

ADEQ

ARKANSAS
Department of Environmental Quality

FEB 22 2013

Randall Whitmore, Environmental Manager
Great Lakes Chemical Corporation (West Plant)
P.O. Box 7020
El Dorado, AR 71731-7020

Dear Mr. Whitmore:

The enclosed Permit No. 0286-AOP-R8 is your authority to construct, operate, and maintain the equipment and/or control apparatus as set forth in your application initially received on 9/28/2012.

After considering the facts and requirements of A.C.A. §8-4-101 et seq., and implementing regulations, I have determined that Permit No. 0286-AOP-R8 for the construction, operation and maintenance of an air pollution control system for Great Lakes Chemical Corporation (West Plant) to be issued and effective on the date specified in the permit, unless a Commission review has been properly requested under Arkansas Department of Pollution Control & Ecology Commission's Administrative Procedures, Regulation 8, within thirty (30) days after service of this decision.

The applicant or permittee and any other person submitting public comments on the record may request an adjudicatory hearing and Commission review of the final permitting decisions as provided under Chapter Six of Regulation No. 8, Administrative Procedures, Arkansas Pollution Control and Ecology Commission. Such a request shall be in the form and manner required by Regulation 8.603, including filing a written Request for Hearing with the APC&E Commission Secretary at 101 E. Capitol Ave., Suite 205, Little Rock, Arkansas 72201. If you have any questions about filing the request, please call the Commission at 501-682-7890.

Sincerely,



Mike Bates
Chief, Air Division

ADEQ OPERATING AIR PERMIT

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

Permit No. : 0286-AOP-R8

IS ISSUED TO:
Great Lakes Chemical Corporation (West Plant)
5821 Schuler Road
El Dorado, AR 71753
Union County
AFIN: 70-00101

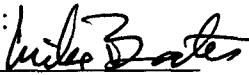
THIS PERMIT AUTHORIZES THE ABOVE REFERENCED PERMITTEE TO INSTALL, OPERATE, AND MAINTAIN THE EQUIPMENT AND EMISSION UNITS DESCRIBED IN THE PERMIT APPLICATION AND ON THE FOLLOWING PAGES. THIS PERMIT IS VALID BETWEEN:

October 9, 2012

AND

October 8, 2017

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

Signed: 

Mike Bates
Chief, Air Division

FEB 22 2013

Date

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List of Acronyms and Abbreviations

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

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SECTION I: FACILITY INFORMATION

PERMITTEE: Great Lakes Chemical Corporation (West Plant)

AFIN: 70-00101

PERMIT NUMBER: 0286-AOP-R8

FACILITY ADDRESS: 5821 Schuler Road
El Dorado, AR 71753

MAILING ADDRESS: P.O. Box 7020
El Dorado, AR 71731-7020

COUNTY: Union County

CONTACT NAME: Randall Whitmore

CONTACT POSITION: Environmental Manager

TELEPHONE NUMBER: 870-864-1587

REVIEWING ENGINEER: Kimberly O'Guinn

UTM North South (Y): Zone 15: 3671685.96 m

UTM East West (X): Zone 15: 505813.07 m

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SECTION II: INTRODUCTION

Summary of Permit Activity

Great Lakes Chemical Corporation-West Plant operates a bromine recovery facility at 5821 Schuler Road in Marysville, Arkansas. This modification is to allow the continued operation of a natural gas-fired rental boiler (SN-104) at the facility during planned maintenance on Boiler #2 (SN-102) and the addition of a cooling tower (SN-510).

With these modifications permitted PM/PM₁₀ annual emissions will increase by 0.2 tons/year (tpy).

Process Description

Bromine-containing brine is pumped to the surface from the underlying Smackover foundation at the brine supply wells. The brine may contain dissolved hydrogen sulfide gas (sour gas) and oil, which must be separated from the brine before the brine is sent to the bromine tower. The brine and sour gas streams are piped to the plant. The crude oil is stored in the tanks for future sales.

Brine Supply Pre-Treatment

At the plant, incoming brine is acidified to make gas removal easier and then sent to a vacuum stripper. After the vacuum stripper, most of the brine is sent directly to the bromine tower. The acid used to treat the brine is stored on site. The acid storage tanks are equipped with a scrubber (SN-301) to control acid gas emissions. The sour gas stripped at the well sites is combined with the gas removed from the vacuum stripper. The combined sour gas stream is then routed to Lion Oil Company (LOC) (via GLCC's Central Plant) for sweetening. LOC returns the sweetened gas to the Central Plant for combustion in that facility's boilers.

Flare

The facility has a flare used to flare sour gas in the event that the sour gas cannot be routed to GLCC Central Plant.

Boilers

The facility operates two natural gas fired boilers to generate steam for use at the facility. The existing boilers are both fired by pipeline-quality natural gas and have heat input capacities of 68 MMBtu/hr for Boiler #1 (SN-101A) and 106 MMBtu/hr for Boiler #2 (SN-102). The facility utilizes a rental boiler (SN-104) during maintenance on Boiler #2. The rental boiler will burn pipeline-quality natural gas and is rated for a maximum heat input capacity of 97.7 MMBtu/hr.

Engines

The facility operates three diesel-fired generator engines that supply back-up power for the West Plant sour gas compressors. Each engine is equipped with a diesel fuel storage tank.

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Bromine Production

During bromine production, brine, steam, and chlorine are introduced into the bromine tower, where bromine is extracted. The bromine vapor is condensed and purified. From the purification process, bromine is transferred to storage tanks, where it is then loaded into tank trucks or ISO's. The debrominated brine goes through heat recovery and treatment operations before it is reinjected in to the Smackover formation.

The vents from the bromine purification system are vented to the environmental scrubber (SN-005). In the event of a required pressure release from the purification system, bromine emissions may vent to the atmosphere at the atmospheric absorbers. Emissions from the bromine storage tanks and transfer operations are also routed to the environmental scrubber (SN-005). Cooling towers remove heat from the various fluids and processes at the facility.

Emergency Releases

Ammonia is used to control emergency releases of bromine, chlorine, and hydrobromic acid.

Regulations

The following table contains the regulations applicable to this permit.

Regulations
Arkansas Air Pollution Control Code, Regulation 18, effective June 18, 2010
Regulations of the Arkansas Plan of Implementation for Air Pollution Control, Regulation 19, effective July 9, 2012
Regulations of the Arkansas Operating Air Permit Program, Regulation 26, effective July 9, 2012
40 CFR Part 60, Subpart Dc, <i>Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units</i>
40 CFR Part 63, Subpart ZZZZ, <i>National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engine</i>

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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	20.0	41.3
		PM ₁₀	20.0	41.3
		SO ₂	1987.2	40.1
		VOC	17.3	21.1
		CO	82.7	193.4
		NO _x	84.8	94.0
HAPs		HCl	1.20	5.27
		Cl	0.10	0.44
Air Contaminants **		HBr	0.50	2.50
		Br ₂	4.00	17.60
		H ₂ S	38.10	15.40
005	Environmental Scrubber	Br ₂	4.00	17.60
		Cl	0.10	0.44
		HCl	0.10	0.44
101A	Boiler #1 Natural Gas (68 MMBTU/hr)	PM	0.6	2.3
		PM ₁₀	0.6	2.3
		SO ₂	0.1	0.2
		VOC	0.8	3.8
		CO	5.7	24.7
		NO _x	3.4	14.7
102	Boiler #2	PM	0.4	1.8

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EMISSION SUMMARY				
Source Number	Description	Pollutant	Emission Rates	
			lb/hr	tpy
	Natural Gas (106 MMBTU/hr)	PM ₁₀	0.4	1.8
		SO ₂	0.6	2.7
		VOC	0.6	2.7
		CO	22.1	96.8
		NO _x	6.5	28.5
104	Rental Boiler Natural Gas (97.7 MMBTu/hr)	PM	0.8	2.7
		PM ₁₀	0.8	2.7
		SO ₂	0.1	0.3
		VOC	0.6	2.0
		CO	17.9	64.2
		NO _x	9.8	35.2
201A	Sour Gas Flare (Pilot Only)	PM	0.1	0.1
		PM ₁₀	0.1	0.1
		SO ₂	0.1	0.1
		VOC	0.1	0.1
		CO	0.1	0.1
		NO _x	0.1	0.1
201	Sour Gas Flare (Sour Gas Combustion)	PM	6.7	1.3
		PM ₁₀	6.7	1.3
		SO ₂	1980.0	35.0
		VOC	8.9	1.7
		CO	23.5	4.3
		NO _x	4.4	0.8
		H ₂ S	36.1	6.6
301	HCl/HBr Storage Tanks	HBr	0.10	0.50

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EMISSION SUMMARY				
Source Number	Description	Pollutant	Emission Rates	
			lb/hr	tpy
	Scrubber	HCl	0.70	3.07
401	Generator Engine (864 hp)	PM	0.7	0.2
		PM ₁₀	0.7	0.2
		SO ₂	3.5	0.9
		VOC	0.7	0.2
		CO	4.8	1.2
		NO _x	20.8	5.2
402	Generator Engine (598 hp)	PM	1.4	0.4
		PM ₁₀	1.4	0.4
		SO ₂	1.3	0.4
		VOC	1.6	0.4
		CO	4.0	1.0
		NO _x	18.6	4.7
403	Generator Engine (598 hp)	PM	1.4	0.4
		PM ₁₀	1.4	0.4
		SO ₂	1.3	0.4
		VOC	1.6	0.4
		CO	4.0	1.0
		NO _x	18.6	4.7
404	Fire Pump Engine	PM	0.2	0.1
		PM ₁₀	0.2	0.1
		SO ₂	0.2	0.1
		VOC	0.2	0.1
		CO	0.6	0.1
		NO _x	2.6	0.1
501	Tall Brine FRP Cooling Tower Cell (CT-50-3301)	PM	0.7	3.0
		PM ₁₀	0.7	3.0

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EMISSION SUMMARY				
Source Number	Description	Pollutant	Emission Rates	
			lb/hr	tpy
		VOC	0.1	0.5
		HBr	0.10	0.50
		HCl	0.10	0.44
		PM	0.7	3.0
		PM ₁₀	0.7	3.0
502	Tall Brine FRP Cooling Tower Cell (CT-50-3302)	VOC	0.1	0.5
		HBr	0.10	0.50
		HCl	0.10	0.44
		PM	0.7	3.0
		PM ₁₀	0.7	3.0
503	Tall Brine FRP Cooling Tower Cell (CT-50-3303)	VOC	0.1	0.5
		HBr	0.10	0.50
		HCl	0.10	0.44
		PM	0.7	3.0
		PM ₁₀	0.7	3.0
504	Tall Brine FRP Cooling Tower Cell (CT-50-3304)	VOC	0.1	0.5
		HBr	0.10	0.50
		HCl	0.10	0.44
		PM	0.7	3.0
		PM ₁₀	0.7	3.0
505	Scrubber Brine Cooling Tower (CT-50-3409 A,B,C)	PM	3.1	13.5
		PM ₁₀	3.1	13.5
506	Chiller Cooling Tower (CT-50-3407)	PM	0.2	0.8
		PM ₁₀	0.2	0.8
507	NV Cooling Tower (CT-53-3515N)	PM	0.6	2.3
		PM ₁₀	0.6	2.3
508	NV Cooling Tower (CT-53-3515S)	PM	0.6	2.3
		PM ₁₀	0.6	2.3
509	Stripper Cooling Tower	PM	0.3	0.9

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EMISSION SUMMARY				
Source Number	Description (CT-52-3619)	Pollutant	Emission Rates	
			lb/hr	tpy
		PM ₁₀	0.3	0.9
510	Cooling Tower	PM	0.1	0.2
		PM ₁₀	0.1	0.2
601	Brine Wells Crude Oil Storage Tanks	VOC	1.8	7.7
		H ₂ S	2.00	8.80

*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.

