_8 .

Remote stationary RICE means stationary RICE meeting any of the following criteria:

(1) Stationary RICE located in an offshore area that is beyond the line of ordinary low water along that portion of the coast of the United States that is in direct contact with the open seas and beyond the line marking the seaward limit of inland waters.

(2) Stationary RICE located on a pipeline segment that meets both of the criteria in paragraphs (2)(i) and (ii) of this definition.

(i) A pipeline segment with 10 or fewer buildings intended for human occupancy and no buildings with four or more stories within 220 yards (200 meters) on either side of the centerline of any continuous 1-mile (1.6 kilometers) length of pipeline. Each separate dwelling unit in a multiple dwelling unit building is counted as a separate building intended for human occupancy.

(ii) The pipeline segment does not lie within 100 yards (91 meters) of either a building or a small, well-defined outside area (such as a playground, recreation area, outdoor theater, or other place of public assembly) that is occupied by 20 or more persons on at least 5 days a week for 10 weeks in any 12-month period. The days and weeks need not be consecutive. The building or area is considered occupied for a full day if it is occupied for any portion of the day.

(iii) For purposes of this [paragraph \(2\)](#), the term pipeline segment means all parts of those physical facilities through which gas moves in transportation, including but not limited to pipe, valves, and other appurtenance attached to pipe, compressor units, metering stations, regulator stations, delivery stations, holders, and fabricated assemblies. Stationary RICE located within 50 yards (46 meters) of the pipeline segment providing power for equipment on a pipeline segment are part of the pipeline segment. Transportation of gas means the gathering, transmission, or distribution of gas by pipeline, or the storage of gas. A building is intended for human occupancy if its primary use is for a purpose involving the presence of humans.

(3) Stationary RICE that are not located on gas pipelines and that have 5 or fewer buildings intended for human occupancy and no buildings with four or more stories within a 0.25 mile radius around the engine. A building is intended for human occupancy if its primary use is for a purpose involving the presence of humans.

Residential emergency stationary RICE means an emergency stationary RICE used in residential establishments such as homes or apartment buildings.

Responsible official means responsible official as defined in [40 CFR 70.2](#).

Rich burn engine means any four-stroke spark ignited engine where the manufacturer's recommended operating air/fuel ratio divided by the stoichiometric air/fuel ratio at full load conditions is less than or equal to 1.1. Engines originally manufactured as rich burn engines, but modified prior to December 19, 2002 with passive emission control technology for NO_x (such as pre-combustion chambers) will be considered lean burn engines. Also, existing engines where there are no manufacturer's recommendations regarding air/fuel ratio will be considered a rich burn engine if the excess oxygen content of the exhaust at full load conditions is less than or equal to 2 percent.

Site-rated HP means the maximum manufacturer's design capacity at engine site conditions.

Spark ignition means relating to either: A gasoline-fueled engine; or any other type of engine with a spark plug (or other sparking device) and with operating characteristics significantly similar to the theoretical Otto combustion cycle. Spark ignition engines usually use a throttle to regulate intake air flow to control power during normal operation. Dual-fuel engines in which a liquid fuel (typically diesel fuel) is used for CI and gaseous fuel (typically natural gas) is used as the primary fuel at an annual average ratio of less than 2 parts diesel fuel to 100 parts total fuel on an energy equivalent basis are spark ignition engines.

Stationary reciprocating internal combustion engine (RICE) means any reciprocating internal combustion engine which uses reciprocating motion to convert heat energy into mechanical work and which is not mobile. Stationary RICE differ from mobile RICE in that a stationary RICE is not a non-road engine as defined at [40 CFR 1068.30](#), and is not used to propel a motor vehicle or a vehicle used solely for competition.

Stationary RICE test cell/stand means an engine test cell/stand, as defined in [subpart P of this part](#), that tests stationary RICE.

Stoichiometric means the theoretical air-to-fuel ratio required for complete combustion.

Storage vessel with the potential for flash emissions means any storage vessel that contains a hydrocarbon liquid with a stock tank gas-to-oil ratio equal to or greater than 0.31 cubic meters per liter and an American Petroleum Institute gravity equal to or greater than 40 degrees and an actual annual average hydrocarbon liquid throughput equal to or greater than 79,500 liters per day. Flash emissions occur when dissolved hydrocarbons in the fluid evolve from solution when the fluid pressure is reduced.

Subpart means [40 CFR part 63, subpart ZZZZ](#).

Surface site means any combination of one or more graded pad sites, gravel pad sites, foundations, platforms, or the immediate physical location upon which equipment is physically affixed.

Two-stroke engine means a type of engine which completes the power cycle in single crankshaft revolution by combining the intake and compression operations into one stroke and the power and exhaust operations into a second stroke. This system requires auxiliary scavenging and inherently runs lean of stoichiometric.

[[69 FR 33506](#), June 15, 2004, as amended at [71 FR 20467](#), Apr. 20, 2006; [73 FR 3607](#), Jan. 18, 2008; [75 FR 9679](#), Mar. 3, 2010; [75 FR 51592](#), Aug. 20, 2010; [76 FR 12867](#), Mar. 9, 2011; [78 FR 6706](#), Jan. 30, 2013; [87 FR 48608](#), Aug. 10, 2022]

Table 1a to Subpart ZZZZ of Part 63—Emission Limitations for Existing, New, and Reconstructed Spark Ignition, 4SRB Stationary RICE >500 HP Located at a Major Source of HAP Emissions

As stated in §§ [63.6600](#) and [63.6640](#), you must comply with the following emission limitations at 100 percent load plus or minus 10 percent for existing, new and reconstructed 4SRB stationary RICE >500 HP located at a major source of HAP emissions:

For each . . .	You must meet the following emission limitation, except during periods of startup . . .	During periods of startup you must . . .
1. 4SRB stationary RICE	a. Reduce formaldehyde emissions by 76 percent or more. If you commenced construction or reconstruction between December 19, 2002 and June 15, 2004, you may reduce formaldehyde emissions by 75 percent or more until June 15, 2007 or	Minimize the engine's time spent at idle and minimize the engine's startup time at startup to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the non-startup emission limitations apply. ¹
	b. Limit the concentration of formaldehyde in the stationary RICE exhaust to 350 ppbvd or less at 15 percent O ₂	
¹ Sources can petition the Administrator pursuant to the requirements of 40 CFR 63.6(g) for alternative work practices.		

[[75 FR 9679](#), Mar. 3, 2010, as amended at [75 FR 51592](#), Aug. 20, 2010]

Table 1b to Subpart ZZZZ of Part 63—Operating Limitations for Existing, New, and Reconstructed SI 4SRB Stationary RICE >500 HP Located at a Major Source of HAP Emissions

As stated in §§ [63.6600](#), [63.6603](#), [63.6630](#) and [63.6640](#), you must comply with the following operating limitations for existing, new and reconstructed 4SRB stationary RICE >500 HP located at a major source of HAP emissions:

For each . . .	You must meet the following operating limitation, except during periods of startup . . .
1. existing, new and reconstructed 4SRB stationary RICE >500 HP located at a major source of HAP emissions complying with the requirement to reduce formaldehyde emissions by 76 percent or more (or by 75 percent or more, if applicable) and using NSCR; or existing, new and reconstructed 4SRB stationary RICE >500 HP located at a major source of HAP emissions complying with the requirement to limit the concentration of formaldehyde in the stationary RICE exhaust to 350 ppbvd or less at 15 percent O₂ and using NSCR;	a. maintain your catalyst so that the pressure drop across the catalyst does not change by more than 2 inches of water at 100 percent load plus or minus 10 percent from the pressure drop across the catalyst measured during the initial performance test; and b. maintain the temperature of your stationary RICE exhaust so that the catalyst inlet temperature is greater than or equal to 750 °F and less than or equal to 1250 °F.¹
2. existing, new and reconstructed 4SRB stationary RICE >500 HP located at a major source of HAP emissions complying with the requirement to reduce formaldehyde emissions by 76 percent or more (or by 75 percent or more, if applicable) and not using NSCR; or	Comply with any operating limitations approved by the Administrator.
existing, new and reconstructed 4SRB stationary RICE >500 HP located at a major source of HAP emissions complying with the requirement to limit the concentration of formaldehyde in the stationary RICE exhaust to 350 ppbvd or less at 15 percent O₂ and not using NSCR.	
¹ Sources can petition the Administrator pursuant to the requirements of 40 CFR 63.8(f) for a different temperature range.	

[[78 FR 6706](#), Jan. 30, 2013]

Table 2a to Subpart ZZZZ of Part 63—Emission Limitations for New and Reconstructed 2SLB and Compression Ignition Stationary RICE >500 HP and New and Reconstructed 4SLB Stationary RICE ≥250 HP Located at a Major Source of HAP Emissions

As stated in §§ 63.6600 and 63.6640, you must comply with the following emission limitations for new and reconstructed lean burn and new and reconstructed compression ignition stationary RICE at 100 percent load plus or minus 10 percent:

For each . . .	You must meet the following emission limitation, except during periods of startup . . .	During periods of startup you must . . .
1. 2SLB stationary RICE	a. Reduce CO emissions by 58 percent or more; or b. Limit concentration of formaldehyde in the stationary RICE exhaust to 12 ppmvd or less at 15 percent O ₂ . If you commenced construction or reconstruction between December 19, 2002 and June 15, 2004, you may limit concentration of formaldehyde to 17 ppmvd or less at 15 percent O ₂ until June 15, 2007	Minimize the engine's time spent at idle and minimize the engine's startup time at startup to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the non-startup emission limitations apply. ¹
2. 4SLB stationary RICE	a. Reduce CO emissions by 93 percent or more; or	
	b. Limit concentration of formaldehyde in the stationary RICE exhaust to 14 ppmvd or less at 15 percent O ₂	
3. CI stationary RICE	a. Reduce CO emissions by 70 percent or more; or	
	b. Limit concentration of formaldehyde in the stationary RICE exhaust to 580 ppbvd or less at 15 percent O ₂	
¹ Sources can petition the Administrator pursuant to the requirements of 40 CFR 63.6(g) for alternative work practices.		

[[75 FR 9680](#), Mar. 3, 2010]

Table 2b to Subpart ZZZZ of Part 63—Operating Limitations for New and Reconstructed 2SLB and CI Stationary RICE >500 HP Located at a Major Source of HAP Emissions, New and Reconstructed 4SLB Stationary RICE $\geq$ 250 HP Located at a Major Source of HAP Emissions, Existing CI Stationary RICE >500 HP

As stated in §§ [63.6600](#), [63.6601](#), [63.6603](#), [63.6630](#), and [63.6640](#), you must comply with the following operating limitations for new and reconstructed 2SLB and CI stationary RICE >500 HP located at a major source of HAP emissions; new and reconstructed 4SLB stationary RICE $\geq$ 250 HP located at a major source of HAP emissions; and existing CI stationary RICE >500 HP:

For each . . .	You must meet the following operating limitation, except during periods of startup . . .
1. New and reconstructed 2SLB and CI stationary RICE >500 HP located at a major source of HAP emissions and new and reconstructed 4SLB stationary RICE $\geq$250 HP located at a major source of HAP emissions complying with the requirement to reduce CO emissions and using an oxidation catalyst; and New and reconstructed 2SLB and CI stationary RICE >500 HP located at a major source of HAP emissions and new and reconstructed 4SLB stationary RICE $\geq$250 HP located at a major source of HAP emissions complying with the requirement to limit the concentration of formaldehyde in the stationary RICE exhaust and using an oxidation catalyst.	a. maintain your catalyst so that the pressure drop across the catalyst does not change by more than 2 inches of water at 100 percent load plus or minus 10 percent from the pressure drop across the catalyst that was measured during the initial performance test; and b. maintain the temperature of your stationary RICE exhaust so that the catalyst inlet temperature is greater than or equal to 450 °F and less than or equal to 1350 °F.¹
2. Existing CI stationary RICE >500 HP complying with the requirement to limit or reduce the concentration of CO in the stationary RICE exhaust and using an oxidation catalyst	a. maintain your catalyst so that the pressure drop across the catalyst does not change by more than 2 inches of water from the pressure drop across the catalyst that was measured during the initial performance test; and
	b. maintain the temperature of your stationary RICE exhaust so that the catalyst

For each . . .	You must meet the following operating limitation, except during periods of startup . . .
	inlet temperature is greater than or equal to 450 °F and less than or equal to 1350 °F. ¹
3. New and reconstructed 2SLB and CI stationary RICE >500 HP located at a major source of HAP emissions and new and reconstructed 4SLB stationary RICE ≥250 HP located at a major source of HAP emissions complying with the requirement to reduce CO emissions and not using an oxidation catalyst; and	Comply with any operating limitations approved by the Administrator.
New and reconstructed 2SLB and CI stationary RICE >500 HP located at a major source of HAP emissions and new and reconstructed 4SLB stationary RICE ≥250 HP located at a major source of HAP emissions complying with the requirement to limit the concentration of formaldehyde in the stationary RICE exhaust and not using an oxidation catalyst; and	
existing CI stationary RICE >500 HP complying with the requirement to limit or reduce the concentration of CO in the stationary RICE exhaust and not using an oxidation catalyst.	
¹ Sources can petition the Administrator pursuant to the requirements of 40 CFR 63.8(f) for a different temperature range.	

[[78 FR 6707](#), Jan. 30, 2013]

Table 2c to Subpart ZZZZ of Part 63—Requirements for Existing Compression Ignition Stationary RICE Located at a Major Source of HAP Emissions and Existing Spark Ignition Stationary RICE ≤500 HP Located at a Major Source of HAP Emissions

As stated in [§§ 63.6600](#), [63.6602](#), and [63.6640](#), you must comply with the following requirements for existing compression ignition stationary RICE located at a major source of HAP emissions and existing spark ignition stationary RICE ≤500 HP located at a major source of HAP emissions

For each . . .	You must meet the following requirement, except during periods of startup . . .	During periods of startup you must . . .
1. Emergency stationary CI RICE and black start stationary CI RICE ¹	a. Change oil and filter every 500 hours of operation or within 1 year + 30 days of the previous change, whichever comes first ² . b. Inspect air cleaner every 1,000 hours of operation or within 1 year + 30 days of the previous inspection, whichever comes first, and replace as necessary;	Minimize the engine's time spent at idle and minimize the engine's startup time at startup to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the non-startup emission limitations apply. ³
	c. Inspect all hoses and belts every 500 hours of operation or within 1 year + 30 days of the previous inspection, whichever comes first, and replace as necessary ³	
2. Non-Emergency, non-black start stationary CI RICE <100 HP	a. Change oil and filter every 1,000 hours of operation or within 1 year + 30 days of the previous change, whichever comes first ² .	
	b. Inspect air cleaner every 1,000 hours of operation or within 1 year + 30 days of the previous inspection, whichever comes first, and replace as necessary;	
	c. Inspect all hoses and belts every 500 hours of operation or within 1 year + 30 days of the previous inspection,	

For each . . .	You must meet the following requirement, except during periods of startup . . .	During periods of startup you must . . .
	whichever comes first, and replace as necessary ³	
3. Non-Emergency, non-black start CI stationary RICE 100≤HP≤300 HP	Limit concentration of CO in the stationary RICE exhaust to 230 ppmvd or less at 15 percent O ₂	
4. Non-Emergency, non-black start CI stationary RICE 300<HP≤500	a. Limit concentration of CO in the stationary RICE exhaust to 49 ppmvd or less at 15 percent O ₂ ; or	
	b. Reduce CO emissions by 70 percent or more	
5. Non-Emergency, non-black start stationary CI RICE >500 HP	a. Limit concentration of CO in the stationary RICE exhaust to 23 ppmvd or less at 15 percent O ₂ ; or	
	b. Reduce CO emissions by 70 percent or more	
6. Emergency stationary SI RICE and black start stationary SI RICE. ¹	a. Change oil and filter every 500 hours of operation or within 1 year + 30 days of the previous change, whichever comes first; ²	
	b. Inspect spark plugs every 1,000 hours of operation or within 1 year + 30 days of the previous inspection,	

For each . . .	You must meet the following requirement, except during periods of startup . . .	During periods of startup you must . . .
	whichever comes first, and replace as necessary;	
	c. Inspect all hoses and belts every 500 hours of operation or within 1 year + 30 days of the previous inspection, whichever comes first, and replace as necessary ³	
7. Non-Emergency, non-black start stationary SI RICE <100 HP that are not 2SLB stationary RICE	a. Change oil and filter every 1,440 hours of operation or within 1 year + 30 days of the previous change, whichever comes first; ²	
	b. Inspect spark plugs every 1,440 hours of operation or within 1 year + 30 days of the previous inspection, whichever comes first, and replace as necessary	
	c. Inspect all hoses and belts every 1,440 hours of operation or within 1 year + 30 days of the previous inspection, whichever comes first, and replace as necessary ³	
8. Non-Emergency, non-black start 2SLB stationary SI RICE <100 HP	a. Change oil and filter every 4,320 hours of operation or within 1 year + 30 days of	

For each . . .	You must meet the following requirement, except during periods of startup . . .	During periods of startup you must . . .
	the previous change, whichever comes first; ²	
	b. Inspect spark plugs every 4,320 hours of operation or within 1 year + 30 days of the previous inspection, whichever comes first, and replace as necessary;	
	c. Inspect all hoses and belts every 4,320 hours of operation or within 1 year + 30 days of the previous inspection, whichever comes first, and replace as necessary ³	
9. Non-emergency, non-black start 2SLB stationary RICE 100≤HP≤500	Limit concentration of CO in the stationary RICE exhaust to 225 ppmvd or less at 15 percent O ₂	
10. Non-emergency, non-black start 4SLB stationary RICE 100≤HP≤500	Limit concentration of CO in the stationary RICE exhaust to 47 ppmvd or less at 15 percent O ₂	
11. Non-emergency, non-black start 4SRB stationary RICE 100≤HP≤500	Limit concentration of formaldehyde in the stationary RICE exhaust to 10.3 ppmvd or less at 15 percent O ₂	
12. Non-emergency, non-black start stationary RICE	Limit concentration of CO in the stationary RICE exhaust	

For each . . .	You must meet the following requirement, except during periods of startup . . .	During periods of startup you must . . .
100≤HP≤500 which combusts landfill or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis	to 177 ppmvd or less at 15 percent O ₂	
¹ If an emergency engine is operating during an emergency and it is not possible to shut down the engine in order to perform the work practice requirements on the schedule required in table 2c of this subpart, or if performing the work practice on the required schedule would otherwise pose an unacceptable risk under Federal, state, or local law, the work practice can be delayed until the emergency is over or the unacceptable risk under Federal, state, or local law has abated. The work practice should be performed as soon as practicable after the emergency has ended or the unacceptable risk under Federal, state, or local law has abated. Sources must report any failure to perform the work practice on the schedule required and the Federal, state or local law under which the risk was deemed unacceptable.		
² Sources have the option to utilize an oil analysis program as described in § 63.6625(i) or (j) in order to extend the specified oil change requirement in table 2c of this subpart.		
³ Sources can petition the Administrator pursuant to the requirements of 40 CFR 63.6(g) for alternative work practices.		

[[89 FR 70518](#), Aug. 30, 2024]

Table 2d to Subpart ZZZZ of Part 63—Requirements for Existing Stationary RICE Located at Area Sources of HAP Emissions

As stated in [§§ 63.6603](#) and [63.6640](#), you must comply with the following requirements for existing stationary RICE located at area sources of HAP emissions:

For each . . .	You must meet the following requirement, except during periods of startup . . .	During periods of startup you must . . .
1. Non-Emergency, non-black start CI stationary RICE ≤ 300 HP	a. Change oil and filter every 1,000 hours of operation or within 1 year + 30 days of the previous change, whichever comes first; ¹ b. Inspect air cleaner every 1,000 hours of operation or within 1 year + 30 days of the previous inspection, whichever comes first, and replace as necessary;	Minimize the engine's time spent at idle and minimize the engine's startup time at startup to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the non-startup emission limitations apply.
	c. Inspect all hoses and belts every 500 hours of operation or within 1 year + 30 days of the previous inspection, whichever comes first, and replace as necessary	
2. Non-Emergency, non-black start CI stationary RICE $300 < \text{HP} \leq 500$	a. Limit concentration of CO in the stationary RICE exhaust to 49 ppmvd at 15 percent O ₂ ; or	
	b. Reduce CO emissions by 70 percent or more	
3. Non-Emergency, non-black start CI stationary RICE > 500 HP	a. Limit concentration of CO in the stationary RICE exhaust to 23 ppmvd at 15 percent O ₂ ; or	

For each . . .	You must meet the following requirement, except during periods of startup . . .	During periods of startup you must . . .
	b. Reduce CO emissions by 70 percent or more	
4. Emergency stationary CI RICE and black start stationary CI RICE. ²	a. Change oil and filter every 500 hours of operation or within 1 year + 30 days of the previous change, whichever comes first; ¹	
	b. Inspect air cleaner every 1,000 hours of operation or within 1 year + 30 days of the previous inspection, whichever comes first, and replace as necessary; and	
	c. Inspect all hoses and belts every 500 hours of operation or within 1 year + 30 days of the previous inspection, whichever comes first, and replace as necessary	
5. Emergency stationary SI RICE; black start stationary SI RICE; non-emergency, non-black start 4SLB stationary RICE >500 HP that operate 24 hours or less per calendar year; non-emergency, non-black start 4SRB stationary RICE >500 HP that operate 24 hours or less per calendar year. ²	a. Change oil and filter every 500 hours of operation or within 1 year + 30 days of the previous change, whichever comes first; ¹ b. Inspect spark plugs every 1,000 hours of operation or within 1 year + 30 days of the previous	

For each . . .	You must meet the following requirement, except during periods of startup . . .	During periods of startup you must . . .
	inspection, whichever comes first, and replace as necessary; and	
	c. Inspect all hoses and belts every 500 hours of operation or within 1 year + 30 days of the previous inspection, whichever comes first, and replace as necessary	
6. Non-emergency, non-black start 2SLB stationary RICE	a. Change oil and filter every 4,320 hours of operation or within 1 year + 30 days of the previous change, whichever comes first; ¹	
	b. Inspect spark plugs every 4,320 hours of operation or within 1 year + 30 days of the previous inspection, whichever comes first, and replace as necessary; and	
	c. Inspect all hoses and belts every 4,320 hours of operation or within 1 year + 30 days of the previous inspection, whichever comes first, and replace as necessary	

For each . . .	You must meet the following requirement, except during periods of startup . . .	During periods of startup you must . . .
7. Non-emergency, non-black start 4SLB stationary RICE $\leq$ 500 HP	a. Change oil and filter every 1,440 hours of operation or within 1 year + 30 days of the previous change, whichever comes first; ¹	
	b. Inspect spark plugs every 1,440 hours of operation or within 1 year + 30 days of the previous inspection, whichever comes first, and replace as necessary; and	
	c. Inspect all hoses and belts every 1,440 hours of operation or within 1 year + 30 days of the previous inspection, whichever comes first, and replace as necessary	
8. Non-emergency, non-black start 4SLB remote stationary RICE >500 HP	a. Change oil and filter every 2,160 hours of operation or within 1 year + 30 days of the previous change, whichever comes first; ¹	
	b. Inspect spark plugs every 2,160 hours of operation or within 1 year + 30 days of the previous inspection, whichever	

For each . . .	You must meet the following requirement, except during periods of startup . . .	During periods of startup you must . . .
	comes first, and replace as necessary; and	
	c. Inspect all hoses and belts every 2,160 hours of operation or within 1 year + 30 days of the previous inspection, whichever comes first, and replace as necessary	
9. Non-emergency, non-black start 4SLB stationary RICE >500 HP that are not remote stationary RICE and that operate more than 24 hours per calendar year	Install an oxidation catalyst to reduce HAP emissions from the stationary RICE	
10. Non-emergency, non-black start 4SRB stationary RICE ≤500 HP	a. Change oil and filter every 1,440 hours of operation or within 1 year + 30 days of the previous change, whichever comes first; ¹	
	b. Inspect spark plugs every 1,440 hours of operation or within 1 year + 30 days of the previous inspection, whichever comes first, and replace as necessary; and	
	c. Inspect all hoses and belts every 1,440 hours of operation or within 1 year + 30 days of the previous	

For each . . .	You must meet the following requirement, except during periods of startup . . .	During periods of startup you must . . .
	inspection, whichever comes first, and replace as necessary	
11. Non-emergency, non-black start 4SRB remote stationary RICE >500 HP	a. Change oil and filter every 2,160 hours of operation or within 1 year + 30 days of the previous change, whichever comes first; ¹	
	b. Inspect spark plugs every 2,160 hours of operation or within 1 year + 30 days of the previous inspection, whichever comes first, and replace as necessary; and	
	c. Inspect all hoses and belts every 2,160 hours of operation or within 1 year + 30 days of the previous inspection, whichever comes first, and replace as necessary	
12. Non-emergency, non-black start 4SRB stationary RICE >500 HP that are not remote stationary RICE and that operate more than 24 hours per calendar year	Install NSCR to reduce HAP emissions from the stationary RICE	
13. Non-emergency, non-black start stationary RICE which combusts landfill or digester gas equivalent to	a. Change oil and filter every 1,440 hours of operation or within 1 year	

For each . . .	You must meet the following requirement, except during periods of startup . . .	During periods of startup you must . . .
10 percent or more of the gross heat input on an annual basis	+ 30 days of the previous change, whichever comes first; ¹ b. Inspect spark plugs every 1,440 hours of operation or within 1 year + 30 days of the previous inspection, whichever comes first, and replace as necessary; and	
	c. Inspect all hoses and belts every 1,440 hours of operation or within 1 year + 30 days of the previous inspection, whichever comes first, and replace as necessary	
¹ Sources have the option to utilize an oil analysis program as described in § 63.6625(i) or (j) in order to extend the specified oil change requirement in table 2d of this subpart.		
² If an emergency engine is operating during an emergency and it is not possible to shut down the engine in order to perform the management practice requirements on the schedule required in table 2d of this subpart, or if performing the management practice on the required schedule would otherwise pose an unacceptable risk under Federal, state, or local law, the management practice can be delayed until the emergency is over or the unacceptable risk under Federal, state, or local law has abated. The management practice should be performed as soon as practicable after the emergency has ended or the unacceptable risk under Federal, state, or local law has abated. Sources must report any failure to perform the management practice on the schedule required and the Federal, state or local law under which the risk was deemed unacceptable.		

[[89 FR 70520](#), Aug. 30, 2024]

Table 3 to Subpart ZZZZ of Part 63—Subsequent Performance Tests

As stated in §§ 63.6615 and 63.6620, you must comply with the following subsequent performance test requirements:

For each . . .	Complying with the requirement to . . .	You must . . .
1. New or reconstructed 2SLB stationary RICE >500 HP located at major sources; new or reconstructed 4SLB stationary RICE ≥250 HP located at major sources; and new or reconstructed CI stationary RICE >500 HP located at major sources	Reduce CO emissions and not using a CEMS	Conduct subsequent performance tests semiannually. ¹
2. 4SRB stationary RICE ≥5,000 HP located at major sources	Reduce formaldehyde emissions	Conduct subsequent performance tests semiannually. ¹
3. Stationary RICE >500 HP located at major sources and new or reconstructed 4SLB stationary RICE 250≤HP≤500 located at major sources	Limit the concentration of formaldehyde in the stationary RICE exhaust	Conduct subsequent performance tests semiannually. ¹
4. Existing non-emergency, non-black start CI stationary RICE >500 HP that are not limited use stationary RICE	Limit or reduce CO emissions and not using a CEMS	Conduct subsequent performance tests every 8,760 hours or 3 years, whichever comes first.
5. Existing non-emergency, non-black start CI stationary RICE >500 HP that are limited use stationary RICE	Limit or reduce CO emissions and not using a CEMS	Conduct subsequent performance tests every 8,760 hours or 5 years, whichever comes first.
¹ After you have demonstrated compliance for two consecutive tests, you may reduce the frequency of subsequent performance tests to annually. If the results of any subsequent annual performance test indicate the stationary RICE is not in compliance with the CO or formaldehyde emission limitation, or you deviate from any of your operating limitations, you must resume semiannual performance tests.		

[78 FR 6711, Jan. 30, 2013]

Table 4 to Subpart ZZZZ of Part 63—Requirements for Performance Tests

As stated in §§ [63.6610](#), [63.6611](#), [63.6620](#), and [63.6640](#), you must comply with the following requirements for performance tests for stationary RICE:

For each . . .	Complying with the requirement to . . .	You must . . .	Using . . .	According to the following requirements . . .
1. 2SLB, 4SLB, and CI stationary RICE	a. Reduce CO emissions	i. Select the sampling port location and the number/location of traverse points at the inlet and outlet of the control device; and		(a) For CO, O ₂ , and moisture measurement, ducts ≤6 inches in diameter may be sampled at a single point located at the duct centroid and ducts >6 and ≤12 inches in diameter may be sampled at 3 traverse points located at 16.7, 50.0, and 83.3% of the measurement line ('3-point long line'). If the duct is >12 inches in diameter <i>and</i> the sampling port location meets the two and half-diameter criterion of section 11.1.1 of method 1 of 40 CFR part 60, appendix A-1 , the duct may be sampled at '3-point long line'; otherwise, conduct the stratification testing and select sampling points according to section 8.1.2 of method 7E of 40 CFR part 60, appendix A-4 .

For each . .	Complying with the requirement to . . .	You must . . .	Using . . .	According to the following requirements . . .
		ii. Measure the O ₂ at the inlet and outlet of the control device; and	(1) Method 3 or 3A or 3B of 40 CFR part 60, appendix A-2 , or ASTM D6522-00 (Reapproved 2005) ^{1 3} (heated probe not necessary)	(b) Measurements to determine O ₂ must be made at the same time as the measurements for CO concentration.
		iii. Measure the CO at the inlet and the outlet of the control device; and	(2) ASTM D6522-00 (Reapproved 2005) ^{1 2 3} (heated probe not necessary) or method 10 of 40 CFR part 60, appendix A-4	(c) The CO concentration must be at 15 percent O ₂ , dry basis.
		iv. Measure moisture content at the inlet and outlet of the control device as needed to determine CO and O ₂ concentrations on a dry basis	(3) Method 4 of 40 CFR part 60, appendix A-3 , or method 320 of 40 CFR part 63, appendix A , or ASTM D6348-03 ^{1 3}	(d) Measurements to determine moisture content must be made at the same time and location as the measurements for CO concentration.
2. 4SRB stationary RICE	a. Reduce formaldehyde or THC emissions	i. Select the sampling port location and the number/location of traverse points at the inlet and outlet of the control device; and		(a) For formaldehyde, THC, O ₂ , and moisture measurement, ducts ≤6 inches in diameter may be sampled at a single point located at the duct centroid and ducts >6 and ≤12 inches in diameter may be

For each . .	Complying with the requirement to . . .	You must . . .	Using . . .	According to the following requirements . . .
				sampled at 3 traverse points located at 16.7, 50.0, and 83.3% of the measurement line ('3-point long line'). If the duct is >12 inches in diameter <i>and</i> the sampling port location meets the two and half-diameter criterion of section 11.1.1 of method 1 of 40 CFR part 60, appendix A , the duct may be sampled at '3-point long line'; otherwise, conduct the stratification testing and select sampling points according to section 8.1.2 of method 7E of 40 CFR part 60, appendix A .
		ii. Measure O ₂ at the inlet and outlet of the control device; and	(1) Method 3 or 3A or 3B of 40 CFR part 60, appendix A-2 , or ASTM D6522-00 (Reapproved 2005) ^{1 3} (heated probe not necessary)	(b) Measurements to determine O ₂ concentration must be made at the same time as the measurements for formaldehyde or THC concentration.
		iii. Measure moisture content at the inlet and outlet of the	(2) Method 4 of 40 CFR part 60, appendix A-3 , or	(c) Measurements to determine moisture content must be made at

For each . . .	Complying with the requirement to . . .	You must . . .	Using . . .	According to the following requirements . . .
		control device as needed to determine formaldehyde or THC and O ₂ concentrations on a dry basis; and	method 320 of 40 CFR part 63, appendix A , or ASTM D6348-03 ^{1 3}	the same time and location as the measurements for formaldehyde or THC concentration.
		iv. If demonstrating compliance with the formaldehyde percent reduction requirement, measure formaldehyde at the inlet and the outlet of the control device	(3) Method 320 or 323 of 40 CFR part 63, appendix A ; or ASTM D6348-03, ^{1 3} provided in ASTM D6348-03 Annex A5 (Analyte Spiking Technique), the percent R must be greater than or equal to 70 and less than or equal to 130	(d) Formaldehyde concentration must be at 15 percent O ₂ , dry basis. Results of this test consist of the average of the three 1-hour or longer runs.
		v. If demonstrating compliance with the THC percent reduction requirement, measure THC at the inlet and the outlet of the control device	(4) (1) Method 25A, reported as propane, of 40 CFR part 60, appendix A -7	(e) THC concentration must be at 15 percent O ₂ , dry basis. Results of this test consist of the average of the three 1-hour or longer runs.
3. Stationary RICE	a. Limit the concentration of formaldehyde	i. Select the sampling port location and the number/location of traverse points at the		(a) For formaldehyde, CO, O ₂ , and moisture measurement, ducts ≤6 inches in diameter may

For each . .	Complying with the requirement to . . .	You must . . .	Using . . .	According to the following requirements . . .
	or CO in the stationary RICE exhaust	exhaust of the stationary RICE; and		be sampled at a single point located at the duct centroid and ducts >6 and ≤12 inches in diameter may be sampled at 3 traverse points located at 16.7, 50.0, and 83.3% of the measurement line ('3-point long line'). If the duct is >12 inches in diameter <i>and</i> the sampling port location meets the two and half-diameter criterion of section 11.1.1 of method 1 of 40 CFR part 60, appendix A , the duct may be sampled at '3-point long line'; otherwise, conduct the stratification testing and select sampling points according to section 8.1.2 of method 7E of 40 CFR part 60, appendix A . If using a control device, the sampling site must be located at the outlet of the control device.
		ii. Determine the O ₂ concentration of the stationary RICE	(1) Method 3 or 3A or 3B of 40 CFR part 60, appendix	(b) Measurements to determine O ₂ concentration must be

For each . .	Complying with the requirement to . . .	You must . . .	Using . . .	According to the following requirements . . .
		exhaust at the sampling port location; and	A-2, or ASTM D6522-00 (Reapproved 2005) ^{1 3} (heated probe not necessary)	made at the same time and location as the measurements for formaldehyde or CO concentration.
		iii. Measure moisture content of the stationary RICE exhaust at the sampling port location as needed to determine formaldehyde or CO and O ₂ concentrations on a dry basis; and	(2) Method 4 of 40 CFR part 60, appendix A-3 , or method 320 of 40 CFR part 63, appendix A , or ASTM D6348-03 ^{1 3}	(c) Measurements to determine moisture content must be made at the same time and location as the measurements for formaldehyde or CO concentration.
		iv. Measure formaldehyde at the exhaust of the stationary RICE; or	(3) Method 320 or 323 of 40 CFR part 63, appendix A ; or ASTM D6348-03, ^{1 3} provided in ASTM D6348-03 Annex A5 (Analyte Spiking Technique), the percent R must be greater than or equal to 70 and less than or equal to 130	(d) Formaldehyde concentration must be at 15 percent O ₂ , dry basis. Results of this test consist of the average of the three 1-hour or longer runs.

For each . .	Complying with the requirement to . . .	You must . . .	Using . . .	According to the following requirements . . .
		v. Measure CO at the exhaust of the stationary RICE	(4) Method 10 of 40 CFR part 60, appendix A-4 , ASTM D6522-00 (2005), ^{1 3} method 320 of 40 CFR part 63, appendix A , or ASTM D6348-03 ^{1 3}	(e) CO concentration must be at 15 percent O ₂ , dry basis. Results of this test consist of the average of the three 1-hour or longer runs.
¹ You may also use methods 3A and 10 as options to ASTM-D6522-00 (2005).				
² You may obtain a copy of ASTM-D6348-03 from at least one of the following addresses: American Society for Testing and Materials, 100 Barr Harbor Drive, West Conshohocken, PA 19428-2959, or University Microfilms International, 300 North Zeeb Road, Ann Arbor, MI 48106.				
³ Incorporated by reference, see § 63.14 .				