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SECTION III: PERMIT HISTORY

Permit 286-A to construct and operate was issued on February 3, 1975.

Permit 286-AR-1, which was issued on November 4, 1987, allowed the construction of a sodium hydrosulfide unit and the tail gas from this unit was routed to either or both of the facility's two boilers.

Permit 1647-A was issued on June 27, 1995. This air permit allowed the construction of a third bromine tower and construction of a scrubber brine cooling system (SBCS) to replace the feed brine pond. Other changes included the transport of hydrogen sulfide (sour gas) to Lion Oil Company via GLCC's Central plant. The sour gas is sweetened and returned to the Central plant for combustion.

Permit 286-AR-2 was issued on August 13, 1996. This air permit covered consolidating permit 1647-A with 286-AR-2. In addition, this modification allowed for the installation of a fourth bromine tower.

Permit 286-AOP-R0 was this facility's initial Title V permit. It was issued on March 9, 1998 and a third boiler was permitted for the first time in this permit. Several previously permitted sources were designated as insignificant.

An administrative amendment was performed on permit 286-AOP-R0 on June 10, 1999. This amendment corrected several typographical errors and sources SN-302 through 307 were removed.

Permit 286-AOP-R1 was issued on July 12, 2000. It allowed the installation of a smaller third boiler (SN-103) than the one permitted in permit 286-AOP-R0.

Permit 286-AOP-R2 was issued on May 7, 2002. This modification allowed Great Lakes to install a boiler previously located at the Newell facility. This boiler replaced the #1 boiler (SN-101). This boiler is rated at 68 MMBtu/hr and is utilized as a standby boiler. This modification resulted in permitted emissions decreases of 1.4 tpy PM, 1.4 tpy PM₁₀, 17.7 tpy CO, and 274.7 tpy NO_x and a permitted increase of 0.2 tpy VOC. Emissions from the boiler (SN-101A) are less than the PSD significance levels.

Permit 286-AOP-R3 was issued on June 12, 2003. This was the initial renewal of the Title V permit for this facility. This was also a modification which allowed Great Lakes to replace the three Bromine Towers (SN-001, 002 and 007) with three purification systems. SN-009, the fourth bromine tower, SN-103, Boiler #3, and the NaHS unit were removed from service. Finally the natural gas limit was removed from SN-101A and combustion emissions were revised to reflect updated AP-42 factors.

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Permit 286-AOP-R4 was issued on January 21, 2005. This was a minor modification to the existing permit. It allowed Great Lakes to remove the scrubber from SN-006 and route the emissions to SN-005. This modification also incorporated an administrative amendment to add the use of ammonia to control emergency releases to the permit.

Permit 0286-AOP-R5 was issued on July 11, 2006. This modification was to comply with a Consent Administrative Order (CAO LIS 05022) which instructed the facility to submit a permit modification to correct discrepancies between permitted and actual sour gas handling. The permit was modified to allow for an Alternate Operating Scenario in the event of a startup, shutdown, emergency condition, malfunction, or in an unplanned outage of Lion Oil's amine unit or the Central Plant's NaHS unit. The Alternate Operating Scenario allows the West Plant's sour gas to be combusted in the West Plant's sour gas flare (SN-201) or routed to the Great Lakes' Central Plant. Also, this modification allowed for the installation of an electric redundant compressor at the West Plant to minimize sour gas flaring events. This compressor is a back-up compressor for SN-201 and included in the Insignificant Activities List. Including the Alternate Operating Scenario, permitted PM/PM₁₀, NO_x, CO, VOC, SO₂, & H₂S emissions increased by 0.9 tons/year (tpy), 0.4 tpy, 3.9 tpy, 1.3 tpy, 34.6 tpy, & 6.6 tpy, respectively.

Permit 0286-AOP-R6 was issued on June 13, 2007. This modification was to install three diesel-fired generator engines that supplied back-up power for the West Plant sour gas compressors. Each engine was equipped with a diesel fuel storage tank. The diesel fuel storage tanks qualified as Group A-3 Insignificant Activities. With this modification PM/PM₁₀, SO₂, VOC, CO and NO_x emissions increased by 1.0 tons/year (tpy), 2.1 tpy, 1.0 tpy, 3.2 tpy, and 14.6 tpy respectively.

This permit modification also incorporated the language and conditions agreed to in the Permit Appeal Resolution (PAR) 06-005-P issued on December 11, 2006.

Permit 0286-AOP-R7 was issued on October 9, 2012. The facility submitted an application to renew the existing permit and to comply with Consent Administrative Order (CAO LIS 05-022) on December 11, 2007. The CAO required the facility to update the facility's existing permit. An audit revealed sources located at the facility that was not previously listed as sources. These sources included cooling towers and brine wells crude oil storage tanks (SN-501-SN-509, SN-601). These sources were included as permissible sources in the permit.

On September 10, 2008, the facility submitted an application for a minor modification. The modification requested to revise Specific Condition #26 in permit #286-AOP-R6 to allow the facility to measure the brine flow rate once per shift to ensure it remained above the minimum acceptable level established by stack testing.

On September 21, 2011 the facility submitted an application for a minor modification to temporarily operate a natural gas-fired Rental Boiler (SN-104) at the facility during planned maintenance on the permitted Boiler #2 (SN-102).

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With these modifications permitted annual emissions increased as follows: PM/PM₁₀ by 35.1 tons/year (tpy), VOC by 14.3 tpy, CO by 69.1 tpy, NO_x by 38.1 tpy, total HAPs by 2.61 tpy, and total air contaminants by 10.8 tpy. Permitted SO₂ emissions decreased by 0.4 tpy.

SECTION IV: SPECIFIC CONDITIONS

SN-005

Bromine Purification System Common Vent

Source Description

Bromine containing brine occurs naturally in specific south Arkansas geologic formations. When the brine first comes out of the ground it contains sour gas and sodium bromide. This gas is separated and sent to Lion Oil via the Central pipeline. Most of the degassed brine goes directly to the bromine tower where it is mixed with chlorine. The rest is sent to a scrubber brine cooling system (SBCS). Liquid chlorine is unloaded from trucks and stored. Chlorine gas is then injected into the bromine purification systems under flow control.

In the bromine tower, the brine is chlorinated to remove the bromine that is steam stripped and condensed. The bromine vapors are condensed, purified, and packaged in tank trucks, ISO's or bulk containers. Each bromine purification system has its own scrubber but vapors are normally routed to a bromine purification system common vent (SN-005) which vents to the atmosphere. Vapors from the bromine tower (formerly SN-009) are now also routed to the final vent scrubber, SN-005. Vapors leaving each bromine purification system are visually monitored from the bromine control room. Bromine is highly visible even when present in low concentrations. This allows early detection of possible process upsets.

Bromine vapors displaced during the storage and packaging operations are routed to the bromine purification system common vent, SN-005.

The debrominated brine flows from the bromine tower, through a heat recovery system and then to the tail brine system where it is reinjected into the Smackover formation. Great Lakes uses lime, caustic, or ammonia to neutralize the tail brine.

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 compliance with Specific Condition #6. [Regulation 18, §18.801, and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]

Pollutant	lb/hr	tpy
Br ₂	4.00	17.60
Cl	0.10	0.44
HCl	0.10	0.44

2. Visible emissions may not exceed the limits specified in the following table of this permit as measured by EPA Reference Method 9.

SN	Limit	Regulatory Citation
005	5%	Regulation 18, §18.501

3. The permittee shall conduct weekly observations of the opacity from sources SN-005 and keep a record of these observations. If the permittee detects visible emissions exceeding this limit, the permittee must immediately take action to identify and correct the cause of the visible emissions. After implementing the corrective action, the permittee must document that the source complies with the visible emissions requirements. The permittee shall maintain records of the cause of any visible emissions and the corrective action taken. The permittee must keep these records onsite and make them available to Department personnel upon request. [Regulation 18, §18.501 and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]
4. Venting from the Bromine Purification Systems shall be considered an upset condition and subject to the requirements of Regulation 18, §18.11. [Regulation 18, §18.11]
5. The permittee shall maintain a minimum scrubbing media flow rate of 2 gallons per minute to the Bromine Purification System Common Vent (SN-005). The flow rate shall be monitored and recorded a minimum of once per week. Records of flow rate shall be kept on site and made available to Department personnel upon request. [Regulation 18, §18.1003 and §18.1004 and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]
6. The permittee shall measure the bromine emissions from the Bromine Purification System Common Vent (SN-005) once in the first year of every 5 year permit period in accordance with an EPA approved test method. If no testing has been conducted within 5 years of the issuance date of this permit 0286-AOP-R7, then testing shall be conducted within (180 or 270) days of permit issuance, and every five years thereafter. [Regulation 18, §18.1002 and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]
7. The bromine loading rate shall not exceed 30 gallons per minute and 300,000 B-lots per any consecutive twelve month period. Compliance with this condition shall be verified by maintaining monthly records of the amount of bromine shipped. These records shall be kept on site and shall be provided to Department personnel upon request. [Regulation 18, §18.1003 and §18.1004 and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]
8. The permittee shall use only degassed brine, fresh water, and/or caustic solution as the scrubbing media in the Bromine Purification System Common Vent (SN-005).

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- a. The appropriate parameter of the scrubbing media in use shall be measured and recorded once per shift.
- b. The permittee may implement a previously unused scrubbing media when establishing appropriate scrubber operating parameters determined during emissions testing. During the interim time between emissions testing and the receipt of the testing results, the permittee may continue to operate under the scrubber operating parameters present at the time of the emissions testing. In the event that emissions testing results indicate emissions in excess of the permitted limits, the permittee shall take corrective actions as quickly as practicable and shall notify the Department of the deviation as required by General Provision #8.

SN-101A, SN-102 & SN-104
 Boiler #1, Boiler #2 & Rental Boiler

Source Description

Great Lakes has two boilers (#1 and #2) permitted at the West Plant. Boiler #1 (SN-101A) and Boiler #2 (SN-102) have a rated capacity of 68 and 106 million Btu per hour, respectively. These boilers are equipped with low NO_x burners and use only natural gas as fuel. The facility utilizes a rental boiler (SN-104) during the maintenance on Boiler #2. The rental boiler will burn pipeline-quality natural gas and is rated for a maximum heat input capacity of 97.7 MMBtu/hr.

SN-101A and SN-104 are subject to 40 CFR Part 60, Subpart Dc-*Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units*. SN-102 was installed before June 19, 1984 and is not subject to 40 CFR Part 60.