[[88 FR 18413](#), Mar. 29, 2023]

Table 5 to Subpart ZZZZ of Part 63—Initial Compliance With Emission Limitations, Operating Limitations, and Other Requirements

As stated in [§§ 63.6612](#), [63.6625](#) and [63.6630](#), you must initially comply with the emission and operating limitations as required by the following:

For each . . .	Complying with the requirement to . . .	You have demonstrated initial compliance if . . .
1. New or reconstructed non-emergency 2SLB stationary RICE >500 HP located at a major source of HAP, new or reconstructed non-emergency 4SLB stationary RICE ≥250 HP located at a major source of HAP, non-emergency stationary	a. Reduce CO emissions and using oxidation catalyst, and using a CPMS	i. The average reduction of emissions of CO determined from the initial performance test achieves the required CO percent reduction; and ii. You have installed a CPMS to continuously monitor catalyst inlet

For each . . .	Complying with the requirement to . . .	You have demonstrated initial compliance if . . .
CI RICE >500 HP located at a major source of HAP, and existing non-emergency stationary CI RICE >500 HP located at an area source of HAP		temperature according to the requirements in § 63.6625(b) ; and iii. You have recorded the catalyst pressure drop and catalyst inlet temperature during the initial performance test.
2. Non-emergency stationary CI RICE >500 HP located at a major source of HAP, and existing non-emergency stationary CI RICE >500 HP located at an area source of HAP	a. Limit the concentration of CO, using oxidation catalyst, and using a CPMS	i. The average CO concentration determined from the initial performance test is less than or equal to the CO emission limitation; and
		ii. You have installed a CPMS to continuously monitor catalyst inlet temperature according to the requirements in § 63.6625(b) ; and
		iii. You have recorded the catalyst pressure drop and catalyst inlet temperature during the initial performance test.
3. New or reconstructed non-emergency 2SLB stationary RICE >500 HP located at a major source of HAP, new or reconstructed non-emergency 4SLB stationary RICE $\geq$ 250 HP located at a major source of HAP, non-emergency stationary CI RICE >500 HP located at a major source of HAP, and existing non-emergency stationary CI RICE >500 HP located at an area source of HAP	a. Reduce CO emissions and not using oxidation catalyst	i. The average reduction of emissions of CO determined from the initial performance test achieves the required CO percent reduction; and ii. You have installed a CPMS to continuously monitor operating parameters approved by the Administrator (if any) according to the requirements in § 63.6625(b) ; and iii. You have recorded the approved

For each . . .	Complying with the requirement to . . .	You have demonstrated initial compliance if . . .
		operating parameters (if any) during the initial performance test.
4. Non-emergency stationary CI RICE >500 HP located at a major source of HAP, and existing non-emergency stationary CI RICE >500 HP located at an area source of HAP	a. Limit the concentration of CO, and not using oxidation catalyst	i. The average CO concentration determined from the initial performance test is less than or equal to the CO emission limitation; and ii. You have installed a CPMS to continuously monitor operating parameters approved by the Administrator (if any) according to the requirements in § 63.6625(b) ; and
		iii. You have recorded the approved operating parameters (if any) during the initial performance test.
5. New or reconstructed non-emergency 2SLB stationary RICE >500 HP located at a major source of HAP, new or reconstructed non-emergency 4SLB stationary RICE ≥250 HP located at a major source of HAP, non-emergency stationary CI RICE >500 HP located at a major source of HAP, and existing non-emergency stationary CI RICE >500 HP located at an area source of HAP	a. Reduce CO emissions, and using a CEMS	i. You have installed a CEMS to continuously monitor CO and either O ₂ or CO ₂ at both the inlet and outlet of the oxidation catalyst according to the requirements in § 63.6625(a) ; and ii. You have conducted a performance evaluation of your CEMS using PS 3 and 4A of 40 CFR part 60, appendix B ; and
		iii. The average reduction of CO calculated using § 63.6620 equals or exceeds the required percent reduction. The initial test comprises the first 4-hour period after successful validation of the CEMS.

For each . . .	Complying with the requirement to . . .	You have demonstrated initial compliance if . . .
		Compliance is based on the average percent reduction achieved during the 4-hour period.
6. Non-emergency stationary CI RICE >500 HP located at a major source of HAP, and existing non-emergency stationary CI RICE >500 HP located at an area source of HAP	a. Limit the concentration of CO, and using a CEMS	i. You have installed a CEMS to continuously monitor CO and either O ₂ or CO ₂ at the outlet of the oxidation catalyst according to the requirements in § 63.6625(a) ; and
		ii. You have conducted a performance evaluation of your CEMS using PS 3 and 4A of 40 CFR part 60, appendix B ; and
		iii. The average concentration of CO calculated using § 63.6620 is less than or equal to the CO emission limitation. The initial test comprises the first 4-hour period after successful validation of the CEMS. Compliance is based on the average concentration measured during the 4-hour period.
7. Non-emergency 4SRB stationary RICE >500 HP located at a major source of HAP	a. Reduce formaldehyde emissions and using NSCR	i. The average reduction of emissions of formaldehyde determined from the initial performance test is equal to or greater than the required formaldehyde percent reduction, or the average reduction of emissions of THC determined from the initial performance test is equal to or greater than 30 percent; and

For each . . .	Complying with the requirement to . . .	You have demonstrated initial compliance if . . .
		ii. You have installed a CPMS to continuously monitor catalyst inlet temperature according to the requirements in § 63.6625(b) ; and
		iii. You have recorded the catalyst pressure drop and catalyst inlet temperature during the initial performance test.
8. Non-emergency 4SRB stationary RICE >500 HP located at a major source of HAP	a. Reduce formaldehyde emissions and not using NSCR	i. The average reduction of emissions of formaldehyde determined from the initial performance test is equal to or greater than the required formaldehyde percent reduction or the average reduction of emissions of THC determined from the initial performance test is equal to or greater than 30 percent; and
		ii. You have installed a CPMS to continuously monitor operating parameters approved by the Administrator (if any) according to the requirements in § 63.6625(b) ; and
		iii. You have recorded the approved operating parameters (if any) during the initial performance test.
9. New or reconstructed non-emergency stationary RICE >500 HP located at a major source of HAP, new or reconstructed non-emergency 4SLB stationary RICE 250≤HP≤500 located at a major	a. Limit the concentration of formaldehyde in the stationary RICE exhaust and using	i. The average formaldehyde concentration, corrected to 15 percent O ₂ , dry basis, from the three test runs is less than or equal to the formaldehyde emission limitation; and

For each . . .	Complying with the requirement to . . .	You have demonstrated initial compliance if . . .
source of HAP, and existing non-emergency 4SRB stationary RICE >500 HP located at a major source of HAP	oxidation catalyst or NSCR	ii. You have installed a CPMS to continuously monitor catalyst inlet temperature according to the requirements in § 63.6625(b) ; and
		iii. You have recorded the catalyst pressure drop and catalyst inlet temperature during the initial performance test.
10. New or reconstructed non-emergency stationary RICE >500 HP located at a major source of HAP, new or reconstructed non-emergency 4SLB stationary RICE $250 \leq \text{HP} \leq 500$ located at a major source of HAP, and existing non-emergency 4SRB stationary RICE >500 HP located at a major source of HAP	a. Limit the concentration of formaldehyde in the stationary RICE exhaust and not using oxidation catalyst or NSCR	i. The average formaldehyde concentration, corrected to 15 percent O ₂ , dry basis, from the three test runs is less than or equal to the formaldehyde emission limitation; and ii. You have installed a CPMS to continuously monitor operating parameters approved by the Administrator (if any) according to the requirements in § 63.6625(b) ; and
		iii. You have recorded the approved operating parameters (if any) during the initial performance test.
11. Existing non-emergency stationary RICE $100 \leq \text{HP} \leq 500$ located at a major source of HAP, and existing non-emergency stationary CI RICE $300 < \text{HP} \leq 500$ located at an area source of HAP	a. Reduce CO emissions	i. The average reduction of emissions of CO or formaldehyde, as applicable determined from the initial performance test is equal to or greater than the required CO or formaldehyde, as applicable, percent reduction.
12. Existing non-emergency stationary RICE $100 \leq \text{HP} \leq 500$ located at a major source of HAP,	a. Limit the concentration of formaldehyde or CO	i. The average formaldehyde or CO concentration, as applicable, corrected to 15 percent O ₂ , dry

For each . . .	Complying with the requirement to . . .	You have demonstrated initial compliance if . . .
and existing non-emergency stationary CI RICE $300 < \text{HP} \leq 500$ located at an area source of HAP	in the stationary RICE exhaust	basis, from the three test runs is less than or equal to the formaldehyde or CO emission limitation, as applicable.
13. Existing non-emergency 4SLB stationary RICE >500 HP located at an area source of HAP that are not remote stationary RICE and that are operated more than 24 hours per calendar year	a. Install an oxidation catalyst	i. You have conducted an initial compliance demonstration as specified in § 63.6630(e) to show that the average reduction of emissions of CO is 93 percent or more, or the average CO concentration is less than or equal to 47 ppmvd at 15 percent O ₂ ;
		ii. You have installed a CPMS to continuously monitor catalyst inlet temperature according to the requirements in § 63.6625(b) , or you have installed equipment to automatically shut down the engine if the catalyst inlet temperature exceeds 1350 °F.
14. Existing non-emergency 4SRB stationary RICE >500 HP located at an area source of HAP that are not remote stationary RICE and that are operated more than 24 hours per calendar year	a. Install NSCR	i. You have conducted an initial compliance demonstration as specified in § 63.6630(e) to show that the average reduction of emissions of CO is 75 percent or more, the average CO concentration is less than or equal to 270 ppmvd at 15 percent O ₂ , or the average reduction of emissions of THC is 30 percent or more;
		ii. You have installed a CPMS to continuously monitor catalyst inlet temperature according to the requirements in § 63.6625(b) , or

For each . . .	Complying with the requirement to . . .	You have demonstrated initial compliance if . . .
		you have installed equipment to automatically shut down the engine if the catalyst inlet temperature exceeds 1250 °F.

[[78 FR 6712](#), Jan. 30, 2013]

Table 6 to Subpart ZZZZ of Part 63—Continuous Compliance With Emission Limitations, and Other Requirements

As stated in [§ 63.6640](#), you must continuously comply with the emissions and operating limitations and work or management practices as required by the following:

For each . . .	Complying with the requirement to . . .	You must demonstrate continuous compliance by . . .
1. New or reconstructed non-emergency 2SLB stationary RICE >500 HP located at a major source of HAP, new or reconstructed non-emergency 4SLB stationary RICE ≥250 HP located at a major source of HAP, and new or reconstructed non-emergency CI stationary RICE >500 HP located at a major source of HAP	a. Reduce CO emissions and using an oxidation catalyst, and using a CPMS	i. Conducting semiannual performance tests for CO to demonstrate that the required CO percent reduction is achieved ^a ; and ii. Collecting the catalyst inlet temperature data according to § 63.6625(b) ; and iii. Reducing these data to 4-hour rolling averages; and
		iv. Maintaining the 4-hour rolling averages within the operating limitations for the catalyst inlet temperature; and
		v. Measuring the pressure drop across the catalyst once per month and demonstrating that the pressure drop across the catalyst is within the operating limitation established during the performance test.

For each . . .	Complying with the requirement to . . .	You must demonstrate continuous compliance by . . .
2. New or reconstructed non-emergency 2SLB stationary RICE >500 HP located at a major source of HAP, new or reconstructed non-emergency 4SLB stationary RICE ≥250 HP located at a major source of HAP, and new or reconstructed non-emergency CI stationary RICE >500 HP located at a major source of HAP	a. Reduce CO emissions and not using an oxidation catalyst, and using a CPMS	i. Conducting semiannual performance tests for CO to demonstrate that the required CO percent reduction is achieved ^a ; and ii. Collecting the approved operating parameter (if any) data according to § 63.6625(b) ; and iii. Reducing these data to 4-hour rolling averages; and
		iv. Maintaining the 4-hour rolling averages within the operating limitations for the operating parameters established during the performance test.
3. New or reconstructed non-emergency 2SLB stationary RICE >500 HP located at a major source of HAP, new or reconstructed non-emergency 4SLB stationary RICE ≥250 HP located at a major source of HAP, new or reconstructed non-emergency stationary CI RICE >500 HP located at a major source of HAP, and existing non-emergency stationary CI RICE >500 HP	a. Reduce CO emissions or limit the concentration of CO in the stationary RICE exhaust, and using a CEMS	i. Collecting the monitoring data according to § 63.6625(a) , reducing the measurements to 1-hour averages, calculating the percent reduction or concentration of CO emissions according to § 63.6620 ; and ii. Demonstrating that the catalyst achieves the required percent reduction of CO emissions over the 4-hour averaging period, or that the emission remain at or below the CO concentration limit; and
		iii. Conducting an annual RATA of your CEMS using PS 3 and 4A of 40 CFR part 60, appendix B , as well as daily and periodic data quality checks in accordance with 40 CFR part 60, appendix F , procedure 1.

For each . . .	Complying with the requirement to . . .	You must demonstrate continuous compliance by . . .
4. Non-emergency 4SRB stationary RICE >500 HP located at a major source of HAP	a. Reduce formaldehyde emissions and using NSCR	i. Collecting the catalyst inlet temperature data according to § 63.6625(b) ; and
		ii. Reducing these data to 4-hour rolling averages; and
		iii. Maintaining the 4-hour rolling averages within the operating limitations for the catalyst inlet temperature; and
		iv. Measuring the pressure drop across the catalyst once per month and demonstrating that the pressure drop across the catalyst is within the operating limitation established during the performance test.
5. Non-emergency 4SRB stationary RICE >500 HP located at a major source of HAP	a. Reduce formaldehyde emissions and not using NSCR	i. Collecting the approved operating parameter (if any) data according to § 63.6625(b) ; and
		ii. Reducing these data to 4-hour rolling averages; and
		iii. Maintaining the 4-hour rolling averages within the operating limitations for the operating parameters established during the performance test.
6. Non-emergency 4SRB stationary RICE with a brake HP $\geq$ 5,000 located at a major source of HAP	a. Reduce formaldehyde emissions	Conducting semiannual performance tests for formaldehyde to demonstrate that the required formaldehyde percent reduction is

For each . . .	Complying with the requirement to . . .	You must demonstrate continuous compliance by . . .
		achieved, or to demonstrate that the average reduction of emissions of THC determined from the performance test is equal to or greater than 30 percent. ^a
7. New or reconstructed non-emergency stationary RICE >500 HP located at a major source of HAP and new or reconstructed non-emergency 4SLB stationary RICE $250 \leq \text{HP} \leq 500$ located at a major source of HAP	a. Limit the concentration of formaldehyde in the stationary RICE exhaust and using oxidation catalyst or NSCR	i. Conducting semiannual performance tests for formaldehyde to demonstrate that your emissions remain at or below the formaldehyde concentration limit ^a ; and ii. Collecting the catalyst inlet temperature data according to § 63.6625(b) ; and
		iii. Reducing these data to 4-hour rolling averages; and
		iv. Maintaining the 4-hour rolling averages within the operating limitations for the catalyst inlet temperature; and
		v. Measuring the pressure drop across the catalyst once per month and demonstrating that the pressure drop across the catalyst is within the operating limitation established during the performance test.
8. New or reconstructed non-emergency stationary RICE >500 HP located at a major source of HAP and new or reconstructed non-emergency 4SLB stationary RICE	a. Limit the concentration of formaldehyde in the stationary RICE exhaust and not using	i. Conducting semiannual performance tests for formaldehyde to demonstrate that your emissions remain at or below the formaldehyde concentration limit ^a ; and ii. Collecting the approved operating

For each . . .	Complying with the requirement to . . .	You must demonstrate continuous compliance by . . .
250≤HP≤500 located at a major source of HAP	oxidation catalyst or NSCR	parameter (if any) data according to § 63.6625(b) ; and
		iii. Reducing these data to 4-hour rolling averages; and
		iv. Maintaining the 4-hour rolling averages within the operating limitations for the operating parameters established during the performance test.
9. Existing emergency and black start stationary RICE ≤500 HP located at a major source of HAP, existing non-emergency stationary RICE <100 HP located at a major source of HAP, existing emergency and black start stationary RICE located at an area source of HAP, existing non-emergency stationary CI RICE ≤300 HP located at an area source of HAP, existing non-emergency 2SLB stationary RICE located at an area source of HAP, existing non-emergency stationary SI RICE located at an area source of HAP which combusts landfill or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis, existing non-emergency 4SLB and 4SRB stationary RICE ≤500 HP located at an area source of HAP, existing non-emergency 4SLB and 4SRB stationary RICE >500 HP located at an area source of HAP that operate	a. Work or Management practices	i. Operating and maintaining the stationary RICE according to the manufacturer's emission-related operation and maintenance instructions; or ii. Develop and follow your own maintenance plan which must provide to the extent practicable for the maintenance and operation of the engine in a manner consistent with good air pollution control practice for minimizing emissions.

For each . . .	Complying with the requirement to . . .	You must demonstrate continuous compliance by . . .
24 hours or less per calendar year, and existing non-emergency 4SLB and 4SRB stationary RICE >500 HP located at an area source of HAP that are remote stationary RICE		
10. Existing stationary CI RICE >500 HP that are not limited use stationary RICE	a. Reduce CO emissions, or limit the concentration of CO in the stationary RICE exhaust, and using oxidation catalyst	i. Conducting performance tests every 8,760 hours or 3 years, whichever comes first, for CO or formaldehyde, as appropriate, to demonstrate that the required CO or formaldehyde, as appropriate, percent reduction is achieved or that your emissions remain at or below the CO or formaldehyde concentration limit; and
		ii. Collecting the catalyst inlet temperature data according to § 63.6625(b) ; and
		iii. Reducing these data to 4-hour rolling averages; and
		iv. Maintaining the 4-hour rolling averages within the operating limitations for the catalyst inlet temperature; and
		v. Measuring the pressure drop across the catalyst once per month and demonstrating that the pressure drop across the catalyst is within the operating limitation established during the performance test.

For each . . .	Complying with the requirement to . . .	You must demonstrate continuous compliance by . . .
11. Existing stationary CI RICE >500 HP that are not limited use stationary RICE	a. Reduce CO emissions, or limit the concentration of CO in the stationary RICE exhaust, and not using oxidation catalyst	i. Conducting performance tests every 8,760 hours or 3 years, whichever comes first, for CO or formaldehyde, as appropriate, to demonstrate that the required CO or formaldehyde, as appropriate, percent reduction is achieved or that your emissions remain at or below the CO or formaldehyde concentration limit; and
		ii. Collecting the approved operating parameter (if any) data according to § 63.6625(b) ; and
		iii. Reducing these data to 4-hour rolling averages; and
		iv. Maintaining the 4-hour rolling averages within the operating limitations for the operating parameters established during the performance test.
12. Existing limited use CI stationary RICE >500 HP	a. Reduce CO emissions or limit the concentration of CO in the stationary RICE exhaust, and using an oxidation catalyst	i. Conducting performance tests every 8,760 hours or 5 years, whichever comes first, for CO or formaldehyde, as appropriate, to demonstrate that the required CO or formaldehyde, as appropriate, percent reduction is achieved or that your emissions remain at or below the CO or formaldehyde concentration limit; and

For each . . .	Complying with the requirement to . . .	You must demonstrate continuous compliance by . . .
		ii. Collecting the catalyst inlet temperature data according to § 63.6625(b) ; and
		iii. Reducing these data to 4-hour rolling averages; and
		iv. Maintaining the 4-hour rolling averages within the operating limitations for the catalyst inlet temperature; and
		v. Measuring the pressure drop across the catalyst once per month and demonstrating that the pressure drop across the catalyst is within the operating limitation established during the performance test.
13. Existing limited use CI stationary RICE >500 HP	a. Reduce CO emissions or limit the concentration of CO in the stationary RICE exhaust, and not using an oxidation catalyst	i. Conducting performance tests every 8,760 hours or 5 years, whichever comes first, for CO or formaldehyde, as appropriate, to demonstrate that the required CO or formaldehyde, as appropriate, percent reduction is achieved or that your emissions remain at or below the CO or formaldehyde concentration limit; and
		ii. Collecting the approved operating parameter (if any) data according to § 63.6625(b) ; and
		iii. Reducing these data to 4-hour rolling averages; and

For each . . .	Complying with the requirement to . . .	You must demonstrate continuous compliance by . . .
		iv. Maintaining the 4-hour rolling averages within the operating limitations for the operating parameters established during the performance test.
14. Existing non-emergency 4SLB stationary RICE >500 HP located at an area source of HAP that are not remote stationary RICE and that are operated more than 24 hours per calendar year	a. Install an oxidation catalyst	i. Conducting annual compliance demonstrations as specified in § 63.6640(c) to show that the average reduction of emissions of CO is 93 percent or more, or the average CO concentration is less than or equal to 47 ppmvd at 15 percent O ₂ ; and either ii. Collecting the catalyst inlet temperature data according to § 63.6625(b) , reducing these data to 4-hour rolling averages; and maintaining the 4-hour rolling averages within the limitation of greater than 450 °F and less than or equal to 1350 °F for the catalyst inlet temperature; or iii. Immediately shutting down the engine if the catalyst inlet temperature exceeds 1350 °F.
15. Existing non-emergency 4SRB stationary RICE >500 HP located at an area source of HAP that are not remote stationary RICE and that are operated more than 24 hours per calendar year	a. Install NSCR	i. Conducting annual compliance demonstrations as specified in § 63.6640(c) to show that the average reduction of emissions of CO is 75 percent or more, the average CO concentration is less than or equal to 270 ppmvd at 15 percent O ₂ , or the average reduction of emissions of THC is 30 percent or more; and either

For each . . .	Complying with the requirement to . . .	You must demonstrate continuous compliance by . . .
		ii. Collecting the catalyst inlet temperature data according to § 63.6625(b) , reducing these data to 4-hour rolling averages; and maintaining the 4-hour rolling averages within the limitation of greater than or equal to 750 °F and less than or equal to 1250 °F for the catalyst inlet temperature; or iii. Immediately shutting down the engine if the catalyst inlet temperature exceeds 1250 °F.
^a After you have demonstrated compliance for two consecutive tests, you may reduce the frequency of subsequent performance tests to annually. If the results of any subsequent annual performance test indicate the stationary RICE is not in compliance with the CO or formaldehyde emission limitation, or you deviate from any of your operating limitations, you must resume semiannual performance tests.		

[[78 FR 6715](#), Jan. 30, 2013]

Table 7 to Subpart ZZZZ of Part 63—Requirements for Reports

As stated in [§ 63.6650](#), you must comply with the following requirements for reports:

For each . . .	You must submit a . . .	The report must contain . . .	You must submit the report . . .
1. Existing non-emergency, non-black start stationary RICE $100 \leq \text{HP} \leq 500$ located at a major source of HAP; existing non-emergency, non-black start stationary CI RICE > 500 HP located at a major source of HAP; existing non-emergency	Compliance report	a. If there are no deviations from any emission limitations or operating limitations that apply to you, a statement that there were no deviations from the emission limitations or operating limitations	i. Semiannually according to the requirements in § 63.6650(b)(1)-(5) and (i) for engines that are not limited use stationary RICE subject to numerical emission limitations; and ii. Annually according to the requirements in §

For each . . .	You must submit a . . .	The report must contain . . .	You must submit the report . . .
4SRB stationary RICE >500 HP located at a major source of HAP; existing non-emergency, non-black start stationary CI RICE >300 HP located at an area source of HAP; new or reconstructed non-emergency stationary RICE >500 HP located at a major source of HAP; and new or reconstructed non-emergency 4SLB stationary RICE $250 \leq \text{HP} \leq 500$ located at a major source of HAP		during the reporting period. If there were no periods during which the CMS, including CEMS and CPMS, was out-of-control, as specified in § 63.8(c)(7), a statement that there were not periods during which the CMS was out-of-control during the reporting period; or b. If you had a deviation from any emission limitation or operating limitation during the reporting period, the information in § 63.6650(d). If there were periods during which the CMS, including CEMS and CPMS, was out-of-control, as specified in § 63.8(c)(7), the information in § 63.6650(e); or	63.6650(b)(6)-(9) and (i) for engines that are limited use stationary RICE subject to numerical emission limitations. i. Semiannually according to the requirements in § 63.6650(b) and (i).
		c. If you had a malfunction during the reporting period, the information in § 63.6650(c)(4)	i. Semiannually according to the requirements in § 63.6650(b) and (i).
2. New or reconstructed non-emergency stationary RICE that combusts landfill gas or digester gas	Report	a. The fuel flow rate of each fuel and the heating values that were used in your calculations, and you	i. Annually, according to the requirements in § 63.6650.

For each . . .	You must submit a . . .	The report must contain . . .	You must submit the report . . .
equivalent to 10 percent or more of the gross heat input on an annual basis		must demonstrate that the percentage of heat input provided by landfill gas or digester gas, is equivalent to 10 percent or more of the gross heat input on an annual basis; and	
		b. The operating limits provided in your federally enforceable permit, and any deviations from these limits; and	i. See item 2.a.i.
		c. Any problems or errors suspected with the meters	i. See item 2.a.i.
3. Existing non-emergency, non-black start 4SLB and 4SRB stationary RICE >500 HP located at an area source of HAP that are not remote stationary RICE and that operate more than 24 hours per calendar year	Compliance report	a. The results of the annual compliance demonstration, if conducted during the reporting period	i. Semiannually according to the requirements in § 63.6650(b)(1)-(5) and (i) .
4. Emergency stationary RICE that operate for the purposes specified in § 63.6640(f)(4)(ii)	Report	a. The information in § 63.6650(h)(1)	i. Annually according to the requirements in § 63.6650(h)(2)-(3) and (i) .

[[89 FR 70522](#), Aug. 30, 2024]

Table 8 to Subpart ZZZZ of Part 63—Applicability of General Provisions to Subpart ZZZZ

As stated in [§ 63.6665](#), you must comply with the following applicable general provisions.

General provisions citation	Subject of citation	Applies to subpart	Explanation
§ 63.1	General applicability of the General Provisions	Yes	
§ 63.2	Definitions	Yes	Additional terms defined in § 63.6675 .
§ 63.3	Units and abbreviations	Yes	
§ 63.4	Prohibited activities and circumvention	Yes	
§ 63.5	Construction and reconstruction	Yes	
§ 63.6(a)	Applicability	Yes	
§ 63.6(b)(1)-(4)	Compliance dates for new and reconstructed sources	Yes	
§ 63.6(b)(5)	Notification	Yes	
§ 63.6(b)(6)	[Reserved]		
§ 63.6(b)(7)	Compliance dates for new and reconstructed area sources that become major sources	Yes	
§ 63.6(c)(1)-(2)	Compliance dates for existing sources	Yes	
§ 63.6(c)(3)-(4)	[Reserved]		
§ 63.6(c)(5)	Compliance dates for existing area sources that become major sources	Yes	
§ 63.6(d)	[Reserved]		

General provisions citation	Subject of citation	Applies to subpart	Explanation
§ 63.6(e)	Operation and maintenance	No	
§ 63.6(f)(1)	Applicability of standards	No	
§ 63.6(f)(2)	Methods for determining compliance	Yes	
§ 63.6(f)(3)	Finding of compliance	Yes	
§ 63.6(g)(1)-(3)	Use of alternate standard	Yes	
§ 63.6(h)	Opacity and visible emission standards	No	Subpart ZZZZ does not contain opacity or visible emission standards.
§ 63.6(i)	Compliance extension procedures and criteria	Yes	
§ 63.6(j)	Presidential compliance exemption	Yes	
§ 63.7(a)(1)-(2)	Performance test dates	Yes	Subpart ZZZZ contains performance test dates at §§ 63.6610 , 63.6611 , and 63.6612 .
§ 63.7(a)(3)	CAA section 114 authority	Yes	
§ 63.7(b)(1)	Notification of performance test	Yes	Except that § 63.7(b)(1) only applies as specified in § 63.6645 .
§ 63.7(b)(2)	Notification of rescheduling	Yes	Except that § 63.7(b)(2) only applies as specified in § 63.6645 .

General provisions citation	Subject of citation	Applies to subpart	Explanation
§ 63.7(c)	Quality assurance/test plan	Yes	Except that § 63.7(c) only applies as specified in § 63.6645 .
§ 63.7(d)	Testing facilities	Yes	
§ 63.7(e)(1)	Conditions for conducting performance tests	No	Subpart ZZZZ specifies conditions for conducting performance tests at § 63.6620 .
§ 63.7(e)(2)	Conduct of performance tests and reduction of data	Yes	Subpart ZZZZ specifies test methods at § 63.6620 .
§ 63.7(e)(3)	Test run duration	Yes	
§ 63.7(e)(4)	Administrator may require other testing under section 114 of the CAA	Yes	
§ 63.7(f)	Alternative test method provisions	Yes	
§ 63.7(g)	Performance test data analysis, recordkeeping, and reporting	Yes	
§ 63.7(h)	Waiver of tests	Yes	
§ 63.8(a)(1)	Applicability of monitoring requirements	Yes	Subpart ZZZZ contains specific requirements for monitoring at § 63.6625 .
§ 63.8(a)(2)	Performance specifications	Yes	
§ 63.8(a)(3)	[Reserved]		
§ 63.8(a)(4)	Monitoring for control devices	No	

General provisions citation	Subject of citation	Applies to subpart	Explanation
§ 63.8(b)(1)	Monitoring	Yes	
§ 63.8(b)(2)-(3)	Multiple effluents and multiple monitoring systems	Yes	
§ 63.8(c)(1)	Monitoring system operation and maintenance	Yes	
§ 63.8(c)(1)(i)	Routine and predictable SSM	No	
§ 63.8(c)(1)(ii)	SSM not in Startup Shutdown Malfunction Plan	Yes	
§ 63.8(c)(1)(iii)	Compliance with operation and maintenance requirements	No	
§ 63.8(c)(2)-(3)	Monitoring system installation	Yes	
§ 63.8(c)(4)	Continuous monitoring system (CMS) requirements	Yes	Except that subpart ZZZZ does not require Continuous Opacity Monitoring System (COMS).
§ 63.8(c)(5)	COMS minimum procedures	No	Subpart ZZZZ does not require COMS.
§ 63.8(c)(6)-(8)	CMS requirements	Yes	Except that subpart ZZZZ does not require COMS.
§ 63.8(d)	CMS quality control	Yes	
§ 63.8(e)	CMS performance evaluation	Yes	Except for § 63.8(e)(5)(ii) , which applies to COMS.
			Except that § 63.8(e) only applies as specified in § 63.6645 .

General provisions citation	Subject of citation	Applies to subpart	Explanation
§ 63.8(f)(1)-(5)	Alternative monitoring method	Yes	Except that § 63.8(f)(4) only applies as specified in § 63.6645 .
§ 63.8(f)(6)	Alternative to relative accuracy test	Yes	Except that § 63.8(f)(6) only applies as specified in § 63.6645 .
§ 63.8(g)	Data reduction	Yes	Except that provisions for COMS are not applicable. Averaging periods for demonstrating compliance are specified at §§ 63.6635 and 63.6640 .
§ 63.9(a)	Applicability and State delegation of notification requirements	Yes	
§ 63.9(b)(1)-(5)	Initial notifications	Yes	Except that § 63.9(b)(3) is reserved.
			Except that § 63.9(b) only applies as specified in § 63.6645 .
§ 63.9(c)	Request for compliance extension	Yes	Except that § 63.9(c) only applies as specified in § 63.6645 .
§ 63.9(d)	Notification of special compliance requirements for new sources	Yes	Except that § 63.9(d) only applies as specified in § 63.6645 .
§ 63.9(e)	Notification of performance test	Yes	Except that § 63.9(e) only applies as specified in § 63.6645 .

General provisions citation	Subject of citation	Applies to subpart	Explanation
§ 63.9(f)	Notification of visible emission (VE)/opacity test	No	Subpart ZZZZ does not contain opacity or VE standards.
§ 63.9(g)(1)	Notification of performance evaluation	Yes	Except that § 63.9(g) only applies as specified in § 63.6645 .
§ 63.9(g)(2)	Notification of use of COMS data	No	Subpart ZZZZ does not contain opacity or VE standards.
§ 63.9(g)(3)	Notification that criterion for alternative to RATA is exceeded	Yes	If alternative is in use. Except that § 63.9(g) only applies as specified in § 63.6645 .
§ 63.9(h)(1)-(6)	Notification of compliance status	Yes	Except that notifications for sources using a CEMS are due 30 days after completion of performance evaluations. § 63.9(h)(4) is reserved.
			Except that § 63.9(h) only applies as specified in § 63.6645 .
§ 63.9(i)	Adjustment of submittal deadlines	Yes	
§ 63.9(j)	Change in previous information	Yes	
§ 63.9(k)	Electronic reporting procedures	Yes	Only as specified in §§ 63.9(j) , 63.6620 , 63.6625 , 63.6645 , and 63.6650 .
§ 63.10(a)	Administrative provisions for recordkeeping/reporting	Yes	

General provisions citation	Subject of citation	Applies to subpart	Explanation
§ 63.10(b)(1)	Record retention	Yes	Except that the most recent 2 years of data do not have to be retained on site.
§ 63.10(b)(2)(i)-(v)	Records related to SSM	No	
§ 63.10(b)(2)(vi)-(xi)	Records	Yes	
§ 63.10(b)(2)(xii)	Record when under waiver	Yes	
§ 63.10(b)(2)(xiii)	Records when using alternative to RATA	Yes	For CO standard if using RATA alternative.
§ 63.10(b)(2)(xiv)	Records of supporting documentation	Yes	
§ 63.10(b)(3)	Records of applicability determination	Yes	
§ 63.10(c)	Additional records for sources using CEMS	Yes	Except that § 63.10(c)(2)-(4) and (9) are reserved.
§ 63.10(d)(1)	General reporting requirements	Yes	
§ 63.10(d)(2)	Report of performance test results	Yes	
§ 63.10(d)(3)	Reporting opacity or VE observations	No	Subpart ZZZZ does not contain opacity or VE standards.
§ 63.10(d)(4)	Progress reports	Yes	
§ 63.10(d)(5)	Startup, shutdown, and malfunction reports	No	

General provisions citation	Subject of citation	Applies to subpart	Explanation
§ 63.10(e)(1) and (2)(i)	Additional CMS Reports	Yes	
§ 63.10(e)(2)(ii)	COMS-related report	No	Subpart ZZZZ does not require COMS.
§ 63.10(e)(3)	Excess emission and parameter exceedances reports	No	Excess emissions and exceedance reporting is specified in § 63.6650 .
§ 63.10(e)(4)	Reporting COMS data	No	Subpart ZZZZ does not require COMS.
§ 63.10(f)	Waiver for recordkeeping/reporting	Yes	
§ 63.11	Flares	No	
§ 63.12	State authority and delegations	Yes	
§ 63.13	Addresses	Yes	
§ 63.14	Incorporation by reference	Yes	
§ 63.15	Availability of information	Yes	

[[89 FR 70522](#), Aug. 30, 2024]

Appendix A to Subpart ZZZZ of Part 63—Protocol for Using an Electrochemical Analyzer to Determine Oxygen and Carbon Monoxide Concentrations From Certain Engines

1.0 Scope and Application. What is this Protocol?

This protocol is a procedure for using portable electrochemical (EC) cells for measuring carbon monoxide (CO) and oxygen (O₂) concentrations in controlled and uncontrolled emissions from existing stationary 4-stroke lean burn and 4-stroke rich burn reciprocating internal combustion engines as specified in the applicable rule.

1.1 Analytes. What does this protocol determine?

This protocol measures the engine exhaust gas concentrations of carbon monoxide (CO) and oxygen (O₂).

Analyte	CAS No.	Sensitivity
Carbon monoxide (CO)	630-08-0	Minimum detectable limit should be 2 percent of the nominal range or 1 ppm, whichever is less restrictive.
Oxygen (O ₂)	7782-44-7	

1.2 Applicability. When is this protocol acceptable?

This protocol is applicable to [40 CFR part 63, subpart ZZZZ](#). Because of inherent cross sensitivities of EC cells, you must not apply this protocol to other emissions sources without specific instruction to that effect.

1.3 Data Quality Objectives. How good must my collected data be?

Refer to Section 13 to verify and document acceptable analyzer performance.

1.4 Range. What is the targeted analytical range for this protocol?

The measurement system and EC cell design(s) conforming to this protocol will determine the analytical range for each gas component. The nominal ranges are defined by choosing up-scale calibration gas concentrations near the maximum anticipated flue gas concentrations for CO and O₂, or no more than twice the permitted CO level.

1.5 Sensitivity. What minimum detectable limit will this protocol yield for a particular gas component?

The minimum detectable limit depends on the nominal range and resolution of the specific EC cell used, and the signal to noise ratio of the measurement system. The minimum detectable limit should be 2 percent of the nominal range or 1 ppm, whichever is less restrictive.

2.0 Summary of Protocol

In this protocol, a gas sample is extracted from an engine exhaust system and then conveyed to a portable EC analyzer for measurement of CO and O₂ gas concentrations. This method provides measurement system performance specifications and sampling protocols to ensure reliable data. You may use additions to, or modifications of vendor supplied measurement systems (e.g., heated or unheated sample lines, thermocouples, flow meters, selective gas scrubbers, etc.) to

meet the design specifications of this protocol. Do not make changes to the measurement system from the as-verified configuration (Section 3.12).

3.0 Definitions

3.1 Measurement System. The total equipment required for the measurement of CO and O₂ concentrations. The measurement system consists of the following major subsystems:

3.1.1 Data Recorder. A strip chart recorder, computer or digital recorder for logging measurement data from the analyzer output. You may record measurement data from the digital data display manually or electronically.

3.1.2 Electrochemical (EC) Cell. A device, similar to a fuel cell, used to sense the presence of a specific analyte and generate an electrical current output proportional to the analyte concentration.

3.1.3 Interference Gas Scrubber. A device used to remove or neutralize chemical compounds that may interfere with the selective operation of an EC cell.

3.1.4 Moisture Removal System. Any device used to reduce the concentration of moisture in the sample stream so as to protect the EC cells from the damaging effects of condensation and to minimize errors in measurements caused by the scrubbing of soluble gases.

3.1.5 Sample Interface. The portion of the system used for one or more of the following: sample acquisition; sample transport; sample conditioning or protection of the EC cell from any degrading effects of the engine exhaust effluent; removal of particulate matter and condensed moisture.

3.2 Nominal Range. The range of analyte concentrations over which each EC cell is operated (normally 25 percent to 150 percent of up-scale calibration gas value). Several nominal ranges can be used for any given cell so long as the calibration and repeatability checks for that range remain within specifications.

3.3 Calibration Gas. A vendor certified concentration of a specific analyte in an appropriate balance gas.

3.4 Zero Calibration Error. The analyte concentration output exhibited by the EC cell in response to zero-level calibration gas.

3.5 Up-Scale Calibration Error. The mean of the difference between the analyte concentration exhibited by the EC cell and the certified concentration of the up-scale calibration gas.

3.6 Interference Check. A procedure for quantifying analytical interference from components in the engine exhaust gas other than the targeted analytes.

3.7 Repeatability Check. A protocol for demonstrating that an EC cell operated over a given nominal analyte concentration range provides a stable and consistent response and is not significantly affected by repeated exposure to that gas.

3.8 Sample Flow Rate. The flow rate of the gas sample as it passes through the EC cell. In some situations, EC cells can experience drift with changes in flow rate. The flow rate must be monitored and documented during all phases of a sampling run.

3.9 Sampling Run. A timed three-phase event whereby an EC cell's response rises and plateaus in a sample conditioning phase, remains relatively constant during a measurement data phase, then declines during a refresh phase. The sample conditioning phase exposes the EC cell to the gas sample for a length of time sufficient to reach a constant response. The measurement data phase is the time interval during which gas sample measurements can be made that meet the acceptance criteria of this protocol. The refresh phase then purges the EC cells with CO-free air. The refresh phase replenishes requisite O₂ and moisture in the electrolyte reserve and provides a mechanism to de-gas or desorb any interference gas scrubbers or filters so as to enable a stable CO EC cell response. There are four primary types of sampling runs: pre-sampling calibrations; stack gas sampling; post-sampling calibration checks; and measurement system repeatability checks. Stack gas sampling runs can be chained together for extended evaluations, providing all other procedural specifications are met.

3.10 Sampling Day. A time not to exceed twelve hours from the time of the pre-sampling calibration to the post-sampling calibration check. During this time, stack gas sampling runs can be repeated without repeated recalibrations, providing all other sampling specifications have been met.

3.11 Pre-Sampling Calibration/Post-Sampling Calibration Check. The protocols executed at the beginning and end of each sampling day to bracket measurement readings with controlled performance checks.

3.12 Performance-Established Configuration. The EC cell and sampling system configuration that existed at the time that it initially met the performance requirements of this protocol.

4.0 Interferences.

When present in sufficient concentrations, NO and NO₂ are two gas species that have been reported to interfere with CO concentration measurements. In the likelihood of this occurrence, it is the protocol user's responsibility to employ and properly maintain an appropriate CO EC cell filter or scrubber for removal of these gases, as described in Section 6.2.12.

5.0 Safety. [Reserved]

6.0 Equipment and Supplies.

6.1 What equipment do I need for the measurement system?

The system must maintain the gas sample at conditions that will prevent moisture condensation in the sample transport lines, both before and as the sample gas contacts the EC cells. The essential components of the measurement system are described below.

6.2 Measurement System Components.

6.2.1 *Sample Probe.* A single extraction-point probe constructed of glass, stainless steel or other non-reactive material, and of length sufficient to reach any designated sampling point. The sample probe must be designed to prevent plugging due to condensation or particulate matter.

6.2.2 *Sample Line.* Non-reactive tubing to transport the effluent from the sample probe to the EC cell.

6.2.3 *Calibration Assembly (optional).* A three-way valve assembly or equivalent to introduce calibration gases at ambient pressure at the exit end of the sample probe during calibration checks. The assembly must be designed such that only stack gas or calibration gas flows in the sample line and all gases flow through any gas path filters.

6.2.4 *Particulate Filter (optional).* Filters before the inlet of the EC cell to prevent accumulation of particulate material in the measurement system and extend the useful life of the components. All filters must be fabricated of materials that are non-reactive to the gas mixtures being sampled.

6.2.5 *Sample Pump.* A leak-free pump to provide undiluted sample gas to the system at a flow rate sufficient to minimize the response time of the measurement system. If located upstream of the EC cells, the pump must be constructed of a material that is non-reactive to the gas mixtures being sampled.

6.2.8 *Sample Flow Rate Monitoring.* An adjustable rotameter or equivalent device used to adjust and maintain the sample flow rate through the analyzer as prescribed.

6.2.9 *Sample Gas Manifold (optional).* A manifold to divert a portion of the sample gas stream to the analyzer and the remainder to a by-pass discharge vent. The sample gas manifold may also include provisions for introducing calibration gases directly to the analyzer. The manifold must be constructed of a material that is non-reactive to the gas mixtures being sampled.

6.2.10 *EC cell.* A device containing one or more EC cells to determine the CO and O₂ concentrations in the sample gas stream. The EC cell(s) must meet the applicable performance specifications of Section 13 of this protocol.

6.2.11 *Data Recorder.* A strip chart recorder, computer or digital recorder to make a record of analyzer output data. The data recorder resolution (i.e., readability) must be no greater than 1 ppm for CO; 0.1 percent for O₂; and one degree (either °C or °F) for temperature. Alternatively,

you may use a digital or analog meter having the same resolution to observe and manually record the analyzer responses.

6.2.12 Interference Gas Filter or Scrubber. A device to remove interfering compounds upstream of the CO EC cell. Specific interference gas filters or scrubbers used in the performance-established configuration of the analyzer must continue to be used. Such a filter or scrubber must have a means to determine when the removal agent is exhausted. Periodically replace or replenish it in accordance with the manufacturer's recommendations.

7.0 Reagents and Standards. What calibration gases are needed?

7.1 Calibration Gases. CO calibration gases for the EC cell must be CO in nitrogen or CO in a mixture of nitrogen and O₂. Use CO calibration gases with labeled concentration values certified by the manufacturer to be within ± 5 percent of the label value. Dry ambient air (20.9 percent O₂) is acceptable for calibration of the O₂ cell. If needed, any lower percentage O₂ calibration gas must be a mixture of O₂ in nitrogen.

7.1.1 Up-Scale CO Calibration Gas Concentration. Choose one or more up-scale gas concentrations such that the average of the stack gas measurements for each stack gas sampling run are between 25 and 150 percent of those concentrations. Alternatively, choose an up-scale gas that does not exceed twice the concentration of the applicable outlet standard. If a measured gas value exceeds 150 percent of the up-scale CO calibration gas value at any time during the stack gas sampling run, the run must be discarded and repeated.

7.1.2 Up-Scale O₂ Calibration Gas Concentration.

Select an O₂ gas concentration such that the difference between the gas concentration and the average stack gas measurement or reading for each sample run is less than 15 percent O₂. When the average exhaust gas O₂ readings are above 6 percent, you may use dry ambient air (20.9 percent O₂) for the up-scale O₂ calibration gas.

7.1.3 Zero Gas. Use an inert gas that contains less than 0.25 percent of the up-scale CO calibration gas concentration. You may use dry air that is free from ambient CO and other combustion gas products (e.g., CO₂).

8.0 Sample Collection and Analysis

8.1 Selection of Sampling Sites.

8.1.1 Control Device Inlet. Select a sampling site sufficiently downstream of the engine so that the combustion gases should be well mixed. Use a single sampling extraction point near the center of the duct (e.g., within the 10 percent centroidal area), unless instructed otherwise.

8.1.2 Exhaust Gas Outlet. Select a sampling site located at least two stack diameters downstream of any disturbance (e.g., turbocharger exhaust, crossover junction or recirculation

take-off) and at least one-half stack diameter upstream of the gas discharge to the atmosphere. Use a single sampling extraction point near the center of the duct (e.g., within the 10 percent centroidal area), unless instructed otherwise.

8.2 Stack Gas Collection and Analysis. Prior to the first stack gas sampling run, conduct that the pre-sampling calibration in accordance with Section 10.1. Use Figure 1 to record all data. Zero the analyzer with zero gas. Confirm and record that the scrubber media color is correct and not exhausted. Then position the probe at the sampling point and begin the sampling run at the same flow rate used during the up-scale calibration. Record the start time. Record all EC cell output responses and the flow rate during the “sample conditioning phase” once per minute until constant readings are obtained. Then begin the “measurement data phase” and record readings every 15 seconds for at least two minutes (or eight readings), or as otherwise required to achieve two continuous minutes of data that meet the specification given in Section 13.1. Finally, perform the “refresh phase” by introducing dry air, free from CO and other combustion gases, until several minute-to-minute readings of consistent value have been obtained. For each run use the “measurement data phase” readings to calculate the average stack gas CO and O₂ concentrations.

8.3 EC Cell Rate. Maintain the EC cell sample flow rate so that it does not vary by more than ± 10 percent throughout the pre-sampling calibration, stack gas sampling and post-sampling calibration check. Alternatively, the EC cell sample flow rate can be maintained within a tolerance range that does not affect the gas concentration readings by more than ± 3 percent, as instructed by the EC cell manufacturer.

9.0 Quality Control (Reserved)

10.0 Calibration and Standardization

10.1 Pre-Sampling Calibration. Conduct the following protocol once for each nominal range to be used on each EC cell before performing a stack gas sampling run on each field sampling day. Repeat the calibration if you replace an EC cell before completing all of the sampling runs. There is no prescribed order for calibration of the EC cells; however, each cell must complete the measurement data phase during calibration. Assemble the measurement system by following the manufacturer's recommended protocols including for preparing and preconditioning the EC cell. Assure the measurement system has no leaks and verify the gas scrubbing agent is not depleted. Use Figure 1 to record all data.

10.1.1 Zero Calibration. For both the O₂ and CO cells, introduce zero gas to the measurement system (e.g., at the calibration assembly) and record the concentration reading every minute until readings are constant for at least two consecutive minutes. Include the time and sample flow rate. Repeat the steps in this section at least once to verify the zero calibration for each component gas.

10.1.2 Zero Calibration Tolerance. For each zero gas introduction, the zero level output must be less than or equal to ± 3 percent of the up-scale gas value or ± 1 ppm, whichever is less restrictive, for the CO channel and less than or equal to ± 0.3 percent O₂ for the O₂ channel.

10.1.3 Up-Scale Calibration. Individually introduce each calibration gas to the measurement system (e.g., at the calibration assembly) and record the start time. Record all EC cell output responses and the flow rate during this “sample conditioning phase” once per minute until readings are constant for at least two minutes. Then begin the “measurement data phase” and record readings every 15 seconds for a total of two minutes, or as otherwise required. Finally, perform the “refresh phase” by introducing dry air, free from CO and other combustion gases, until readings are constant for at least two consecutive minutes. Then repeat the steps in this section at least once to verify the calibration for each component gas. Introduce all gases to flow through the entire sample handling system (i.e., at the exit end of the sampling probe or the calibration assembly).

10.1.4 Up-Scale Calibration Error. The mean of the difference of the “measurement data phase” readings from the reported standard gas value must be less than or equal to ± 5 percent or ± 1 ppm for CO or ± 0.5 percent O₂, whichever is less restrictive, respectively. The maximum allowable deviation from the mean measured value of any single “measurement data phase” reading must be less than or equal to ± 2 percent or ± 1 ppm for CO or ± 0.5 percent O₂, whichever is less restrictive, respectively.

10.2 Post-Sampling Calibration Check. Conduct a stack gas post-sampling calibration check after the stack gas sampling run or set of runs and within 12 hours of the initial calibration. Conduct up-scale and zero calibration checks using the protocol in Section 10.1. Make no changes to the sampling system or EC cell calibration until all post-sampling calibration checks have been recorded. If either the zero or up-scale calibration error exceeds the respective specification in Sections 10.1.2 and 10.1.4 then all measurement data collected since the previous successful calibrations are invalid and re-calibration and re-sampling are required. If the sampling system is disassembled or the EC cell calibration is adjusted, repeat the calibration check before conducting the next analyzer sampling run.

11.0 Analytical Procedure

The analytical procedure is fully discussed in Section 8.

12.0 Calculations and Data Analysis

Determine the CO and O₂ concentrations for each stack gas sampling run by calculating the mean gas concentrations of the data recorded during the “measurement data phase”.

13.0 Protocol Performance

Use the following protocols to verify consistent analyzer performance during each field sampling day.

13.1 Measurement Data Phase Performance Check. Calculate the mean of the readings from the “measurement data phase”. The maximum allowable deviation from the mean for each of the individual readings is ± 2 percent, or ± 1 ppm, whichever is less restrictive. Record the mean value and maximum deviation for each gas monitored. Data must conform to Section 10.1.4. The EC cell flow rate must conform to the specification in Section 8.3.

Example: A measurement data phase is invalid if the maximum deviation of any single reading comprising that mean is greater than ± 2 percent or ± 1 ppm (the default criteria). For example, if the mean = 30 ppm, single readings of below 29 ppm and above 31 ppm are disallowed).

13.2 Interference Check. Before the initial use of the EC cell and interference gas scrubber in the field, and semi-annually thereafter, challenge the interference gas scrubber with NO and NO₂ gas standards that are generally recognized as representative of diesel-fueled engine NO and NO₂ emission values. Record the responses displayed by the CO EC cell and other pertinent data on Figure 1 or a similar form.

13.2.1 Interference Response. The combined NO and NO₂ interference response should be less than or equal to ± 5 percent of the up-scale CO calibration gas concentration.

13.3 Repeatability Check. Conduct the following check once for each nominal range that is to be used on the CO EC cell within 5 days prior to each field sampling program. If a field sampling program lasts longer than 5 days, repeat this check every 5 days. Immediately repeat the check if the EC cell is replaced or if the EC cell is exposed to gas concentrations greater than 150 percent of the highest up-scale gas concentration.

13.3.1 Repeatability Check Procedure. Perform a complete EC cell sampling run (all three phases) by introducing the CO calibration gas to the measurement system and record the response. Follow Section 10.1.3. Use Figure 1 to record all data. Repeat the run three times for a total of four complete runs. During the four repeatability check runs, do not adjust the system except where necessary to achieve the correct calibration gas flow rate at the analyzer.

13.3.2 Repeatability Check Calculations. Determine the highest and lowest average “measurement data phase” CO concentrations from the four repeatability check runs and record the results on Figure 1 or a similar form. The absolute value of the difference between the maximum and minimum average values recorded must not vary more than ± 3 percent or ± 1 ppm of the up-scale gas value, whichever is less restrictive.

14.0 Pollution Prevention (Reserved)

15.0 Waste Management (Reserved)

16.0 Alternative Procedures (Reserved)

17.0 References

(1) ***“Development of an Electrochemical Cell Emission Analyzer Test Protocol”*** , Topical Report, Phil Juneau, Emission Monitoring, Inc., July 1997.

(2) ***“Determination of Nitrogen Oxides, Carbon Monoxide, and Oxygen Emissions from Natural Gas-Fired Engines, Boilers, and Process Heaters Using Portable Analyzers”*** , EMC Conditional Test Protocol 30 (CTM-30), Gas Research Institute Protocol GRI-96/0008, Revision 7, October 13, 1997.

(3) ***“ICAC Test Protocol for Periodic Monitoring”*** , EMC Conditional Test Protocol 34 (CTM-034), The Institute of Clean Air Companies, September 8, 1999.

(4) ***“Code of Federal Regulations”*** , Protection of Environment, [40 CFR](#), Part 60, Appendix A, Methods 1-4; 10.

Table 1: Appendix A—Sampling Run Data.

Facility_____ Engine I.D._____ Date_____											
Run Type:	☐		☐		☐		☐		☐		
(X)	Pre-Sample Calibration		Stack Gas Sample		Post-Sample Cal. Check		Repeatability Check				
Run #	1	1	2	2	3	3	4	4	Time	Scrub. OK	Flow- Rate
Gas	O ₂	CO	O ₂	CO	O ₂	CO	O ₂	CO			
Sample Cond. Phase											
"											
"											
"											
"											

Run #	1	1	2	2	3	3	4	4	Time	Scrub. OK	Flow- Rate
Measurement Data Phase											
"											
"											
"											
"											
"											
"											
"											
"											
"											
"											
Mean											
Refresh Phase											
"											
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[[78 FR 6721](#), Jan. 30, 2013]

Appendix F

40 C.F.R. Part 63 Subpart DDDDD

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

Appendix G

40 C.F.R. Part 63 Subpart SSSS

National Emission Standards for Hazardous Air Pollutants: Surface Coating of Metal Coil

Subpart SSSS—National Emission Standards for Hazardous Air Pollutants: Surface Coating of Metal Coil

Source: [67 FR 39812](#), June 10, 2002, unless otherwise noted.

What This Subpart Covers

§ 63.5080 What is in this subpart?

This subpart describes the actions you must take to reduce emissions of hazardous air pollutants (HAP) if you own or operate a facility that performs metal coil surface coating operations and is a major source of HAP. This subpart establishes emission standards and states what you must do to comply. Certain requirements apply to all who must comply with the subpart; others depend on the means you use to comply with an emission standard.

§ 63.5090 Does this subpart apply to me?

(a) The provisions of this subpart apply to each facility that is a major source of HAP, as defined in [§ 63.2](#), at which a coil coating line is operated, except as provided in [paragraphs \(b\) and \(e\)](#) of this section.

(b) This subpart does not apply to any coil coating line that meets the criteria of [paragraph \(b\)\(1\)](#) or [\(2\)](#) of this section.

(1) A coil coating line that is part of research or laboratory equipment.

(2) A coil coating line on which at least 85 percent of the metal coil coated, based on surface area, is less than 0.15 millimeter (0.006 inch) thick, except as provided in [paragraph \(c\)](#) of this section.

(c) If you operate a coating line subject to [subpart JJJJ of this part](#) that also meets the criteria in either [paragraph \(c\)\(1\)](#) or [\(2\)](#) of this section, and you choose to comply with the requirements of this subpart, then such compliance constitutes compliance with subpart JJJJ. The coating line for which you choose this option is, therefore, included in the affected source for this subpart as defined in [§ 63.5110](#) and shall not be included in the affected source for subpart JJJJ as defined in [§ 63.3300](#).

(1) The coating line is used to coat metal coil of thicknesses both less than and greater than or equal to 0.15 millimeter (0.006 inch) thick, regardless of the percentage of surface area of each thickness coated.

(2) The coating line is used to coat only metal coil that is less than 0.15 millimeter (0.006 inch) thick and the coating line is controlled by a common control device that also receives

organic HAP emissions from a coil coating line that is subject to the requirements of this subpart.

(d) Each coil coating line that does not comply with the provisions of this subpart because it meets the criteria in [paragraph \(b\)\(2\)](#) of this section, that for any rolling 12-month period fails to meet the criteria in paragraph (b)(2) would from that point forward become subject to the provisions of this subpart. After becoming subject to the provisions of this subpart, the coil coating line would no longer be eligible to use the criteria of [paragraph \(b\)\(2\)](#) of this section, even if in subsequent 12-month periods at least 85 percent of the metal coil coated, based on surface area, is less than 0.15 millimeter (0.006 inch) thick.

(e) This subpart does not apply to the application of incidental markings (including letters, numbers, or symbols) that are added to bare metal coils and that are used for only product identification or for product inventory control. The application of letters, numbers, or symbols to a coated metal coil is considered a coil coating process and part of the coil coating affected source.

[[67 FR 39812](#), June 10, 2002, as amended at [85 FR 10861](#), Feb. 25, 2020]

§ 63.5100 Which of my emissions sources are affected by this subpart?

The affected source subject to this subpart is the collection of all of the coil coating lines at your facility.

§ 63.5110 What special definitions are used in this subpart?

All terms used in this subpart that are not defined in this section have the meaning given to them in the Clean Air Act (CAA) and in [subpart A of this part](#).

Always-controlled work station means a work station associated with a curing oven from which the curing oven exhaust is delivered to a control device with no provision for the oven exhaust to bypass the control device. Sampling lines for analyzers and relief valves needed for safety purposes are not considered bypass lines.

Capture efficiency means the fraction of all organic HAP emissions generated by a process that is delivered to a control device, expressed as a percentage.

Capture system means a hood, enclosed room, or other means of collecting organic HAP emissions and conveying them to a control device.

Car-seal means a seal that is placed on a device that is used to change the position of a valve or damper (e.g., from open to closed) in such a way that the position of the valve or damper cannot be changed without breaking the seal.

Coating means material applied onto or impregnated into a substrate for decorative, protective, or functional purposes. Such materials include, but are not limited to, paints, varnishes, sealants, inks, adhesives, maskants, and temporary coatings. Decorative, protective, or functional materials that consist only of solvents, protective oils, acids, bases, or any combination of these substances are not considered coatings for the purposes of this subpart.

Coating material means the coating and other products (e.g., a catalyst and resin in multi-component coatings) combined to make a single material at the coating facility that is applied to metal coil. For the purposes of this subpart, an organic solvent that is used to thin a coating prior to application to the metal coil is considered a coating material.

Coil coating line means a process and the collection of equipment used to apply an organic coating to the surface of metal coil. A coil coating line includes a web unwind or feed section, a series of one or more work stations, any associated curing oven, wet section, and quench station. A coil coating line does not include ancillary operations such as mixing/thinning, cleaning, wastewater treatment, and storage of coating material.

Control device means a device such as a solvent recovery device or oxidizer which reduces the organic HAP in an exhaust gas by recovery or by destruction.

Control device efficiency means the ratio of organic HAP emissions recovered or destroyed by a control device to the total organic HAP emissions that are introduced into the control device, expressed as a percentage.

Curing oven means the device that uses heat or radiation to dry or cure the coating material applied to the metal coil.

Day means a 24-consecutive-hour period.

Deviation, before August 24, 2020, means any instance in which an affected source, subject to this subpart, or an owner or operator of such a source:

- (1) Fails to meet any requirement or obligation established by this subpart including, but not limited to, any emission limitation (including any operating limit) or work practice standard; or
- (2) Fails to meet any term or condition that is adopted to implement an applicable requirement in this subpart and that is included in the operating permit for any affected source required to obtain such a permit; or
- (3) Fails to meet any emission limitation (including any operating limit) or work practice standard in this subpart during start-up, shutdown, or malfunction, regardless of whether or not such failure is permitted by this subpart.

Deviation, on and after August 24, 2020, means any instance in which an affected source, subject to this subpart, or an owner or operator of such a source:

(1) Fails to meet any requirement or obligation established by this subpart including, but not limited to, any emission limitation (including any operating limit) or work practice standard; or

(2) Fails to meet any term or condition that is adopted to implement an applicable requirement in this subpart and that is included in the operating permit for any affected source required to obtain such a permit.

Existing affected source means an affected source the construction of which commenced on or before July 18, 2000, and it has not subsequently undergone reconstruction as defined in [§ 63.2](#).

Facility means all contiguous or adjoining property that is under common ownership or control, including properties that are separated only by a road or other public right-of-way.

Flexible packaging means any package or part of a package the shape of which can be readily changed. Flexible packaging includes but is not limited to bags, pouches, labels, liners and wraps utilizing paper, plastic, film, aluminum foil, metalized or coated paper or film, or any combination of these materials.

HAP applied means the organic HAP content of all coating materials applied to a substrate by a coil coating line.

Intermittently-controllable work station means a work station associated with a curing oven with provisions for the curing oven exhaust to be delivered to a control device or diverted from a control device through a bypass line, depending on the position of a valve or damper. Sampling lines for analyzers and relief valves needed for safety purposes are not considered bypass lines.

Metal coil means a continuous metal strip that is at least 0.15 millimeter (0.006 inch) thick, which is packaged in a roll or coil prior to coating. After coating, it may or may not be rewound into a roll or coil. Metal coil does not include metal webs that are coated for use in flexible packaging.

Month means a calendar month or a pre-specified period of 28 days to 35 days to allow for flexibility in recordkeeping when data are based on a business accounting period.

Never-controlled work station means a work station which is not equipped with provisions by which any emissions, including those in the exhaust from any associated curing oven, may be delivered to a control device.

New affected source means an affected source the construction or reconstruction of which commenced after July 18, 2000.

Overall organic HAP control efficiency means the total efficiency of a control system, determined either by:

(1) The product of the capture efficiency as determined in accordance with the requirements of [§ 63.5160\(e\)](#) and the control device efficiency as determined in accordance with the requirements of [§ 63.5160\(a\)\(1\)\(i\)](#) and [\(ii\)](#) or [§ 63.5160\(d\)](#); or

(2) A liquid-liquid material balance in accordance with the requirements of [§ 63.5170\(e\)\(1\)](#).

Permanent total enclosure (PTE) means a permanently installed enclosure that meets the criteria of Method 204 of appendix M, [40 CFR part 51](#) for a PTE, and that directs all the exhaust gases from the enclosure to a control device.

Protective oil means an organic material that is applied to metal for the purpose of providing lubrication or protection from corrosion without forming a solid film. This definition of protective oil includes but is not limited to lubricating oils, evaporative oils (including those that evaporate completely), and extrusion oils.

Research or laboratory equipment means any equipment for which the primary purpose is to conduct research and development into new processes and products, where such equipment is operated under the close supervision of technically trained personnel and is not engaged in the manufacture of products for commercial sale in commerce, except in a de minimis manner.

Temporary total enclosure (TTE) means an enclosure constructed for the purpose of measuring the capture efficiency of pollutants emitted from a given source, as defined in Method 204 of [40 CFR part 51, appendix M](#).

Work station means a unit on a coil coating line where coating material is deposited onto the metal coil substrate.

[[67 FR 39812](#), June 10, 2002, as amended at [85 FR 10861](#), Feb. 25, 2020]

Emission Standards and Compliance Dates

§ 63.5120 What emission standards must I meet?

(a) Each coil coating affected source must limit organic HAP emissions to the level specified in [paragraph \(a\)\(1\)](#), [\(2\)](#), or [\(3\)](#) of this section:

(1) No more than 2 percent of the organic HAP applied for each month during each 12-month compliance period (98 percent reduction); or

(2) No more than 0.046 kilogram (kg) of organic HAP per liter of solids applied during each 12-month compliance period; or

(3) If you use an oxidizer to control organic HAP emissions, operate the oxidizer such that an outlet organic HAP concentration of no greater than 20 parts per million by volume (ppmv) on a dry basis is achieved and the efficiency of the capture system is 100 percent.

(b) You must demonstrate compliance with one of these standards by following the applicable procedures in [§ 63.5170](#).

§ 63.5121 What operating limits must I meet?

(a) Except as provided in [paragraph \(b\)](#) of this section, for any coil coating line for which you use an add-on control device, unless you use a solvent recovery system and conduct a liquid-liquid material balance according to [§ 63.5170\(e\)\(1\)](#), you must meet the applicable operating limits specified in Table 1 to this subpart. You must establish the operating limits during performance tests according to the requirements in [§ 63.5160\(d\)\(3\)](#) and Table 1 to [§ 63.5160](#). You must meet the operating limits established during the most recent performance test required in [§ 63.5160](#) at all times after you establish them.

(b) If you use an add-on control device other than those listed in Table 1 to this subpart, or wish to monitor an alternative parameter and comply with a different operating limit, you must apply to the Administrator for approval of alternative monitoring under [§ 63.8\(f\)](#).

[[67 FR 39812](#), June 10, 2002, as amended at [85 FR 10862](#), Feb. 25, 2020]

§ 63.5130 When must I comply?

(a) For an existing affected source, the compliance date is June 10, 2005.

(b) If you own or operate a new affected source subject to the provisions of this subpart, you must comply immediately upon start-up of the affected source, or by June 10, 2002, whichever is later.

(c) Affected sources which have undergone reconstruction are subject to the requirements for new affected sources.

(d) The initial compliance period begins on the applicable compliance date specified in [paragraph \(a\)](#) or [\(b\)](#) of this section and ends on the last day of the 12th month following the compliance date. If the compliance date falls on any day other than the first day of a month, then the initial compliance period extends through that month plus the next 12 months.

(e) For the purpose of demonstrating continuous compliance, a compliance period consists of 12 months. Each month after the end of the initial compliance period described in [paragraph \(d\)](#) of this section is the end of a compliance period consisting of that month and the preceding 11 months.

[[67 FR 39812](#), June 10, 2002, as amended at [85 FR 10862](#), Feb. 25, 2020]

General Requirements for Compliance with the Emission Standards and for Monitoring and Performance Tests

§ 63.5140 What general requirements must I meet to comply with the standards?

(a) Before August 24, 2020, you must be in compliance with the applicable emission standards in [§ 63.5120](#) and the operating limits in Table 1 to this subpart at all times, except during periods of start-up, shutdown, and malfunction of any capture system and control device used to comply with this subpart. On and after August 24, 2020 you must be in compliance with the applicable emission standards in [§ 63.5120](#) and the operating limits in Table 1 to this subpart at all times. If you are complying with the emission standards of this subpart without the use of a capture system and control device, you must be in compliance with the standards at all times.

(b) Before August 24, 2020, you must always operate and maintain your affected source, including air pollution control and monitoring equipment, according to the provisions in [§ 63.6\(e\)\(1\)](#). On and after August 24, 2020, at all times, you must operate and maintain your affected source, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. The general duty to minimize emissions does not require the owner or operator to make any further efforts to reduce emissions if levels required by the applicable standard have been achieved. Determination of whether a source is operating in compliance with operation and maintenance requirements will be based on information available to the Administrator that may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the affected source.

(c) Table 2 of this subpart provides cross references to [subpart A of this part](#), indicating the applicability of the General Provisions requirements to this subpart.

[[67 FR 39812](#), June 10, 2002, as amended at [85 FR 10862](#), Feb. 25, 2020]

§ 63.5150 If I use a control device to comply with the emission standards, what monitoring must I do?

Table 1 to § 63.5150 —Control Device Monitoring Requirements Index	
If you operate a coil coating line and have the following:	Then you must:
1. Control device	Monitor control device operating parameters (§ 63.5150(a)(3)).
2. Capture system	Monitor capture system operating parameters (§ 63.5150(a)(4)).
3. Intermittently controllable work station	Monitor parameters related to possible exhaust flow through any bypass to a control device (§ 63.5150(a)(1)).
4. Continuous emission monitors	Operate continuous emission monitors and perform a quarterly audit (§ 63.5150(a)(2)).

(a) To demonstrate continuing compliance with the standards, you must monitor and inspect each capture system and each control device required to comply with [§ 63.5120](#) following the date on which the initial performance test of the capture system and control device is completed. You must install and operate the monitoring equipment as specified in [paragraphs \(a\)\(1\) through \(4\)](#) of this section. On and after August 24, 2020, you must also maintain the monitoring equipment at all times in accordance with [§ 63.5140\(b\)](#) and keep the necessary parts readily available for routine repairs of the monitoring equipment.

(1) **Bypass monitoring.** If you operate coil coating lines with intermittently-controllable work stations, you must follow at least one of the procedures in [paragraphs \(a\)\(1\)\(i\) through \(iv\)](#) of this section for each curing oven associated with these work stations to monitor for potential bypass of the control device:

(i) **Flow control position indicator.** Install, calibrate, maintain, and operate according to the manufacturer's specifications a flow control position indicator that provides a record indicating whether the exhaust stream from the curing oven is directed to the control device or is diverted from the control device. The time and flow control position must be recorded at least once per hour, as well as every time the flow direction is changed. The flow control position indicator must be installed at the entrance to any bypass line that could divert the exhaust stream away from the control device to the atmosphere.

(ii) **Car-seal or lock-and-key valve closures.** Secure any bypass line valve in the closed position with a car-seal or a lock-and-key type configuration when the control device is in operation; a visual inspection of the seal or closure mechanism will be performed at least once every month to ensure that the valve or damper is maintained in the closed position, and the exhaust stream is not diverted through the bypass line.

(iii) **Valve closure continuous monitoring.** Ensure that any bypass line valve or damper is in the closed position through continuous monitoring of valve position when the control device is in operation. The monitoring system must be inspected at least once every month to verify that the monitor will indicate valve position.

(iv) **Automatic shutdown system.** Use an automatic shutdown system in which the coil coating line is stopped when flow is diverted away from the control device to any bypass line when the control device is in operation. The automatic shutdown system must be inspected at least once every month to verify that it will detect diversions of flow and shut down operations.

(2) **Continuous emission monitoring system (CEMS).** If you are demonstrating continuous compliance with the standards in [§ 63.5120\(a\)\(1\)](#) or [\(2\)](#) through continuous emission monitoring of a control device, you must install, calibrate, operate, and maintain continuous emission monitors to measure the total organic volatile matter concentration at both the control device inlet and outlet, and you must continuously monitor flow rate. If you are demonstrating continuous compliance with the outlet organic HAP concentration limit in [§ 63.5120\(a\)\(3\)](#), you must install, calibrate, operate, and maintain a continuous emission monitor to measure the total organic volatile matter concentration at the control device outlet.

(i) All CEMS must comply with performance specification 8 or 9 of [40 CFR part 60, appendix B](#), as appropriate for the detection principle you choose. The requirements of [40 CFR part 60](#), procedure 1, appendix F must also be followed. In conducting the quarterly audits of the monitors as required by procedure 1, appendix F, you must use compounds representative of the gaseous emission stream being controlled.

(ii) As specified in [§ 63.8\(c\)\(4\)\(ii\)](#), each CEMS and each flow rate monitor must complete a minimum of one cycle of operation (sampling, analyzing, and data recording) for each successive 15-minute period. Information which must be determined for recordkeeping purposes, as required by [§ 63.5190\(a\)\(1\)\(i\)](#) includes:

(A) The hourly average of all recorded readings;

(B) The daily average of all recorded readings for each operating day; and

(C) The monthly average for each month during the semiannual reporting period.

(3) ***Temperature monitoring of oxidizers.*** If you are complying with the requirements of the standards in [§ 63.5120](#) through the use of an oxidizer and demonstrating continuous compliance through monitoring of an oxidizer operating parameter, you must comply with [paragraphs \(a\)\(3\)\(i\) through \(iii\)](#) of this section.

(i) Install, calibrate, maintain, and operate temperature monitoring equipment according to manufacturer's specifications. The calibration of the chart recorder, data logger, or temperature indicator must be verified every 3 months; or the chart recorder, data logger, or temperature indicator must be replaced. You must replace the equipment either if you choose not to perform the calibration, or if the equipment cannot be calibrated properly. Each temperature monitoring device must be equipped with a continuous recorder. The device must have an accuracy of ± 1 percent of the temperature being monitored in degrees Celsius, or ± 1 °Celsius, whichever is greater.

(ii) For an oxidizer other than a catalytic oxidizer, to demonstrate continuous compliance with the operating limit established according to [§ 63.5160\(d\)\(3\)\(i\)](#), you must install the thermocouple or temperature sensor in the combustion chamber at a location in the combustion zone.

(iii) For a catalytic oxidizer, if you are demonstrating continuous compliance with the operating limit established according to [§ 63.5160\(d\)\(3\)\(ii\)\(A\)](#) and [\(B\)](#), then you must install the thermocouples or temperature sensors in the vent stream at the nearest feasible point to the inlet and outlet of the catalyst bed. Calculate the temperature difference across the catalyst. If you are demonstrating continuous compliance with the operating limit established according to [§ 63.5160\(d\)\(3\)\(ii\)\(C\)](#) and [\(D\)](#), then you must install the thermocouple or temperature sensor in the vent stream at the nearest feasible point to the inlet of the catalyst bed.

(4) **Capture system monitoring.** If you are complying with the requirements of the standards in [§ 63.5120](#) through the use of a capture system and control device, you must develop a capture system monitoring plan containing the information specified in [paragraphs \(a\)\(4\)\(i\)](#) and [\(ii\)](#) of this section. You must monitor the capture system in accordance with [paragraph \(a\)\(4\)\(iii\)](#) of this section. You must make the monitoring plan available for inspection by the permitting authority upon request.

(i) The monitoring plan must identify the operating parameter to be monitored to ensure that the capture efficiency measured during compliance tests is maintained, explain why this parameter is appropriate for demonstrating ongoing compliance, and identify the specific monitoring procedures.

(ii) The plan also must specify operating limits at the capture system operating parameter value, or range of values, that demonstrates compliance with the standards in [§ 63.5120](#). The operating limits must represent the conditions indicative of proper operation and maintenance of the capture system.

(iii) You must conduct monitoring in accordance with the plan.

(b) If an operating parameter monitored in accordance with [paragraphs \(a\)\(3\)](#) and [\(4\)](#) of this section is out of the allowed range specified in Table 1 to this subpart it will be considered a deviation from the operating limit.

[[67 FR 39812](#), June 10, 2002, as amended at [85 FR 10862](#), Feb. 25, 2020]

§ 63.5160 What performance tests must I complete?