Specific Conditions

9. The permittee shall not exceed the emission rates set forth in the following table. Both lb/hr and tpy limits are based on maximum capacity of the equipment. [Regulation 19, §19.501 et seq. and 40 CFR Part 52, Subpart E]

SN	Description	Pollutant	lb/hr	tpy
101A	Boiler #1	PM ₁₀	0.6	2.3
		SO ₂	0.1	0.2
		VOC	0.8	3.8
		CO	5.7	24.7
		NO _x	3.4	14.7
102	Boiler #2	PM ₁₀	0.4	1.8
		SO ₂	0.6	2.7
		VOC	0.6	2.7
		CO	22.1	96.8
		NO _x	6.5	28.5
104	Rental Boiler	PM ₁₀	0.8	2.7
		SO ₂	0.1	0.3
		VOC	0.6	2.0
		CO	17.9	64.2
		NO _x	9.8	35.2

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10. The permittee shall not exceed the emission rates set forth in the following table. Both lb/hr and tpy limits are based on maximum capacity of the equipment. [Regulation 18, §18.801 and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]

SN	Description	Pollutant	lb/hr	tpy
101A	Boiler #1	PM	0.6	2.3
102	Boiler #2	PM	0.4	1.8
104	Rental Boiler	PM	0.8	2.7

11. Visible emissions shall not exceed 5% opacity from SN-101A, SN-102 and SN-104. The permittee shall demonstrate compliance by burning only natural gas as fuel at these sources. [Regulation 18, §18.501 and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]
12. Pipeline quality natural gas shall be the only fuel fired in the rental boiler (SN-104). [Regulation 19, §19.705of Regulations 19, 40 CFR §70.6, and A.C.A §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]
13. The permittee shall combust no more than 689,650 Mscf of natural gas within the rental boiler (SN-104) during any consecutive 12-month period. During the time period in which the rental boiler is in operation, Boiler #2 (SN-102) shall remain offline for maintenance. [Regulation 19, §19.705of Regulations 19, 40 CFR §70.6, and A.C.A §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]
14. The permittee shall maintain records of the operation of the rental boiler (SN-104). These records shall be updated monthly during periods of rental boiler operation and shall document the amount of natural gas combusted in SN-104 during each month. These records shall include a 12 month rolling total and shall be updated by the 15th of each month to show compliance with Specific Condition #13. [Regulation 19, §19.705of Regulations 19, 40 CFR Part 52 Subpart E]
15. Boiler #1 (SN-101A) and the rental boiler (SN-104) are subject to and shall comply with the applicable provisions of 40 CFR Part 60 Subpart Dc – *New Source Performance Standards for Small Industrial-Commercial – Institutional Steam Generating Units*. The requirements of Subpart Dc, as applicable to the boilers, are outlined below.
- a. The permittee shall submit an initial notification of the date of start-up. This notification shall contain the information outlined by 68.48c(a)(1) through (4). [§68.48c(a)]
 - b. The permittee shall maintain records of the amount of natural gas combusted during each calendar month [§60.48c(g)(2)]
 - c. All records required under Subpart Dc shall be maintained by the permittee for a period of two years following the date of such record. [§60.48c(i)]

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SN-201A
Sour Gas Flare (Pilot Only)

Source Description

The Great Lakes Chemical Company currently operates brine supply wells in conjunction with the West Plant. These wells produce brine that contains dissolved sour gas. Since the gas interferes with the operation of the bromine tower, Great Lakes removes as much of it as possible before the bromine is recovered.

The gas separation begins at the well site. The gas separated at the well is cooled and transported to the West Plant through a buried pipeline. The brine is sent to the plant in a separate pipeline. At the plant, incoming brine is acidified to make gas removal easier and then sent to a vacuum stripper. After the vacuum stripper, most of the brine is sent directly to the bromine tower. The remaining brine is sent to the scrubber brine cooling system (SBCS) and then the bromine tower. The acid used to treat the brine is stored on site. This storage tank is equipped with a scrubber (SN-301) which uses degassed brine, fresh water or caustic as the scrubbing media.

The sour gas stripped at the well sites is combined with the gas removed from the vacuum stripper. The combined sour gas stream is then routed to the Central Plant, where it is combined with the sour gas from other GLCC plants and routed to Lion Oil Company (LOC) for sweetening. LOC returns the sweetened gas to the Central Plant for combustion in the facility's boilers.

In the event of a planned or unplanned outage of Lion Oil's amine unit, the Central Plant's NaHS unit, and/or other equipment related to the off-site transfer or processing of sour gas, the plant is equipped with a flare (SN-201) to burn the sour gas.

The scrubber brine cooling system was installed to replace the feed brine ponds. The SBCS consists of a non-contact heat exchanger, support structures, and feed pumps. The system is also equipped with instrumentation to monitor the surge tank level and the brine temperature. (Previously the brine was pumped into a pond where it cooled by evaporation. The pond had H₂S emissions but they were fugitive and not point source emissions).

Specific Conditions

16. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition through compliance with Specific Condition #18 & #19. [Regulation 19, §19.501 et seq. and 40 CFR Part 52, Subpart E]

SN	Description	Pollutant	lb/hr	tpy
201A	Sour Gas Flare (0.125 MMBTU/hr) Pilot Only	PM ₁₀	0.1	0.1
		SO ₂	0.1	0.1
		VOC	0.1	0.1
		CO	0.1	0.1
		NO _x	0.1	0.1

17. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition through compliance with Specific Condition #18 & #19. [Regulation 18, §18.801, and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]

SN	Description	Pollutant	lb/hr	tpy
201A	Sour Gas Flare (0.125 MMBTU/hr) Pilot Only	PM	0.1	0.1

18. Visible emissions from the flare pilot (SN-201A) shall not exceed 5% opacity. The permittee shall show compliance by burning only pipeline quality natural gas as fuel for the flare pilot (SN-201A). [Regulation 18, §18.501 and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]
19. The permittee shall use only pipeline quality natural gas as fuel for the flare pilot (SN-201A). [Regulation 19, §19.705, A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311, and 40 CFR Part 70.6]

***Alternate Operating Scenario
 Sour Gas Flaring Events***

20. During planned outages of Loin Oil’s amine unit, the Central Plant’s NaHs unit, and/or other equipment related to the off-site transfer or processing of sour gas (including startup and shutdown associated therewith), the permittee shall be allowed to combust the West Plant’s sour gas in the West Plant’s sour gas flare in accordance with Specific Conditions #21, #22, #23 and #24 or route the sour gas to another facility permitted to accept it. [Regulation 19, §19.601]
21. The permittee shall not exceed the emission rates set forth in the following table when flaring sour gas during planned outages. The permittee shall demonstrate compliance with this condition through compliance with Specific Condition #22. [Regulation 19, §19.501 and 40 CFR Part 52, Subpart E]

SN	Description	Pollutant	lb/hr	tpy
201	Sour Gas Flare (Sour Gas Combustion)	PM ₁₀	6.7	1.3
		SO ₂	1980.0	35.0
		VOC	8.9	1.7
		CO	23.5	4.3
		NO _x	4.4	0.8

22. The permittee shall maintain records which document compliance with the emission limits listed in Specific Condition #21. These records shall indicate the reason for flaring, the duration of each flaring event, the total volume of gas flared during each event, and the air emissions resulting from each event in both lb/hr and tons/yr. These records shall be updated for each flaring event, kept on site, and made available to Department personnel upon request and submitted to the Department in accordance with General Provision 7. If emissions exceed the limits of Specific Condition #21, the emissions must be reported in accordance with §19.601 or §19.602, as applicable. [Regulation No. 19 §19.705 and 40 CFR Part 52, Subpart E]

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23. The permittee shall not exceed the emission rates set forth in the following table when flaring sour gas during planned outages of Lion Oil's amine unit, the Central Plant's NaHS unit, and/or other equipment related to the off-site transfer or processing of sour gas (including startup and shutdown associated therewith). The permittee shall demonstrate compliance with this condition through compliance with Specific Condition #24. [Regulation 18, §18.801 and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]

SN	Description	Pollutant	lb/hr	tpy
201	Flare (sour gas combustion)	PM	6.7	1.3
		H ₂ S	36.1	6.6

24. The permittee shall maintain records which document compliance with the emission limits listed in Specific Condition #23. These records shall indicate the reason for flaring the duration of each flaring event, the total volume of gas flared during each event, and the air emissions resulting from each event in both lb/hr and tons/yr. These records shall be updated for each flaring event, kept on site, made available to Department personnel upon request and submitted to the Department in accordance with General Provision 7. If emissions exceed the limits in Specific Condition #23, the emissions must be reported in accordance with §18.1101, as applicable. [Regulation No. 18 §18.1004 and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]
25. Sour gas flaring of any duration during any unplanned outage of Lion Oil's amine unit, the Central Plant's NaHS unit, and/or other equipment related to the off-site transfer or processing of sour gas (including startup and shutdown associated therewith), shall be considered an "upset condition" or "emergency condition" and shall be reported in accordance with Regulations 19, §19.601, 19.602 and Regulation 18, §18.1101 and §18.105, as applicable. [Regulations 19, §§19.601, 19.602, Regulation 18, §18.1101 and §18.105 and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]
26. On or before June 30, 2007, the permittee shall submit a root cause analysis to ADEQ demonstrating the effectiveness of the backup compressor and backup power supply in reducing sour gas flaring incidents at the West Plant. The Department may use this information to re-evaluate the flaring limits and conditions. The facility submitted to the Department a root cause analysis on June 28, 2007. [A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]

SN- 301

HCl/HBr Storage Tank

Source Description

The acid used to treat the brine is stored on site. This storage tank is equipped with a scrubber (SN-301) which uses degassed brine, fresh water or caustic as the scrubbing media.

Specific Conditions

27. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition through compliance with Specific Condition #30 and Specific Condition #31. [Regulation 18, §18.801, effective June 18, 2010, and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]

Pollutant	lb/hr	tpy
HCl	0.70	3.07
HBr	0.10	0.50

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

SN	Limit	Regulatory Citation
301	5%	§18.501

29. The permittee shall conduct weekly observations of the opacity from source SN-301 and keep a record of these observations. If the permittee detects visible emissions exceeding this limit, the permittee must immediately take action to identify and correct the cause of the excess visible emissions. After implementing the corrective action, the permittee must document that the source complies with the visible emissions requirements. The permittee shall maintain records of the cause of any excess visible emissions and the corrective action taken. The permittee must keep these records onsite and make them available to Department personnel upon request. [Regulation 18, §18.1004 and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]

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30. The permittee shall maintain a minimum flow rate of 5 gallons per minute to the acid tank scrubber (SN-301) during acid transfer operations from tanker trucks to acid storage tanks. Flow rate shall be monitored and recorded a minimum of once during acid transfer operations from tanker trucks to the acid storage tanks. Records of flow rate shall be maintained on site and provided to Department personnel upon request. [Regulation 18, §18.1003 and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]
31. The permittee shall use only degassed brine, fresh water, and/or caustic as the scrubbing media in the acid tank scrubber (SN-301). Compliance shall be demonstrated through compliance with Specific Condition #32. [Regulation 18, §18.1004 and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]
32. The permittee shall maintain monthly records of the scrubbing media used at SN-301. The permittee shall update these records any time the scrubbing media being used is changed. The permittee shall keep these records onsite and make them available to Department personnel upon request. [Regulation 18, §18.1004 and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]

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SN-401, SN-402, SN-403, SN-404
 Generac MD600 Emergency Generator Engine (864 hp)
 Generac MD400 Emergency Generator Engine (598 hp)
 Generac MD400 Emergency Generator Engine (598 hp)
 Fire Pump Diesel Engine (85 hp)

Source Description

Three diesel-fired generator engines supply back-up power for the West Plant sour gas compressors. Each engine is equipped with a diesel fuel storage tank. The diesel storage tanks are listed as Insignificant Activities due to the capacity of less than 10,000 gallons and vapor pressure less than 0.5 psia. The Fire Pump Diesel Engine will only be used for fire suppression.