Table 1 to § 63.5160 —Required Performance Testing Summary	
If you control HAP on your coil coating line by:	You must:
1. Limiting HAP or Volatile matter content of coatings	Determine the HAP or volatile matter and solids content of coating materials according to the procedures in § 63.5160(b) and (c) .
2. Using a capture system and add-on control device	Except as specified in paragraph (a) of this section, conduct an initial performance test within 180 days of the applicable compliance date in § 63.5130 , and conduct periodic performance tests within 5 years following the previous performance test, as follows: If you are not required to complete periodic performance tests as a requirement of renewing your facility's operating permit under 40 CFR part 70 or 40 CFR part 71 , you must conduct the first periodic performance test before March 25, 2023, unless you already have conducted a performance test on or after March 25, 2018; thereafter, you must conduct a performance test no later than 5 years following the

Table 1 to [§ 63.5160](#)—Required Performance Testing Summary

If you control HAP on your coil coating line by:	You must:
	previous performance test. Operating limits must be confirmed or reestablished during each performance test. If you are required to complete periodic performance tests as a requirement of renewing your facility's operating permit under 40 CFR part 70 or 40 CFR part 71 , you must conduct the periodic testing in accordance with the terms and schedule required by your permit conditions. For each performance test: (1) For each capture and control system, determine the destruction or removal efficiency of each control device according to § 63.5160(d) and the capture efficiency of each capture system according to § 63.5160(e) , and (2) confirm or re-establish the operating limits.

(a) If you use a control device to comply with the requirements of [§ 63.5120](#), you are not required to conduct a performance test to demonstrate compliance if one or more of the criteria in [paragraphs \(a\)\(1\)](#) through [\(3\)](#) of this section are met:

(1) The control device is equipped with continuous emission monitors for determining total organic volatile matter concentration, and capture efficiency has been determined in accordance with the requirements of this subpart; and the continuous emission monitors are used to demonstrate continuous compliance in accordance with [§ 63.5150\(a\)\(2\)](#); or

(2) You have received a waiver of performance testing under [§ 63.7\(h\)](#); or

(3) The control device is a solvent recovery system and you choose to comply by means of a monthly liquid-liquid material balance.

(b) **Organic HAP content.** You must determine the organic HAP weight fraction of each coating material applied by following one of the procedures in [paragraphs \(b\)\(1\)](#) through [\(4\)](#) of this section:

(1) **Method 311.** You may test the material in accordance with Method 311 of [appendix A of this part](#). The Method 311 determination may be performed by the manufacturer of the material and the results provided to you. The organic HAP content must be calculated according to the criteria and procedures in [paragraphs \(b\)\(1\)\(i\)](#) through [\(iii\)](#) of this section.

(i) Count only those organic HAP in Table 3 to this subpart that are measured to be present at greater than or equal to 0.1 weight percent and greater than or equal to 1.0 weight percent for other organic HAP compounds.

(ii) Express the weight fraction of each organic HAP you count according to [paragraph \(b\)\(1\)\(i\)](#) of this section as a value truncated to four places after the decimal point (for example, 0.3791).

(iii) Calculate the total weight fraction of organic HAP in the tested material by summing the counted individual organic HAP weight fractions and truncating the result to three places after the decimal point (for example, 0.763).

(2) **Method 24 in appendix A-7 of part 60.** For coatings, you may determine the total volatile matter content as weight fraction of nonaqueous volatile matter and use it as a substitute for organic HAP, using Method 24 in appendix A-7 of part 60. As an alternative to using Method 24, you may use ASTM D2369-10 (2015), “Test Method for Volatile Content of Coatings” (incorporated by reference, see [§ 63.14](#)). The determination of total volatile matter content using a method specified in this [paragraph \(b\)\(2\)](#) or as provided in [paragraph \(b\)\(3\)](#) of this section may be performed by the manufacturer of the coating and the results provided to you.

(3) **Alternative method.** You may use an alternative test method for determining the organic HAP weight fraction once the Administrator has approved it. You must follow the procedure in [§ 63.7\(f\)](#) to submit an alternative test method for approval.

(4) **Formulation data.** You may use formulation data provided that the information represents each organic HAP in Table 3 to this subpart that is present at a level equal to or greater than 0.1 percent and equal to or greater than 1.0 percent for other organic HAP compounds in any raw material used, weighted by the mass fraction of each raw material used in the material. Formulation data may be provided to you by the manufacturer of the coating material. In the event of any inconsistency between test data obtained with the test methods specified in [paragraphs \(b\)\(1\)](#) through [\(3\)](#) of this section and formulation data, the test data will govern.

(c) **Solids content and density.** You must determine the solids content and the density of each coating material applied. You may determine the volume solids content using ASTM D2697-03(2014) Standard Test Method for Volume Nonvolatile Matter in Clear or Pigmented Coatings (incorporated by reference, see [§ 63.14](#)) or ASTM D6093-97 (2016) Standard Test Method for Percent Volume Nonvolatile Matter in Clear or Pigmented Coatings Using a Helium Gas Pycnometer (incorporated by reference, see [§ 63.14](#)), or an EPA approved alternative method. You must determine the density of each coating using ASTM D1475-13 “Standard Test Method for Density of Liquid Coatings, Inks, and Related Products” (incorporated by reference, see [§ 63.14](#)) or ASTM D2111-10 (2015) “Standard Test Methods for Specific Gravity and Density of Halogenated Organic Solvents and Their Admixtures” (incorporated by reference, see [§ 63.14](#)). The solids determination using ASTM D2697-03(2014) or ASTM D6093-97 (2016) and the density determination using ASTM D1475-13 or ASTM 2111-10 (2015) may be performed by the manufacturer of the material and the results provided to you. Alternatively, you may rely on formulation data provided by material providers to determine the volume solids. In the event of any inconsistency between test data obtained with the ASTM test methods specified in this section and formulation data, the test data will govern.

(d) ***Control device destruction or removal efficiency.*** If you are using an add-on control device, such as an oxidizer, to comply with the standard in [§ 63.5120](#), you must conduct performance tests according to Table 1 to [§ 63.5160](#) to establish the destruction or removal efficiency of the control device or the outlet HAP concentration achieved by the oxidizer, according to the methods and procedures in [paragraphs \(d\)\(1\)](#) and [\(2\)](#) of this section. During performance tests, you must establish the operating limits required by [§ 63.5121](#) according to [paragraph \(d\)\(3\)](#) of this section.

(1) Performance tests conducted to determine the destruction or removal efficiency of the control device must be performed such that control device inlet and outlet testing is conducted simultaneously. To determine the outlet organic HAP concentration achieved by the oxidizer, only oxidizer outlet testing must be conducted. The data must be reduced in accordance with the test methods and procedures in paragraphs (d)(1)(i) through (ix).

(i) Method 1 or 1A of [40 CFR part 60, appendix A](#), is used for sample and velocity traverses to determine sampling locations.

(ii) Method 2, 2A, 2C, 2D, 2F, or 2G of [40 CFR part 60, appendix A](#), is used to determine gas volumetric flow rate.

(iii) Method 3, 3A, or 3B of [40 CFR part 60, appendix A](#), used for gas analysis to determine dry molecular weight. You may also use as an alternative to Method 3B, the manual method for measuring the oxygen, carbon dioxide, and carbon monoxide content of exhaust gas, ANSI/ASME PTC 19.10-1981, “Flue and Exhaust Gas Analyses” (incorporated by reference, see [§ 63.14](#)).

(iv) Method 4 of [40 CFR part 60, appendix A](#), is used to determine stack gas moisture.

(v) Methods for determining gas volumetric flow rate, dry molecular weight, and stack gas moisture must be performed, as applicable, during each test run, as specified in [paragraph \(d\)\(1\)\(vii\)](#) of this section.

(vi) Method 25 or 25A in appendix A-7 of part 60 is used to determine total gaseous non-methane organic matter concentration. You may use Method 18 in appendix A-6 of part 60 to subtract methane emissions from measured total gaseous organic mass emissions as carbon. Use the same test method for both the inlet and outlet measurements, which must be conducted simultaneously. You must submit notification of the intended test method to the Administrator for approval along with notification of the performance test required under [§ 63.7 \(b\)](#). You must use Method 25A if any of the conditions described in [paragraphs \(d\)\(1\)\(vi\)\(A\)](#) through [\(D\)](#) of this section apply to the control device.

(A) The control device is not an oxidizer.

(B) The control device is an oxidizer, but an exhaust gas volatile organic matter concentration of 50 ppmv or less is required to comply with the standards in [§ 63.5120](#);
or

(C) The control device is an oxidizer, but the volatile organic matter concentration at the inlet to the control system and the required level of control are such that they result in exhaust gas volatile organic matter concentrations of 50 ppmv or less; or

(D) The control device is an oxidizer, but because of the high efficiency of the control device, the anticipated volatile organic matter concentration at the control device exhaust is 50 ppmv or less, regardless of inlet concentration.

(vii) Each performance test must consist of three separate runs, except as provided by § 63.7(e)(3); each run must be conducted for at least 1 hour under the conditions that exist when the affected source is operating under normal operating conditions. For the purpose of determining volatile organic matter concentrations and mass flow rates, the average of the results of all runs will apply. If you are demonstrating compliance with the outlet organic HAP concentration limit in § 63.5120(a)(3), only the average outlet volatile organic matter concentration must be determined.

(viii) If you are determining the control device destruction or removal efficiency, for each run, determine the volatile organic matter mass flow rates using Equation 1 of this section:

$$M_f = Q_{sd} C_c (12 \times 0.0416) (10^{-6}) \quad (\text{Eq. 1})$$

Where:

M_f = total organic volatile matter mass flow rate, kg/per hour (h).

C_c = concentration of organic compounds as carbon in the vent gas, as determined by Method 25 or Method 25A, ppmv, dry basis.

Q_{sd} = volumetric flow rate of gases entering or exiting the control device, as determined by Method 2, 2A, 2C, 2D, 2F, or 2G, dry standard cubic meters (dscm)/h.

0.0416 = conversion factor for molar volume, kg-moles per cubic meter (mol/m^3) (@ 293 Kelvin (K) and 760 millimeters of mercury (mmHg)).

(ix) For each run, determine the control device destruction or removal efficiency, DRE, using Equation 2 of this section:

$$\text{DRE} = \frac{M_{fi} - M_{fo}}{M_{fi}} \times 100 \quad (\text{Eq. 2})$$

Where:

DRE = organic emissions destruction or removal efficiency of the add-on control device, percent.

M_{fi} = organic volatile matter mass flow rate at the inlet to the control device, kg/h.

M_{fo} = organic volatile matter mass flow rate at the outlet of the control device, kg/h.

(x) The control device destruction or removal efficiency is determined as the average of the efficiencies determined in the three test runs and calculated in Equation 2 of this section.

(2) You must record such process information as may be necessary to determine the conditions in existence at the time of the performance test. Before August 24, 2020, operations during periods of start-up, shutdown, and malfunction will not constitute representative conditions for the purpose of a performance test. On and after August 24, 2020, you must conduct the performance test under representative operating conditions for the coating operation. Operations during periods of start-up, shutdown, or nonoperation do not constitute representative conditions for the purpose of a performance test. The owner or operator may not conduct performance tests during periods of malfunction. You must record the process information that is necessary to document operating conditions during the test and explain why the conditions represent normal operation. Upon request, you must make available to the Administrator such records as may be necessary to determine the conditions of performance tests.

(3) **Operating limits.** If you are using a capture system and add-on control device other than a solvent recovery system for which you conduct a liquid-liquid material balance to comply with the requirements in [§ 63.5120](#), you must establish the applicable operating limits required by [§ 63.5121](#). These operating limits apply to each capture system and to each add-on emission control device that is not monitored by CEMS, and you must establish the operating limits during performance tests required by [paragraph \(d\)](#) of this section according to the requirements in [paragraphs \(d\)\(3\)\(i\)](#) through [\(iii\)](#) of this section.

(i) **Thermal oxidizer.** If your add-on control device is a thermal oxidizer, establish the operating limits according to [paragraphs \(d\)\(3\)\(i\)\(A\)](#) and [\(B\)](#) of this section.

(A) During performance tests, you must monitor and record the combustion temperature at least once every 15 minutes during each of the three test runs. You must monitor the temperature in the firebox of the thermal oxidizer or immediately downstream of the firebox before any substantial heat exchange occurs.

(B) Use the data collected during the performance test to calculate and record the average combustion temperature maintained during the performance test. This average combustion temperature is the minimum operating limit for your thermal oxidizer.

(ii) **Catalytic oxidizer.** If your add-on control device is a catalytic oxidizer, establish the operating limits according to either paragraphs (d)(3)(ii)(A) and (B) or [paragraphs \(d\)\(3\)\(ii\)\(C\)](#) and [\(D\)](#) of this section.

(A) During the performance test, you must monitor and record the temperature just before the catalyst bed and the temperature difference across the catalyst bed at least once every 15 minutes during each of the three test runs.

(B) Use the data collected during the performance test to calculate and record the average temperature just before the catalyst bed and the average temperature difference across the catalyst bed maintained during the performance test. These are the minimum operating limits for your catalytic oxidizer.

(C) As an alternative to monitoring the temperature difference across the catalyst bed, you may monitor the temperature at the inlet to the catalyst bed and implement a site-specific inspection and maintenance plan for your catalytic oxidizer as specified in [paragraph \(d\)\(3\)\(ii\)\(D\)](#) of this section. During the performance test, you must monitor and record the temperature just before the catalyst bed at least once every 15 minutes during each of the three test runs. Use the data collected during the performance test to calculate and record the average temperature just before the catalyst bed during the performance test. This is the minimum operating limit for your catalytic oxidizer.

(D) You must develop and implement an inspection and maintenance plan for your catalytic oxidizer(s) for which you elect to monitor according to [paragraph \(d\)\(3\)\(ii\)\(C\)](#) of this section. The plan must address, at a minimum, the elements specified in paragraphs (d)(3)(ii)(D) (1) through (3) of this section.

(1) Annual sampling and analysis of the catalyst activity (*i.e.*, conversion efficiency) following the manufacturer's or catalyst supplier's recommended procedures.

(2) Monthly inspection of the oxidizer system including the burner assembly and fuel supply lines for problems and,

(3) Annual internal and monthly external visual inspection of the catalyst bed to check for channeling, abrasion, and settling. If problems are found, you must take corrective action consistent with the manufacturer's recommendations and conduct a new performance test to determine destruction efficiency according to [§ 63.5160](#).

(iii) **Other types of control devices.** If you use a control device other than an oxidizer or a solvent recovery system for which you choose to comply by means of a monthly liquid-liquid material balance, or wish to monitor an alternative parameter and comply with a different operating limit, you must apply to the Administrator for approval of alternative monitoring under [§ 63.8\(f\)](#).

(e) **Capture efficiency.** If you are required to determine capture efficiency to meet the requirements of [§ 63.5170\(e\)\(2\)](#), [\(f\)\(1\)](#) and [\(2\)](#), [\(g\)\(2\)](#) through [\(4\)](#), or [\(i\)\(2\)](#) and [\(3\)](#), you must determine capture efficiency using the procedures in [paragraph \(e\)\(1\)](#), [\(2\)](#), or [\(3\)](#) of this section, as applicable.

(1) For an enclosure that meets the criteria for a PTE, you may assume it achieves 100 percent capture efficiency. You must confirm that your capture system is a PTE by demonstrating that it meets the requirements of section 6 of EPA Method 204 of [40 CFR part 51, appendix M](#) (or an EPA approved alternative method), and that all exhaust gases from the enclosure are delivered to a control device.

(2) You may determine capture efficiency, CE, according to the protocols for testing with temporary total enclosures that are specified in Method 204A through F of [40 CFR part 51, appendix M](#). You may exclude never-controlled work stations from such capture efficiency determinations.

(3) As an alternative to the procedures specified in [paragraphs \(e\)\(1\) and \(2\)](#) of this section, if you are required to conduct a capture efficiency test, you may use any capture efficiency protocol and test methods that satisfy the criteria of either the Data Quality Objective or the Lower Confidence Limit approach as described in appendix A to [subpart KK of this part](#). You may exclude never-controlled work stations from such capture efficiency determinations.

[[67 FR 39812](#), June 10, 2002, as amended at [85 FR 10862](#), Feb. 25, 2020]

Requirements for Showing Compliance

§ 63.5170 How do I demonstrate compliance with the standards?

You must include all coating materials (as defined in [§ 63.5110](#)) used in the affected source when determining compliance with the applicable emission limit in [§ 63.5120](#). To make this determination, you must use at least one of the four compliance options listed in Table 1 of this section. You may apply any of the compliance options to an individual coil coating line, or to multiple lines as a group, or to the entire affected source. You may use different compliance options for different coil coating lines, or at different times on the same line. However, you may not use different compliance options at the same time on the same coil coating line. If you switch between compliance options for any coil coating line or group of lines, you must document this switch as required by [§ 63.5190\(a\)](#), and you must report it in the next semiannual compliance report required in [§ 63.5180](#).

Table 1 to § 63.5170 —Compliance Demonstration Requirements Index	
If you choose to demonstrate compliance by:	Then you must demonstrate that:
1. Use of “as purchased” compliant coatings	a. Each coating material used during the 12-month compliance period does not exceed 0.046 kg HAP per liter solids, as purchased. Paragraph (a) of this section.

Table 1 to [§ 63.5170](#)—Compliance Demonstration Requirements Index

If you choose to demonstrate compliance by:	Then you must demonstrate that:
2. Use of “as applied” compliant coatings	a. Each coating material used does not exceed 0.046 kg HAP per liter solids on a rolling 12-month average as applied basis, determined monthly. Paragraphs (b)(1) of this section; or
	b. Average of all coating materials used does not exceed 0.046 kg HAP per liter solids on a rolling 12-month average as applied basis, determined monthly. Paragraph (b)(2) of this section.
3. Use of a capture system and control device	Overall organic HAP control efficiency is at least 98 percent on a monthly basis for individual or groups of coil coating lines; or overall organic HAP control efficiency is at least 98 percent during performance tests conducted according to Table 1 to § 63.5170 and operating limits are achieved continuously for individual coil coating lines; or oxidizer outlet HAP concentration is no greater than 20 ppmv and there is 100-percent capture efficiency during performance tests conducted according to Table 1 to § 63.5170 and operating limits are achieved continuously for individual coil coating lines. Paragraph (c) of this section.
4. Use of a combination of compliant coatings and control devices and maintaining an acceptable equivalent emission rate	Average equivalent emission rate does not exceed 0.046 kg HAP per liter solids on a rolling 12-month average as applied basis, determined monthly. Paragraph (d) of this section.

(a) **As-purchased compliant coatings.** If you elect to use coatings that individually meet the organic HAP emission limit in [§ 63.5120\(a\)\(2\)](#) as-purchased, to which you will not add HAP during distribution or application, you must demonstrate that each coating material applied during the 12-month compliance period contains no more than 0.046 kg HAP per liter of solids on an as-purchased basis.

(1) Determine the organic HAP content for each coating material in accordance with [§ 63.5160\(b\)](#) and the volume solids content in accordance with [§ 63.5160\(c\)](#).

(2) Combine these results using Equation 1 of this section and compare the result to the organic HAP emission limit in [§ 63.5120\(a\)\(2\)](#) to demonstrate that each coating material contains no more organic HAP than the limit.

$$H_{\text{avg}} = \frac{C_h D_i}{V_{\text{sl}}} \quad (\text{Eq. 1})$$

Where:

H_{siap} = as-purchased, organic HAP to solids ratio of coating material, i, kg organic HAP/liter solids applied.

C_{hi} = organic HAP content of coating material, i, expressed as a weight-fraction, kg/kg.

D_i = density of coating material, i, kg/l.

V_{si} = volume fraction of solids in coating, i, l/l.

(b) **As-applied compliant coatings.** If you choose to use “as-applied” compliant coatings, you must demonstrate that the average of each coating material applied during the 12-month compliance period contains no more than 0.046 kg of organic HAP per liter of solids applied in accordance with (b)(1) of this section, or demonstrate that the average of all coating materials applied during the 12-month compliance period contain no more than 0.046 kg of organic HAP per liter of solids applied in accordance with [paragraph \(b\)\(2\)](#) of this section.

(1) To demonstrate that the average organic HAP content on the basis of solids applied for each coating material applied, $H_{si\ yr}$, is less than 0.046 kg HAP per liter solids applied for the 12-month compliance period, use Equation 2 of this section:

$$H_{si\ yr} = \frac{\sum_{i=1}^{12} \left[V_i D_i C_{ahi} + \sum_{j=1}^q V_j D_j C_{hij} \right]}{\sum_{i=1}^{12} V_i V_{si}} \quad (\text{Eq. 2})$$

Where:

$H_{si\ yr}$ = average for the 12-month compliance period, as-applied, organic HAP to solids ratio of material, i, kg organic HAP/liter solids applied.

V_i = volume of coating material, i, l.

D_i = density of coating material, i, kg/l.

C_{ahi} = monthly average, as-applied, organic HAP content of solids-containing coating material, i, expressed as a weight fraction, kilogram (kg)/kg.

V_j = volume of solvent, j, l.

D_j = density of solvent, j, kg/l.

C_{hij} = organic HAP content of solvent, j, added to coating material, i, expressed as a weight fraction, kg/kg.

V_{si} = volume fraction of solids in coating, i, l/l.

y = identifier for months.

q = number of different solvents, thinners, reducers, diluents, or other non-solids-containing coating materials applied in a month.

(2) To demonstrate that the average organic HAP content on the basis of solids applied, $H_{s_{yr}}$, of all coating materials applied is less than 0.046 kg HAP per liter solids applied for the 12-month compliance period, use Equation 3 of this section:

$$H_{s_{yr}} = \frac{\sum_{y=1}^{12} \left[\sum_{i=1}^p V_i D_i C_{ahi} + \sum_{j=1}^q V_j D_j C_{hij} \right]}{\sum_{y=1}^{12} \left[\sum_{i=1}^p V_i V_{si} \right]} \quad (\text{Eq. 3})$$

Where:

$H_{s_{yr}}$ = average for the 12-month compliance period, as-applied, organic HAP to solids ratio of all materials applied, kg organic HAP/liter solids applied.

V_i = volume of coating material, i, l.

D_i = density of coating material, i, kg/l.

C_{ahi} = monthly average, as-applied, organic HAP content of solids-containing coating material, i, expressed as a weight fraction, kilogram (kg)/kg.

V_j = volume of solvent, j, l.

D_j = density of solvent, j, kg/l.

C_{hij} = organic HAP content of solvent, j, added to coating material, i, expressed as a weight fraction, kg/kg.

V_{si} = volume fraction of solids in coating, i, l/l.

p = number of different coating materials applied in a month.

q = number of different solvents, thinners, reducers, diluents, or other non-solids-containing coating materials applied in a month.

y = identifier for months.

(c) ***Capture and control to reduce emissions to no more than the allowable limit.*** If you use one or more capture systems and one or more control devices and demonstrate an average overall organic HAP control efficiency of at least 98 percent for each month to comply with [§ 63.5120\(a\)\(1\)](#); or operate a capture system and oxidizer so that the capture efficiency is 100 percent and the oxidizer outlet HAP concentration is no greater than 20 ppmv on a dry basis to comply with [§ 63.5120\(a\)\(3\)](#), you must follow one of the procedures in [paragraphs \(c\)\(1\) through \(4\)](#) of this section. Alternatively, you may demonstrate compliance for an individual coil coating line by operating its capture system and control device and continuous parameter monitoring system according to the procedures in [paragraph \(i\)](#) of this section.

(1) If the affected source uses one compliance procedure to limit organic HAP emissions to the level specified in [§ 63.5120\(a\)\(1\)](#) or [\(3\)](#) and has only always-controlled work stations, then you must demonstrate compliance with the provisions of [paragraph \(e\)](#) of this section when emissions from the affected source are controlled by one or more solvent recovery devices.

(2) If the affected source uses one compliance procedure to limit organic HAP emissions to the level specified in [§ 63.5120\(a\)\(1\)](#) or [\(3\)](#) and has only always-controlled work stations, then you must demonstrate compliance with the provisions of [paragraph \(f\)](#) of this section when emissions are controlled by one or more oxidizers.

(3) If the affected source operates both solvent recovery and oxidizer control devices, one or more never-controlled work stations, or one or more intermittently-controllable work stations, or uses more than one compliance procedure, then you must demonstrate compliance with the provisions of [paragraph \(g\)](#) of this section.

(4) The method of limiting organic HAP emissions to the level specified in [§ 63.5120\(a\)\(3\)](#) is the installation and operation of a PTE around each work station and associated curing oven in the coating line and the ventilation of all organic HAP emissions from each PTE to an oxidizer with an outlet organic HAP concentration of no greater than 20 ppmv on a dry basis. An enclosure that meets the requirements in [§ 63.5160\(e\)\(1\)](#) is considered a PTE. Compliance of the oxidizer with the outlet organic HAP concentration limit is demonstrated either through continuous emission monitoring according to [paragraph \(c\)\(4\)\(ii\)](#) of this section or through performance tests according to the requirements of [§ 63.5160\(d\)](#) and Table 1 to [§ 63.5160](#). If this method is selected, you must meet the requirements of [paragraph \(c\)\(4\)\(i\)](#) of this section to demonstrate continuing achievement of 100 percent capture of organic HAP emissions and either [paragraph \(c\)\(4\)\(ii\)](#) or [paragraph \(c\)\(4\)\(iii\)](#) of this section, respectively, to demonstrate continuous compliance with the oxidizer outlet organic HAP concentration limit through continuous emission monitoring or continuous operating parameter monitoring:

- (i) Whenever a work station is operated, continuously monitor the capture system operating parameter established in accordance with [§ 63.5150\(a\)\(4\)](#).
 - (ii) To demonstrate that the value of the exhaust gas organic HAP concentration at the outlet of the oxidizer is no greater than 20 ppmv, on a dry basis, install, calibrate, operate, and maintain CEMS according to the requirements of [§ 63.5150\(a\)\(2\)](#).
 - (iii) To demonstrate continuous compliance with operating limits established in accordance with [§ 63.5150\(a\)\(3\)](#), whenever a work station is operated, continuously monitor the applicable oxidizer operating parameter.
- (d) **Capture and control to achieve the emission rate limit.** If you use one or more capture systems and one or more control devices and limit the organic HAP emission rate to no more than 0.046 kg organic HAP emitted per liter of solids applied on a 12-month average as-applied basis, then you must follow one of the procedures in [paragraphs \(d\)\(1\)](#) through [\(3\)](#) of this section.
- (1) If you use one or more solvent recovery devices, you must demonstrate compliance with the provisions in [paragraph \(e\)](#) of this section.
 - (2) If you use one or more oxidizers, you must demonstrate compliance with the provisions in [paragraph \(f\)](#) of this section.
 - (3) If you use both solvent recovery devices and oxidizers, or operate one or more never-controlled work stations or one or more intermittently controllable work stations, you must demonstrate compliance with the provisions in [paragraph \(g\)](#) of this section.
- (e) **Use of solvent recovery to demonstrate compliance.** If you use one or more solvent recovery devices to control emissions from always-controlled work stations, you must show compliance by following the procedures in either [paragraph \(e\)\(1\)](#) or [\(2\)](#) of this section:
- (1) **Liquid-liquid material balance.** Perform a liquid-liquid material balance for each month as specified in [paragraphs \(e\)\(1\)\(i\)](#) through [\(vi\)](#) of this section and use Equations 4 through 6 of this section to convert the data to units of this standard. All determinations of quantity of coating and composition of coating must be made at a time and location in the process after all ingredients (including any dilution solvent) have been added to the coating, or appropriate adjustments must be made to account for any ingredients added after the amount of coating has been determined.
 - (i) Measure the mass of each coating material applied on the work station or group of work stations controlled by one or more solvent recovery devices during the month.
 - (ii) If demonstrating compliance with the organic HAP emission rate based on solids applied, determine the organic HAP content of each coating material applied during the month following the procedure in [§ 63.5160\(b\)](#).

(iii) Determine the volatile matter content of each coating material applied during the month following the procedure in [§ 63.5160\(c\)](#).

(iv) If demonstrating compliance with the organic HAP emission rate based on solids applied, determine the solids content of each coating material applied during the month following the procedure in [§ 63.5160\(c\)](#).

(v) For each solvent recovery device used to comply with [§ 63.5120\(a\)](#), install, calibrate, maintain, and operate according to the manufacturer's specifications, a device that indicates the cumulative amount of volatile matter recovered by the solvent recovery device on a monthly basis. The device must be initially certified by the manufacturer to be accurate to within ± 2.0 percent.

(vi) For each solvent recovery device used to comply with [§ 63.5120\(a\)](#), measure the amount of volatile matter recovered for the month.

(vii) **Recovery efficiency, R_v .** Calculate the volatile organic matter collection and recovery efficiency, R_v , using Equation 4 of this section:

$$R_v = 100 \frac{\sum_{k=1}^p M_{kvr}}{\sum_{i=1}^p M_i C_{vi} + \sum_{j=1}^q M_j} \quad (\text{Eq. 4})$$

Where:

R_v = organic volatile matter collection and recovery efficiency, percent.

M_{kvr} = mass of volatile matter recovered in a month by solvent recovery device, k, kg.

M_i = mass of coating material, i, applied in a month, kg.

C_{vi} = volatile matter content of coating material, i, expressed as a weight fraction, kg/kg.

M_j = mass of solvent, thinner, reducer, diluent, or other non-solids-containing coating material (excluding H_2O), j, applied in a month, kg.

p = number of different coating materials applied in a month.

q = number of different solvents, thinners, reducers, diluents, or other non-solids-containing coating materials applied in a month.

s = number of solvent recovery devices used to comply with the standard of [§ 63.5120 of this subpart](#), in the facility.

(viii) **Organic HAP emitted, H_e .** Calculate the mass of organic HAP emitted during the month, H_e , using Equation 5 of this section:

$$H_e = \left[1 - \frac{R_v}{100} \right] \left[\sum_{i=1}^p \left(C_{hi} M_i + \sum_{j=1}^q C_{hij} M_{ij} \right) \right] \quad (\text{Eq. 5})$$

Where:

H_e = total monthly organic HAP emitted, kg.

R_v = organic volatile matter collection and recovery efficiency, percent.

C_{hi} = organic HAP content of coating material, i, expressed as a weight-fraction, kg/kg.

M_i = mass of coating material, i, applied in a month, kg.

C_{hij} = organic HAP content of solvent, j, added to coating material, i, expressed as a weight fraction, kg/kg.

M_{ij} = mass of solvent, thinner, reducer, diluent, or other non-solids-containing coating material, j, added to solids-containing coating material, i, in a month, kg.

p = number of different coating materials applied in a month.

q = number of different solvents, thinners, reducers, diluents, or other non-solids-containing coating materials applied in a month.

(ix) **Organic HAP emission rate based on solids applied for the 12-month compliance period, L_{ANNUAL} .** Calculate the organic HAP emission rate based on solids applied for the 12-month compliance period, L_{ANNUAL} , using Equation 6 of this section:

$$L_{\text{ANNUAL}} = \frac{\sum_{y=1}^{12} H_e}{\sum_{y=1}^{12} \left[\sum_{i=1}^p C_{hi} M_i \right]} \quad (\text{Eq. 6})$$

Where:

L_{ANNUAL} = mass organic HAP emitted per volume of solids applied for the 12-month compliance period, kg/liter.

H_e = total monthly organic HAP emitted, kg.

C_{si} = solids content of coating material, i , expressed as liter of solids/kg of material.

M_i = mass of coating material, i , applied in a month, kg.

y = identifier for months.

p = number of different coating materials applied in a month.

(x) **Compare actual performance to performance required by compliance option.** The affected source is in compliance with [§ 63.5120\(a\)](#) if it meets the requirement in either [paragraph \(e\)\(1\)\(x\)\(A\)](#) or [\(B\)](#) of this section:

(A) The average volatile organic matter collection and recovery efficiency, R_v , is 98 percent or greater each month of the 12-month compliance period; or

(B) The organic HAP emission rate based on solids applied for the 12-month compliance period, L_{ANNUAL} , is 0.046 kg organic HAP per liter solids applied or less.

(2) **Continuous emission monitoring of control device performance.** Use continuous emission monitors to demonstrate recovery efficiency, conduct performance tests of capture efficiency and volumetric flow rate, and continuously monitor a site specific operating parameter to ensure that capture efficiency and volumetric flow rate are maintained following the procedures in [paragraphs \(e\)\(2\)\(i\)](#) through [\(xi\)](#) of this section:

(i) **Control device destruction or removal efficiency, DRE.** For each control device used to comply with [§ 63.5120\(a\)](#), continuously monitor the gas stream entering and exiting the control device to determine the total volatile organic matter mass flow rate (e.g., by determining the concentration of the vent gas in grams per cubic meter and the volumetric flow rate in cubic meters per second, such that the total volatile organic matter mass flow rate in grams per second can be calculated using Equation 1 of [§ 63.5160](#), and the percent destruction or removal efficiency, DRE, of the control device can be calculated for each month using Equation 2 of [§ 63.5160](#).

(ii) Determine the percent capture efficiency, CE, for each work station in accordance with [§ 63.5160\(e\)](#).

(iii) **Capture efficiency monitoring.** Whenever a work station is operated, continuously monitor the operating parameter established in accordance with [§ 63.5150\(a\)\(4\)](#).

(iv) **Control efficiency, R.** Calculate the overall organic HAP control efficiency, R, achieved for each month using Equation 7 of this section:

$$R = 100 \frac{\sum_{A=1}^w \left[DRE_k CE_A \left(\sum_{i=1}^p M_{Ai} C_{vi} + \sum_{j=1}^q M_{Aj} \right) \right]}{\sum_{i=1}^p M_i C_{vi} + \sum_{j=1}^q M_j} \quad (\text{Eq. 7})$$

Where:

R = overall organic HAP control efficiency, percent.

DRE_k = organic volatile matter destruction or removal efficiency of control device, k, percent.

CE_A = organic volatile matter capture efficiency of the capture system for work station, A, percent.

M_{Ai} = mass of coating material, i, applied on work station, A, in a month, kg.

C_{vi} = volatile matter content of coating material, i, expressed as a weight fraction, kg/kg.

M_{Aj} = mass of solvent, thinner, reducer, diluent, or other non-solids-containing coating material (including H₂O), j, applied on work station, A, in a month, kg.

M_i = mass of coating material, i, applied in a month, kg.

M_j = mass of solvent, thinner, reducer, diluent, or other non-solids-containing coating material (excluding H₂O), j, applied in a month, kg.

w = number of always-controlled work stations in the facility.

p = number of different coating materials applied in a month.

q = number of different solvents, thinners, reducers, diluents, or other non-solids-containing coating materials applied in a month.

(v) If demonstrating compliance with the organic HAP emission rate based on solids applied, measure the mass of each coating material applied on each work station during the month.

(vi) If demonstrating compliance with the organic HAP emission rate based on solids applied, determine the organic HAP content of each coating material applied during the month in accordance with [§ 63.5160\(b\)](#).

(vii) If demonstrating compliance with the organic HAP emission rate based on solids applied, determine the solids content of each coating material applied during the month in accordance with [§ 63.5160\(c\)](#).

(viii) If demonstrating compliance with the organic HAP emission rate based on solids applied, calculate the organic HAP emitted during the month, H_e , for each month using Equation 8 of this section:

$$H_e = \sum_{A=1}^w \left[\left(1 - (DRE_k \cdot CE_A) \right) \left(\sum_{i=1}^p \left(C_{hi} M_{Ai} \right) + \sum_{j=1}^q C_{hij} M_{Aij} \right) \right] \quad (\text{Eq. 8})$$

Where:

H_e = total monthly organic HAP emitted, kg.

DRE_k = organic volatile matter destruction or removal efficiency of control device, k, percent.

CE_A = organic volatile matter capture efficiency of the capture system for work station, A, percent.

C_{hi} = organic HAP content of coating material, i, expressed as a weight-fraction, kg/kg.

M_{Ai} = mass of coating material, i, applied on work station, A, in a month, kg.

C_{hij} = organic HAP content of solvent, j, added to coating material, i, expressed as a weight fraction, kg/kg.

M_{Aij} = mass of solvent, thinner, reducer, diluent, or other non-solids-containing coating material, j, added to solids-containing coating material, i, applied on work station, A, in a month, kg.

w = number of always-controlled work stations in the facility.

p = number of different coating materials applied in a month.

q = number of different solvents, thinners, reducers, diluents, or other non-solids-containing coating materials applied in a month.

(ix) **Organic HAP emission rate based on solids applied for the 12-month compliance period, L_{ANNUAL} .** Calculate the organic HAP emission rate based on solids applied for the 12-month compliance period, L_{ANNUAL} , using Equation 6 of this section.

(x) **Compare actual performance to performance required by compliance option.** The affected source is in compliance with [§ 63.5120\(a\)](#) if each capture system operating parameter is operated at an average value greater than or less than (as appropriate) the operating parameter value established in accordance with [§ 63.5150](#) for each 3-hour period; and

(A) The overall organic HAP control efficiency, R , is 98 percent or greater for each; or

(B) The organic HAP emission rate based on solids applied for the 12-month compliance period, L_{ANNUAL} , is 0.046 kg organic HAP per liter solids applied or less.