Specific Conditions

33. 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 #37 and #39. [Regulation 19, §19.501 et seq. and 40 CFR Part 52, Subpart E]

SN	Description	Pollutant	lb/hr	tpy
401	Generator Engine (864 hp)	PM ₁₀	0.7	0.2
		SO ₂	3.5	0.9
		VOC	0.7	0.2
		CO	4.8	1.2
		NO _x	20.8	5.2
402	Generator Engine (598 hp)	PM ₁₀	1.4	0.4
		SO ₂	1.3	0.4
		VOC	1.6	0.4
		CO	4.0	1.0
		NO _x	18.6	4.7
403	Generator Engine (598 hp)	PM ₁₀	1.4	0.4
		SO ₂	1.3	0.4
		VOC	1.6	0.4
		CO	4.0	1.0
		NO _x	18.6	4.7

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SN	Description	Pollutant	lb/hr	tpy
404	Fire Pump Engine (85hp)	PM ₁₀	0.2	0.1
		SO ₂	0.2	0.1
		VOC	0.2	0.1
		CO	0.6	0.1
		NO _x	2.6	0.1

34. 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 #37 and #39. [Regulation 18, §18.801, and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]

SN	Description	Pollutant	lb/hr	tpy
401	Generator Engine (864 hp)	PM	0.7	0.2
402	Generator Engine (598 hp)	PM	1.4	0.4
403	Generator Engine (598 hp)	PM	1.4	0.4
404	Fire Pump Engine (85hp)	PM	0.2	0.1

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 Specific Condition shall be demonstrated by compliance with Specific Condition #36. [Regulation No. 19 §19.503 and 40 CFR Part 52, Subpart E]

SN	Limit	Regulatory Citation
401, 402, 403, 404	20%	§19.501

36. The permittee shall conduct daily visible emissions observations as a method of compliance verification for the opacity limit assigned whenever SN-401, SN-402, SN-403 and SN-404 are in operation for more than 24 consecutive hours. Observations shall be conducted by someone trained in EPA Reference Method 9. If during the observations, visible emissions are detected which appear to be in excess of the permitted opacity limit, the permittee shall:

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- a. Take immediate action to identify the cause of the visible emissions,
- b. Implement corrective action, and
- c. If excessive visible emissions are still detected, an opacity reading shall be conducted in accordance with EPA Reference Method 9 for point sources and in accordance with EPA Method 22 for non-point sources. This reading shall be conducted by a person trained and certified in the reference method. If the opacity reading exceeds the permitted limit, further corrective measures shall be taken.
- d. If no excessive visible emissions are detected, the incident shall be noted in the records as described below.

The permittee shall maintain records related to all visible emission observations and Method 9 readings. These records shall be updated on an as-performed basis. These records shall be kept on site and made available to Department personnel upon request. These records shall contain:

- e. The time and date of each observation/reading,
 - f. Any observance of visible emissions appearing to be above permitted limits or any Method 9 reading which indicates exceedance,
 - g. The cause of any observed exceedance of opacity limits, corrective actions taken, and results of the reassessment, and
 - h. The name of the person conducting the observation/reading.
37. The permittee shall not operate SN-401, SN-402 and SN-403 in exceedance of 500 hours per 12-month period for each engine. [Regulation No. 19 §19.705, A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, and 40 CFR 70.6]
 38. The permittee shall maintain records which demonstrate compliance with the limits set forth in Specific Condition #37. These records shall be updated monthly, shall be kept on site, and shall be made available to Department personnel upon request. [Regulation No. 19 §19.705 and 40 CFR Part 52, Subpart E]
 39. Diesel fuel shall be the only fuel utilized for SN-401, SN-402, SN-403 and SN-404. Any fuel utilized at these sources shall have a sulfur content of 0.5% by weight or less. The permittee shall maintain documentation of the sulfur content of the fuel used at these sources for the purpose of compliance demonstration. These records shall be updated as necessary, maintained on-site, and made available to Department personnel upon request. [§19.705 of Regulation 19 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]
 40. The facility must submit a permit application to incorporate applicable provisions of 40 CFR Part 63 Subpart ZZZZ by May 3, 2013. [§19.304 of Regulation 19 and 40 CFR §63.6595(a)(1)]

SN-501, SN-502, SN-503, SN-504
 Tall Brine Cooling Tower Cells

Source Description

The tail brine cooling towers circulate tail brine.

Specific Conditions

41. 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 #43 and #44. [Regulation 19, §19.501 et seq. and 40 CFR Part 52, Subpart E]

SN	Description	Pollutant	lb/hr	tpy
501	Tail Brine FRP Cooling Tower Cell (CT-50-3301)	PM ₁₀	0.7	3.0
		VOC	0.1	0.5
502	Tail Brine FRP Cooling Tower Cell (CT-50-3302)	PM ₁₀	0.7	3.0
		VOC	0.1	0.5
503	Tail Brine FRP Cooling Tower Cell (CT-50-3303)	PM ₁₀	0.7	3.0
		VOC	0.1	0.5
504	Tail Brine FRP Cooling Tower Cell (CT-50-3304)	PM ₁₀	0.7	3.0
		VOC	0.1	0.5

42. 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 #43 and #44. [Regulation 18, §18.801, and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]

SN	Description	Pollutant	lb/hr	tpy
501	Tail Brine FRP Cooling Tower Cell (CT-50-3301)	PM	0.7	3.0
		HBr	0.10	0.50
		HCl	0.10	0.44
502	Tail Brine FRP Cooling Tower Cell (CT-50-3302)	PM	0.7	3.0
		HBr	0.1	0.5
		HCl	0.10	0.44

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SN	Description	Pollutant	lb/hr	tpy
503	Tail Brine FRP Cooling Tower Cell (CT-50-3303)	PM	0.70	3.00
		HBr	0.10	0.50
		HCl	0.10	0.44
504	Tail Brine FRP Cooling Tower Cell (CT-50-3304)	PM	0.7	3.0
		HBr	0.10	0.50
		HCl	0.10	0.44

43. The water flow rate for each Tall Brine Cooling Tower Cells (SN-501, SN-502, SN-503, and SN-504) shall not exceed the 1,625 gallons per min (gpm). The permittee shall maintain, on site, documentation that the physical flow capacities of meet the values in the table. [§19.705 of Regulation 19 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, and 40CFR 70.6]
44. The total dissolved solids concentrations for SN-501, SN-502, SN-503, and SN-504 shall not be exceeded 0.40 lb PM/lb water. The permittee shall demonstrate compliance by compliance with Specific Condition #45. [Regulation No. 19 §19.705,A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, and 40 CFR 70.6]
45. Within 60 days of issuance of Permit 0826-AOPR7, the facility shall begin testing for total dissolved solids (TDS) at the cooling towers (SN-501, SN-502, SN-503, and SN-504). The permittee shall monitor quarterly the TDS. Results less than 0.40 lb PM/lb water will demonstrate compliance with the requirements in Specific Condition #41 and #42. These records shall be updated on a quarterly basis. If the facility chooses to use conductivity in place of TDS testing the permittee shall develop a conductivity vs. TDS curve and test for conductivity on a weekly basis when the cooling towers are operating. The conductivity result shall not exceed the level which correlates with 0.40 lb PM/lb water TDS for any sample results taken when the cooling towers are operating. The permittee shall also determine, directly, TDS once every quarter. The results shall be kept on-site and made available to Department personnel upon request. The permittee shall submit records in accordance with General Provision #7. [Regulation 19, §19.705 and §19.703, Regulation 18, §18.1004 and §18.1003, and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

SN-505
 Scrubber Brine Cooling Tower

Source Description

The scrubber brine cooling towers circulate scrubber brine.

Specific Conditions

46. 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 #48 and #49. [Regulation 19, §19.501 et seq. and 40 CFR Part 52, Subpart E]

SN	Description	Pollutant	lb/hr	tpy
505	Scrubber Brine Cooling Tower (CT-50-3409 A,B,C)	PM ₁₀	3.1	13.5

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 Specific Condition #48 and #49. [Regulation 18, §18.801, and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]

SN	Description	Pollutant	lb/hr	tpy
505	Scrubber Brine Cooling Tower (CT-50-3409 A,B,C)	PM	3.1	13.5

48. The permittee shall not exceed the 7,500 gpm water flow rate at SN-505. The permittee shall maintain, on site, documentation that the physical flow capacities of SN-505 meet the referenced limit. [§19.705 of Regulation 19 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, and 40CFR 70.6]
49. The permittee shall not exceed 0.40 lb PM/lb water of total dissolved solids concentrations at SN-505. The permittee shall demonstrate compliance by compliance with Specific Condition #50. [Regulation No. 19 §19.705, A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, and 40 CFR 70.6]
50. Within 60 days of issuance of Permit 0826-AOP-R7, the facility shall begin testing for total dissolved solids (TDS) at the cooling tower (SN-505). The permittee shall monitor quarterly the TDS. Results less than 0.40 lb PM/lb water will demonstrate compliance with the requirements in Specific Condition #46 and #47. These records shall be updated on a quarterly basis. If the facility chooses to use conductivity in place of TDS testing the permittee shall develop a conductivity vs. TDS curve and test for conductivity on a weekly basis when the cooling towers are operating. The conductivity result shall not exceed the level which correlates with 0.40 lb PM/lb water TDS for any sample

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results taken when the cooling towers are operating. The permittee shall also determine, directly, TDS once every quarter. The results shall be kept on-site and made available to Department personnel upon request. The permittee shall submit records in accordance with General Provision #7. [Regulation 19, §19.705 and §19.703, Regulation 18, §18.1004 and §18.1003, and A.C.A. §8-4-203 as referenced by §8 4 304 and §8 4 311]

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SN-506, SN-507, SN-508, SN-509
 Cooling Towers

Source Description

This group of cooling towers does not handle tail brine or scrubber brine.

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 Condition #53 and #54. [Regulation 19, §19.501 et seq. and 40 CFR Part 52, Subpart E]

SN	Description	Pollutant	lb/hr	tpy
506	Chiller Cooling Tower (CT-50-3407)	PM ₁₀	0.2	0.8
507	NV Cooling Tower (CT-53-3515N)	PM ₁₀	0.6	2.3
508	NV Cooling Tower (CT-53-3515S)	PM ₁₀	0.6	2.3
509	Stripper Cooling Tower (CT-52-3619)	PM ₁₀	0.3	0.9

52. 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 #53 and #54. [Regulation 18, §18.801, and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]

SN	Description	Pollutant	lb/hr	tpy
506	Chiller Cooling Tower (CT-50-3407)	PM	0.2	0.8
507	NV Cooling Tower (CT-53-3515N)	PM	0.6	2.3
508	NV Cooling Tower (CT-53-3515S)	PM	0.6	2.3
509	Stripper Cooling Tower (CT-52-3619)	PM	0.3	0.9

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53. The permittee shall not exceed the water flow rates in the following table. The permittee shall maintain, on site, documentation that the physical flow capacities of SN-506, SN-07, SN-508 and SN-509 meet the values in the table. [§19.705 of Regulation 19 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, and 40CFR 70.6]

SN	Description	Maximum Water Flow Rate Through Tower (gallons per minute)
506	Chiller Cooling Tower (CT-50-3407)	800 gpm
507	NV Cooling Tower (CT-53-3515N)	2,500 gpm
508	NV Cooling Tower (CT-53-3515S)	2,500 gpm
509	Stripper Cooling Tower (CT-52-3619)	1,000 gpm

54. The total dissolved solids concentrations for SN-506, SN-07, SN-508 and SN-509 shall not be exceeded 2,000 ppm. The permittee shall demonstrate compliance by compliance with Specific Condition #55. [Regulation No. 19 §19.705, A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, and 40 CFR 70.6]
55. Within 60 days of issuance of Permit 0826-AOP-R7, the facility shall begin testing for total dissolved solids (TDS) at the cooling towers (SN-506, SN-07, SN-508 and SN-509). The permittee shall monitor monthly the TDS. Results less than 2,000 ppm, or equivalent conductivity, will demonstrate compliance with the requirements in Specific Condition #51 and #52. If the facility chooses to use conductivity in place of TDS testing the permittee shall develop a conductivity vs. TDS curve and test for conductivity on a weekly basis when the cooling towers are operating. The conductivity result shall not exceed the level which correlates with 2,000 ppm TDS for any sample results taken when the cooling towers are operating. The permittee shall also determine, directly, TDS once every quarter. The results shall be kept on-site and made available to Department personnel upon request. The permittee shall submit records in accordance with General Provision #7. [Regulation 19, §19.705 and §19.703, Regulation 18, §18.1004 and §18.1003, and A.C.A. §8-4-203 as referenced by §8 4 304 and §8 4 311]

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SN-510
 Cooling Towers

Source Description

This group of cooling towers does not handle tail brine or scrubber brine.

Specific Conditions

56. 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 #58 and 59. [Regulation 19, §19.501 et seq. and 40 CFR Part 52, Subpart E]

SN	Description	Pollutant	lb/hr	tpy
510	Cooling Tower	PM ₁₀	0.1	0.2

57. 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 #58 and 59. [Regulation 18, §18.801, and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]

SN	Description	Pollutant	lb/hr	tpy
510	Cooling Tower	PM	0.1	0.2

58. The permittee shall not exceed the water flow rates in the following table. The permittee shall maintain, on site, documentation that the physical flow capacities of SN-510 meet the values in the table. [§19.705 of Regulation 19 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, and 40CFR 70.6]

SN	Description	Maximum Water Flow Rate Through Tower (gallons per minute)
510	Cooling Tower	2,000 gpm

59. The total dissolved solids concentrations for SN-510 shall not be exceeded 4,000 ppm. The permittee shall demonstrate compliance by compliance with Specific Condition #60. [Regulation No. 19 §19.705, A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, and 40 CFR 70.6]

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60. Within 60 days of issuance of Permit 0826-AOP-R8, the facility shall begin testing for total dissolved solids (TDS) at the cooling tower, SN-510. The permittee shall monitor monthly the TDS. Results less than 4,000 ppm, or equivalent conductivity, will demonstrate compliance with the requirements in Specific Condition #56 and 57. If the facility chooses to use conductivity in place of TDS testing the permittee shall develop a conductivity vs. TDS curve and test for conductivity on a weekly basis when the cooling towers are operating. The conductivity result shall not exceed the level which correlates with 4,000 ppm TDS for any sample results taken when the cooling towers are operating. The permittee shall also determine, directly, TDS once every quarter. The results shall be kept on-site and made available to Department personnel upon request. The permittee shall submit records in accordance with General Provision #7. [Regulation 19, §19.705 and §19.703, Regulation 18, §18.1004 and §18.1003, and A.C.A. §8-4-203 as referenced by §8 4 304 and §8 4 311]

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SN-601

Brine Wells Crude Oil Storage Tanks

Source Description

Volatile organic compound (VOC) emissions are emitted from numerous crude oil storage tanks located at the well sties. There are 7 crude oil storage tanks with a total capacity of 167,580 gallons located at the facility.

Brine Well Site	Capacity (gallons)
BSW-17M	8,820
BSW-7M	8,820
BSW-6M	12,600
BSW-9M	16,800
Joy K. #2	8,820
	8,820
BSW-15-16	8,820
	8,820
	8,820
BSW-1M	8,820
	8,820
	12,600
Total	167,580

Specific Conditions

61. 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 #63. [Regulation 19, §19.501 et seq. and 40 CFR Part 52, Subpart E]

SN	Description	Pollutant	lb/hr	tpy
601	Brine Wells Crude Oil Storage Tanks	VOC	1.8	7.7

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62. 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 #63. [Regulation 18, §18.801, and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]

SN	Description	Pollutant	lb/hr	tpy
601	Brine Wells Crude Oil Storage Tanks	H ₂ S	2.0	8.8

63. The permittee shall not exceed the maximum throughput of 1,000,000 gallons per consecutive 12 month period for all crude oil storage tanks located at SN-601. [Regulation No. 19 §19.705, A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, and 40 CFR 70.6]
64. The permittee shall maintain records to demonstrate compliance with Specific Condition #63. The permittee shall update these records by the fifteenth day of the month following the month. Records for each calendar year shall be maintained on-site, made available to Department personnel upon request and submitted in accordance with General Provision 7. [§19.705 of Regulation 19 and 40 CFR Part 52 Subpart E]

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SECTION V: COMPLIANCE PLAN AND SCHEDULE

Great Lakes Chemical Corporation (West Plant) will continue to operate in compliance with those identified regulatory provisions. The facility will examine and analyze future regulations that may apply and determine their applicability with any necessary action taken on a timely basis.

SECTION VI: PLANTWIDE CONDITIONS

1. The permittee shall notify the Director in writing within thirty (30) days after commencing construction, completing construction, first placing the equipment and/or facility in operation, and reaching the equipment and/or facility target production rate. [Regulation 19, §19.704, 40 CFR Part 52, Subpart E, and A.C.A. §8-4-203 as referenced by A.C.A. §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. [Regulation 19, §19.410(B) and 40 CFR Part 52, Subpart E]
3. The permittee must test any equipment scheduled for testing, unless otherwise stated in the Specific Conditions of this permit or by any federally regulated requirements, within the following time frames: (1) new equipment or newly modified equipment within sixty (60) days of achieving the maximum production rate, but no later than 180 days after initial start up of the permitted source or (2) operating equipment according to the time frames set forth by the Department or within 180 days of permit issuance if no date is specified. The permittee must notify the Department of the scheduled date of compliance testing at least fifteen (15) days in advance of such test. The permittee shall submit the compliance test results to the Department within thirty (30) days after completing the testing. [Regulation 19, §19.702 and/or Regulation 18 §18.1002 and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]
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.

[Regulation 19, §19.702 and/or Regulation 18, §18.1002 and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]
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. [Regulation 19, §19.303 and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]
6. This permit subsumes and incorporates all previously issued air permits for this facility. [Regulation 26 and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]

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7. The permittee is authorized to use ammonia, as an emergency response, to neutralize releases of bromine, chlorine, and hydrobromic acid. Any use of ammonia shall be reportable under the Emergency and Upset release provisions contained in Regulations 18 and 19. [Regulation 18, §18.1101 & §18.1105 and Regulation 19, §19.601 and §19.602]

Permit Shield

8. Compliance with the conditions of this permit shall be deemed compliance with all applicable requirements, as of the date of permit issuance, included in and specifically identified in the following table of this condition. The permit specifically identifies the following as applicable requirements based upon the information submitted by the permittee in an application dated December 11, 2007.

Applicable Regulations

Source No.	Regulation	Description
Facility	Arkansas Regulation 19	Compilation of Regulations of the Arkansas State Implementation Plan for Air Pollution Control
Facility	Arkansas Regulation 26	Regulations of the Arkansas Operation Air Permit Program
Facility	40 CFR 52.21	Prevention of Significant Deterioration (PSD) of Air Quality
SN-101A	40 CFR 60, Subpart Dc	Boiler installed after June 19, 1984, and has a heat input capacity greater than or equal to 2.9 MW (10 MMBtu/hr), but less than 29 MW (100 MMBTU/hr)
Facility	40 CFR Part 61 Subpart M	National Emission Standard for Asbestos (facility subject in event of demolition or renovation projects)
Facility	40 CFR Part 68	Chemical Accident Prevention
Stationary Engines	40 CFR Part 63 Subpart ZZZZ	National Emission Standards for Hazardous Pollutants For Stationary Reciprocating Internal Combustion Engines

The permit specifically identifies the following as inapplicable based upon information submitted by the permittee in an application dated December 11, 2007.

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Inapplicable Regulations

Source No.	Regulation	Description
SN-102	40 CFR Part 60 Subpart Db	Standards of Performance for Industrial-Commercial-Institutional Steam Generating Unit (Boiler has greater than 100 MMBTu/hr input, but was installed before applicability date)
ALL VOL Storage Tanks	40 CFR Part 60 Kb	Standard of Performance for Volatile Organic Liquid Storage Vessels (including Petroleum Liquid Storage Vessels) for which construction, Reconstruction or Modification Commenced After July 23, 1984 (none of the VOL storage tanks have a storage capacity greater than 19,815 gallons)
Stationary Diesel Engines	40 CFR Part 60 Subpart IIII	Standards of Performance for Stationary Compression Ignition Internal Combustion Engines (Engines constructed prior to applicability dates listed in 40 CFR 60.4200)
Cooling Towers	40 CFR Part 63 Subpart Q	National Emission Standards for Hazardous Air Pollutants For Industrial Process Cooling Towers (Chromium based water treatment chemicals not utilized in cooling towers. Facility not considered a HAP major source.)
Gas Handling Equipment	40 CFR Part 63 Subpart HHH	National Emissions Standards for Hazardous Air Pollutants from Natural Gas Transmission and Storage Facilities (No glycol dehydration units present. Facility not considered a HAP major source)
Boilers	40 CFR Part 63 DDDDD	National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers and Process Heaters (Facility not considered a HAP major source)
Emissions Control Equipment	40 CFR Part 64	Compliance Assurance Monitoring

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SECTION VII: INSIGNIFICANT ACTIVITIES

The following sources are insignificant activities. Any activity that has a state or federal applicable requirement shall be considered a significant activity even if this activity meets the criteria of §26.304 of Regulation 26 or listed in the table below. Insignificant activity determinations rely upon the information submitted by the permittee in an application dated December 11, 2007.

Description	Category
Gasoline Storage Tank (1,000 gal.)	A-13
Diesel Fuel Storage Tank (500 gal.)	A-3
Waste Oil Tank (500 gal.)	A-3
Bulk Lube Oil Storage Tank (TT-52-3623A) (500 gal)	A-3
Bulk Lube Oil Storage Tank (TT-52-3623B) (500 gal)	A-3
Fire Pump Engine Diesel Storage Tank (130 gal.)	A-2
Tailbrine Surge Tank #1 (TT-50-3301)	B-21
Tailbrine Surge Tank #2 (TT-50-3302)	B-21
Brine Overflow Tank (TT-52-3401)	B-21
First Feed Brine Surge Tank (TT-52-3402)	B-21
Second Feed Brine Surge Tank (TT-52-3403)	B-21
Albermarle Tailbrine Sample Tank (TT-50-3404C)	B-21
Spent Caustic Tank (TT-50-3405A)	B-21
NaBr Storage Tank (TT-50-3406)	B-21
Feed Brine Heater Tank (TT-50-3406P)	B-21
Scrubber Brine Surge Tank (TT-50-3408)	B-21
H ₂ SO ₄ Storage Tank (TT-50-3427)	B-21
Process Ditch Water Tank (TT-50-3433)	B-21
Tailbrine Surge Tank (TT-50-3439)	B-21
Scrubber Brine Cooling Tower Surge Tank (TT-50-3442)	B-21
Chiller Surge Tank (TT-50-3444)	B-21
H ₂ SO ₄ Storage Tank (TT-50-3450)	B-21

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Description	Category
Primary Surge Tank (TT-53-3510)	B-21
Boiler Feed Surge Tank (TT-53-3511)	B-21
Cooling Tower Surge Tank (TT-53-3512)	B-21
Cooling Tower Surge Tank (TT-53-3512A)	B-21
Cooling Tower Surge Tank (TT-53-3515A)	B-21
Deaerator Tank (TK-53-3522)	B-21
Blowdown Tank (TT-53-3524)	B-21
Boiler Chemical Tank (TT-53-3525)	B-43
Oxygen Scavenger Tank (TT-53-3526)	B-45
Primary Surge Tank (TT-53-3530)	B-21
Boiler Chemical Wetting Agent Storage Tank (TT-53-3531)	B-43
Stripper Cooling Tower Pump Suction (TT-52-3619)	B-21
Painting (infrastructure only)	B-14