(f) **Use of oxidation to demonstrate compliance.** If you use one or more oxidizers to control emissions from always controlled work stations, you must follow the procedures in either [paragraph \(f\)\(1\)](#) or [\(2\)](#) of this section:

(1) **Continuous monitoring of capture system and control device operating parameters.** Demonstrate compliance through performance tests of capture efficiency and control device efficiency and continuous monitoring of capture system and control device operating parameters as specified in [paragraphs \(f\)\(1\)\(i\)](#) through [\(xi\)](#) of this section:

(i) For each oxidizer used to comply with [§ 63.5120\(a\)](#), determine the oxidizer destruction or removal efficiency, DRE, using the procedure in [§ 63.5160\(d\)](#).

(ii) Whenever a work station is operated, continuously monitor the operating parameter established in accordance with [§ 63.5150\(a\)\(3\)](#).

(iii) Determine the capture system capture efficiency, CE, for each work station in accordance with [§ 63.5160\(e\)](#).

(iv) Whenever a work station is operated, continuously monitor the operating parameter established in accordance with [§ 63.5150\(a\)\(4\)](#).

(v) Calculate the overall organic HAP control efficiency, R , achieved using Equation 7 of this section.

(vi) If demonstrating compliance with the organic HAP emission rate based on solids applied, measure the mass of each coating material applied on each work station during the month.

(vii) If demonstrating compliance with the organic HAP emission rate based on solids applied, determine the organic HAP content of each coating material applied during the month following the procedure in [§ 63.5160\(b\)](#).

(viii) If demonstrating compliance with the organic HAP emission rate based on solids applied, determine the solids content of each coating material applied during the month following the procedure in [§ 63.5160\(c\)](#).

(ix) Calculate the organic HAP emitted during the month, H_e , for each month:

(A) For each work station and its associated oxidizer, use Equation 8 of this section.

(B) For periods when the oxidizer has not operated within its established operating limit, the control device efficiency is determined to be zero.

(x) **Organic HAP emission rate based on solids applied for the 12-month compliance period, L_{ANNUAL} .** If demonstrating compliance with the organic HAP emission rate based on solids applied for the 12-month compliance period, calculate the organic HAP emission rate based on solids applied, L_{ANNUAL} , for the 12-month compliance period using Equation 6 of this section.

(xi) **Compare actual performance to performance required by compliance option.** The affected source is in compliance with [§ 63.5120\(a\)](#) if each oxidizer is operated such that the average operating parameter value is greater than the operating parameter value established in [§ 63.5150\(a\)\(3\)](#) for each 3-hour period, and each capture system operating parameter average value is greater than or less than (as appropriate) the operating parameter value established in [§ 63.5150\(a\)\(4\)](#) for each 3-hour period; and the requirement in either [paragraph \(f\)\(1\)\(xi\)\(A\)](#) or [\(B\)](#) of this section is met.

(A) The overall organic HAP control efficiency, R , is 98 percent or greater for each; or

(B) The organic HAP emission rate based on solids applied, L_{ANNUAL} , is 0.046 kg organic HAP per liter solids applied or less for the 12-month compliance period.

(2) **Continuous emission monitoring of control device performance.** Use continuous emission monitors, conduct performance tests of capture efficiency, and continuously monitor a site specific operating parameter to ensure that capture efficiency is maintained. Compliance must be demonstrated in accordance with [paragraph \(e\)\(2\)](#) of this section.

(g) **Combination of capture and control.** You must demonstrate compliance according to the procedures in [paragraphs \(g\)\(1\)](#) through [\(8\)](#) of this section if both solvent recovery and oxidizer control devices, one or more never controlled coil coating stations, or one or more intermittently controllable coil coating stations are operated; or more than one compliance procedure is used.

(1) **Solvent recovery system using liquid/liquid material balance compliance demonstration.** For each solvent recovery system used to control one or more work stations for which you choose to comply by means of a liquid-liquid material balance, you must determine the organic HAP emissions each month of the 12-month compliance period for

those work stations controlled by that solvent recovery system according to either [paragraph \(g\)\(1\)\(i\)](#) or [\(ii\)](#) of this section:

- (i) In accordance with [paragraphs \(e\)\(1\)\(i\)](#) through [\(iii\)](#) and [\(e\)\(1\)\(v\)](#) through [\(viii\)](#) of this section if the work stations controlled by that solvent recovery system are only always-controlled work stations; or
- (ii) In accordance with [paragraphs \(e\)\(1\)\(ii\)](#) through [\(iii\)](#), [\(e\)\(1\)\(v\)](#) through [\(vi\)](#), and [\(h\)](#) of this section if the work stations controlled by that solvent recovery system include one or more never-controlled or intermittently-controllable work stations.

(2) Solvent recovery system using performance test and continuous monitoring compliance demonstration. For each solvent recovery system used to control one or more coil coating stations for which you choose to comply by means of performance testing of capture efficiency, continuous emission monitoring of the control device, and continuous monitoring of a capture system operating parameter, each month of the 12-month compliance period you must meet the requirements of [paragraphs \(g\)\(2\)\(i\)](#) and [\(ii\)](#) of this section:

- (i) For each capture system delivering emissions to that solvent recovery system, monitor an operating parameter established in [§ 63.5150\(a\)\(4\)](#) to ensure that capture system efficiency is maintained; and
- (ii) Determine the organic HAP emissions for those work stations served by each capture system delivering emissions to that solvent recovery system according to either [paragraph \(g\)\(2\)\(ii\)\(A\)](#) or [\(B\)](#) of this section:
 - (A) In accordance with [paragraphs \(e\)\(2\)\(i\)](#) through [\(iii\)](#) and [\(e\)\(2\)\(v\)](#) through [\(viii\)](#) of this section if the work stations served by that capture system are only always-controlled coil coating stations; or
 - (B) In accordance with [paragraphs \(e\)\(2\)\(i\)](#) through [\(iii\)](#), [\(e\)\(2\)\(v\)](#) through [\(vii\)](#), and [\(h\)](#) of this section if the work stations served by that capture system include one or more never-controlled or intermittently-controllable work stations.

(3) Oxidizer using performance tests and continuous monitoring of operating parameters compliance demonstration. For each oxidizer used to control emissions from one or more work stations for which you choose to demonstrate compliance through performance tests of capture efficiency, control device efficiency, and continuous monitoring of capture system and control device operating parameters, each month of the 12-month compliance period you must meet the requirements of [paragraphs \(g\)\(3\)\(i\)](#) through [\(iii\)](#) of this section:

- (i) Monitor an operating parameter established in [§ 63.5150\(a\)\(3\)](#) to ensure that control device destruction or removal efficiency is maintained; and
- (ii) For each capture system delivering emissions to that oxidizer, monitor an operating parameter established in [§ 63.5150\(a\)\(4\)](#) to ensure capture efficiency; and

(iii) Determine the organic HAP emissions for those work stations served by each capture system delivering emissions to that oxidizer according to either [paragraph \(g\)\(3\)\(iii\)\(A\)](#) or [\(B\)](#) of this section:

(A) In accordance with [paragraphs \(f\)\(1\)\(i\)](#) through [\(v\)](#) and [\(ix\)](#) of this section if the work stations served by that capture system are only always-controlled work stations; or

(B) In accordance with [paragraphs \(f\)\(1\)\(i\)](#) through [\(v\)](#), [\(ix\)](#), and [\(h\)](#) of this section if the work stations served by that capture system include one or more never-controlled or intermittently-controllable work stations.

(4) Oxidizer using continuous emission monitoring compliance demonstration. For each oxidizer used to control emissions from one or more work stations for which you choose to demonstrate compliance through capture efficiency testing, continuous emission monitoring of the control device, and continuous monitoring of a capture system operating parameter, each month of the 12-month compliance period you must meet the requirements in [paragraphs \(g\)\(4\)\(i\)](#) and [\(ii\)](#) of this section:

(i) For each capture system delivering emissions to that oxidizer, monitor an operating parameter established in [§ 63.5150\(a\)\(4\)](#) to ensure capture efficiency; and

(ii) Determine the organic HAP emissions for those work stations served by each capture system delivering emissions to that oxidizer according to either [paragraph \(g\)\(4\)\(ii\)\(A\)](#) or [\(B\)](#) of this section:

(A) In accordance with [paragraphs \(e\)\(2\)\(i\)](#) through [\(iii\)](#) and [\(e\)\(2\)\(v\)](#) through [\(viii\)](#) of this section if the work stations served by that capture system are only always-controlled work stations; or

(B) In accordance with [paragraphs \(e\)\(2\)\(i\)](#) through [\(iii\)](#), [\(e\)\(2\)\(v\)](#) through [\(vii\)](#), and [\(h\)](#) of this section if the work stations served by that capture system include one or more never-controlled or intermittently-controllable work stations.

(5) Uncontrolled work stations. For uncontrolled work stations, each month of the 12-month compliance period you must determine the organic HAP applied on those work stations using Equation 9 of this section. The organic HAP emitted from an uncontrolled work station is equal to the organic HAP applied on that work station:

$$H_m = \sum_{A=1}^A \left(\sum_{i=1}^I C_{hi} M_{A_i} + \sum_{j=1}^J C_{hj} M_{A_{ij}} \right) \quad (\text{Eq. 9})$$

Where:

H_m = facility total monthly organic HAP applied on uncontrolled coil coating stations, kg.

C_{hi} = organic HAP content of coating material, i, expressed as a weight-fraction, kg/kg.

M_{Ai} = mass of coating material, i, applied on work station, A, in a month, kg.

C_{hij} = organic HAP content of solvent, j, added to coating material, i, expressed as a weight fraction, kg/kg.

M_{Aij} = mass of solvent, thinner, reducer, diluent, or other non-solids-containing coating material, j, added to solids-containing coating material, i, applied on work station, A, in a month, kg.

x = number of uncontrolled work stations in the facility.

p = number of different coating materials applied in a month.

q = number of different solvents, thinners, reducers, diluents, or other non-solids-containing coating materials applied in a month.

(6) If demonstrating compliance with the organic HAP emission rate based on solids applied, each month of the 12-month compliance period you must determine the solids content of each coating material applied during the month following the procedure in [§ 63.5160\(c\)](#).

(7) **Organic HAP emitted.** You must determine the organic HAP emissions for the affected source for each 12-month compliance period by summing all monthly organic HAP emissions calculated according to [paragraphs \(g\)\(1\)](#), [\(g\)\(2\)\(ii\)](#), [\(g\)\(3\)\(iii\)](#), [\(g\)\(4\)\(ii\)](#), and [\(g\)\(5\)](#) of this section.

(8) **Compare actual performance to performance required by compliance option.** The affected source is in compliance with [§ 63.5120\(a\)](#) for the 12-month compliance period if all operating parameters required to be monitored under [paragraphs \(g\)\(2\)](#) through [\(4\)](#) of this section were maintained at the values established in [§ 63.5150](#); and it meets the requirement in either [paragraph \(g\)\(8\)\(i\)](#) or [\(ii\)](#) of this section.

(i) The total mass of organic HAP emitted by the affected source was not more than 0.046 kg HAP per liter of solids applied for the 12-month compliance period; or

(ii) The total mass of organic HAP emitted by the affected source was not more than 2 percent of the total mass of organic HAP applied by the affected source each month. You must determine the total mass of organic HAP applied by the affected source in each month of the 12-month compliance period using Equation 9 of this section.

(h) **Organic HAP emissions from intermittently-controllable or never-controlled coil coating stations.** If you have been expressly referenced to this paragraph by [paragraphs \(g\)\(1\)\(ii\)](#), [\(g\)\(2\)\(ii\)\(B\)](#), [\(g\)\(3\)\(iii\)\(B\)](#), or [\(g\)\(4\)\(ii\)\(B\)](#) of this section for calculation procedures to determine organic HAP emissions, you must for your intermittently-controllable or never-controlled work stations meet the requirements of [paragraphs \(h\)\(1\)](#) through [\(6\)](#) of this section:

(1) Determine the sum of the mass of all solids-containing coating materials which are applied on intermittently-controllable work stations in bypass mode, and the mass of all solids-containing coating materials which are applied on never-controlled coil coating stations during each month of the 12-month compliance period, M_{Bi} .

(2) Determine the sum of the mass of all solvents, thinners, reducers, diluents, and other nonsolids-containing coating materials which are applied on intermittently-controllable work stations in bypass mode, and the mass of all solvents, thinners, reducers, diluents and other nonsolids-containing coating materials which are applied on never-controlled work stations during each month of the 12-month compliance period, M_{Bj} .

(3) Determine the sum of the mass of all solids-containing coating materials which are applied on intermittently-controllable work stations in controlled mode, and the mass of all solids-containing coating materials which are applied on always-controlled work stations during each month of the 12-month compliance period, M_{Ci} .

(4) Determine the sum of the mass of all solvents, thinners, reducers, diluents, and other nonsolids-containing coating materials which are applied on intermittently-controllable work stations in controlled mode, and the mass of all solvents, thinners, reducers, diluents, and other nonsolids-containing coating materials which are applied on always-controlled work stations during each month of the 12-month compliance period, M_{Cj} .

(5) **Liquid-liquid material balance calculation of HAP emitted.** For each work station or group of work stations for which you use the provisions of [paragraph \(g\)\(1\)\(ii\)](#) of this section, you must calculate the organic HAP emitted during the month using Equation 10 of this section:

$$H_e = \left[\sum_{i=1}^p M_{Ci} C_{hi} + \sum_{i=1}^q M_{Ci} C_{hi} \right] \left[1 - \frac{\sum_{k=1}^2 M_{k,w}}{\sum_{i=1}^p M_{Ci} C_{w,i} + \sum_{i=1}^q M_{Ci}} \right] + \left[\sum_{i=1}^p M_{Bi} C_{hi} + \sum_{i=1}^q M_{Bi} C_{hi} \right]$$

Where:

H_e = total monthly organic HAP emitted, kg.

M_{Ci} = sum of the mass of solids-containing coating material, i , applied on intermittently-controllable work stations operating in controlled mode and the mass of solids-containing coating material, i , applied on always-controlled work stations, in a month, kg.

C_{hi} = organic HAP content of coating material, i , expressed as a weight-fraction, kg/kg.

M_{cj} = sum of the mass of solvent, thinner, reducer, diluent, or other non-solids-containing coating material, j, applied on intermittently-controllable work stations operating in controlled mode and the mass of solvent, thinner, reducer, diluent, or other non-solids-containing coating material, j, applied on always-controlled work stations in a month, kg.

C_{hj} = organic HAP content of solvent, j, expressed as a weight fraction, kg/kg.

M_{kvr} = mass of volatile matter recovered in a month by solvent recovery device, k, kg.

C_{vi} = volatile matter content of coating material, i, expressed as a weight fraction, kg/kg.

M_{Bi} = sum of the mass of solids-containing coating material, i, applied on intermittently-controllable work stations operating in bypass mode and the mass of solids-containing coating material, i, applied on never-controlled work stations, in a month, kg.

M_{Bj} = sum of the mass of solvent, thinner, reducer, diluent, or other non-solids-containing coating material, j, applied on intermittently-controllable work stations operating in bypass mode and the mass of solvent, thinner, reducer, diluent, or other non-solids-containing coating material, j, applied on never-controlled work stations, in a month, kg.

p = number of different coating materials applied in a month.

q = number of different solvents, thinners, reducers, diluents, or other non-solids-containing coating materials applied in a month.

s = number of solvent recovery devices used to comply with the standard of [§ 63.5120 of this subpart](#), in the facility.

(6) **Control efficiency calculation of HAP emitted.** For each work station or group of work stations for which you use the provisions of [paragraphs \(g\)\(2\)\(ii\)\(B\)](#), [\(g\)\(3\)\(iii\)\(B\)](#), or [\(g\)\(4\)\(ii\)\(B\)](#) of this section, you must calculate the organic HAP emitted during the month, H_e , using Equation 11 of this section:

$$H_e = \sum_{A=1}^{w_i} \left[\left(\sum_{i=1}^p M_{ci} C_{hi} + \sum_{j=1}^q M_{cj} C_{hj} \right) (1 - DRE_k CE_A) \right] + \left[\sum_{i=1}^p M_{Bi} C_{hi} + \sum_{j=1}^q M_{Bj} C_{hj} \right]$$

Where:

H_e = total monthly organic HAP emitted, kg.

M_{ci} = sum of the mass of solids-containing coating material, i, applied on intermittently-controllable work stations operating in controlled mode and the mass of solids-containing coating material, i, applied on always-controlled work stations, in a month, kg.

C_{hi} = organic HAP content of coating material, i, expressed as a weight-fraction, kg/kg.

M_{cj} = sum of the mass of solvent, thinner, reducer, diluent, or other non-solids-containing coating material, j, applied on intermittently-controllable work stations operating in controlled mode and the mass of solvent, thinner, reducer, diluent, or other non-solids-containing coating material, j, applied on always-controlled work stations in a month, kg.

C_{hj} = organic HAP content of solvent, j, expressed as a weight fraction, kg/kg.

DRE_k = organic volatile matter destruction or removal efficiency of control device, k, percent.

CE_A = organic volatile matter capture efficiency of the capture system for work station, A, percent.

M_{Bi} = sum of the mass of solids-containing coating material, i, applied on intermittently-controllable work stations operating in bypass mode and the mass of solids-containing coating material, i, applied on never-controlled work stations, in a month, kg.

M_{Bj} = sum of the mass of solvent, thinner, reducer, diluent, or other non-solids-containing coating material, j, applied on intermittently-controllable work stations operating in bypass mode and the mass of solvent, thinner, reducer, diluent, or other non-solids-containing coating material, j, applied on never-controlled work stations, in a month, kg.

w_i = number of intermittently-controllable work stations in the facility.

p = number of different coating materials applied in a month.

q = number of different solvents, thinners, reducers, diluents, or other non-solids-containing coating materials applied in a month.

(i) *Capture and control system compliance demonstration procedures using a CPMS for a coil coating line.* If you use an add-on control device, to demonstrate compliance for each capture system and each control device through performance tests and continuous monitoring of capture system and control device operating parameters, you must meet the requirements in [paragraphs \(i\)\(1\) through \(3\)](#) of this section.

(1) Conduct performance tests according to the schedule in Table 1 to [§ 63.5160](#) to determine the control device destruction or removal efficiency, DRE, according to [§ 63.5160\(d\)](#) and Table 1 to [§ 63.5160](#).

(2) Determine the emission capture efficiency, CE, in accordance with [§ 63.5160\(e\)](#).

(3) Whenever a coil coating line is operated, continuously monitor the operating parameters established according to [§ 63.5150\(a\)\(3\)](#) and [\(4\)](#) to ensure capture and control efficiency.

[[67 FR 39812](#), June 10, 2002, as amended at [85 FR 10864](#), Feb. 25, 2020]

Reporting and Recordkeeping

§ 63.5180 What reports must I submit?

- (a) Submit the reports specified in [paragraphs \(b\)](#) through [\(i\)](#) of this section to the EPA Regional Office that serves the State or territory in which the affected source is located and to the delegated State agency:
- (b) You must submit an initial notification required in [§ 63.9\(b\)](#).
- (1) Submit an initial notification for an existing source no later than 2 years after June 10, 2002, or no later than 120 days after the source becomes subject to this subpart, whichever is later.
- (2) Submit an initial notification for a new or reconstructed source as required by [§ 63.9\(b\)](#).
- (3) For the purpose of this subpart, a title V permit application may be used in lieu of the initial notification required under [§ 63.9\(b\)](#), provided the same information is contained in the permit application as required by [§ 63.9\(b\)](#), and the State to which the permit application has been submitted has an approved operating permit program under [part 70 of this chapter](#) and has received delegation of authority from the EPA.
- (4) Submit a title V permit application used in lieu of the initial notification required under [§ 63.9\(b\)](#) by the same due dates as those specified in [paragraphs \(b\)\(1\)](#) and [\(2\)](#) of this section for the initial notifications.
- (c) You must submit a Notification of Performance Test as specified in [§§ 63.7](#) and [63.9\(e\)](#) if you are complying with the emission standard using a control device. This notification and the site-specific test plan required under [§ 63.7\(c\)\(2\)](#) must identify the operating parameter to be monitored to ensure that the capture efficiency measured during the performance test is maintained. You may consider the operating parameter identified in the site-specific test plan to be approved unless explicitly disapproved, or unless comments received from the Administrator require monitoring of an alternate parameter.
- (d) You must submit a Notification of Compliance Status as specified in [§ 63.9\(h\)](#). You must submit the Notification of Compliance Status no later than 30 calendar days following the end of the initial 12-month compliance period described in [§ 63.5130](#).
- (e) You must submit performance test reports as specified in [§ 63.10\(d\)\(2\)](#) if you are using a control device to comply with the emission standards and you have not obtained a waiver from the performance test requirement.
- (f) Before August 24, 2020, you must submit start-up, shutdown, and malfunction reports as specified in [§ 63.10\(d\)\(5\)](#) if you use a control device to comply with this subpart.

(1) Before August 24, 2020, if your actions during a start-up, shutdown, or malfunction of an affected source (including actions taken to correct a malfunction) are not completely consistent with the procedures specified in the source's start-up, shutdown, and malfunction plan specified in [§ 63.6 \(e\)\(3\)](#) and required before August 24, 2020, you must state such information in the report. The start-up, shutdown, or malfunction report will consist of a letter containing the name, title, and signature of the responsible official who is certifying its accuracy, that will be submitted to the Administrator. Separate start-up, shutdown, or malfunction reports are not required if the information is included in the report specified in [paragraph \(g\)](#) of this section. The start-up, shutdown, and malfunction plan and start-up, shutdown, and malfunction report are no longer required on and after August 24, 2020.

(2) [Reserved]

(g) You must submit semi-annual compliance reports containing the information specified in [paragraphs \(g\)\(1\)](#) and [\(2\)](#) of this section.

(1) Compliance report dates.

(i) The first semiannual reporting period begins 1 day after the end of the initial compliance period described in [§ 63.5130\(d\)](#) that applies to your affected source and ends 6 months later.

(ii) The first semiannual compliance report must cover the first semiannual reporting period and be postmarked or delivered no later than 30 days after the reporting period ends.

(iii) Each subsequent compliance report must cover the semiannual reporting period from January 1 through June 30 or the semiannual reporting period from July 1 through December 31.

(iv) Each subsequent compliance report must be postmarked or delivered no later than July 31 or January 31, whichever date is the first date following the end of the semiannual reporting period.

(v) For each affected source that is subject to permitting regulations pursuant to [40 CFR part 70](#) or part 71, and the permitting authority has established dates for submitting semiannual reports pursuant to [40 CFR 70.6\(a\)\(3\)\(iii\)\(A\)](#) or [40 CFR 71.6\(a\)\(3\)\(iii\)\(A\)](#), you may submit the first and subsequent compliance reports according to the dates the permitting authority has established instead of according to the dates in [paragraphs \(g\)\(1\)\(i\)](#) through [\(iv\)](#) of this section.

(2) The semi-annual compliance report must contain the following information:

(i) Company name and address.

(ii) Statement by a responsible official with that official's name, title, and signature, certifying the accuracy of the content of the report.

- (iii) Date of report and beginning and ending dates of the reporting period. The reporting period is the 6-month period ending on June 30 or December 31. Note that the information reported for each of the 6 months in the reporting period will be based on the last 12 months of data prior to the date of each monthly calculation.
- (iv) Identification of the compliance option or options specified in Table 1 to [§ 63.5170](#) that you used on each coating operation during the reporting period. If you switched between compliance options during the reporting period, you must report the beginning dates you used each option.
- (v) A statement that there were no deviations from the applicable emission limit in [§ 63.5120](#) or the applicable operating limit(s) established according to [§ 63.5121](#) during the reporting period, and that no CEMS were inoperative, inactive, malfunctioning, out-of-control, repaired, or adjusted.
- (h) You must submit, for each deviation occurring at an affected source where you are not using CEMS to comply with the standards in this subpart, the semi-annual compliance report containing the information in [paragraphs \(g\)\(2\)\(i\)](#) through [\(iv\)](#) of this section and the information in [paragraphs \(h\)\(1\)](#) through [\(4\)](#) of this section:
- (1) The total operating time of each affected source during the reporting period.
 - (2) Before August 24, 2020, you must provide information on the number, duration, and cause of deviations (including unknown cause, if applicable) as applicable, and the corrective action taken. On and after August 24, 2020, you must provide information on the number, date, time, duration, and cause of deviations from an emission limit in [§ 63.5120](#) or any applicable operating limit established according to [§ 63.5121](#) (including unknown cause, if applicable) as applicable, and the corrective action taken.
 - (3) Before August 24, 2020, you must provide information on the number, duration, and cause for continuous parameter monitoring system downtime incidents (including unknown cause other than downtime associated with zero and span and other daily calibration checks, if applicable). On and after August 24, 2020, you must provide the information specified in [paragraphs \(h\)\(3\)\(i\)](#) and [\(ii\)](#) of this section.
 - (i) Number, date, time, duration, cause (including unknown cause), and descriptions of corrective actions taken for continuous parameter monitoring systems that are inoperative (except for zero (low-level) and high-level checks).
 - (ii) Number, date, time, duration, cause (including unknown cause), and descriptions of corrective actions taken for continuous parameter monitoring systems that are out of control as specified in [§ 63.8\(c\)\(7\)](#).
 - (4) On and after August 24, 2020, for each deviation from an emission limit in [§ 63.5120](#) or any applicable operating limit established according to [§ 63.5121](#), you must provide a list of the affected source or equipment, an estimate of the quantity of each regulated pollutant

emitted over any emission limit in [§ 63.5120](#), a description of the method used to estimate the emissions, and the actions you took to minimize emissions in accordance with [§ 63.5140\(b\)](#).

(i) You must submit, for each deviation from the applicable emission limit in [§ 63.5120](#) or the applicable operation limit(s) established according to [§ 63.5121](#) occurring at an affected source where you are using CEMS to comply with the standards in this subpart, the semi-annual compliance report containing the information in [paragraphs \(g\)\(2\)\(i\)](#) through [\(iv\)](#) of this section, and the information in [paragraphs \(i\)\(1\)](#) through [\(12\)](#) of this section:

(1) The date and time that each malfunction of the capture system or add-on control devices started and stopped.

(2) Before August 24, 2020, the date and time that each CEMS was inoperative, except for zero (low-level) and high-level checks. On and after August 24, 2020, for each instance that the CEMS was inoperative, except for zero (low-level) and high-level checks, the date, time, and duration that the CEMS was inoperative; the cause (including unknown cause) for the CEMS being inoperative; and a description of corrective actions taken.

(3) Before August 24, 2020, the date and time that each CEMS was out-of-control, including the information in [§ 63.8\(c\)\(8\)](#). On and after August 24, 2020, for each instance that the CEMS was out-of-control, as specified in [§ 63.8\(c\)\(7\)](#), the date, time, and duration that the CEMS was out-of-control; the cause (including unknown cause) for the CEMS being out-of-control; and descriptions of corrective actions taken.

(4) Before August 24, 2020, the date and time that each deviation started and stopped, and whether each deviation occurred during a period of start-up, shutdown, or malfunction or during another period. On and after August 24, 2020, the date, time, and duration of each deviation from an emission limit in [§ 63.5120](#). For each deviation, an estimate of the quantity of each regulated pollutant emitted over any emission limit in [§ 63.5120](#) to this subpart, and a description of the method used to estimate the emissions.

(5) A summary of the total duration of the deviation during the reporting period, and the total duration as a percent of the total source operating time during that reporting period.

(6) Before August 24, 2020, a breakdown of the total duration of the deviations during the reporting period into those that are due to start-up, shutdown, control equipment problems, process problems, other known causes, and other unknown causes. On and after August 24, 2020, a breakdown of the total duration of the deviations during the reporting period into those that are due to control equipment problems, process problems, other known causes, and other unknown causes.

(7) A summary of the total duration of CEMS downtime during the reporting period, and the total duration of CEMS downtime as a percent of the total source operating time during that reporting period.

(8) A breakdown of the total duration of CEMS downtime during the reporting period into periods that are due to monitoring equipment malfunctions, nonmonitoring equipment malfunctions, quality assurance/quality control calibrations, other known causes, and other unknown causes.

(9) Before August 24, 2020, a brief description of the metal coil coating line. On and after August 24, 2020, a list of the affected source or equipment, including a brief description of the metal coil coating line.

(10) The monitoring equipment manufacturer(s) and model number(s).

(11) The date of the latest CEMS certification or audit.

(12) A description of any changes in CEMS, processes, or controls since the last reporting period.

[[67 FR 39812](#), June 10, 2002, as amended at [68 FR 12592](#), Mar. 17, 2003; [85 FR 10865](#), Feb. 25, 2020; [85 FR 73908](#), Nov. 19, 2020]

§ 63.5181 What are my electronic reporting requirements?

(a) Beginning no later than August 24, 2020, you must submit the results of each performance test as required in [§ 63.5180\(e\)](#) following the procedure specified in [paragraphs \(a\)\(1\) through \(3\)](#) of this section.

(1) For data collected using test methods supported by the EPA's Electronic Reporting Tool (ERT) as listed on the EPA's ERT website (<https://www.epa.gov/electronic-reporting-air-emissions/electronic-reporting-tool-ert>) at the time of the test, you must submit the results of the performance test to the EPA via the Compliance and Emissions Data Reporting Interface (CEDRI). The CEDRI interface can be accessed through the EPA's Central Data Exchange (CDX) (<https://cdx.epa.gov/>). Performance test data must be submitted in a file format generated through the use of the EPA's ERT or an alternate electronic file format consistent with the extensible markup language (XML) schema listed on the EPA's ERT website.

(2) For data collected using test methods that are not supported by the EPA's ERT as listed on the EPA's ERT website at the time of the test, you must submit the results of the performance test in portable document format (PDF) using the attachment module of the ERT.

(3) If you claim that some of the performance test information being submitted under [paragraph \(a\)\(1\)](#) of this section is confidential business information (CBI), you must submit a complete file generated through the use of the EPA's ERT or an alternate electronic file consistent with the XML schema listed on the EPA's ERT website, including information claimed to be CBI, on a compact disc, flash drive or other commonly used electronic storage medium to the EPA. The electronic medium must be clearly marked as CBI and mailed to U.S. EPA/OAQPS/CORE CBI Office, Attention: Group Leader, Measurement Policy Group,

MD C404-02, 4930 Old Page Rd., Durham, NC 27703. The same ERT or alternate file with the CBI omitted must be submitted to the EPA via the EPA's CDX as described in [paragraph \(a\)\(1\)](#) of this section.

(b) Beginning on August 24, 2020, the owner or operator shall submit the initial notifications required in [§ 63.9\(b\)](#) and the notification of compliance status required in [§§ 63.9\(h\)](#) and [63.5180\(d\)](#) to the EPA via the CEDRI. The CEDRI interface can be accessed through the EPA's CDX (<https://cdx.epa.gov>). The owner or operator must upload to CEDRI an electronic copy of each applicable notification in PDF. The applicable notification must be submitted by the deadline specified in this subpart, regardless of the method in which the reports are submitted. Owners or operators who claim that some of the information required to be submitted via CEDRI is CBI shall submit a complete report generated using the appropriate form in CEDRI or an alternate electronic file consistent with the XML schema listed on the EPA's CEDRI website, including information claimed to be CBI, on a compact disc, flash drive, or other commonly used electronic storage medium to the EPA. The electronic medium shall be clearly marked as CBI and mailed to U.S. EPA/OAQPS/CORE CBI Office, Attention: Group Leader, Measurement Policy Group, MD C404-02, 4930 Old Page Rd., Durham, NC 27703. The same file with the CBI omitted shall be submitted to the EPA via the EPA's CDX as described earlier in this paragraph.

(c) Beginning on March 25, 2021, or once the reporting template has been available on the CEDRI website for 1 year, whichever date is later, the owner or operator shall submit the semiannual compliance report required in [§ 63.5180\(g\)](#) through [\(i\)](#), as applicable, to the EPA via the CEDRI. The CEDRI interface can be accessed through the EPA's CDX (<https://cdx.epa.gov>). The owner or operator must use the appropriate electronic template on the CEDRI website for this subpart (<https://www.epa.gov/electronic-reporting-air-emissions/compliance-and-emissions-data-reporting-interface-cedri>). The date on which the report templates become available will be listed on the CEDRI website. If the reporting form for the semiannual compliance report specific to this subpart is not available in CEDRI at the time that the report is due, you must submit the report to the Administrator at the appropriate addresses listed in [§ 63.13](#). Once the form has been available in CEDRI for 1 year, you must begin submitting all subsequent reports via CEDRI. The reports must be submitted by the deadlines specified in this subpart, regardless of the method in which the reports are submitted. Owners or operators who claim that some of the information required to be submitted via CEDRI is CBI shall submit a complete report generated using the appropriate form in CEDRI, including information claimed to be CBI, on a compact disc, flash drive, or other commonly used electronic storage medium to the EPA. The electronic medium shall be clearly marked as CBI and mailed to U.S. EPA/OAQPS/CORE CBI Office, Attention: Group Leader, Measurement Policy Group, MD C404-02, 4930 Old Page Rd., Durham, NC 27703. The same file with the CBI omitted shall be submitted to the EPA via the EPA's CDX as described earlier in this paragraph.

(d) If you are required to electronically submit a report through the CEDRI in the EPA's CDX, you may assert a claim of EPA system outage for failure to timely comply with the reporting requirement. To assert a claim of EPA system outage, you must meet the requirements outlined in [paragraphs \(g\)\(1\)](#) through [\(7\)](#) of this section.

- (1) You must have been or will be precluded from accessing CEDRI and submitting a required report within the time prescribed due to an outage of either the EPA's CEDRI or CDX systems.
 - (2) The outage must have occurred within the period of time beginning five business days prior to the date that the submission is due.
 - (3) The outage may be planned or unplanned.
 - (4) You must submit notification to the Administrator in writing as soon as possible following the date you first knew, or through due diligence should have known, that the event may cause or caused a delay in reporting.
 - (5) You must provide to the Administrator a written description identifying:
 - (i) The date(s) and time(s) when CDX or CEDRI was accessed and the system was unavailable;
 - (ii) A rationale for attributing the delay in reporting beyond the regulatory deadline to the EPA system outage;
 - (iii) Measures taken or to be taken to minimize the delay in reporting; and
 - (iv) The date by which you propose to report, or if you have already met the reporting requirement at the time of the notification, the date you reported.
 - (6) The decision to accept the claim of EPA system outage and allow an extension to the reporting deadline is solely within the discretion of the Administrator.
 - (7) In any circumstance, the report must be submitted electronically as soon as possible after the outage is resolved.
- (e) If you are required to electronically submit a report through CEDRI in the EPA's CDX, you may assert a claim of force majeure for failure to timely comply with the reporting requirement. To assert a claim of force majeure, you must meet the requirements outlined in [paragraphs \(h\)\(1\) through \(5\)](#) of this section.
- (1) You may submit a claim if a force majeure event is about to occur, occurs, or has occurred or there are lingering effects from such an event within the period of time beginning five business days prior to the date the submission is due. For the purposes of this section, a force majeure event is defined as an event that will be or has been caused by circumstances beyond the control of the affected facility, its contractors, or any entity controlled by the affected facility that prevents you from complying with the requirement to submit a report electronically within the time period prescribed. Examples of such events are acts of nature (*e.g.*, hurricanes, earthquakes, or floods), acts of war or terrorism, or equipment failure or safety hazard beyond the control of the affected facility (*e.g.*, large scale power outage).

(2) You must submit notification to the Administrator in writing as soon as possible following the date you first knew, or through due diligence should have known, that the event may cause or has caused a delay in reporting.

(3) You must provide to the Administrator:

(i) A written description of the force majeure event;

(ii) A rationale for attributing the delay in reporting beyond the regulatory deadline to the force majeure event;

(iii) Measures taken or to be taken to minimize the delay in reporting; and

(iv) The date by which you propose to report, or if you have already met the reporting requirement at the time of the notification, the date you reported.

(4) The decision to accept the claim of force majeure and allow an extension to the reporting deadline is solely within the discretion of the Administrator.

(5) In any circumstance, the reporting must occur as soon as possible after the force majeure event occurs.

[[85 FR 10866](#), Feb. 25, 2020]

§ 63.5190 What records must I maintain?

(a) You must maintain the records specified in [paragraphs \(a\)](#) and [\(b\)](#) of this section in accordance with [§ 63.10\(b\)\(1\)](#):

(1) Records of the coating lines on which you used each compliance option and the time periods (beginning and ending dates and times) you used each option.

(2) Records specified in [§ 63.10\(b\)\(2\)](#) of all measurements needed to demonstrate compliance with this subpart, including:

(i) Continuous emission monitor data in accordance with [§ 63.5150\(a\)\(2\)](#);

(ii) Control device and capture system operating parameter data in accordance with [§ 63.5150\(a\)\(1\)](#), [\(3\)](#), and [\(4\)](#);

(iii) Organic HAP content data for the purpose of demonstrating compliance in accordance with [§ 63.5160\(b\)](#);

(iv) Volatile matter and solids content data for the purpose of demonstrating compliance in accordance with [§ 63.5160\(c\)](#);

(v) Overall control efficiency determination or alternative outlet HAP concentration using capture efficiency tests and control device destruction or removal efficiency tests in accordance with [§ 63.5160\(d\)](#), [\(e\)](#), and [\(f\)](#); and

(vi) Material usage, HAP usage, volatile matter usage, and solids usage and compliance demonstrations using these data in accordance with [§ 63.5170\(a\)](#), [\(b\)](#), and [\(d\)](#);

(3) Records specified in [§ 63.10\(b\)\(3\)](#); and

(4) Additional records specified in [§ 63.10\(c\)](#) for each continuous monitoring system operated by the owner or operator in accordance with [§ 63.5150\(a\)\(2\)](#).