SECTION VIII: GENERAL PROVISIONS

1. Any terms or conditions included in this permit which specify and reference Arkansas Pollution Control & Ecology Commission Regulation 18 or the Arkansas Water and Air Pollution Control Act (A.C.A. §8-4-101 et seq.) as the sole origin of and authority for the terms or conditions are not required under the Clean Air Act or any of its applicable requirements, and are not federally enforceable under the Clean Air Act. Arkansas Pollution Control & Ecology Commission Regulation 18 was adopted pursuant to the Arkansas Water and Air Pollution Control Act (A.C.A. §8-4-101 et seq.). Any terms or conditions included in this permit which specify and reference Arkansas Pollution Control & Ecology Commission Regulation 18 or the Arkansas Water and Air Pollution Control Act (A.C.A. §8-4-101 et seq.) as the origin of and authority for the terms or conditions are enforceable under this Arkansas statute. [40 CFR 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 CFR 70.6(a)(2) and Regulation 26 §26.701(B)]
3. The permittee must submit a complete application for permit renewal at least six (6) months before permit expiration. Permit expiration terminates the permittee's right to operate unless the permittee submitted a complete renewal application at least six (6) months before permit expiration. If the permittee submits a complete application, the existing permit will remain in effect until the Department takes final action on the renewal application. The Department will not necessarily notify the permittee when the permit renewal application is due. [Regulation 26 §26.406]
4. Where an applicable requirement of the Clean Air Act, as amended, 42 U.S.C. 7401, et seq. (Act) is more stringent than an applicable requirement of regulations promulgated under Title IV of the Act, the permit incorporates both provisions into the permit, and the Director or the Administrator can enforce both provisions. [40 CFR 70.6(a)(1)(ii) and Regulation 26 §26.701(A)(2)]
5. The permittee must maintain the following records of monitoring information as required by this permit.
 - a. The date, place as defined in this permit, and time of sampling or measurements;
 - b. The date(s) analyses performed;
 - c. The company or entity performing the analyses;
 - d. The analytical techniques or methods used;
 - e. The results of such analyses; and
 - f. The operating conditions existing at the time of sampling or measurement.

[40 CFR 70.6(a)(3)(ii)(A) and Regulation 26 §26.701(C)(2)]

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6. The permittee must retain the records of all required monitoring data and support information for at least five (5) years from the date of the monitoring sample, measurement, report, or application. Support information includes all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, and copies of all reports required by this permit. [40 CFR 70.6(a)(3)(ii)(B) and Regulation 26 §26.701(C)(2)(b)]
7. The permittee must submit reports of all required monitoring every six (6) months. If the permit establishes no other reporting period, the reporting period shall end on the last day of the month six months after the issuance of the initial Title V permit and every six months thereafter. The report is due on the first day of the second month after the end of the reporting period. The first report due after issuance of the initial Title V permit shall contain six months of data and each report thereafter shall contain 12 months of data. The report shall contain data for all monitoring requirements in effect during the reporting period. If a monitoring requirement is not in effect for the entire reporting period, only those months of data in which the monitoring requirement was in effect are required to be reported. The report must clearly identify all instances of deviations from permit requirements. A responsible official as defined in Regulation No. 26, §26.2 must certify all required reports. The permittee will send the reports to the address below:

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

[40 CFR 70.6(a)(3)(iii)(A) and Regulation 26 §26.701(C)(3)(a)]

8. The permittee shall report to the Department all deviations from permit requirements, including those attributable to upset conditions as defined in the permit.
 - a. For all upset conditions (as defined in Regulation 19, § 19.601), the permittee will make an initial report to the Department by the next business day after the discovery of the occurrence. The initial report may be made by telephone and shall include:
 - i. The facility name and location;
 - ii. The process unit or emission source deviating from the permit limit;
 - iii. The permit limit, including the identification of pollutants, from which deviation occurs;
 - iv. The date and time the deviation started;
 - v. The duration of the deviation;
 - vi. The average emissions during the deviation;
 - vii. The probable cause of such deviations;

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- viii. Any corrective actions or preventive measures taken or being taken to prevent such deviations in the future; and
- ix. The name of the person submitting the report.

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

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

[Regulation 19 §19.601 and §19.602, Regulation 26 §26.701(C)(3)(b), and 40 CFR 70.6(a)(3)(iii)(B)]

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

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13. This permit does not convey any property rights of any sort, or any exclusive privilege. [40 CFR 70.6(a)(6)(iv) and Regulation 26 §26.701(F)(4)]
14. The permittee must furnish to the Director, within the time specified by the Director, any information that the Director may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating the permit or to determine compliance with the permit. Upon request, the permittee must also furnish to the Director copies of records required by the permit. For information the permittee claims confidentiality, the Department may require the permittee to furnish such records directly to the Director along with a claim of confidentiality. [40 CFR 70.6(a)(6)(v) and Regulation 26 §26.701(F)(5)]
15. The permittee must pay all permit fees in accordance with the procedures established in Regulation 9. [40 CFR 70.6(a)(7) and Regulation 26 §26.701(G)]
16. No permit revision shall be required, under any approved economic incentives, marketable permits, emissions trading and other similar programs or processes for changes provided for elsewhere in this permit. [40 CFR 70.6(a)(8) and Regulation 26 §26.701(H)]
17. If the permit allows different operating scenarios, the permittee shall, contemporaneously with making a change from one operating scenario to another, record in a log at the permitted facility a record of the operational scenario. [40 CFR 70.6(a)(9)(i) and Regulation 26 §26.701(I)(1)]
18. The Administrator and citizens may enforce under the Act all terms and conditions in this permit, including any provisions designed to limit a source's potential to emit, unless the Department specifically designates terms and conditions of the permit as being federally unenforceable under the Act or under any of its applicable requirements. [40 CFR 70.6(b) and Regulation 26 §26.702(A) and (B)]
19. Any document (including reports) required by this permit must contain a certification by a responsible official as defined in Regulation 26, §26.2. [40 CFR 70.6(c)(1) and Regulation 26 §26.703(A)]
20. The permittee must allow an authorized representative of the Department, upon presentation of credentials, to perform the following: [40 CFR 70.6(c)(2) and Regulation 26 §26.703(B)]
 - a. Enter upon the permittee's premises where the permitted source is located or emissions related activity is conducted, or where records must be kept under the conditions of this permit;
 - b. Have access to and copy, at reasonable times, any records required under the conditions of this permit;

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- c. Inspect at reasonable times any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit; and
 - d. As authorized by the Act, sample or monitor at reasonable times substances or parameters for assuring compliance with this permit or applicable requirements.

- 21. The permittee shall submit a compliance certification with the terms and conditions contained in the permit, including emission limitations, standards, or work practices. The permittee must submit the compliance certification annually. If the permit establishes no other reporting period, the reporting period shall end on the last day of the anniversary month of the initial Title V permit. The report is due on the first day of the second month after the end of the reporting period. The permittee must also submit the compliance certification to the Administrator as well as to the Department. All compliance certifications required by this permit must include the following: [40 CFR 70.6(c)(5) and Regulation 26 §26.703(E)(3)]
 - a. The identification of each term or condition of the permit that is the basis of the certification;
 - b. The compliance status;
 - c. Whether compliance was continuous or intermittent;
 - d. The method(s) used for determining the compliance status of the source, currently and over the reporting period established by the monitoring requirements of this permit; and
 - e. Such other facts as the Department may require elsewhere in this permit or by §114(a)(3) and §504(b) of the Act.

- 22. Nothing in this permit will alter or affect the following: [Regulation 26 §26.704(C)]
 - a. The provisions of Section 303 of the Act (emergency orders), including the authority of the Administrator under that section;
 - b. The liability of the permittee for any violation of applicable requirements prior to or at the time of permit issuance;
 - c. The applicable requirements of the acid rain program, consistent with §408(a) of the Act; or
 - d. The ability of EPA to obtain information from a source pursuant to §114 of the Act.

- 23. This permit authorizes only those pollutant emitting activities addressed in this permit. [A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

- 24. The permittee may request in writing and at least 15 days in advance of the deadline, an extension to any testing, compliance or other dates in this permit. No such extensions are authorized until the permittee receives written Department approval. The Department may grant such a request, at its discretion in the following circumstances:

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- a. Such an extension does not violate a federal requirement;
- b. The permittee demonstrates the need for the extension; and
- c. The permittee documents that all reasonable measures have been taken to meet the current deadline and documents reasons it cannot be met.

[Regulation 18 §18.314(A), Regulation 19 §19.416(A), Regulation 26 §26.1013(A), A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, and 40 CFR Part 52, Subpart E]

25. The permittee may request in writing and at least 30 days in advance, temporary emissions and/or testing that would otherwise exceed an emission rate, throughput requirement, or other limit in this permit. No such activities are authorized until the permittee receives written Department approval. Any such emissions shall be included in the facility's total emissions and reported as such. The Department may grant such a request, at its discretion under the following conditions:

- a. Such a request does not violate a federal requirement;
- b. Such a request is temporary in nature;
- c. Such a request will not result in a condition of air pollution;
- d. The request contains such information necessary for the Department to evaluate the request, including but not limited to, quantification of such emissions and the date/time such emission will occur;
- e. Such a request will result in increased emissions less than five tons of any individual criteria pollutant, one ton of any single HAP and 2.5 tons of total HAPs; and
- f. The permittee maintains records of the dates and results of such temporary emissions/testing.

[Regulation 18 §18.314(B), Regulation 19 §19.416(B), Regulation 26 §26.1013(B), A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, and 40 CFR Part 52, Subpart E]

26. The permittee may request in writing and at least 30 days in advance, an alternative to the specified monitoring in this permit. No such alternatives are authorized until the permittee receives written Department approval. The Department may grant such a request, at its discretion under the following conditions:

- a. The request does not violate a federal requirement;
- b. The request provides an equivalent or greater degree of actual monitoring to the current requirements; and
- c. Any such request, if approved, is incorporated in the next permit modification application by the permittee.

[Regulation 18 §18.314(C), Regulation 19 §19.416(C), Regulation 26 §26.1013(C), A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, and 40 CFR Part 52, Subpart E]

Appendix A

40 CFR 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: 55 FR 37683, Sept. 12, 1990, unless otherwise noted.

§ 60.40c Applicability and delegation of authority.

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

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

(c) Steam generating units which 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.

[55 FR 37683, Sept. 12, 1990, as amended at 61 FR 20736, May 8, 1996]

§ 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 for Testing and Materials in ASTM D388-77, "Standard Specification for

Classification of Coals by Rank" (incorporated by reference—see § 60.17); coal refuse; and petroleum coke. Synthetic fuels derived from coal for the purpose of creating useful heat, including but not limited to solvent-refined coal, gasified coal, coal-oil mixtures, and coal-water mixtures, are 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.

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

Combined cycle 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 D396-78, "Standard Specification for Fuel Oils" (incorporated by reference—see § 60.17).

Dry flue gas desulfurization technology means a sulfur dioxide (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 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.

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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 40 CFR 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 D1835-86, "Standard Specification for Liquefied Petroleum Gases" (incorporated by reference—see § 60.17).

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

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

Potential sulfur dioxide emission rate means the theoretical SO₂ emissions (nanograms per joule [ng/J], or pounds per million Btu [lb/million Btu] 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 D396-78, "Standard Specification for Fuel Oils" (incorporated by reference—see § 60.17).

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

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 particulate matter (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.

[55 FR 37683, Sept. 12, 1990, as amended at 61 FR 20736, May 8, 1996]

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§ 60.42c Standard for sulfur dioxide.