(5) On and after August 24, 2020, for each deviation from an emission limitation reported under [§ 63.5180\(h\)](#) or [\(i\)](#), a record of the information specified in [paragraphs \(a\)\(5\)\(i\) through \(iv\)](#) of this section, as applicable.

(i) The date, time, and duration of the deviation, as reported under [§ 63.5180\(h\)](#) and [\(i\)](#).

(ii) A list of the affected sources or equipment for which the deviation occurred and the cause of the deviation, as reported under [§ 63.5180\(h\)](#) and [\(i\)](#).

(iii) An estimate of the quantity of each regulated pollutant emitted over any applicable emission limit in [§ 63.5120](#) to this subpart or any applicable operating limit established according to [§ 63.5121](#) to this subpart, and a description of the method used to calculate the estimate, as reported under [§ 63.5180\(h\)](#) and [\(i\)](#).

(iv) A record of actions taken to minimize emissions in accordance with [§ 63.5140\(b\)](#) and any corrective actions taken to return the affected unit to its normal or usual manner of operation.

(b) Maintain records of all liquid-liquid material balances that are performed in accordance with the requirements of [§ 63.5170](#).

(c) Any records required to be maintained by this subpart that are in reports that were submitted electronically via the EPA's CEDRI may be maintained in electronic format. This ability to maintain electronic copies does not affect the requirement for facilities to make records, data, and reports available upon request to a delegated air agency or the EPA as part of an on-site compliance evaluation.

[[67 FR 39812](#), June 10, 2002, as amended at [85 FR 10867](#), Feb. 25, 2020]

Delegation of Authority

§ 63.5200 What authorities may be delegated to the States?

(a) This subpart can be implemented and enforced by us, the EPA, or a delegated authority such as your State, local, or tribal agency. If the EPA Administrator has delegated authority to your State, local, or tribal agency, then that agency has the authority to implement and enforce this subpart. You should contact your EPA Regional Office to find out if this subpart is delegated to your State, local, or tribal agency.

(b) In delegating implementation and enforcement authority of this subpart to a State, local, or tribal agency under section [40 CFR part 63, subpart E](#), the authorities contained in [paragraph \(c\)](#) of this section are retained by the EPA Administrator and not transferred to the State, local, or tribal agency.

(c) Authority which will not be delegated to States, local, or tribal agencies:

(1) Approval of alternatives to the emission limitations in [§ 63.5120](#);

(2) Approval of major alternatives to test methods under [§ 63.7\(e\)\(2\)\(ii\)](#) and [\(f\)](#) and as defined in [§ 63.5160](#);

(3) Approval of major alternatives to monitoring under [§ 63.8\(f\)](#) and as defined in [§ 63.5150](#); and

(4) Approval of major alternatives to recordkeeping and reporting under [§ 63.10\(f\)](#) and as defined in [§§ 63.5180](#) and [63.5190](#).

§§ 63.5201-63.5209 [Reserved]

Table 1 to Subpart SSSS of Part 63—Operating Limits if Using Add-on Control Devices and Capture System

If you are required to comply with operating limits by [§ 63.5121](#), you must comply with the applicable operating limits in the following table:

For the following device . . .	You must meet the following operating limit . . .	And you must demonstrate continuous compliance with the operating limit by . . .
1. thermal oxidizer	a. the average combustion temperature in any 3-hour period must not fall below the combustion temperature limit established according to § 63.5160(d)(3)(i)	i. collecting the combustion temperature data according to § 63.5150(a)(3) ; ii. reducing the data to 3-hour block averages; and iii. maintaining the 3-hour average combustion temperature at or above the temperature limit.
2. catalytic oxidizer	a. the average temperature measured just before the catalyst bed in any 3-hour period must not	i. collecting the temperature data according to § 63.5150(a)(3) ; ii. reducing the data to 3-hour block averages;

For the following device . . .	You must meet the following operating limit . . .	And you must demonstrate continuous compliance with the operating limit by . . .
	fall below the limit established according to § 63.5160(d)(3)(ii) ; and either	and iii. maintaining the 3-hour average temperature before the catalyst bed at or above the temperature limit.
	b. ensure that the average temperature difference across the catalyst bed in any 3-hour period does not fall below the temperature difference limit established according to § 63.5160(d)(3)(ii) ; or	i. collecting the temperature data according to § 63.5150(a)(3) ; ii. reducing the data to 3-hour block averages; and iii. maintaining the 3-hour average temperature difference at or above the temperature difference limit.
	c. develop and implement an inspection and maintenance plan according to § 63.5160(d)(3)(ii)	maintaining an up-to-date inspection and maintenance plan, records of annual catalyst activity checks, records of monthly inspections of the oxidizer system, and records of the annual internal inspections of the catalyst bed. If a problem is discovered during a monthly or annual inspection required by § 63.5160(d)(3)(ii) , you must take corrective action as soon as practicable consistent with the manufacturer's recommendations.
3. emission capture system	develop a monitoring plan that identifies operating parameter to be monitored and specifies operating limits according to § 63.5150(a)(4)	conducting monitoring according to the plan § 63.5150(a)(4) .

Table 2 to Subpart SSSS of Part 63—Applicability of General Provisions to Subpart SSSS

You must comply with the applicable General Provisions requirements according to the following table:

General provisions reference	Subject	Applicable to subpart SSSS	Explanation
§ 63.1(a)(1)-(4)	General Applicability	Yes	
§ 63.1(a)(6)	Source Category Listing	Yes	
§ 63.1(a)(10)-(12)	Timing and Overlap Clarifications	Yes	

General provisions reference	Subject	Applicable to subpart SSSS	Explanation
§ 63.1(b)(1)	Initial Applicability Determination	Yes	Applicability to Subpart SSSS is also specified in § 63.5090 .
§ 63.1(b)(3)	Applicability Determination Recordkeeping	Yes	
§ 63.1(c)(1)	Applicability after Standard Established	Yes	
§ 63.1(c)(2)	Applicability of Permit Program for Area Sources	Yes	
§ 63.1(c)(5)	Extensions and Notifications	Yes	
§ 63.1(c)(6)		Yes	
§ 63.1(e)	Applicability of Permit Program Before Relevant Standard is Set	Yes	
§ 63.2	Definitions	Yes	Additional definitions are specified in § 63.5110 .
§ 63.3	Units and Abbreviations	Yes	
§ 63.4(a)(1)-(2)	Prohibited Activities	Yes	
§ 63.4(b)-(c)	Circumvention/Fragmentation	Yes	
§ 63.5(a)	Construction/Reconstruction	Yes	
§ 63.5(b)(1), (3), (4), (6)	Requirements for Existing, Newly Constructed, and Reconstructed Sources	Yes	
§ 63.5(d)(1)(i)-(ii)(F), (d)(1)(ii)(H), (d)(1)(ii)(J), (d)(1)(iii), (d)(2)-(4)	Application for Approval of Construction/Reconstruction	Yes	Only total HAP emissions in terms of tons per year are required for § 63.5(d)(1)(ii)(H) .
§ 63.5(e)	Approval of Construction/Reconstruction	Yes	
§ 63.5(f)	Approval of Construction/Reconstruction Based on Prior State Review	Yes	
§ 63.6(a)	Compliance with Standards and Maintenance Requirements-Applicability	Yes	

General provisions reference	Subject	Applicable to subpart SSSS	Explanation
§ 63.6(b)(1)-(5), (b)(7)	Compliance Dates for New and Reconstructed Sources	Yes	Section 63.5130 specifies the compliance dates.
§ 63.6(c)(1), (2), (5)	Compliance Dates for Existing Sources	Yes	Section 63.5130 specifies the compliance dates.
§ 63.6(e)(1)(i)-(ii)	General Duty to Minimize Emissions and Requirement to Correct Malfunctions As Soon As Possible	Yes before August 24, 2020. No on and after August 24, 2020	See § 63.5140(b) for general duty requirement.
§ 63.6(e)(1)(iii)	Operation and Maintenance Requirements	Yes	
§ 63.6(e)(3)(i), (e)(3)(iii)-(ix)	SSMP Requirements	Yes before August 24, 2020. No on and after August 24, 2020	
§ 63.6(f)(1)	SSM Exemption	Yes before August 24, 2020. No on and after August 24, 2020	See § 63.5140(b) for general duty requirement.
§ 63.6(f)(2)-(3)	Compliance with Non-Opacity Emission Standards	Yes	
§ 63.6(g)	Alternative Non-Opacity Emission Standard	Yes	
§ 63.6(h)	Compliance with Opacity/Visible Emission Standards	No	Subpart SSSS does not establish opacity standards or visible emission standards.
§ 63.6(i)(1)-(14), (i)(16)	Extension of Compliance and Administrator's Authority	Yes	
§ 63.6(j)	Presidential Compliance Exemption	Yes	

General provisions reference	Subject	Applicable to subpart SSSS	Explanation
§ 63.7(a)-(d) except (a)(2)(i)-(viii)	Performance Test Requirements	Yes	
§ 63.7(e)(1)	Performance Testing	Yes before August 24, 2020. No on and after August 24, 2020	See § 63.5160(d)(2).
§ 63.7(e)(2)-(4)	Conduct of Performance Tests	Yes	
§ 63.7(f)	Alternative Test Method	Yes	EPA retains approval authority.
§ 63.7(g)-(h)	Data Analysis and Waiver of Tests	Yes	
§ 63.8(a)(1)-(2)	Monitoring Requirements—Applicability	Yes	Additional requirements for monitoring are specified in § 63.5150(a).
§ 63.8(a)(4)	Additional Monitoring Requirements	No	Subpart SSSS does not have monitoring requirements for flares.
§ 63.8(b)	Conduct of Monitoring	Yes	
§ 63.8(c)(1)	Operation and Maintenance of Continuous Monitoring System (CMS)	Yes before August 24, 2020. No on and after August 24, 2020	Section 63.5150(a) specifies the requirements for the operation of CMS for capture systems and add-on control devices at sources using these to comply.
§ 63.8(c)(2)-(3)	CMS Operation and Maintenance	Yes	Applies only to monitoring of capture system and add-on control device efficiency at sources using these to comply with the standards. Additional requirements for CMS operations and

General provisions reference	Subject	Applicable to subpart SSSS	Explanation
			maintenance are specified in § 63.5170.
§ 63.8(c)(4)-(5)	CMS Continuous Operation Procedures	No	Subpart SSSS does not require COMS.
§ 63.8(c)(6)-(8)	CMS Requirements	Yes	Provisions only apply if CEMS are used.
§ 63.8(d)-(e)	CMS Quality Control, Written Procedures, and Performance Evaluation	Yes	Provisions only apply if CEMS are used.
§ 63.8(f)(1)-(5)	Use of an Alternative Monitoring Method	Yes	EPA retains approval authority.
§ 63.8(f)(6)	Alternative to Relative Accuracy Test	No	Section 63.8(f)(6) provisions are not applicable because subpart SSSS does not require CEMS.
§ 63.8(g)	Data Reduction	No	Sections 63.5170, 63.5140, 63.5150, and 63.5150 specify monitoring data reduction.
§ 63.9(a)	Notification of Applicability	Yes	
§ 63.9(b)(1)	Initial Notifications	Yes	
§ 63.9(b)(2)	Initial Notifications	Yes	With the exception that § 63.5180(b)(1) provides 2 years after the proposal date for submittal of the initial notification for existing sources.
§ 63.9(b)(4)(i), (b)(4)(v), (b)(5)	Application for Approval of Construction or Reconstruction	Yes	
§ 63.9(c)-(e)	Request for Extension of Compliance, New Source Notification for Special Compliance Requirements, and Notification of Performance Test	Yes	Notification of performance test requirement applies only to capture system and add-on control device performance tests at sources using these to comply with the standards.

General provisions reference	Subject	Applicable to subpart SSSS	Explanation
§ 63.9(f)	Notification of Visible Emissions/Opacity Test	No	Subpart SSSS does not require opacity and visible emissions observations.
§ 63.9(g)	Additional Notifications When Using CMS	No	Provisions for COMS are not applicable.
§ 63.9(h)(1)-(3)	Notification of Compliance Status	Yes	Section 63.5130 specifies the dates for submitting the notification of compliance status.
§ 63.9(h)(5)-(6)	Clarifications	Yes	
§ 63.9(i)	Adjustment of Submittal Deadlines	Yes	
§ 63.9(j)	Change in Previous Information	Yes	
§ 63.9(k)	Yes	Only as specified in § 63.9(j)	
§ 63.10(a)	Recordkeeping/Reporting—Applicability and General Information	Yes	
§ 63.10(b)(1)	General Recordkeeping Requirements	Yes	Additional requirements are specified in § 63.5190.
§ 63.10(b)(2)(i)-(ii)	Recordkeeping of Occurrence and Duration of Startups and Shutdowns and Recordkeeping of Failures to Meet Standards	Yes before August 24, 2020. No on and after August 24, 2020	See § 63.5190(a)(5).
§ 63.10(b)(2)(iii)	Maintenance Records	Yes	
§ 63.10(b)(2)(iv)-(v)	Actions Taken to Minimize Emissions During Startup, Shutdown, and Malfunction	Yes before August 24, 2020, No on and after August 24, 2020	See § 63.5190(a)(5).
§ 63.10(b)(2)(vi)	Recordkeeping for CMS Malfunctions	Yes before August 24, 2020, No on	See § 63.5190(a)(5).

General provisions reference	Subject	Applicable to subpart SSSS	Explanation
		and after August 24, 2020	
§ 63.10(b)(2)(vii)-(xiv)	Other CMS Requirements	Yes	
§ 63.10(b)(3)	Recordkeeping Requirements for Applicability Determinations	Yes	
§ 63.10(c)	Additional CMS Recordkeeping Requirements	No	See § 63.5190(a)(5).
§ 63.10(d)(1)-(2)	General Reporting Requirements and Report of Performance Test Results	Yes	Additional requirements are specified in § 63.5180(e).
§ 63.10(d)(3)	Reporting Opacity or Visible Emissions Observations	No	Subpart SSSS does not require opacity and visible emissions observations.
§ 63.10(d)(4)	Progress Reports for Sources with Compliance Extensions	Yes	
§ 63.10(d)(5)	Startup, Shutdown, Malfunction Reports	Yes before August 24, 2020. No on and after August 24, 2020	
§ 63.10(e)	Additional Reporting Requirements for Sources with CMS	No	
§ 63.10(f)	Recordkeeping/Reporting Waiver	Yes	
§ 63.11	Control Device Requirements/Flares	No	Subpart SSSS does not specify use of flares for compliance.
§ 63.12	State Authority and Delegations	Yes	
§ 63.13(a)	Addresses	Yes before August 24, 2020. No on and after August 24, 2020	
§ 63.13(b)	Submittal to State Agencies	Yes	

General provisions reference	Subject	Applicable to subpart SSSS	Explanation
§ 63.13(c)	Submittal to State Agencies	Yes before August 24, 2020. No unless the state requires the submittal via CEDRI, on and after August 24, 2020	
§ 63.14	Incorporation by Reference	Yes	Subpart SSSS includes provisions for alternative ASTM and ASME test methods that are incorporated by reference.
§ 63.15	Availability of Information/Confidentiality	Yes	

[[85 FR 10868](#), Feb. 25, 2020, as amended at [85 FR 73908](#), Nov. 19, 2020]

Table 3 to Subpart SSSS of Part 63—List of Hazardous Air Pollutants That Must Be Counted Toward Total Organic HAP Content if Present at 0.1 Percent or More by Mass

Chemical name	CAS No.
1,1,2,2-Tetrachloroethane	79-34-5
1,1,2-Trichloroethane	79-00-5
1,1-Dimethylhydrazine	57-14-7
1,2-Dibromo-3-chloropropane	96-12-8
1,2-Diphenylhydrazine	122-66-7
1,3-Butadiene	106-99-0
1,3-Dichloropropene	542-75-6
1,4-Dioxane	123-91-1
2,4,6-Trichlorophenol	88-06-2
2,4/2,6-Dinitrotoluene (mixture)	25321-14-6
2,4-Dinitrotoluene	121-14-2

Chemical name	CAS No.
2,4-Toluene diamine	95-80-7
2-Nitropropane	79-46-9
3,3'-Dichlorobenzidine	91-94-1
3,3'-Dimethoxybenzidine	119-90-4
3,3'-Dimethylbenzidine	119-93-7
4,4'-Methylene bis(2-chloroaniline)	101-14-4
Acetaldehyde	75-07-0
Acrylamide	79-06-1
Acrylonitrile	107-13-1
Allyl chloride	107-05-1
alpha-Hexachlorocyclohexane (a-HCH)	319-84-6
Aniline	62-53-3
Benzene	71-43-2
Benzidine	92-87-5
Benzotrichloride	98-07-7
Benzyl chloride	100-44-7
beta-Hexachlorocyclohexane (b-HCH)	319-85-7
Bis(2-ethylhexyl)phthalate	117-81-7
Bis(chloromethyl)ether	542-88-1
Bromoform	75-25-2
Captan	133-06-2
Carbon tetrachloride	56-23-5
Chlordane	57-74-9
Chlorobenzilate	510-15-6
Chloroform	67-66-3
Chloroprene	126-99-8
Cresols (mixed)	1319-77-3
DDE	3547-04-4
Dichloroethyl ether	111-44-4
Dichlorvos	62-73-7
Epichlorohydrin	106-89-8
Ethyl acrylate	140-88-5
Ethylene dibromide	106-93-4
Ethylene dichloride	107-06-2
Ethylene oxide	75-21-8

Chemical name	CAS No.
Ethylene thiourea	96-45-7
Ethylidene dichloride (1,1-Dichloroethane)	75-34-3
Formaldehyde	50-00-0
Heptachlor	76-44-8
Hexachlorobenzene	118-74-1
Hexachlorobutadiene	87-68-3
Hexachloroethane	67-72-1
Hydrazine	302-01-2
Isophorone	78-59-1
Lindane (hexachlorocyclohexane, all isomers)	58-89-9
m-Cresol	108-39-4
Methylene chloride	75-09-2
Naphthalene	91-20-3
Nitrobenzene	98-95-3
Nitrosodimethylamine	62-75-9
o-Cresol	95-48-7
o-Toluidine	95-53-4
Parathion	56-38-2
p-Cresol	106-44-5
p-Dichlorobenzene	106-46-7
Pentachloronitrobenzene	82-68-8
Pentachlorophenol	87-86-5
Propoxur	114-26-1
Propylene dichloride	78-87-5
Propylene oxide	75-56-9
Quinoline	91-22-5
Tetrachloroethene	127-18-4
Toxaphene	8001-35-2
Trichloroethylene	79-01-6
Trifluralin	1582-09-8
Vinyl bromide	593-60-2
Vinyl chloride	75-01-4
Vinylidene chloride	75-35-4

[[85 FR 10870](#), Feb. 25, 2020]

Appendix H

40 C.F.R. Part 63 Subpart CCC

National Emission Standards for Hazardous Air Pollutants for Steel Pickling – HCl Process Facilities and Hydrochloric Acid Regeneration Plants

Subpart CCC—National Emission Standards for Hazardous Air Pollutants for Steel Pickling—HCl Process Facilities and Hydrochloric Acid Regeneration Plants

Source: [64 FR 33218](#), June 22, 1999, unless otherwise noted.

§ 63.1155 Applicability.

(a) The provisions of this subpart apply to the following facilities and plants that are major sources for hazardous air pollutants (HAP) or are parts of facilities that are major sources for HAP:

(1) All new and existing steel pickling facilities that pickle carbon steel using hydrochloric acid solution that contains 6 percent or more by weight HCl and is at a temperature of 100 °F or higher; and

(2) All new and existing hydrochloric acid regeneration plants.

(3) The provisions of this subpart do not apply to facilities that pickle carbon steel without using hydrochloric acid, to facilities that pickle only specialty steel, or to acid regeneration plants that regenerate only acids other than hydrochloric acid.

(b) For the purposes of implementing this subpart, the affected sources at a facility or plant subject to this subpart are as follows: Continuous and batch pickling lines, hydrochloric acid regeneration plants, and hydrochloric acid storage vessels.

(c) Table 1 to this subpart specifies the provisions of this part 63, subpart A that apply and those that do not apply to owners and operators of steel pickling facilities and hydrochloric acid regeneration plants subject to this subpart.

(d) In response to an action to enforce the standards set forth in this subpart, the owner or operator may assert an affirmative defense to a claim for civil penalties for violations of such standards that are caused by a malfunction, as defined in [§ 63.2](#). Appropriate penalties may be assessed, however, if the owner or operator fails to meet the burden of proving all the requirements in the affirmative defense. The affirmative defense shall not be available for claims for injunctive relief.

(1) To establish the affirmative defense in any action to enforce such a standard, the owner or operator must timely meet the reporting requirements of [paragraph \(d\)\(2\)](#) of this section, and must prove by a preponderance of evidence that:

(i) The violation was caused by a sudden, infrequent, and unavoidable failure of air pollution control equipment, process equipment, or a process to operate in a normal and usual manner; and could not have been prevented through careful planning, proper design, or better operation and maintenance practices; and did not stem from any activity or event that could have been foreseen

and avoided, or planned for; and was not part of a recurring pattern indicative of inadequate design, operation, or maintenance; and

(ii) Repairs were made as expeditiously as possible when exceeded violation occurred. Off-shift and overtime labor were used, to the extent practicable to make these repairs; and

(iii) The frequency, amount, and duration of the violation (including any bypass) were minimized to the maximum extent practicable; and

(iv) If the violation resulted from a bypass of control equipment or a process, then the bypass was unavoidable to prevent loss of life, personal injury, or severe property damage; and

(v) All possible steps were taken to minimize the impact of the violation on ambient air quality, the environment, and human health; and

(vi) All emissions monitoring and control systems were kept in operation if at all possible, consistent with safety and good air pollution control practices; and

(vii) All of the actions in response to the violation were documented by properly signed, contemporaneous operating logs; and

(viii) At all times, the affected source was operated in a manner consistent with good practices for minimizing emissions; and

(ix) A written root cause analysis has been prepared, the purpose of which is to determine, correct, and eliminate the primary causes of the malfunction and the violation resulting from the malfunction event at issue. The analysis shall also specify, using the best monitoring methods and engineering judgment, the amount of excess emissions that were the result of the malfunction.

(2) **Report.** The owner of operator seeking to assert an affirmative defense shall submit a written report to the Administrator with all necessary supporting documentation, that it has met the requirements set forth in [paragraph \(d\)\(1\)](#) of this section. This affirmative defense report shall be included in the first periodic compliance, deviation report or excess emission report otherwise required after the initial occurrence of the violation of the relevant standard (which may be the end of any applicable averaging period). If such compliance, deviation report or excess emission report is due less than 45 days after the initial occurrence of the violation, the affirmation defense report may be included in the second compliance, deviation report or excess emission report due after the initial occurrence of the violation of the relevant standard.

[[64 FR 33218](#), June 22, 1999, as amended at [77 FR 58250](#), Sept. 19, 2012]

§ 63.1156 Definitions.

Terms used in this subpart are defined in the Clean Air Act, in [subpart A of this part](#), or in this section as follows:

Affirmative defense means, in the context of an enforcement proceeding, a response or a defense put forward by a defendant, regarding which the defendant has the burden of proof, and the merits of which are independently and objectively evaluated in a judicial or administrative proceeding.

Batch pickling line means the collection of equipment and tanks configured for pickling metal in any form but usually in discrete shapes where the material is lowered in batches into a bath of acid solution, allowed to remain until the scale is dissolved, then removed from the solution, drained, and rinsed by spraying or immersion in one or more rinse tanks to remove residual acid.

Carbon steel means steel that contains approximately 2 percent or less carbon, 1.65 percent or less manganese, 0.6 percent or less silicon, and 0.6 percent or less copper.

Closed-vent system means a system that is not open to the atmosphere and that is composed of piping, ductwork, connections, and, if necessary, flow-inducing devices that transport emissions from a process unit or piece of equipment (e.g., pumps, pressure relief devices, sampling connections, open-ended valves or lines, connectors, and instrumentation systems) back into a closed system or into any device that is capable of reducing or collecting emissions.

Continuous pickling line means the collection of equipment and tanks configured for pickling metal strip, rod, wire, tube, or pipe that is passed through an acid solution in a continuous or nearly continuous manner and rinsed in another tank or series of tanks to remove residual acid. This definition includes continuous spray towers.

Hydrochloric acid regeneration plant means the collection of equipment and processes configured to reconstitute fresh hydrochloric acid pickling solution from spent pickle liquor using a thermal treatment process.

Hydrochloric acid regeneration plant production mode means operation under conditions that result in production of usable regenerated acid or iron oxide.

Hydrochloric acid storage vessel means a stationary vessel used for the bulk containment of virgin or regenerated hydrochloric acid.

Responsible maintenance official means a person designated by the owner or operator as having the knowledge and the authority to sign records and reports required under this rule.

Specialty steel means a category of steel that includes silicon electrical, alloy, tool, and stainless steels.

Spray tower means an enclosed vertical tower in which acid pickling solution is sprayed onto moving steel strip in multiple vertical passes.

Steel pickling means the chemical removal of iron oxide mill scale that is formed on steel surfaces during hot rolling or hot forming of semi-finished steel products through contact with an aqueous solution of acid where such contact occurs prior to shaping or coating of the finished steel product. This definition does not include removal of light rust or scale from finished steel products or activation of the metal surface prior to plating or coating.

Steel pickling facility means any facility that operates one or more batch or continuous steel pickling lines.

[[64 FR 33218](#), June 22, 1999, as amended at [77 FR 58250](#), Sept. 19, 2012]

§ 63.1157 Emission standards for existing sources.

(a) ***Pickling lines.*** No owner or operator of an existing affected continuous or batch pickling line at a steel pickling facility shall cause or allow to be discharged into the atmosphere from the affected pickling line:

(1) Any gases that contain HCl in a concentration in excess of 18 parts per million by volume (ppmv); or

(2) HCl at a mass emission rate that corresponds to a collection efficiency of less than 97 percent.

(b) ***Hydrochloric acid regeneration plants.***

(1) No owner or operator of an existing affected plant shall cause or allow to be discharged into the atmosphere from the affected plant any gases that contain HCl in a concentration greater than 25 ppmv.

(2) In addition to the requirement of [paragraph \(b\)\(1\)](#) of this section, no owner or operator of an existing plant shall cause or allow to be discharged into the atmosphere from the affected plant any gases that contain chlorine (Cl₂) in a concentration in excess of 6 ppmv.

[[64 FR 33218](#), June 22, 1999, as amended at [77 FR 58250](#), Sept. 19, 2012]

§ 63.1158 Emission standards for new or reconstructed sources.

(a) ***Pickling lines*** —

(1) ***Continuous pickling lines.*** No owner or operator of a new or reconstructed affected continuous pickling line at a steel pickling facility shall cause or allow to be discharged into the atmosphere from the affected pickling line:

(i) Any gases that contain HCl in a concentration in excess of 6 ppmv; or

(ii) HCl at a mass emission rate that corresponds to a collection efficiency of less than 99 percent.

(2) **Batch pickling lines.** No owner or operator of a new or reconstructed affected batch pickling line at a steel pickling facility shall cause or allow to be discharged into the atmosphere from the affected pickling line:

(i) Any gases that contain HCl in a concentration in excess of 18 ppmv; or

(ii) HCl at a mass emission rate that corresponds to a collection efficiency of less than 97 percent.

(b) **Hydrochloric acid regeneration plants.**

(1) No owner or operator of a new or reconstructed affected plant shall cause or allow to be discharged into the atmosphere from the affected plant any gases that contain HCl in a concentration greater than 12 ppmv.

(2) In addition to the requirement of [paragraph \(b\)\(1\)](#) of this section, no owner or operator of a new or reconstructed affected plant shall cause or allow to be discharged into the atmosphere from the affected plant any gases that contain Cl₂ in a concentration in excess of 6 ppmv.

§ 63.1159 Operational and equipment standards for existing, new, or reconstructed sources.

(a) **Hydrochloric acid regeneration plant.** The owner or operator of an affected plant must operate the affected plant at all times while in production mode in a manner that minimizes the proportion of excess air fed to the process and maximizes the process offgas temperature consistent with producing usable regenerated acid or iron oxide.

(b) **Hydrochloric acid storage vessels.** The owner or operator of an affected vessel shall provide and operate, except during loading and unloading of acid, a closed-vent system for each vessel. Loading and unloading shall be conducted either through enclosed lines or each point where the acid is exposed to the atmosphere shall be equipped with a local fume capture system, ventilated through an air pollution control device.

(c) **General duty to minimize emissions.** At all times, each owner or operator must operate and maintain any affected source subject to the requirements of this subpart, including associated air pollution control equipment and monitoring equipment in a manner consistent with safety and good air pollution control practices for minimizing emissions. The general duty to minimize emissions does not require the owner or operator to make any further efforts to reduce emissions if levels required by this standard have been achieved. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Administrator which may include, but is not limited to, monitoring results, review of operation

and maintenance procedures, review of operation and maintenance records, and inspection of the source.

[[64 FR 33218](#), June 22, 1999, as amended at [77 FR 58250](#), Sept. 19, 2012]

§ 63.1160 Compliance dates and maintenance requirements.

(a) *Compliance dates.*

(1) The owner or operator of an affected existing steel pickling facility and/or hydrochloric acid regeneration plant subject to this subpart shall achieve initial compliance with the requirements of this subpart no later than June 22, 2001.

(2) The owner or operator of a new or reconstructed steel pickling facility and/or hydrochloric acid regeneration plant subject to this subpart that commences construction or reconstruction after September 18, 1997, shall achieve compliance with the requirements of this subpart immediately upon startup of operations or by June 22, 1999, whichever is later.

(b) *Maintenance requirements.*

(1) The owner or operator shall prepare an operation and maintenance plan for each emission control device to be implemented no later than the compliance date. The plan shall be incorporated by reference into the source's title V permit. All such plans must be consistent with good maintenance practices, and, for a scrubber emission control device, must at a minimum:

(i) Require monitoring and recording the pressure drop across the scrubber once per shift while the scrubber is operating in order to identify changes that may indicate a need for maintenance;

(ii) Require the manufacturer's recommended maintenance at the recommended intervals on fresh solvent pumps, recirculating pumps, discharge pumps, and other liquid pumps, in addition to exhaust system and scrubber fans and motors associated with those pumps and fans;

(iii) Require cleaning of the scrubber internals and mist eliminators at intervals sufficient to prevent buildup of solids or other fouling;

(iv) Require an inspection of each scrubber at intervals of no less than 3 months with:

(A) Cleaning or replacement of any plugged spray nozzles or other liquid delivery devices;

(B) Repair or replacement of missing, misaligned, or damaged baffles, trays, or other internal components;

(C) Repair or replacement of droplet eliminator elements as needed;

(D) Repair or replacement of heat exchanger elements used to control the temperature of fluids entering or leaving the scrubber; and

(E) Adjustment of damper settings for consistency with the required air flow.

(v) If the scrubber is not equipped with a viewport or access hatch allowing visual inspection, alternate means of inspection approved by the Administrator may be used.

(vi) The owner or operator shall initiate procedures for corrective action within 1 working day of detection of an operating problem and complete all corrective actions as soon as practicable. Procedures to be initiated are the applicable actions that are specified in the maintenance plan. Failure to initiate or provide appropriate repair, replacement, or other corrective action is a violation of the maintenance requirement of this subpart.

(vii) The owner or operator shall maintain a record of each inspection, including each item identified in [paragraph \(b\)\(2\)\(iv\)](#) of this section, that is signed by the responsible maintenance official and that shows the date of each inspection, the problem identified, a description of the repair, replacement, or other corrective action taken, and the date of the repair, replacement, or other corrective action taken.

(2) The owner or operator of each hydrochloric acid regeneration plant shall develop and implement a written maintenance program. The program shall require:

(i) Performance of the manufacturer's recommended maintenance at the recommended intervals on all required systems and components;

(ii) Initiation of procedures for appropriate and timely repair, replacement, or other corrective action within 1 working day of detection; and

(iii) Maintenance of a daily record, signed by a responsible maintenance official, showing the date of each inspection for each requirement, the problems found, a description of the repair, replacement, or other action taken, and the date of repair or replacement.

[[64 FR 33218](#), June 22, 1999, as amended at [77 FR 58250](#), Sept. 19, 2012]

§ 63.1161 Performance testing and test methods.

(a) ***Demonstration of compliance.*** The owner or operator shall conduct an initial performance test for each process or emission control device to determine and demonstrate compliance with the applicable emission limitation according to the requirements in [§ 63.7](#) of [subpart A of this part](#) and in this section. Performance tests shall be conducted under such conditions as the Administrator specifies to the owner or operator based on representative performance of the affected source for the period being tested. Upon request, the owner or operator shall make available to the Administrator such records as may be necessary to determine the conditions of performance tests.

(b) ***Establishment of scrubber operating parameters.*** During the performance test for each emission control device, the owner or operator using a wet scrubber to achieve compliance shall

establish site-specific operating parameter values for the minimum scrubber makeup water flow rate and, for scrubbers that operate with recirculation, the minimum recirculation water flow rate. During the emission test, each operating parameter must be monitored continuously and recorded with sufficient frequency to establish a representative average value for that parameter, but no less frequently than once every 15 minutes. The owner or operator shall determine the operating parameter monitoring values as the averages of the values recorded during any of the runs for which results are used to establish the emission concentration or collection efficiency per [paragraph \(a\)\(2\)](#) of this section. An owner or operator may conduct multiple performance tests to establish alternative compliant operating parameter values. Also, an owner or operator may reestablish compliant operating parameter values as part of any performance test that is conducted subsequent to the initial test or tests.

(c) *Establishment of hydrochloric acid regeneration plant operating parameters.*

(1) During the performance test for hydrochloric acid regeneration plants, the owner or operator shall establish site-specific operating parameter values for the minimum process offgas temperature and the maximum proportion of excess air fed to the process as described in [§ 63.1162\(b\)\(1\) of this subpart](#). During the emission test, each operating parameter must be monitored and recorded with sufficient frequency to establish a representative average value for that parameter, but no less frequently than once every 15 minutes for parameters that are monitored continuously. Amount of iron in the spent pickle liquor shall be determined for each run by sampling the liquor every 15 minutes and analyzing a composite of the samples. The owner or operator shall determine the compliant monitoring values as the averages of the values recorded during any of the runs for which results are used to establish the emission concentration per [paragraph \(a\)\(2\)](#) of this section. An owner or operator may conduct multiple performance tests to establish alternative compliant operating parameter values. Also, an owner or operator may reestablish compliant operating parameter values as part of any performance test that is conducted subsequent to the initial test or tests.

(2) [Reserved]

(d) *Test methods.*

(1) The following test methods in appendix A of [40 CFR part 60](#) shall be used to determine compliance under [§§ 63.1157\(a\), 63.1157\(b\), 63.1158\(a\), and 63.1158\(b\) of this subpart](#):

- (i) Method 1, to determine the number and location of sampling points, with the exception that no traverse point shall be within one inch of the stack or duct wall;
- (ii) Method 2, to determine gas velocity and volumetric flow rate;
- (iii) Method 3, to determine the molecular weight of the stack gas;
- (iv) Method 4, to determine the moisture content of the stack gas; and

(v) Method 26A, “Determination of Hydrogen Halide and Halogen Emissions from Stationary Sources—Isokinetic Method,” to determine the HCl mass flows at the inlet and outlet of a control device or the concentration of HCl discharged to the atmosphere, and also to determine the concentration of Cl₂ discharged to the atmosphere from acid regeneration plants. If compliance with a collection efficiency standard is being demonstrated, inlet and outlet measurements shall be performed simultaneously. The minimum sampling time for each run shall be 60 minutes and the minimum sample volume 0.85 dry standard cubic meters (30 dry standard cubic feet). The concentrations of HCl and Cl₂ shall be calculated for each run as follows:

$$C_{\text{HCl}} (\text{ppmv}) = 0.659 C_{\text{HCl}} (\text{mg/dscm}),$$

$$\text{and } C_{\text{Cl}_2} (\text{ppmv}) = 0.339 C_{\text{Cl}_2} (\text{mg/dscm}),$$

where C(ppmv) is concentration in ppmv and C(mg/dscm) is concentration in milligrams per dry standard cubic meter as calculated by the procedure given in Method 26A.

(2) The owner or operator may use equivalent alternative measurement methods approved by the Administrator.

[[64 FR 33218](#), June 22, 1999, as amended at [77 FR 58251](#), Sept. 19, 2012]

§ 63.1162 Monitoring requirements.

(a) The owner or operator of a new, reconstructed, or existing steel pickling facility or acid regeneration plant subject to this subpart shall:

(1) Conduct performance tests to measure the HCl mass flows at the control device inlet and outlet or the concentration of HCl exiting the control device according to the procedures described in [§ 63.1161 of this subpart](#). Performance tests shall be conducted either annually or according to an alternative schedule that is approved by the applicable permitting authority, but no less frequently than every 2 1/2 years or twice per title V permit term. If any performance test shows that the HCl emission limitation is being exceeded, then the owner or operator is in violation of the emission limit.

(2) In addition to conducting performance tests, if a wet scrubber is used as the emission control device, install, operate, and maintain systems for the measurement and recording of the scrubber makeup water flow rate and, if required, recirculation water flow rate. These flow rates must be monitored continuously and recorded at least once per shift while the scrubber is operating. Operation of the wet scrubber with excursions of scrubber makeup water flow rate and recirculation water flow rate less than the minimum values established during the performance test or tests will require initiation of corrective action as specified by the maintenance requirements in [§ 63.1160\(b\)\(2\) of this subpart](#).

(3) If an emission control device other than a wet scrubber is used, install, operate, and maintain systems for the measurement and recording of the appropriate operating parameters.

(4) Failure to record each of the operating parameters listed in [paragraph \(a\)\(2\)](#) of this section is a violation of the monitoring requirements of this subpart.

(5) Each monitoring device shall be certified by the manufacturer to be accurate to within 5 percent and shall be calibrated in accordance with the manufacturer's instructions but not less frequently than once per year.

(6) The owner or operator may develop and implement alternative monitoring requirements subject to approval by the Administrator.

(b) The owner or operator of a new, reconstructed, or existing acid regeneration plant subject to this subpart shall also install, operate, and maintain systems for the measurement and recording of the:

(1) Process offgas temperature, which shall be monitored continuously and recorded at least once every shift while the facility is operating in production mode; and

(2) Parameters from which proportion of excess air is determined. Proportion of excess air shall be determined by a combination of total air flow rate, fuel flow rate, spent pickle liquor addition rate, and amount of iron in the spent pickle liquor, or by any other combination of parameters approved by the Administrator in accordance with [§ 63.8\(f\)](#) of [subpart A of this part](#). Proportion of excess air shall be determined and recorded at least once every shift while the plant is operating in production mode.

(3) Each monitoring device must be certified by the manufacturer to be accurate to within 5 percent and must be calibrated in accordance with the manufacturer's instructions but not less frequently than once per year.

(4) Operation of the plant with the process offgas temperature lower than the value established during performance testing or with the proportion of excess air greater than the value established during performance testing is a violation of the operational standard specified in [§ 63.1159\(a\) of this subpart](#).

(c) The owner or operator of an affected hydrochloric acid storage vessel shall inspect each vessel semiannually to determine that the closed-vent system and either the air pollution control device or the enclosed loading and unloading line, whichever is applicable, are installed and operating when required.

§ 63.1163 Notification requirements.

(a) **Initial notifications.** As required by [§ 63.9\(b\)](#) of [subpart A of this part](#), the owner or operator shall submit the following written notifications to the Administrator:

- (1) The owner or operator of an area source that subsequently becomes subject to the requirements of the standard shall provide notification to the applicable permitting authority as required by [§ 63.9\(b\)\(1\)](#) of [subpart A of this part](#).
- (2) As required by [§ 63.9\(b\)\(2\)](#) of [subpart A of this part](#), the owner or operator of an affected source that has an initial startup before June 22, 1999, shall notify the Administrator that the source is subject to the requirements of the standard. The notification shall be submitted not later than October 20, 1999 (or within 120 calendar days after the source becomes subject to this standard), and shall contain the information specified in [§§ 63.9\(b\)\(2\)\(i\)](#) through [63.9\(b\)\(2\)\(v\)](#) of [subpart A of this part](#).
- (3) As required by [§ 63.9\(b\)\(3\)](#) of [subpart A of this part](#), the owner or operator of a new or reconstructed affected source, or a source that has been reconstructed such that it is an affected source, that has an initial startup after the effective date and for which an application for approval of construction or reconstruction is not required under [§ 63.5\(d\)](#) of [subpart A of this part](#), shall notify the Administrator in writing that the source is subject to the standards no later than 120 days after initial startup, or no later than 120 days after the source becomes subject to this subpart, whichever is later. The notification shall contain the information specified in [§§ 63.9\(b\)\(2\)\(i\)](#) through [\(v\)](#) of [subpart A of this part](#), delivered or postmarked with the notification required in [§ 63.9\(b\)\(5\)](#) of [subpart A of this part](#).
- (4) As required by [§ 63.9\(b\)\(4\)](#) of [subpart A of this part](#), the owner or operator of a new or reconstructed major affected source that has an initial startup after June 22, 1999, and for which an application for approval of construction or reconstruction is required under [§ 63.5\(d\)](#) of [subpart A of this part](#) shall provide the information specified in [§§ 63.9\(b\)\(4\)\(i\)](#) through [63.9\(b\)\(4\)\(v\)](#) of [subpart A of this part](#).
- (5) As required by [§ 63.9\(b\)\(5\)](#) of [subpart A of this part](#), the owner or operator who, after June 22, 1999, intends to construct a new affected source or reconstruct an affected source subject to this standard, or reconstruct a source such that it becomes an affected source subject to this standard, shall notify the Administrator, in writing, of the intended construction or reconstruction.
- (b) ***Request for extension of compliance.*** As required by [§ 63.9\(c\)](#) of [subpart A of this part](#), if the owner or operator of an affected source cannot comply with this standard by the applicable compliance date for that source, or if the owner or operator has installed BACT or technology to meet LAER consistent with [§ 63.6\(i\)\(5\)](#) of [subpart A of this part](#), he/she may submit to the Administrator (or the State with an approved permit program) a request for an extension of compliance as specified in [§§ 63.6\(i\)\(4\)](#) through [63.6\(i\)\(6\)](#) of [subpart A of this part](#).
- (c) ***Notification that source is subject to special compliance requirements.*** As required by [§ 63.9\(d\)](#) of [subpart A of this part](#), an owner or operator of a new source that is subject to special compliance requirements as specified in [§§ 63.6\(b\)\(3\)](#) and [63.6\(b\)\(4\)](#) of [subpart A of this part](#)

shall notify the Administrator of his/her compliance obligations not later than the notification dates established in [§ 63.9\(b\)](#) of [subpart A of this part](#) for new sources that are not subject to the special provisions.

(d) **Notification of performance test.** As required by [§ 63.9\(e\)](#) of [subpart A of this part](#), the owner or operator of an affected source shall notify the Administrator in writing of his or her intention to conduct a performance test at least 60 calendar days before the performance test is scheduled to begin, to allow the Administrator to review and approve the site-specific test plan required under [§ 63.7\(c\)](#) of [subpart A of this part](#) and, if requested by the Administrator, to have an observer present during the test.

(e) **Notification of compliance status.** The owner or operator of an affected source shall submit a notification of compliance status as required by [§ 63.9\(h\)](#) of [subpart A of this part](#) when the source becomes subject to this standard.

[[64 FR 33218](#), June 22, 1999, as amended at [85 FR 73897](#), Nov. 19, 2020]

§ 63.1164 Reporting requirements.

(a) **Reporting results of performance tests.** Within 60 days after the date of completing each performance test (defined in [§ 63.2](#)), as required by this subpart you must submit the results of the performance tests, including any associated fuel analyses, required by this subpart to the EPA's WebFIRE database by using the Compliance and Emissions Data Reporting Interface (CEDRI) that is accessed through the EPA's Central Data Exchange (CDX) (www.epa.gov/cdx). Performance test data must be submitted in the file format generated through use of the EPA's Electronic Reporting Tool (ERT) (see <http://www.epa.gov/ttn/chief/ert/index.html>). Only data collected using test methods on the ERT Web site are subject to this requirement for submitting reports electronically to WebFIRE. Owners or operators who claim that some of the information being submitted for performance tests is confidential business information (CBI) must submit a complete ERT file including information claimed to be CBI on a compact disk, flash drive or other commonly used electronic storage media to the EPA. The electronic media must be clearly marked as CBI and mailed to U.S. EPA/OAPQS/CORE CBI Office, Attention: WebFIRE Administrator, MD C404-02, 4930 Old Page Rd., Durham, NC 27703. The same ERT file with the CBI omitted must be submitted to the EPA via CDX as described earlier in this paragraph. At the discretion of the delegated authority, you must also submit these reports, including the confidential business information, to the delegated authority in the format specified by the delegated authority. For any performance test conducted using test methods that are not listed on the ERT Web site, the owner or operator shall submit the results of the performance test to the Administrator at the appropriate address listed in [§ 63.13](#).

(b) **Progress reports.** The owner or operator of an affected source who is required to submit progress reports under [§ 63.6\(i\)](#) of [subpart A of this part](#) shall submit such reports to the

Administrator (or the State with an approved permit program) by the dates specified in the written extension of compliance.

(c) **Reporting malfunctions.** The number, duration, and a brief description for each type of malfunction which occurred during the reporting period and which caused or may have caused any applicable emission limitation to be exceeded shall be stated in a semiannual report. The report must also include a description of actions taken by an owner or operator during a malfunction of an affected source to minimize emissions in accordance with [§ 63.1159\(c\)](#), including actions taken to correct a malfunction. The report, to be certified by the owner or operator or other responsible official, shall be submitted semiannually and delivered or postmarked by the 30th day following the end of each calendar half.

[[64 FR 33218](#), June 22, 1999, as amended at [71 FR 20458](#), Apr. 20, 2006; [77 FR 58251](#), Sept. 19, 2012]

§ 63.1165 Recordkeeping requirements.

(a) **General recordkeeping requirements.** As required by [§ 63.10\(b\)\(2\)](#) of [subpart A of this part](#), the owner or operator shall maintain records for 5 years from the date of each record of:

- (1) The occurrence and duration of each malfunction of operation (*i.e.*, process equipment);
- (2) The occurrence and duration of each malfunction of the air pollution control equipment;
- (3) All maintenance performed on the air pollution control equipment;
- (4) Actions taken during periods of malfunction to minimize emissions in accordance with [§ 63.1259\(c\)](#) and the dates of such actions (including corrective actions to restore malfunctioning process and air pollution control equipment to its normal or usual manner of operation);
- (5) All required measurements needed to demonstrate compliance with the standard and to support data that the source is required to report, including, but not limited to, performance test measurements (including initial and any subsequent performance tests) and measurements as may be necessary to determine the conditions of the initial test or subsequent tests;
- (6) All results of initial or subsequent performance tests;
- (7) If the owner or operator has been granted a waiver from recordkeeping or reporting requirements under [§ 63.10\(f\)](#) of [subpart A of this part](#), any information demonstrating whether a source is meeting the requirements for a waiver of recordkeeping or reporting requirements;
- (8) If the owner or operator has been granted a waiver from the initial performance test under [§ 63.7\(h\)](#) of [subpart A of this part](#), a copy of the full request and the Administrator's approval or disapproval;

(9) All documentation supporting initial notifications and notifications of compliance status required by [§ 63.9](#) of [subpart A of this part](#); and

(10) Records of any applicability determination, including supporting analyses.

(b) *Subpart CCC records.*

(1) In addition to the general records required by [paragraph \(a\)](#) of this section, the owner or operator shall maintain records for 5 years from the date of each record of:

(i) Scrubber makeup water flow rate and recirculation water flow rate if a wet scrubber is used;

(ii) Calibration and manufacturer certification that monitoring devices are accurate to within 5 percent; and

(iii) Each maintenance inspection and repair, replacement, or other corrective action.

(2) The owner or operator of an acid regeneration plant shall also maintain records for 5 years from the date of each record of process offgas temperature and parameters that determine proportion of excess air.

(3) The owner or operator shall keep the written operation and maintenance plan on record after it is developed to be made available for inspection, upon request, by the Administrator for the life of the affected source or until the source is no longer subject to the provisions of this subpart. In addition, if the operation and maintenance plan is revised, the owner or operator shall keep previous (i.e., superseded) versions of the plan on record to be made available for inspection by the Administrator for a period of 5 years after each revision to the plan.

(c) ***Recent records.*** General records and subpart CCC records for the most recent 2 years of operation must be maintained on site. Records for the previous 3 years may be maintained off site.

[[64 FR 33218](#), June 22, 1999, as amended at [77 FR 58251](#), Sept. 19, 2012]

§ 63.1166 Implementation and enforcement.

(a) This subpart can be implemented and enforced by the U.S. EPA, or a delegated authority such as the applicable State, local, or Tribal agency. If the U.S. EPA Administrator has delegated authority to a State, local, or Tribal agency, then that agency, in addition to the U.S. EPA, has the authority to implement and enforce this subpart. Contact the applicable U.S. EPA Regional Office to find out if implementation and enforcement of this subpart is delegated to a State, local, or Tribal agency.

(b) In delegating implementation and enforcement authority of this subpart to a State, local, or Tribal agency under [subpart E of this part](#), the authorities contained in [paragraph \(c\)](#) of this

section are retained by the Administrator of U.S. EPA and cannot be transferred to the State, local, or Tribal agency.

(c) The authorities that cannot be delegated to State, local, or Tribal agencies are as specified in [paragraphs \(c\)\(1\)](#) through [\(8\)](#) of this section.

(1) Approval of alternatives to the requirements in [§§ 63.1155](#), [63.1157](#) through [63.1159](#), and [63.1160\(a\)](#).

(2) Approval of major alternatives to test methods under [§ 63.7\(e\)\(2\)\(ii\)](#) and [\(f\)](#), as defined in [§ 63.90](#), and as required in this subpart.

(3) Approval of any alternative measurement methods for HCl and CL₂ to those specified in [§ 63.1161\(d\)\(1\)](#).

(4) Approval of major alternatives to monitoring under [§ 63.8\(f\)](#), as defined in [§ 63.90](#), and as required in this subpart.

(5) Approval of any alternative monitoring requirements to those specified in [§§ 63.1162\(a\)\(2\)](#) through [\(5\)](#) and [63.1162\(b\)\(1\)](#) through [\(3\)](#).

(6) Approval of major alternatives to recordkeeping and reporting under [§ 63.10\(f\)](#), as defined in [§ 63.90](#), and as required in this subpart.

(7) Waiver of recordkeeping requirements specified in [§ 63.1165](#).

(8) Approval of an alternative schedule for conducting performance tests to the requirement specified in [§ 63.1162\(a\)\(1\)](#).

[[68 FR 37356](#), June 23, 2003]

§§ 63.1167-63.1174 [Reserved]

Table 1 to Subpart CCC of Part 63—Applicability of General Provisions ([40 CFR Part 63, Subpart A](#)) to Subpart CCC

Reference	Applies to Subpart CCC	Explanation
63.1-63.5	Yes.	
63.6 (a)-(d)	Yes	

Reference	Applies to Subpart CCC	Explanation
63.6(e)(1)(i)	No	See § 63.1259(c) for general duty requirement. Any cross-reference to § 63.6(e)(1)(i) in any other general provision incorporated by reference shall be treated as a cross-reference to § 63.1259(c) .
63.6(e)(1)(ii)	No	
63.6(e)(1)(iii)	Yes	
63.6(e)(2)	No	Section reserved.
63.6(e)(3)	No	
63.6(f)(1)	No	
63.6(f)(2)-(3)	Yes	
63.6(g)	Yes	
63.6(h)	No	Subpart CCC does not contain an opacity or visible emission standard.
63.6 (i)-(j)	Yes.	
63.7	Yes	
63.8(a)-(c)	Yes	
63.8(d)(1)-(2)	Yes	
63.8(d)(3)	Yes, except for last sentence	
63.8(e)-(f)	Yes	
63.9(j)	Yes	

Reference	Applies to Subpart CCC	Explanation
63.9(k)	Yes	Only as specified in § 63.9(j) .
63.10(a)	Yes	
63.10(b)(1)	Yes	
63.10(b)(2)(i)	No	
63.10(b)(2)(ii)	No	See § 63.1265(a)(1) for recordkeeping of occurrence and duration of malfunctions. See § 63.1265(a)(4) for recordkeeping of actions taken during malfunction. Any cross-reference to § 63.10(b)(2)(ii) in any other general provision incorporated by reference shall be treated as a cross-reference to § 63.1265(a)(1) .
63.10(b)(2)(iii)	Yes	
63.10(b)(2)(iv)-(b)(2)(v)	No	
63.10(b)(2)(vi)-(b)(2)(xiv)	Yes	
63.10(b)(3)	Yes	
63.10(c)(1)-(9)	Yes	
63.10(c)(10)	No	See § 63.1164(c) for reporting malfunctions. Any cross-reference to § 63.10(c)(10) in any other general provision incorporated by reference shall be treated as a cross-reference to § 63.1164(c) .
63.10(c)(11)	No	See § 63.1164(c) for reporting malfunctions. Any cross-reference to § 63.10(c)(11) in any other general provision incorporated by reference shall be treated as a cross-reference to § 63.1164(c) .

Reference	Applies to Subpart CCC	Explanation
63.10(c)(12)-(c)(14)	Yes	
63.10(c)(15)	No	
63.10(d)(1)-(2)	Yes.	
63.10(d)(3)	No	Subpart CCC does not contain an opacity or visible emission standard.
63.10(d)(4)	Yes	
63.10(d)(5)	No	
63.10(e)-(f)	Yes.	
63.11	No	Subpart CCC does not require the use of flares.
63.12-63.15	Yes	

[[64 FR 33218](#), June 22, 1999, as amended at [77 FR 58252](#), Sept. 19, 2012; [85 FR 73897](#)

preview citation details

, Nov. 19, 2020]

Appendix I

Case by Case Basis Analysis for the Electric Arc Furnaces (SN-01 and SN-02)

3.3.4 Case-By-Case MACT Review

The purpose of this section is to clarify, to the AEEDEQ, the applicability of the Environmental Protection Agency's (EPA's) National Emission Standards for Hazardous Air Pollutants (NESHAP) provisions for the control of regulated Hazardous Air Pollutants (HAPs) as they pertain to operation of the two Electric Arc Furnaces (EAFs) (SN-01 and SN-02) that are part of the BRS facility.

This section hereby addresses two (2) key items related to the applicability of EPA's NESHAP provisions to the EAFs: (1) amendment of Permit 2305-AOP-R7 to clarify that 40 CFR Part 63, Subpart EEEEE (NESHAP for Iron and Steel Foundries) is not applicable to the EAFs; and (2) establish case-by-case Maximum Achievable Control Technology (MACT) limitations for the two EAFs.

Included in this section, is an overview of EPA's NESHAP provisions as defined in 40 CFR Part 63, review of EPA's NESHAP provisions related to the Steel Industry, the non-applicability of NESHAP Subpart EEEEE, non-applicability determination of other promulgated NESHAP provisions, and a Case-by-Case MACT determination for the EAFs.

3.3.4.1 General Overview of EPA's NESHAP Provisions

The 1990 amendments to the Clean Air Act (CAA) mandated significant new air quality programs, including the National Emissions Standards for Hazardous Air Pollutants (NESHAP) program. 42 U.S.C. § 7412 (referred to as CAA Section 112) addresses the reduction of emissions of HAPs. Section 112 includes provisions for the promulgation of NESHAP, or maximum achievable control technology (MACT) standards. The subsections of § 112 that are relevant to the construction of new stationary sources with the potential to emit regulated Hazardous Air Pollutants (as defined under Section 112 (b)), are summarized below:

- Subsection (c) requires that the EPA publish and regularly update (at least every 8 years) a listing of all categories and subcategories of major and area sources that emit HAPs. The list of source categories itself is not contained in the CAA; it was initially published in the Federal Register on July 16, 1992 (56 FR 31576).
- Subsection (d) states that the EPA must promulgate regulations establishing emission standards (NESHAP) for each category or subcategory of major sources and area sources of HAPs [listed pursuant to Section 112(c)]. The standards must require the maximum degree of emission reduction that the EPA determines to be achievable by each particular source category. Different criteria for maximum achievable control technology (MACT) apply for new and existing sources. Less stringent standards, known as generally available control technology (GACT) standards, are allowed at the Administrator's discretion for area sources.
- Subsection (g) requires owners or operators of newly constructed, reconstructed, and modified major sources of HAPs to apply MACT if emission increases are above certain levels. For purposes of Section 112(g) sources must submit a pre-construction permit application proposing source-specific MACT.
- Subsection (h) allows the EPA, in cases where it is not feasible to prescribe or enforce an emission standard [under Section 112(d) or (f)], to promulgate a design, equipment, work practice, or

operational standard. Also allows an owner or operator to use an alternative means of emission reduction if it can be proven that an equal reduction in emissions of any HAP will be achieved.

- Subsection (j) provides that where applicable emissions limitations have not been set by EPA for a given type of source included on the major source category listing, the MACT for any such emission units should be determined on a case-by-case basis. Section 112(j) is commonly referred to as the "MACT hammer."

3.3.4.2 Review of EPA's NESHAP Provisions – Steel Industry

Pursuant to the various specific listing requirements in Section 112 (c), EPA published on July 16, 1992 (57 FR 31576) an initial list of 174 categories of major and area source that would be subject to emission standards. The following categories included the term "Steel":

- Integrated Iron and Steel Manufacturing.
- Non-stainless-Steel Manufacturing – Electric Arc Furnace (EAF) Operation.
- Stainless-Steel Manufacturing – Electric Arc Furnace (EAF) Operation.
- Steel Foundries; and
- Steel Pickling – HCL Process.

EPA's original list included only "major sources" of HAPs within these categories. Id. at 31591 – 31592. On December 3, 1993 (58 FR 63941) EPA published a schedule for promulgations of emissions standards for the above steel categories at major sources.

- Integrated Iron and Steel Manufacturing – November 15, 2000.
- Non-stainless-Steel Manufacturing – Electric Arc Furnace (EAF) Operation – November 15, 1997.
- Stainless-Steel Manufacturing – Electric Arc Furnace (EAF) Operation – November 15, 1997.
- Steel Foundries - November 15, 2000; and
- Steel Pickling – HCL Process – November 15, 1997.

On June 4, 1996 (61 FR 28197) EPA revised the list of categories and deleted the Non-Stainless-Steel Manufacturing – Electric Arc Furnace (EAF) Operation and the Stainless-Steel Manufacturing – Electric Arc Furnace (EAF) Operation categories. EPA stated that these categories were being removed since there were no existing facilities which qualified as major sources. EPA further stated that arsenic, antimony, beryllium, cadmium, chromium, cobalt, lead, manganese, mercury, nickel, and selenium are believed to be the only HAPs emitted from the EAF source categories. All existing facilities were determined to not emit any of these HAP in sufficient to quantities to meet the major source definition even under worst case assumptions. In addition, existing facilities were already subject to the NSPS for EAF operations which regulate the air pollution control device outlet concentration and visible emissions from the EAF Melt Shop.

And any new facilities would likewise be subject to the NSPS.

On June 26, 2002, EPA added “Stainless and Nonstainless Steel Manufacturing Electric Arc Furnaces” and “Steel Foundries” as new and separate categories to EPA’s source category list for “area sources” of HAPs (note that non-major sources of HAPs are referred to as “Area Sources”). 67 Fed. Reg. 43112. On December 28, 2007, EPA published in the Federal Register (72 FR 74111) a final rule which established a NESHAP provision that applied to EAFs used in support of steel mill operation at non-major sources of HAPs (i.e., “Area Sources”). This subpart is referred to as NESHAP Subpart YYYYYY and applies to EAFs at Steelmaking facilities. In connection with its proposed rule to adopt Subpart YYYYYY, USEPA noted that it had identified two EAF facilities co-located at integrated iron and steel plants that are major sources. 72 Fed. Reg. 53814, 53819 (Sept. 20, 2007). While stating that the existence of these two EAF facilities did not preclude it from adopting Subpart YYYYYY, EPA stated that it intended to add “EAF steelmaking facilities” at major sources of HAPs to its list under CAA § 112(c) and to develop a NESHAP for such facilities. *Id.* at 53816. EPA has not yet added EAF steelmaking operations to the Clean Air Act section 112 major source category list or conducted rulemaking to adopt a NESHAP for EAF steelmaking facilities at major sources of HAPs.

As discussed in the PSD air permit application (i.e., Permit Revision 7 Project), BRS conducted a review of EPA’s promulgated NESHAP provisions to determine the applicability of these provisions. A discussion of BRS’ initial review of these provisions is provided below, as well as a discussion on BRS’ review of EPA’s history of promulgated NESHAPs as they pertain to emission sources associated with the Steel Industry.

3.3.4.3 Applicability of NESHAP Subpart EEEEE

3.3.4.3.1 Initial Review of NESHAP Subpart EEEEE

In section 3.0 of the application document, a review of applicable state and federal air statutes was presented, as it pertains to the new emission units of regulated New Source Review (NSR) air pollutants. A discussion was provided on the applicability of the National Emission Standards for Hazardous Air Pollutants (NESHAP) Subpart EEEEE “National Emission Standards for Hazardous Air Pollutants for Iron and Steel Foundries.” This Subpart is codified under Section 40 of the Code of Federal Regulations (CFR), Part 63, Subpart EEEEE.

During the review of applicable federal air regulations, a review of Subpart EEEEE (herein defined as the “Subpart”) was conducted. That review included Sections 63.7680 and 63.7681 of this Subpart which discuss the purpose of the Subpart and identifies processes/production units at foundries subject to Subpart EEEEE. These sections do not include a reference to the NAICS Codes however, it does include the definition of an Iron and Steel Foundry, under Section 63.7765, which states the following:

- A facility or portion of a facility that melts scrap, ingot, and /or other forms of iron and / or steel and pours the resulting molten metal into molds to produce final or near final shape products for instruction into commerce.
- Metal melting furnace means a cupola, electric arc furnace, or electric induction furnace that coverts scrap, foundry returns, and / or other solid forms of iron and / or steel to a liquid state.

Based on the initial review of these definitions, it was determined that this Subpart may be applicable to the EAFs. During the initial review, an area of potential confusion was whether or not the casting process, which is used at the steel mill would be considered a molding process. As such, this Subpart was listed as an applicable requirement in the application with the understanding that further evaluation could be conducted after discussions with the AEEDEQ. After initial discussions with the AEEDEQ, BRS has informed AEEDEQ that it would re-evaluate applicability of this Subpart to the EAFs.

3.3.4.3.2 NESHAP Subpart EEEEE Is Not Applicable

BRS has further reviewed applicability of NESHAP Subpart EEEEE to the EAFs. This review included reading the draft and final versions of this Subpart as published in the Federal Register. The following statement was included as part of the final rule notice (69 FR 21906), which was published on April 22, 2004, for this Subpart:

“Categories and entities potentially regulated by this action include:

331511 | Iron foundries, Iron and Steel plants. Automotive and large equipment manufacturers.

331512 | Steel investment foundries.

331513 | Steel foundries (except investment).”

The BRS steel mill is classified under NAICS Code 331110 which pertains to Iron and Steel Mills and Ferroalloy Manufacturing.¹ This NAICS Code is not included in the list of industry categories being regulated by EPA under 40 CFR Part 63, Subpart EEEEE. Based on the inclusion of specific NAICS codes in this Subpart, BRS has concluded that EPA had intended this Subpart to apply to Steel Foundries (see definition below) and not to Iron and Steel Mills / Ferroalloys Manufacturing facilities (i.e., Scrap to Steel Mills).

As provided in this Subpart, the definition of an Iron and Steel foundry is further defined as follows:

“A facility that melts scrap, ingot and / or other forms of Iron and / or steel and pour the resulting molten metal into molds to produce final or new final shape products for introduction into commerce.”

78 Fed. 21906, 21907. The NAICS codes referenced by EPA in the final rule (i.e., 331511, 331512 and 331513) are consistent with this definition and contemplate pouring molten iron and steel into specifically designed molds typically consisting of wax covered with ceramic or sand to cast the final or near final shape of products. The NAICS code descriptions note that most of the facilities within these codes do not produce their own steel.

¹ NAICS Code 331110 (2017) provides the following description for the Iron and Steel Mills and Ferroalloy Manufacturing classification: This industry comprises establishments primarily engaged in one or more of the following: (1) direct reduction of iron ore; (2) manufacturing pig iron in molten or solid form; (3) converting pig iron into steel; (4) making steel; (5) making steel and manufacturing shapes (e.g., bar, plate, rod, sheet, strip, wire); (6) making steel and forming pipe and tube; and (7) manufacturing electrometallurgical ferroalloys. Ferroalloys add critical elements, such as silicon and manganese for carbon steel and chromium, vanadium, tungsten, titanium, and molybdenum for low- and high-alloy metals. Ferroalloys include iron-rich alloys and more pure forms of elements added during the steel manufacturing process that alter or improve the characteristics of the metal.

The steel mill melts metal scrap using two (2) EAFs and then pours the resulting molten metal into a casting process. The casting process is used to form a continuous steel coil. The steel coil is cut and rolled at the end of that casting process. As such, the production of the continuous steel coil is not considered to be a mold process that produces final or new final shape products for introduction into commerce.

Based on the steel mill being covered under a different NAICS and the casting process that is used, produces a steel coil, and does not produce final or new final shape products for introduction into commerce, BRS has concluded that this Subpart does not pertain to the equipment used at the facility.

As discussed above, this conclusion can be further supported by EPA's consistent record of treating foundries and scrap-to-steel EAF facilities as distinct and separate regulatory categories, and the initial inclusion of the stainless-Steel and non-stainless-steel Electric Arc Furnace Operation as source categories subject to EPA's NESHAP provisions and EPA's delisting of these two source categories and EPA's development of a NESHAP standard for EAFs at steel making facilities which are part of an area sources of HAPs, referred to as Subpart YYYYYY. Notably, NAICS Code 331110 is identified in the final rule adopting Subpart YYYYYY (NESHAP for Area Sources: Electric Arc Steelmaking Facilities).² And furthermore, Subpart YYYYYY includes a provision expressly exempting EAFs subject to Subpart ZZZZZ from Subpart YYYYYY, further evidencing that EPA intended EAF steelmaking to be a distinct regulatory category from foundries. (See 40 C.F.R. §63.10692).

3.3.4.4 Review of other Applicable NESHAP Provision to the Proposed Steel Mill Project (Electric Arc Furnaces)

Consequently, since Subpart EEEEE has been determined to not apply, a review of other promulgated NESHAP Subparts was performed by BRS to determine applicability to the two (2) EAFs. The two steps followed by BRS to determine applicable NESHAP provisions is provided below:

First Step – Review of Current Promulgated NESHAP Provisions for Electric Arc Furnaces at Steelmaking Facilities

The first step was to review the source categories, developed by EPA, which would be subject to emission reductions of regulated hazardous air pollutants (HAPs). EPA published a revision to the source category list under Section 112 of the Clean Air Act, as defined under the NESHAPs Air Pollutants (67 FR 6521 - February 12, 2002). In this notice, EPA stated it was providing a revision to the list of categories of major and area sources of HAP emissions.

Specifically, EPA listed specific source categories. The category developed for the steel industry was

² Note that USEPA's final rule adopting Subpart YYYYYY refers to NAICS code 331111, which was the NAICS code classification for Iron and Steel Mills and Ferroalloy Manufacturing at the time of that rulemaking (i.e., 2007). 72 Fed. Reg. 53814 (September 20, 2007). In 2012, the NAICS code classification for Iron and Steel Mills and Ferroalloy Manufacturing changed to 331110 and this classification was retained by NAICS in connection with its most current update. No substantive changes to the description of the Iron and Steel Mills and Ferroalloy Manufacturing classification were made in connection with the transition from NAICS code 331111 to 331110 in 2012.

defined as: "Ferrous Metals Processing." EPA did establish NESHAP provisions for several manufacturing categories that pertained to the steel industry. Provided below is a listing of current NESHAP provisions promulgated by EPA for manufacturing categories as they pertain to the steel industry:

- Integrated Iron and Steel Manufacturing (Subpart FFFFF).
- Steel Foundries (Subpart EEEEE); and
- Steel Pickling – HCL process Facilities and Hydrochloric Acid Regeneration Plants (Subpart CCC). Please note that this Subpart was listed by BRS as an applicable NESHAP provision and applies to the HCL process associated with the facility. This section will not further discuss the requirements of this Subpart.

As discussed above, the following source categories were delisted by EPA under the NESHAP provisions for the steel industry:

- Non-Stainless-Steel Manufacturing – Electric Arc Furnace (EAF) operation (Delisted by EPA – see discussion above); and
- Stainless Steel Manufacturing – Electric Arc Furnaces (EAF) operations (Delisted by EPA – see discussion above).

Notwithstanding, EPA did establish a NESHAP provision for EAFs associated with steel making for area sources (non-major stationary sources) of regulated HAPs (Subpart YYYYY) on December 28, 2007 (72 FR 74111 - December 28, 2007). In connection with its proposed rule (72 FR 53814 – September 20, 2007) to adopt Subpart YYYYY, EPA discussed the rationale for development of only an area source MACT for EAFs at steelmaking facilities, which are summarized below:

- EPA is adding electric arc furnace steel making facilities to the list of source categories subject to regulation under Section 112 (c)(6) and revising the area source category list for the Integrated Urban Air Toxics Strategy (page 53814).
- The proposed standards establish requirements for the control of mercury emissions that are based on MACT.
- On page 53817 EPA stated it changed the name of the listed area source category "Stainless and Non-stainless Steel Manufacturing Electric Arc furnace (EAF) to "Electric Arc furnace Steelmaking Facilities". They made the change to clarify that the source category included all types of steel made in EAF, such as stainless steel, carbon steel, specialty steel and other grades and alloy of steel;"
- Essentially no standards were developed (page 53816) for Electric Arc Furnaces at major sources of HAP steelmaking facilities, since the number of existing facilities being classified as major source of HAPs were only two (2).
- On page 53818, EPA provides a discussion on emission sources associated with steel making facilities with a focus on EAFs.

- On page 53818 EPA stated that PM control devices are highly efficient for the capture and control of PM and HAP metals that are in particulate form. EPA also stated that a detailed survey of 27 plants showed that EAF steelmaking facilities use scrap specification, scrap management plans and inspections to insure that charge materials do not adversely affect the quality of steel or create dangerous operation conditions.

As part of the final rule established for Subpart YYYYYY, EPA defined the following control requirements for EAFs, emission limits for EAFs, and specific requirements related to the control of contaminants from scrap:

- Install, operate, and maintain a capture system that collects the emissions from each EAF and conveys that collected emissions to a control device for the removal of particulate matter (PM).
- An EAF must not discharge from a control device and contain in excess of 0.0052 grains of PM per dry standard cubic foot (gr/dscf).
- Any exit from a Melt Shop using an EAF is not allowed to exhibit 6% opacity or greatly; and
- Section 63.10685 identifies specific requirements for the control on contaminants from scrap. The primary requirement is to prepare / implement a plan to minimize scrap steel containing mercury.

As of November 2021, EPA has not established a NESHAP provision for EAFs at steelmaking facilities producing stainless and non-stainless steel at major source of regulated HAPs.

Second Step – Review of Current Promulgated NESHAP Provisions for Applicability to the Proposed Steel Mill Project’s Electric Arc Furnaces

In connection with this review, we evaluated the potential applicability of other NESHAP adopted for the steel industry to determine whether they would be applicable to the EAFs. Based upon this review, and for the reasons set forth in more detail below, we have determined that these NESHAP are not applicable:

- Subpart FFFFF “National Emission Standards for Hazardous Air Pollutants for Integrated Iron and Steel Manufacturing Facilities” was reviewed and determined to not apply to the proposed steel mill since its applicability was for only Integrated Iron and Steel manufacturing facilities at major source of regulated HAPs. An Integrated Iron and Steel Facility was defined as an establishment engaged in the production of steel from iron ore. The proposed steel mill will be engaged in the production of steel from scrap steel. This particular Subpart identifies the affected sources for each new sister plant, blast furnace and basic oxygen process furnace (BOPF) shop at an integrated Iron and Steel manufacturing facility. These types of process operations will not be performed or associated with for the new mill. As such Subpart FFFFF is not applicable; and
- As discussed in more detail above, Subpart EEEEE “National Emission Standards for Hazardous Air Pollutants for Iron and Steel Foundries” was reviewed and determined to not apply to the proposed steel mill since it applies to specific NAICS codes and pertains to the production of steel shaped products. The proposed steel mill will be designed to produce a coiled steel and not molded steel products. See above for further discussion on the non-applicability of Subpart EEEEE. The

history of EPA rulemaking as it pertains to EAFs associated with steelmaking further supports the position that EPA did not intend Subpart EEEEE to pertain to EAF as steelmaking facilities producing stainless and non-stainless grades of steel.