(a) Except as provided in paragraphs (b), (c), and (e) of this section, on and after the date on which the initial performance test is completed or required to be completed under § 60.8 of this part, whichever date comes first, the owner or operator of an affected facility that combusts only coal shall neither: (1) cause to be discharged into the atmosphere from that affected facility any gases that contain SO₂ in excess of 10 percent (0.10) of the potential SO₂ emission rate (90 percent reduction); nor (2) 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/million Btu) heat input. If coal is combusted with other fuels, the affected facility is subject to the 90 percent SO₂ reduction requirement specified in this paragraph and 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 initial performance test is completed or required to be completed under § 60.8 of this part, whichever date comes first, the owner or operator of an affected facility that:

(1) Combusts 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 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/million Btu) heat input. If coal is fired with coal refuse, the affected facility is 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 90 percent SO₂ reduction requirement specified in paragraph (a) of this section and the emission limit 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/million Btu) 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 of this part, 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 this paragraph.

(1) Affected facilities that have a heat input capacity of 22 MW (75 million Btu/hr) or less.

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

(3) Affected facilities located in a noncontinental area.

(4) Affected facilities that combust coal in a duct burner as part of a combined cycle system where 30 percent (0.30) or less of the heat entering the 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 of this part, 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/million Btu) heat input; 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 of this part, 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 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,

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(ii) Has a heat input capacity greater than 22 MW (75 million Btu/hr), and

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

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

$$E_s = (K_a H_a + K_b H_b + K_c H_c) / (H_a + H_b + H_c)$$

where:

E_s is the SO₂ emission limit, expressed in ng/J or lb/million Btu heat input,

K_a is 520 ng/J (1.2 lb/million Btu),

K_b is 260 ng/J (0.60 lb/million Btu),

K_c is 215 ng/J (0.50 lb/million Btu),

H_a is the 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) [million Btu]

H_b is the heat input from the combustion of coal in an affected facility subject to paragraph (b)(2) of this section, in J (million Btu)

H_c is the heat input from the combustion of oil, in J (million Btu).

(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), or (3) 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)(1), (2), or (3), as applicable.

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

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

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

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

(j) Only the heat input supplied to the 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.

§ 60.43c Standard for particulate matter.

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

(1) 22 ng/J (0.05 lb/million Btu) 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/million Btu) 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 of this part, whichever date comes first, no owner or operator of an affected facility that combusts wood or combusts mixtures of wood with other fuels (except coal) and has a heat input capacity of 8.7 MW (30 million Btu/hr) or greater, shall cause to be discharged into the atmosphere from that affected facility any gases that contain PM in excess of the following emissions limits:

(1) 43 ng/J (0.10 lb/million Btu) 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/million Btu) 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 of this part, whichever

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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 million Btu/hr) or greater shall cause to be discharged into the atmosphere from that affected facility any gases that exhibit greater than 20 percent opacity (6-minute average), except for one 6-minute period per hour of not more than 27 percent opacity.

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

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

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

(c) After the initial performance test required under paragraph (b) 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 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 continuous emission monitoring system (CEMS). Method 19 shall be used to cal-

culate E_{ao} when using daily fuel sampling or Method 6B.

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

(1) An adjusted E_{ho} (E_{ho}^o) is used in Equation 19-19 of Method 19 to compute the adjusted E_{ao} (E_{ao}^o). The E_{ho}^o is computed using the following formula:

$$E_{ho}^o = [E_{ho} \cdot E_w (1 \cdot X_k)] / X_k$$

where:

E_{ho}^o is the adjusted E_{ho}, ng/J (lb/million Btu)

E_{ho} is the hourly SO₂ emission rate, ng/J (lb/million Btu)

E_w is the 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, ng/J (lb/million Btu). 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 is the fraction of the total heat input from fuel combustion derived from coal and oil, as determined by applicable procedures in Method 19.

(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.

(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:

$$\%P_e = 100(1 \cdot \%R_g / 100)(1 \cdot \%R_r / 100)$$

where

%P_e is the percent of potential SO₂ emission rate, in percent

%R_g is the SO₂ removal efficiency of the control device as determined by Method 19, in percent

%R_r is the SO₂ removal efficiency of fuel pretreatment as determined by Method 19, in percent

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

(i) To compute the %P_s, an adjusted %R_g (%R_g^o) is computed from E_{ao}^o from paragraph (e)(1) of this section and an adjusted average SO₂ inlet rate (E_{ai}^o) using the following formula:

$$\%R_g^o = 100 [1.0 \cdot E_{ao}^o / E_{ai}^o]$$

where:

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$\%R_g^\circ$ is the adjusted $\%R_g$, in percent

E_{ao}° is the adjusted E_{ao} , ng/J (lb/million Btu)

E_{ai}° is the adjusted average SO_2 inlet rate, ng/J (lb/million Btu)

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

$$E_{hi}^\circ = [E_{hi} \cdot E_w (1 - X_k)] / X_k$$

where:

E_{hi}° is the adjusted E_{hi} , ng/J (lb/million Btu)

E_{hi} is the hourly SO_2 inlet rate, ng/J (lb/million Btu)

E_w is the SO_2 concentration in fuels other than coal and oil combusted in the affected facility, as determined by fuel sampling and analysis procedures in Method 19, ng/J (lb/million Btu). 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 is the fraction of the total heat input from fuel combustion derived from coal and oil, as determined by applicable procedures in Method 19.

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

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

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

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

§ 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.

(1) Method 1 shall be used to select the sampling site and the number of traverse sampling points. The sampling time for each run shall be at least 120 minutes and the minimum sampling volume shall be 1.7 dry square cubic meters (dscm) [60 dry square cubic feet (dscf)] except that smaller sampling times or volumes may be approved by the Administrator when necessitated by process variables or other factors.

(2) Method 3 shall be used for gas analysis when applying Method 5, Method 5B, or Method 17.

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

(i) Method 5 may be used only at affected facilities without wet scrubber systems.

(ii) Method 17 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 2.1 and 2.3 of Method 5B may be used in Method 17 only if Method 17 is used in conjunction with a wet scrubber system. Method 17 shall not be used in conjunction with a wet scrubber system if the effluent is saturated or laden with water droplets.

(iii) Method 5B may be used in conjunction with a wet scrubber system.

(4) For Method 5 or Method 5B, the temperature of the sample gas in the probe and filter holder shall be monitored and maintained at 160 °C (320 °F).

(5) For determination of PM emissions, an oxygen or carbon dioxide measurement shall be obtained simultaneously with each run of Method 5,

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Method 5B, or Method 17 by traversing the duct at the same sampling location.

(6) For each run using Method 5, Method 5B, or Method 17, the emission rates expressed in ng/J (lb/million Btu) heat input shall be determined using:

- (i) The oxygen or carbon dioxide 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 (appendix A).

(7) Method 9 (6-minute average of 24 observations) shall be used for determining the opacity of stack emissions.

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

§ 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 oxygen or carbon dioxide 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 oxygen or carbon dioxide concentrations at both the inlet and outlet of the SO₂ control device.

(b) The 1-hour average SO₂ emission rates measured by a CEM shall be expressed in ng/J or lb/million Btu 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 include at least 2 data points representing two 15-minute periods. 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 (appendix B).

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

(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 CEM 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. Fuel sampling shall be conducted pursuant to either paragraph (d)(1) or (d)(2) of this section. Method 6B 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. Method 19 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 con-

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tent of the oil. If a partially empty fuel tank is re-filled, 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 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 sampling location. The stratification test shall consist of three paired runs of a suitable SO₂ and carbon dioxide 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 (appendix B). Method 6B, Method 6A, or a combination of Methods 6 and 3 or Methods 6C and 3A are suitable measurement techniques. If Method 6B 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 24-hour tests, the mean of the absolute difference between the three paired runs must be less than 10 percent (0.10).

(c) 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) (1), (2), or (3), 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) The owner or operator of an affected facility combusting coal, residual oil, or wood that is subject to the opacity standards under § 60.43c shall install, calibrate, maintain, and operate a CEMS for measuring the opacity of the emissions discharged to the atmosphere and record the output of the system.

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

§ 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, anticipated startup, 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 using the applicable performance specifications in appendix B.

(c) The owner or operator of each coal-fired, residual oil-fired, or wood-fired affected facility subject to the opacity limits under § 60.43c(c) shall submit excess emission reports for any calendar

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quarter for which there are excess emissions from the affected facility. If there are no excess emissions during the calendar quarter, the owner or operator shall submit a report semiannually stating that no excess emissions occurred during the semiannual reporting period. The initial quarterly report shall be postmarked by the 30th day of the third month following the completion of the initial performance test, unless no excess emissions occur during that quarter. The initial semiannual report shall be postmarked by the 30th day of the sixth month following the completion of the initial performance test, or following the date of the previous quarterly report, as applicable. Each subsequent quarterly or semiannual report shall be postmarked by the 30th day following the end of the reporting period.

(d) The owner or operator of each affected facility subject to the SO₂ emission limits, fuel oil sulfur limits, or percent reduction requirements under § 60.42c shall submit quarterly reports to the Administrator. The initial quarterly report shall be postmarked by the 30th day of the third month following the completion of the initial performance test. Each subsequently quarterly report shall be postmarked by the 30th day following the end of the reporting period.

(e) The owner or operator of each affected facility subject to the SO₂ emission limits, fuel oil sulfur limits, or percent reduction requirements under § 60.43c shall keep records and submit quarterly 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/million Btu), or 30-day average sulfur content (weight percent), calculated during the reporting period, ending with the last 30-day period in the quarter; 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 in the quarter; reasons for any noncompliance with the emission standards; and a description of corrective actions taken.

(4) Identification of any steam generating unit operating days for which SO₂ or diluent (oxygen or carbon dioxide) 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 (appendix B).

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

(11) If fuel supplier certification is used to demonstrate compliance, records of fuel supplier certification as described under paragraph (f)(1), (2), or (3) of this section, as applicable. In addition to records of fuel supplier certifications, the quarterly 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 quarter.

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

(1) For distillate oil:

(i) The name of the oil supplier; and

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

(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 lo-

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cation. 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.

(g) The owner or operator of each affected facility shall record and maintain records of the amounts of each fuel combusted during each day.

(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.

Appendix B

40 CFR Part 63 Subpart ZZZZ, National Emission Standards for Hazardous Air Pollutants for
Stationary Reciprocating Internal Combustion Engine

SUBCHAPTER C—AIR PROGRAMS (CONTINUED)

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

Subpart ZZZZ—National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines

WHAT THIS SUBPART COVERS

Sec.

- 63.6580 What is the purpose of subpart ZZZZ?
- 63.6585 Am I subject to this subpart?
- 63.6590 What parts of my plant does this subpart cover?
- 63.6595 When do I have to comply with this subpart?

EMISSION 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?
- 63.6601 What emission limitations must I meet if I own or operate a 4SLB stationary RICE with a site rating of greater than or equal to 250 brake HP and less than 500 brake HP located at a major source of HAP emissions?

GENERAL COMPLIANCE REQUIREMENTS

- 63.6605 What are my general requirements for complying with this subpart?

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?
- 63.6611 By what date must I conduct the initial performance tests or other initial compliance demonstrations if I own or operate a 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?
- 63.6615 When must I conduct subsequent performance tests?
- 63.6620 What performance tests and other procedures must I use?
- 63.6625 What are my monitoring, installation, operation, and maintenance requirements?

- 63.6630 How do I demonstrate initial compliance with the emission limitations and operating limitations?

CONTINUOUS COMPLIANCE REQUIREMENTS

- 63.6635 How do I monitor and collect data to demonstrate continuous compliance?
- 63.6640 How do I demonstrate continuous compliance with the emission limitations and operating limitations?

NOTIFICATION, REPORTS, AND RECORDS

- 63.6645 What notifications must I submit and when?
- 63.6650 What reports must I submit and when?
- 63.6655 What records must I keep?
- 63.6660 In what form and how long must I keep my records?