Third Step – Review of EPA Requirements for Non-Regulated Source Categories of HAPs -Electric Arc Furnaces at Steelmaking Facilities – Major Sources of Regulated HAPs

The third step was to review EPA requirements for proposed projects that involve new emission units with the potential to emit regulated HAPs at major and non-major (area source) stationary emission source. The Clean Air Act requires “Case-by-Case MACT” under two circumstances, first, if a stationary source is a major source of HAP despite not being within any of the source categories identified by EPA under section 112(c) (see Clean Air Act section 112(g), 42 U.S.C. §7412(g), and implementing regulations at 40 CFR 63.40 et seq) and second, if a stationary source which is a major source of HAP contains emission units that are within a source category listed as a major source category under section 112(c), but for which EPA failed to actually establish a MACT standard (see Clean Air Act section 112(j), 42 U.S.C. §7412(j), and implementing regulations at 40 CFR 63.50 et seq). Subpart B under Title 40 of Section 63 of the Code of Federal Regulations (known as the Case-By-Case-MACT) identifies the requirements for control technology determinations for major sources in accordance with Clean Air Act sections 112(g) and 112(j), either of which result in the need for a case-by-case MACT determination.

Per 40 CFR 63.50(a)(2)(i), Subpart B § 63.50 through § 63.56 apply to “the owner or operator of affected sources within a source category or subcategory under this part that are located at a major source that is subject to an approved title V permit program and for which the Administrator has failed to promulgate emission standards by the section 112(j) deadlines.” 40 CFR Part 63.52(b)(1) states “When one or more sources in a category or subcategory subject to the requirements of this subpart are installed at a major source...the owner or operator must submit an application meeting the requirements of § 63.53(a) [i.e., Application for Case-by-Case MACT Determination] within 30 days of startup of the source.”

The Proposed Steel Mill Project presumably would meet this definition and thus would be required to go through a case-by-case MACT determination. Accordingly, this letter constitutes a request for a case-by-case Maximum Achievable Control Technology (MACT) determination under Clean Air Act 112(j) and 40 CFR 63.52(b).

Final Step – Case-by-Case MACT Determination – Electric Arc Furnaces

Case-by-Case MACT 40 C.F.R. § 63.52(f)(1) requires that “The title V permit must contain an emission standard or emission limitation that is equivalent to existing source MACT and an emission standard or emission limitation that is equivalent to new source MACT for control of emissions of hazardous air pollutants. The MACT emission standards or limitations must be determined by the permitting authority and must be based on the degree of emission reductions that can be achieved if the control technologies or work practices are installed, maintained, and operated properly.”

To define the equivalent level of achievable controls and limits being met by other similar new sources, BRS looked to what control level is no less stringent than the maximum achievable control technology emission limitation for new source, BRS reviewed regulatory requirements that defined emission limitations

for new EAFs at steelmaking facilities. This defined the level of achievable controls and limits being met by other similar new EAFs at steel making facilities. Those regulatory requirements included: 1) New Source Performance Standards, 2) Non-major source existing NESHAP provision and 3) Best Available Control Technology (BACT) as defined under the PSD new source construction permit program.

3.3.4.5 New Source Performance Standards (NSPS)

EPA promulgated a specific NSPS provision that required new EAFs at steelmaking facilities to meet specific emission limitations. This NSPS provision is defined as Subpart AAa “Standards of Performance for Steel Plants – Electric Arc Furnaces and Argon-Oxygen Decarburization Vessels Constructed After August 17, 1983”. The provision required that all new EAFs meet the following limitations:

- No EAF is allowed to discharge from a control device a particulate matter in excess of 0.0052 grains/dscf.
- No EAF is allowed to discharge from a control device opacity in excess of 3 percent or greater; and
- No Melt shop supporting operation of an EAF is allowed to exist from that shop opacity at 6 percent or greater.
- These provisions also contain specific emission monitoring and monitoring of operation requirements.

The EAFs will meet the above applicable requirements as defined under NSPS Subpart AAa.

3.3.4.6 Non-Major Source NESHAP Provisions

As discussed above EPA has developed a non-major source NESHAP provision for area sources which is defined as Subpart YYYYYY. EPA defined the following control requirements for EAFs, emission limits for EAFs, and specific requirements related to the control of contaminants from scrap:

- Install, operate, and maintain a capture system that collects those emissions from each EAF and conveys that collected emissions to a control device for the removal of particulate matter (PM).
- An EAF must not discharge from a control device and contain in excess of 0.0052 grains of PM per dry standard cubic foot (gr/dscf).
- Any exit from a Melt Shop using an EAF is not allowed to exhibit 6% opacity or greatly; and
- Section 63.10685 identifies specific requirements for the control on contaminants from scrap. The primary requirement is to prepare / implement a plan to minimize scrap steel containing mercury.

3.3.4.7 BACT Defined under the PSD Construction Permit Program

As discussed in the PSD air permit application submitted to the AEEDEQ, BRS performed a Top Down BACT evaluation and based on that evaluation defined BACT emission limits for the EAFs. The BACT emission limits defined for the EAF were as follows:

- Particulate Matter (PM) limit of 0.0018 grains/dscf.
- Particulate Matter (PM10) limit of 0.0024 grains/dscf; and
- Particulate Matter (PM2.5) limit of 0.0024 grains/dscf.

These limits are based on installing a control device (i.e., baghouse) to control particulate matter from each of the EAFs. These limits reflect the best level of control for particulate matter taking into account energy, environmental and economic impacts. These limits are reflective of the level of control and limits being established for EAFs used in the steelmaking industry to produce stainless and non-stainless steel. The limits being proposed by BRS are more restrictive than those limits established under NSPS AAa and NESHAP Subpart YYYYYY.

3.3.4.8 Case-by-Case MACT Determination for the Electric Arc Furnaces

Based on the above information, BRS has determined what should be considered as case-by-case MACT for the EAFs. The selection of the limits defined below were based on satisfying EPA requirements for establishment of MACT. For sources subject to Case-By-Case MACT, MACT standards cannot be less stringent than the emission control achieved in practice by the best-controlled similar source, as determined by the Administrator. The case-by-case MACT requirements for the EAFs to be used are as follows:

- Install, operate, and maintain a capture system that collects the emissions from each EAF and conveys that collected emissions to a control device for the removal of particulate matter (PM).
- An EAF must not discharge from a control device and contain in excess of 0.0018 grains of PM per dry standard cubic foot (gr/dscf).
- Any exit from a Melt Shop using an EAF is not allowed to exhibit 6% opacity or greater; and
- Section 63.10685 identifies specific requirements for the control of contaminants from scrap. The primary requirement is to prepare / implement a plan to minimize scrap steel containing mercury.

Notably, AEEDEQ has already approved this determination as constituting Case – By – Case MACT for the EAFs under construction at the Exploratory Ventures facility that is considered part of a single stationary source with BRS for Clean Air Act purposes. See Permit No. 2445-AOP-R0, issued to Exploratory Ventures on January 31, 2022.

Appendix J

Case by Case Basis Analysis for Gasoline Storage Tanks and Dispensing Operation

CASE-BY-CASE MACT FOR GASOLINE STORAGE TANKS AND DISPENSING OPERATIONS (SN-100) AT THE BRS FACILITY

Description of the Gasoline Storage Tanks and Dispensing Operation (SN-100) at the BRS Facility

The BRS Facility has a permitted emission source that involve gasoline storage tanks and a dispensing operation. Under the BRS's air permit (Permit #: 2305-AOP-R8) (the "BRS Permit"), source SN-100 "Gasoline Storage Tanks and Dispensing Operation" is subject to the following condition regarding NESHAP applicability:

Permit Condition 121. The permittee is currently subject to NESHAP CCCCCC as the facility is an area source and must comply with Specific Conditions #122 and #123. Upon commencement of operation of SN-107, the facility will instead be a major source of HAPs and this subpart, and its conditions will no longer be applicable. [Rule 19.304 and 40 C.F.R. § 63 Subpart CCCCCC]

As a point of reference, the BRS Facility includes storage tanks storing gasoline and the ability to dispense gasoline into motor vehicles that support the BRS Facility's steel making processes. The operations currently performed at the BRS Facility can be classified as a Gasoline Dispensing Facility (GDF) as noted below:

Gasoline dispensing facility (GDF) means any stationary facility which dispenses gasoline into the fuel tank of a motor vehicle, motor vehicle engine, nonroad vehicle, or nonroad engine, including a nonroad vehicle or nonroad engine used solely for competition. These facilities include, but are not limited to, facilities that dispense gasoline into on- and off-road, street, or highway motor vehicles, lawn equipment, boats, test engines, landscaping equipment, generators, pumps, and other gasoline-fueled engines and equipment.

Other Gasoline Storage and Dispensing Operations Not Applicable to the BRS Facility

The gasoline storage tanks and dispensing operation at the BRS Facility **do not meet** the criteria for other gasoline dispensing operations, as noted below:

Bulk gasoline terminal means (40 CFR 63.421):

Prior to May 8, 2027, any gasoline facility which receives gasoline by pipeline, ship, or barge, and has a gasoline throughput greater than 75,700 liters per day. Gasoline throughput shall be the maximum calculated design throughput as may be limited by compliance with an enforceable condition under Federal, State, or local law and discoverable by the Administrator and any other person.

On or after May 8, 2027, any gasoline facility which receives gasoline by pipeline, ship, barge, or cargo tank and subsequently loads all or a portion of the gasoline into gasoline cargo tanks for transport to bulk gasoline plants or gasoline dispensing facilities and has a gasoline throughput greater than 20,000 gallons per day (75,700 liters per day). Gasoline throughput shall be the maximum calculated design throughput for the facility as may be limited by compliance with an enforceable condition under Federal, State, or local law and discoverable by the Administrator and any other person.

Pipeline breakout station means (40 CFR 63.421):

Prior to May 8, 2027, a facility along a pipeline containing storage vessels used to relieve surges or receive and store gasoline from the pipeline for reinjection and continued transportation by pipeline or to other facilities.

On or after May 8, 2027, a facility along a pipeline containing storage vessels used to relieve surges or receive and store gasoline from the pipeline for reinjection and continued transportation by pipeline to other facilities. Pipeline breakout stations do not have loading racks where gasoline is loaded into cargo tanks. If any gasoline is loaded into cargo tanks, the facility is a bulk gasoline terminal for the purposes of this subpart provided the facility-wide gasoline throughput (including pipeline throughput) exceeds the limits specified for bulk gasoline terminals.

Bulk gasoline plant means (40 CFR 63.11100):

Any gasoline storage and distribution facility that receives gasoline by pipeline, ship or barge, or cargo tank, and subsequently loads the gasoline into gasoline cargo tanks for transport to gasoline dispensing facilities and has a gasoline throughput of less than 20,000 gallons per day. Gasoline throughput shall be the maximum calculated design throughput as may be limited by compliance with an enforceable condition under Federal, State, or local law, and discoverable by the Administrator and any other person.

Pipeline pumping station means (40 CFR 63.11100):

A facility along a pipeline containing pumps to maintain the desired pressure and flow of product through the pipeline, and not containing gasoline loading racks or gasoline storage tanks other than surge control tanks.

Request for Case-by-Case Maximum Achievable Control Technology (MACT) Determination – Gasoline Storage Tanks and Dispensing Operation (SN-100)

As will be discussed in the following sections, several NESHAP subparts have been promulgated by EPA for various types of gasoline dispensing / storage operations. However, there is no current major source NESHAP applicable to gasoline storage and gasoline dispensing operations that handle gasoline with an annual throughput limit of no more than 50,000 gallons per year.

Since GDFs are a listed major source category under section 112 (as explained in more detail below), however there is no current NESHAP for GDF's at major HAP stationary sources and only an area source NESHAP for gasoline fueling, BRS is submitting this case-by-case Maximum Achievable Control Technology (MACT) determination under Clean Air Act 112(j) and 40 CFR 63.52(b).

This section hereby addresses case-by-case MACT for the gasoline storage tanks and dispensing operation (SN-100) once the BRS Facility becomes a major source of HAPs. Included in this section is an overview of EPA's NESHAP provisions as defined in 40 CFR Part 63, review of EPA's NESHAP provisions related to gasoline fueling operations, and a case-by-case MACT determination for the gasoline storage tanks and dispensing operation at the BRS Facility.

I. General Overview of EPA's NESHAP Provisions

Title I of the CAA includes provisions for controlling emissions of hazardous air pollutants (HAP). The provisions in Title I that address the control of HAP emissions, or air toxics, are found in Section 112. Section 112 of the CAA includes provisions for the promulgation of NESHAP, containing maximum achievable control technology (MACT) standards. There are 19 subsections to Section 112 of the CAA. A summary of the relevant sections is summarized below:

- Subsection (c) requires that the EPA publish and regularly update (at least every 8 years) a listing of all categories and subcategories of major sources that emit HAPs, and a separate list of most area sources of HAP. The list of source categories itself is not contained in the CAA; it was initially published in the Federal Register on July 16, 1992 (56 FR 31576).
- Subsection (d) states that the EPA must promulgate regulations establishing emission standards (NESHAP) for each category or subcategory of major sources and area sources of HAPs [listed pursuant to Section 112(c)]. The standards must require the maximum degree of emission reduction that the EPA determines to be achievable by each particular source category. Different criteria for maximum achievable control technology (MACT) apply for new and existing sources. Less stringent standards, known as generally available control technology (GACT) standards, are allowed at the Administrator's discretion for area sources.
- Subsection (j)(2) provides that where applicable emissions limitations have not been set by EPA for a given type of source included on the major source category listing, the MACT for any such emission units should be determined on a case-by-case basis.

II. First Step – Review of Section 112 Listing Status and Current Promulgated NESHAP Provisions for Gasoline Storage and Dispensing Operations

Pursuant to the various specific listing requirements in Section 112 (c), EPA published on July 16, 1992 (57 FR 31576) an initial list of 174 categories of major and area sources that would be subject to emission standards. EPA’s original list included both major and area sources of HAPs within these categories. “Gasoline Distribution (Stage I)” was included as a listed source category. EPA’s first proposal of MACT standards for that category, 59 FR 5868 (February 8, 1994), clarified the scope of this category listing as follows:

“Gasoline distribution network refers to the storage and transfer of gasoline as it is moved from the production refinery process units to the service station storage tank. The gasoline distribution facility category is made up of several distinct facility types. During the analysis of this category, it was determined that this category should be subcategorized by facility type. Therefore, the following gasoline distribution subcategories were analyzed in the context of this proposed rulemaking: --Pipeline pumping stations --Pipeline breakout stations --Bulk gasoline terminals --Bulk plants --Service stations.”

Regarding the delineation between Stage I (listed as major 112 category) and Stage 2 (not listed) EPA clarified further that

“At service stations, gasoline is transferred to storage tanks and ultimately to motor vehicles. Vehicle refueling (known as Stage II), and ship and barge handling of gasoline are being addressed by the Agency under separate programs.”

When the Environmental Protection Agency (EPA) published NESHAP CCCCCC for area sources including GDFs, EPA implied that GDFs may be considered to be included within the “service stations” portion of the initial section 112 listing of Gasoline distribution Stage I sources, though no major source MACT standards were published for GDFs since none were known to be located at major sources at that time. See 73 FR 1916 (Jan. 10, 2008) “Area sources of HAP emissions within the source category (many bulk terminals and pipeline breakout stations and all pipeline pumping stations, bulk plants, *and gasoline dispensing facilities (GDF)* (service stations, convenience stores, and other retail outlets)) are not subject to the Major Source NESHAP.”

There are currently the following NESHAPs that apply to gasoline storage and dispensing operations:

Citation	Description	Applicable to the BRS Facility?
Gasoline Distribution MACT and GACT: National Emission Standards for Hazardous Air Pollutants (NESHAP) - 40 CFR 63 Subparts R (Major Sources) & BBBBBB (Area Sources)	Applies to facilities in the gasoline distribution source category. Gasoline distribution facilities transfer and store gasoline <u>as it is distributed from petroleum refineries to gasoline dispensing facilities</u> . Air toxics are released during gasoline cargo tank loading, during gasoline storage, and from leaks from equipment in gasoline service	MACT Subparts R and BBBBBB do not apply to the gasoline storage and dispensing operations at BRS. The handling of gasoline at BRS are included in the term Gasoline Dispensing Facility (GDF) as defined under subpart CCCCCC. The BRS Facility does not meet the definition of gasoline operations as defined under Subparts R and BBBBBB.
Gasoline Dispensing Area Sources: National Emission Standards for Hazardous Air Pollutants (NESHAP) - 40 CFR 63 Subpart CCCCCC	Applies to gasoline dispensing facilities at area sources of HAPs. Gasoline dispensing facilities receive gasoline via gasoline cargo tanks from gasoline distribution facilities. Air toxics are released during the delivery of gasoline into storage tanks.	Is applicable as long as the BRS Facility remains an area source of HAPs.

On January 10, 2008, EPA published the final rule Gasoline Dispensing Facilities (GDF) (40 CFR 63 Subpart CCCCCC). Under the Summary of Comments and Responses section of the rule, it stated the following:

“Comment: One commenter questioned whether EPA intended the area source rules to apply to facilities that are major sources and that have GDF on site for refueling of their vehicles (fleet vehicle refueling centers). Another commenter stated that EPA should clarify that the proposed rule does not apply to gasoline distribution major sources.

Response: The gasoline distribution (Stage I) area source rules apply to those gasoline distribution facilities that qualify as area sources. Facilities that are major sources (emit ≥ 10 tons per year of one HAP or emit ≥ 25 tons per year of any combination of HAP) as a result of their gasoline distribution activities, or as a result of any other activities, would not be subject to these final area source rules. We have clarified in the final rules that these rules only apply to area sources.”

The GDF’s (SN-100) at the BRS Facility are not subject to 40 CFR 63 Subparts R (Major Sources) & BBBBBB (Area Sources) since the GDF’s do not meet the definition of a Gasoline Distribution Facility. In addition, the GDF’s will not be subject to 40 CFR 63 Subpart CCCCCC once the BRS Facility becomes a major source (upon commencement of operation of the BRS Facility’s emission source SN-107 “Color Coating Line”) of HAP emissions since it only applies to GDF’s at area sources of HAPs.

III. Second Step – Review of Current Promulgated NESHAP Provisions for Applicability to Gasoline Fueling

In connection with this review, we evaluated the potential applicability of other NESHAP adopted for gasoline related operations to determine whether they would be applicable to the gasoline storage tanks and dispensing operation once the BRS Facility becomes a major source of HAPs. Based upon this review, and for the reasons set forth in more detail below, we have determined that these NESHAPs are not/will not be applicable:

- The gasoline storage tanks and dispensing operation (SN-100) at the BRS Facility are not subject to 40 CFR 63 Subpart R because Subpart R only applies to gasoline distribution facilities which are defined as facilities that transfer and store gasoline as it is distributed from petroleum refineries to gasoline dispensing facilities.
- The gasoline storage tanks and dispensing operation (SN-100) at the BRS Facility are not subject to Subpart BBBBBB because Subpart BBBBBB only applies to gasoline distribution facilities located at area sources of HAPs which are defined as facilities that transfer and store gasoline as it is distributed from petroleum refineries to gasoline dispensing facilities.
- The gasoline storage tanks and dispensing operation (SN-100) at the BRS Facility are not subject to 40 CFR 63 Subpart CCCCCC which applies to gasoline dispensing facilities at area sources of HAPs, once the BRS Facility becomes a major source of HAPs.

IV. Third Step – Review of EPA Requirements for Non-Regulated Source Categories of HAPs - Gasoline Storage Tanks and Dispensing Operations at Major Sources of Regulated HAPs

The third step was to review EPA requirements for proposed projects that involve new emission units with the potential to emit regulated HAPs at major and non-major (area source) stationary emission sources. Subpart B under Title 40 of Section 63 of the Code of Federal Regulations identifies the requirements for control technology determinations for major sources in accordance with Clean Air Act sections 112(g) and 112(j). Per 40 CFR 63.50(a)(2)(i), Subpart B § 63.50 through §63.56 apply to “the owner or operator of affected sources within a source category or subcategory under this part that are located at a major source that is subject to an approved title V permit program and for which the Administrator has failed to promulgate emission standards by the section 112(j) deadlines.” 40 CFR Part 63.52(b)(1) states “When one or more sources in a category or subcategory subject to the requirements of this subpart are installed at a major source...the owner or operator must submit an application meeting the requirements of § 63.53(a) [i.e., Application for Case-by-Case MACT Determination] within 30 days of startup of the source.”:

V. Final Step – Case-by-Case MACT Determination – Gasoline Storage Tanks and Dispensing Operation (SN-100)

Given that the combined BRS Facility and EV Facility will be a major source of regulated HAPs and there is currently no NESHAP applicable to gasoline storage tanks and dispensing operations at major sources of HAPs, it appears that the gasoline storage tanks and dispensing operation (SN-100) at the BRS Facility and the EV Facility are instead subject to 40 CFR Part 63 Subpart B (known as the case-by-case MACT), which identifies the requirements for control technology determinations in accordance with Clean Air Act sections 112(g) and 112(j) for certain major sources which contain one or more sources that fall under a Section 112 listed source category or subcategory, but for which EPA has failed to promulgate an emission standard. Case-by-Case MACT 40 C.F.R. § 63.52(f)(1) requires that “The title V permit must contain an emission standard or emission limitation that is equivalent to existing source MACT and an emission standard or emission limitation that is equivalent to new source MACT for control of emissions of hazardous air pollutants. The MACT emission standards or limitations must be determined by the permitting authority and must be based on the degree of emission reductions that can be achieved if the control technologies or work practices are installed, maintained, and operated properly.”

To define the equivalent level of achievable controls and limits being met by other similar new gasoline storage tanks and dispensing operations., BRS reviewed: 1) New Source Performance Standards, 2) Non-major source existing NESHAP provision and 3) Best Available Control Technology (BACT) as defined under the PSD new source construction permit program.

New Source Performance Standards (NSPS)

It appears that there are no applicable New Source Performance Standards (NSPS) applicable to the gasoline storage tanks and the dispensing operation (SN-100) performed at the BRS Facility.

Non-Major Source NESHAP Provisions

As discussed above EPA has developed a non-major source NESHAP provision for area sources which is defined as Subpart CCCCC. EPA defined the following for gasoline fueling operations as specified below:

§63.11111 (a) The affected source includes each gasoline cargo tank during the delivery of product to a GDF and also includes each storage tank.	
(b) If your GDF has a monthly throughput of less than 10,000 gallons of gasoline, you must comply with the requirements in §63.11116.	§63.11116 Requirements for facilities with monthly throughput of less than 10,000 gallons of gasoline. (a) You must not allow gasoline to be handled in a manner that would result in vapor releases to the atmosphere for extended periods of time. Measures to be taken include, but are not limited to, the following: (1) Minimize gasoline spills. (2) Clean up spills as expeditiously as practicable. (3) Cover all open gasoline containers and all gasoline storage tank fill-pipes with a gasketed seal when not in use. (4) Minimize gasoline sent to open waste collection systems that collect and transport gasoline to reclamation and recycling devices, such as oil/water separators. (b) You are not required to submit notifications or reports, but you must have records available within 24 hours of a request by the Administrator to document your gasoline throughput. (c) You must comply with the requirements of this subpart by the applicable dates specified in §63.11113
(c) If your GDF has a monthly throughput of 10,000 gallons of gasoline or more, you must comply with the requirements in §63.11117.	§63.11117 Requirements for facilities with monthly throughput of 10,000 gallons of gasoline or more. (a) You must comply with the requirements in section §63.11116(a). (b) Except as specified in paragraph

	(c), you must only load gasoline into storage tanks at your facility by utilizing submerged filling, as defined in §63.11132, and as specified in paragraph (b)(1) or paragraph (b)(2) of this section. (1) Submerged fill pipes installed on or before November 9, 2006, must be no more than 12 inches from the bottom of the storage tank. (2) Submerged fill pipes installed after November 9, 2006, must be no more than 6 inches from the bottom of the storage tank. (c) Gasoline storage tanks with a capacity of less than 250 gallons are not required to comply with the submerged fill requirements in paragraph (b) of this section but must comply only with all of the requirements in §63.11116. (d) You must have records available within 24 hours of a request by the Administrator to document your gasoline throughput. (e) You must submit the applicable notifications as required under §63.11124(b). (f) You must comply with the requirements of this subpart by the applicable dates contained in §63.11113.
(d) If your GDF has a monthly throughput of 100,000 gallons of gasoline or more, you must comply with the requirements in §63.11118.	Not Applicable
§63.11120 What testing and monitoring requirements must I meet? Not applicable if monthly throughput is less than 100,000 gallons	
§63.11124 What notifications must I submit and when? - Each owner or operator subject to the control requirements in §63.11117 must comply with paragraphs (a)(1) through (4) of this section. (1) You must submit an Initial Notification that you are subject to this subpart by May 9, 2008, or at the time you become subject to the control requirements in §63.11117, unless you meet the requirements in paragraph (a)(3) of this section. The Initial Notification must contain the information specified in paragraphs (a)(1)(i) through (iii) of this section. The notification must be submitted to the applicable EPA Regional Office and delegated State authority as specified in §63.13. - You must submit a Notification of Compliance Status to the applicable EPA Regional Office and the delegated State authority, as specified in §63.13, by the compliance date specified in §63.11113 unless you meet the requirements in paragraph (a)(3) of this section.	

BACT Defined under the PSD Construction Permit Program

Review of the RBLC identified the following gasoline storage tanks and dispensing operation emission sources:

Facility /RBLC ID	Date	Emission Source	BACT Determination
Nucor Steel Brandenburg KY-0110	7/23/20	Two (2) 1000 Gallon Gasoline Storage Tanks	VOC - The gasoline storage tanks shall be equipped with a permanent submerged fill pipe.
Weyerhaeuser NR Company LA-0363	10/2/19	6,000-gallon gasoline storage tank	Good Tank Design and Submerged Fill Pipe
Lehigh Cement Company LLC IN-0312	6/27/19	500-gallon gasoline tank	Submerged fill pipe and Stage I Vapor Control

Facility /RBLC ID	Date	Emission Source	BACT Determination
Fritz Winter North America, LP KY-0109	10/24/16	2000-gal gasoline storage tank	The permittee shall not allow gasoline to be handled in a manner that would result in vapor releases to the atmosphere for extended periods of time. Measures to be taken include, but are not limited to, the following: i. Minimize gasoline spills; ii. Clean up spills as expeditiously as practicable; iii. Cover all open gasoline containers and all gasoline storage tank fill-pipes with a gasketed seal when not in use The gasoline storage tank shall be equipped with a permanent submerged fill pipe.
Indorama Ventures Olefins, LLC LA-0314	8/3/16	1,000-gal gasoline storage tank	Submerged fill pipe
Union County Lumber Company	8/3/15	5,890-gallon gasoline storage tank	Light color tank
Benteler Steel LA-0309	6/4/15	600-gallon gasoline storage tank	Submerged fill pipe

Review of the above indicates that BACT for gasoline storage tanks and dispensing operations consists of the use of submerged fill pipes on the gasoline storage tanks.

Case-by-Case MACT Determination for Gasoline Storage Tanks and Dispensing Operation (SN-100)

Based on the above information, BRS has determined what should be considered as case-by-case MACT for the gasoline storage tanks and dispensing operation which is emission source SN-100 at the BRS Facility. The selection of the equipment requirements / best management practices defined below were based on satisfying EPA requirements for establishment of MACT. BRS is requesting that the following permit condition for the gasoline storage tanks, and dispensing operation (SN-100) be incorporated into the permit:

Upon commencement of operation of SN-107, the BRS Facility must meet the following Case-by-Case MACT requirements for the gasoline storage tanks and dispensing operations (SN-100):

- Use of submerged fill pipes,
- The following best management practices:
 - Minimize gasoline spills.
 - Clean up spills as expeditiously as practicable.
 - Cover all open gasoline containers and all gasoline storage tank fill-pipes with a gasketed seal when not in use.
 - Minimize gasoline sent to open waste collection systems that collect and transport gasoline to reclamation and recycling devices, such as oil/water separators.

Appendix K
NESHAP Applicability

List of Applicable NESHAP Subparts

Rules and Regulations
40 CFR Part 63 Subpart N, Chromium Emissions From Hard and Decorative Chromium Electroplating and Chromium Anodizing Tanks
40 CFR Part 63 Subpart CCC, National Emission Standards for Hazardous Air Pollutants for Steel Pickling – HCl Process Facilities and Hydrochloric Acid Regeneration Plants
40 CFR Part 63 Subpart SSSS, National Emission Standards for Hazardous Air Pollutants: Surface Coating of Metal Coil
40 CFR Part 63 Subpart ZZZZ, National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustions Engines
40 CFR Part 63 Subpart DDDDD, National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters
40 CFR Part 63 Subpart YYYYY, National Emission Standards for Hazardous Air Pollutants for Area Sources: Electric Arc Furnace Steel Making Facilities.
40 CFR Part 63 Subpart CCCCCC, National Emission Standards for Hazardous Air Pollutants for Source Category: Gasoline Dispensing Facilities

Big River Steel
AFIN: 47-00991, Permit No. 235-AOP-R8
Summary of Applicable NESHAP Requirements

Source	Applicable NESHAP Regulation
Melt Shop	
SN-01 EAF I and LMF I	NESHAP Subpart YYYYY (Area Source MACT), NESHAP B Case by Case MACT (Upon becoming Major Source)
SN-02 EAF II and LMF II	
SN-01A Lime Injector Burner I	--
SN-02A Lime Injector Burner II	--
SN-14 Caster #1	--
SN-15 Caster #2	--
RH Degasser & Support Equipment	
SN-03 RH Degasser (including flare)	--
SN-04 RH Degasser Boiler	NESHAP Subpart DDDDD
SN-04A RH Degasser Vessel Preheater Station	--
SN-04B RH Vessel Top Part Dryer	--
SN-04C RH Vessel Nozzle Dryer	--
SN-04D RH Degasser Burner/Top Lance	--
SN-91 RH Degasser Alloy Delivery System (Included w/ Misc. Operations)	--
Melt Shop Natural Gas Sources	
SN-05 through SN-09 Horizontal Ladle Preheaters	--
SN-10 through SN-13 Vertical Ladle Dryout Flash Preheater Stations	--
SN-16 through SN-19B Tundish Preheaters/Dryout Stands	--
Tunnel Furnaces	
SN-20 Tunnel Furnace 1	--
SN-21 Tunnel Furnace 2	--
SN-21C Shuttle Zone	--
Cold Mill Operations	
SN-22 Pickle Line Boiler	NESHAP Subpart DDDDD
SN-23 Pickle Line Scale Dust	--
SN-24 Pickling Process / Outside Tanks and Supporting Scrubber	NESHAP Subpart CCC
SN-24A Push Pull Pickle Line (PPPL) Scrubber and Supporting Scrubber	NESHAP Subpart CCC
SN-25 Pickling Line Tandem Cold Mill	--
SN-26 Galvanizing Line 1 Support Boiler	NESHAP Subpart DDDDD
SN-27 Galvanizing Line 2 Support Boiler	NESHAP Subpart DDDDD
SN-28 Galvanizing Line 1 Furnace	NESHAP Subpart DDDDD (radiant tube heating portion only; not applicable to direct fire portion)
SN-29 Galvanizing Line 2 Furnace	NESHAP Subpart DDDDD (radiant tube heating portion only; not applicable to direct fire portion)
SN-34 Galvanizing Line Caustic Cleaning 1	--

Big River Steel
AFIN: 47-00991, Permit No. 235-AOP-R8
Summary of Applicable NESHAP Requirements

Source	Applicable NESHAP Regulation
SN-35 Galvanizing Line Caustic Cleaning 2	--
SN-36 Galvanizing Line Post Treatment 1	--
SN-37 Galvanizing Line Post Treatment 2	--
SN-38a Skin Pass Mill	--
SN-38b Skin Pass Mill (ACL)	--
SN-39 Annealing Furnaces (15 total units)	NESHAP Subpart DDDDD
SN-40 Decarburizing Line 1 Furnace Section	Applicability of Subpart DDDDD to be determined prior to official start-up / commencement of operation based on final specifications
SN-41 Decarburizing Line 1 Cleaning Section	--
SN-42 Decarburizing Line 2 Furnace Section	Applicability of Subpart DDDDD to be determined prior to official start-up / commencement of operation based on final specifications
SN-43 Decarburizing Line 2 Cleaning Section	--
SN-44 Reversing Cold Mill 3	--
SN-45 Reversing Cold Mill 1	--
SN-46 Reversing Cold Mill 2	--
SN-47 Annealing Pickling Line – Annealing Furnace	Applicability of Subpart DDDDD to be determined prior to official start-up / commencement of operation based on final specifications
SN-48 Annealing Pickling Line – Scale Dust Exhaust	--
SN-49 Annealing Pickling Line – Shot Blast	--
SN-50 Annealing Pickling Line – Pickling Section	NESHAP Subpart CCC
SN-51 Annealing and Coating Line - Annealing Furnace	NESHAP Subpart DDDDD
SN-52 Annealing and Coating Line – Cleaning Section	--
SN-53 Annealing and Coating Line – Drying Furnace & RTO	NESHAP Subpart SSSS
SN-54 MgO Coating Line 1 – Drying Furnace	Applicability of Subpart DDDDD to be determined prior to official start-up / commencement of operation based on final specifications
SN-55 MgO Coating Line 1 – Cleaning Section	--
SN-56 MgO Coating Line 2 – Drying Furnace	Applicability of Subpart DDDDD to be determined prior to official start-up / commencement of operation based on final specifications
SN-57 MgO Coating Line 2 – Cleaning Section	--
SN-58 Flattening Coating Line 1 – Furnace	Applicability of Subpart DDDDD to be determined prior to official start-up / commencement of operation based on final specifications
SN-59 Flattening Coating Line 1 – Cleaning Section (HCl Only)	NESHAP Subpart CCC
SN-60 Flattening Coating Line 2 – Furnace	Applicability of Subpart DDDDD to be determined prior to official start-up / commencement of operation based on final specifications

Big River Steel**AFIN: 47-00991, Permit No. 235-AOP-R8****Summary of Applicable NESHAP Requirements**

Source	Applicable NESHAP Regulation
SN-61 Flattening Coating Line 2 – Cleaning Section (HCl Only)	NESHAP Subpart CCC
SN-101 Annealing Pickling Line – Boiler Natural Gas Fired	NESHAP Subpart DDDDD
SN-102 Natural Gas Fired Cold Mill/Supporting Building Structures Space Heaters	--
SN-105 Color Coating Line – Pre-Cleaning Section	--
SN-106 Color Coating Line – Cleaning Section	--
SN-107 Color Coating Line – Prime/Finish Coating	NESHAP Subpart SSSS
SN-108a Color Coating Line Chemical Dryer	NESHAP Subpart SSSS (Note any process heaters subject to Subpart SSSS are excluded from DDDDD applicability under 40 CFR 63.7491(h))
SN-108b Color Coating Line Primer Oven	
SN-108c Color Coating Line Finish Oven	
SN-108d Color Coating Line RTO	
SN-108e Color Coating Line Spray Passivation	
SN-112 - Natural Gas Fired Waste Water Space Heaters	--
SN-113 - Natural Gas Fired North and South Wall Space Heaters	--
SN-114 - Natural Gas Direct Fired Flack Facility Space Heaters	--
SN-115 - Natural Gas Indirect Fired Flack Facility Space Heaters	--
SN-116 - Natural Gas Fired CGL Building Space Heaters	--
SN-117 - Natural Gas Fired ACL Building Space Heaters	--
SN-118 - Natural Gas Fired RCM Indirect Space Heaters	--
SN-119 - Natural Gas Fired RCM Direct Space Heaters	--
SN-120 Cold Mill Boiler NGO Line	NESHAP Subpart DDDDD
SN-121 Ceramic coating pots for GI Curing and zinc melting	--
SN-122 Ceramic coating pots for GL Curing and zinc melting	--
SN-123 Pre melt pot Curing and zinc melting	--
SN-124 Heated Parts Washer SMS Hotmill Rollshop	--
SN-125 Cold Mill Boiler	NESHAP Subpart DDDDD
SN-126 Color Coating Line Boiler	NESHAP Subpart DDDDD
SN-128 Sedimentation System	NESHAP Subpart CCC
Emergency Equipment	
Emergency Generators	NESHAP Subpart ZZZZ
Emergency Water Pumps	
Cooling Towers	
Cooling Towers	--

Big River Steel**AFIN: 47-00991, Permit No. 235-AOP-R8****Summary of Applicable NESHAP Requirements**

Source	Applicable NESHAP Regulation
Miscellaneous Operations	
Material Handling (SN-80 through SN-95)	--
Material Storage and Handling (SN-83, SN-85, SN-87, SN-89, SN-103)	--
Wind Erosion (Feedstock and Slag Areas) (SN-99A, SN-99B)	--
SN-127a Truck Dump & Silos with SMAC Dust Collector SN-127b Rail Loading Building with SMAC Dust Collector SN-127c Cold Mill Coil Entry with SMAC Dust Collector	--
Slag Handling	
SN-95 Drop Points Slag	--
SN- 96 Slag Handling and Conveying	--
Roadway Sources	
SN-97 Unpaved Roads	--
SN-98 Paved Roads	--
Gasoline Storage Tanks and Dispensing Operation	
SN-100 Gasoline Storage & Dispensing	NESHAP Subpart CCCCCC (Area Source MACT), NESHAP B Case by Case MACT (Upon becoming Major Source)
Hydrogen Plant	
SN-111a Hydrogen Plant Methane Reformer (PHG830)	NESHAP Subpart DDDDD
SN-111b Hydrogen Plant Methane Reformer (PHG250)	NESHAP Subpart DDDDD