OTHER REQUIREMENTS AND INFORMATION

- 63.6665 What parts of the General Provisions apply to me?
- 63.6670 Who implements and enforces this subpart?
- 63.6675 What definitions apply to this subpart?

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

TABLE 1B TO SUBPART ZZZZ OF PART 63—OPERATING LIMITATIONS FOR EXISTING, NEW, AND RECONSTRUCTED SPARK IGNITION, 4SRB STATIONARY RICE >500 HP LOCATED AT A MAJOR SOURCE OF HAP EMISSIONS

TABLE 2A TO SUBPART ZZZZ OF PART 63—EMISSION LIMITATIONS FOR NEW AND RECONSTRUCTED 2SLB AND COMPRESSION IGNITION STATIONARY RICE >500 HP AND 4SLB STATIONARY RICE \geq 250 HP LOCATED AT A MAJOR SOURCE OF HAP EMISSIONS

TABLE 2B TO SUBPART ZZZZ OF PART 63—OPERATING LIMITATIONS FOR NEW AND RECONSTRUCTED 2SLB AND COMPRESSION IGNITION STATIONARY RICE >500 HP AND 4SLB BURN STATIONARY RICE \geq 250 HP LOCATED AT A MAJOR SOURCE OF HAP EMISSIONS

TABLE 3 TO SUBPART ZZZZ OF PART 63—SUBSEQUENT PERFORMANCE TESTS

TABLE 4 TO SUBPART ZZZZ OF PART 63—REQUIREMENTS FOR PERFORMANCE TESTS

TABLE 5 TO SUBPART ZZZZ OF PART 63—INITIAL COMPLIANCE WITH EMISSION LIMITATIONS AND OPERATING LIMITATIONS

TABLE 6 TO SUBPART ZZZZ OF PART 63—CONTINUOUS COMPLIANCE WITH EMISSION LIMITATIONS AND OPERATING LIMITATIONS

TABLE 7 TO SUBPART ZZZZ OF PART 63—REQUIREMENTS FOR REPORTS

TABLE 8 TO SUBPART ZZZZ OF PART 63—APPLICABILITY OF GENERAL PROVISIONS TO SUBPART ZZZZ

Subpart AAAAA—National Emission Standards for Hazardous Air Pollutants for Lime Manufacturing Plants

WHAT THIS SUBPART COVERS

- 63.7080 What is the purpose of this subpart?
 63.7081 Am I subject to this subpart?
 63.7082 What parts of my plant does this subpart cover?
 63.7083 When do I have to comply with this subpart?

EMISSION LIMITATIONS

- 63.7090 What emission limitations must I meet?

GENERAL COMPLIANCE REQUIREMENTS

- 63.7100 What are my general requirements for complying with this subpart?

TESTING AND INITIAL COMPLIANCE REQUIREMENTS

- 63.7110 By what date must I conduct performance tests and other initial compliance demonstrations?
 63.7111 When must I conduct subsequent performance tests?
 63.7112 What performance tests, design evaluations, and other procedures must I use?
 63.7113 What are my monitoring installation, operation, and maintenance requirements?
 63.7114 How do I demonstrate initial compliance with the emission limitations standard?

CONTINUOUS COMPLIANCE REQUIREMENTS

- 63.7120 How do I monitor and collect data to demonstrate continuous compliance?
 63.7121 How do I demonstrate continuous compliance with the emission limitations standard?

NOTIFICATIONS, REPORTS, AND RECORDS

- 63.7130 What notifications must I submit and when?
 63.7131 What reports must I submit and when?
 63.7132 What records must I keep?
 63.7133 In what form and for how long must I keep my records?

OTHER REQUIREMENTS AND INFORMATION

- 63.7140 What parts of the General Provisions apply to me?
 63.7141 Who implements and enforces this subpart?

- 63.7142 What are the requirements for claiming area source status?

- 63.7143 What definitions apply to this subpart?

TABLE 1 TO SUBPART AAAAA OF PART 63—EMISSION LIMITS

TABLE 2 TO SUBPART AAAAA OF PART 63—OPERATING LIMITS

TABLE 3 TO SUBPART AAAAA OF PART 63—INITIAL COMPLIANCE WITH EMISSION LIMITS

TABLE 4 TO SUBPART AAAAA OF PART 63—REQUIREMENTS FOR PERFORMANCE TESTS

TABLE 5 TO SUBPART AAAAA OF PART 63—CONTINUOUS COMPLIANCE WITH OPERATING LIMITS

TABLE 6 TO SUBPART AAAAA OF PART 63—PERIODIC MONITORING FOR COMPLIANCE WITH OPACITY AND VISIBLE EMISSIONS LIMITS

TABLE 7 TO SUBPART AAAAA OF PART 63—REQUIREMENTS FOR REPORTS

TABLE 8 TO SUBPART AAAAA OF PART 63—APPLICABILITY OF GENERAL PROVISIONS TO SUBPART AAAAA

Subpart BBBB—National Emission Standards for Hazardous Air Pollutants for Semiconductor Manufacturing

WHAT THIS SUBPART COVERS

- 63.7180 What is the purpose of this subpart?
 63.7181 Am I subject to this subpart?
 63.7182 What parts of my facility does this subpart cover?
 63.7183 When do I have to comply with this subpart?

EMISSION STANDARDS

- 63.7184 What emission limitations, operating limits, and work practice standards must I meet?

COMPLIANCE REQUIREMENTS

- 63.7185 What are my general requirements for complying with this subpart?
 63.7186 By what date must I conduct performance tests or other initial compliance demonstrations?
 63.7187 What performance tests and other compliance procedures must I use?
 63.7188 What are my monitoring installation, operation, and maintenance requirements?

APPLICATIONS, NOTIFICATIONS, REPORTS, AND RECORDS

- 63.7189 What applications and notifications must I submit and when?
 63.7190 What reports must I submit and when?
 63.7191 What records must I keep?
 63.7192 In what form and how long must I keep my records?

OTHER REQUIREMENTS AND INFORMATION

- 63.7193 What parts of the General Provisions apply to me?
- 63.7194 Who implements and enforces this subpart?
- 63.7195 What definitions apply to this subpart?

TABLE 1 TO SUBPART BBBBB OF PART 63—REQUIREMENTS FOR PERFORMANCE TESTS
 TABLE 2 TO SUBPART BBBBB OF PART 63—APPLICABILITY OF GENERAL PROVISIONS TO SUBPART BBBBB

Subpart CCCCC—National Emission Standards for Hazardous Air Pollutants for Coke Ovens: Pushing, Quenching, and Battery Stacks

WHAT THIS SUBPART COVERS

- 63.7280 What is the purpose of this subpart?
- 63.7281 Am I subject to this subpart?
- 63.7282 What parts of my plant does this subpart cover?
- 63.7283 When do I have to comply with this subpart?

EMISSION LIMITATIONS AND WORK PRACTICE STANDARDS

- 63.7290 What emission limitations must I meet for capture systems and control devices applied to pushing emissions?
- 63.7291 What work practice standards must I meet for fugitive pushing emissions if I have a by-product coke oven battery with vertical flues?
- 63.7292 What work practice standards must I meet for fugitive pushing emissions if I have a by-product coke oven battery with horizontal flues?
- 63.7293 What work practice standards must I meet for fugitive pushing emissions if I have a non-recovery coke oven battery?
- 63.7294 What work practice standard must I meet for soaking?
- 63.7295 What requirements must I meet for quenching?
- 63.7296 What emission limitations must I meet for battery stacks?

OPERATION AND MAINTENANCE REQUIREMENTS

- 63.7300 What are my operation and maintenance requirements?

GENERAL COMPLIANCE REQUIREMENTS

- 63.7310 What are my general requirements for complying with this subpart?

INITIAL COMPLIANCE REQUIREMENTS

- 63.7320 By what date must I conduct performance tests or other initial compliance demonstrations?
- 63.7321 When must I conduct subsequent performance tests?
- 63.7322 What test methods and other procedures must I use to demonstrate initial

compliance with the emission limits for particulate matter?

- 63.7323 What procedures must I use to establish operating limits?
- 63.7324 What procedures must I use to demonstrate initial compliance with the opacity limits?
- 63.7325 What test methods and other procedures must I use to demonstrate initial compliance with the TDS or constituent limits for quench water?
- 63.7326 How do I demonstrate initial compliance with the emission limitations that apply to me?
- 63.7327 How do I demonstrate initial compliance with the work practice standards that apply to me?
- 63.7328 How do I demonstrate initial compliance with the operation and maintenance requirements that apply to me?

CONTINUOUS COMPLIANCE REQUIREMENTS

- 63.7330 What are my monitoring requirements?
- 63.7331 What are the installation, operation, and maintenance requirements for my monitors?
- 63.7332 How do I monitor and collect data to demonstrate continuous compliance?
- 63.7333 How do I demonstrate continuous compliance with the emission limitations that apply to me?
- 63.7334 How do I demonstrate continuous compliance with the work practice standards that apply to me?
- 63.7335 How do I demonstrate continuous compliance with the operation and maintenance requirements that apply to me?
- 63.7336 What other requirements must I meet to demonstrate continuous compliance?

NOTIFICATIONS, REPORTS, AND RECORDS

- 63.7340 What notifications must I submit and when?
- 63.7341 What reports must I submit and when?
- 63.7342 What records must I keep?
- 63.7343 In what form and how long must I keep my records?

OTHER REQUIREMENTS AND INFORMATION

- 63.7350 What parts of the General Provisions apply to me?
- 63.7351 Who implements and enforces this subpart?
- 63.7352 What definitions apply to this subpart?

TABLE 1 TO SUBPART CCCCC OF PART 63—APPLICABILITY OF GENERAL PROVISIONS TO SUBPART CCCCC

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

WHAT THIS SUBPART COVERS

- 63.7480 What is the purpose of this subpart?
- 63.7485 Am I subject to this subpart?
- 63.7490 What is the affected source of this subpart?
- 63.7491 Are any boilers or process heaters not subject to this subpart?
- 63.7495 When do I have to comply with this subpart?

EMISSION LIMITS AND WORK PRACTICE STANDARDS

- 63.7499 What are the subcategories of boilers and process heaters?
- 63.7500 What emission limits, work practice standards, and operating limits must I meet?

GENERAL COMPLIANCE REQUIREMENTS

- 63.7505 What are my general requirements for complying with this subpart?
- 63.7506 Do any boilers or process heaters have limited requirements?
- 63.7507 What are the health-based compliance alternatives for the hydrogen chloride (HCl) and total selected metals (TSM) standards?

TESTING, FUEL ANALYSES, AND INITIAL COMPLIANCE REQUIREMENTS

- 63.7510 What are my initial compliance requirements and by what date must I conduct them?
- 63.7515 When must I conduct subsequent performance tests or fuel analyses?
- 63.7520 What performance tests and procedures must I use?
- 63.7521 What fuel analyses and procedures must I use?
- 63.7522 Can I use emission averaging to comply with this subpart?
- 63.7525 What are my monitoring, installation, operation, and maintenance requirements?
- 63.7530 How do I demonstrate initial compliance with the emission limits and work practice standards?

CONTINUOUS COMPLIANCE REQUIREMENTS

- 63.7535 How do I monitor and collect data to demonstrate continuous compliance?
- 63.7540 How do I demonstrate continuous compliance with the emission limits and work practice standards?

- 63.7541 How do I demonstrate continuous compliance under the emission averaging provision?

NOTIFICATIONS, REPORTS, AND RECORDS

- 63.7545 What notifications must I submit and when?
- 63.7550 What reports must I submit and when?
- 63.7555 What records must I keep?
- 63.7560 In what form and how long must I keep my records?

OTHER REQUIREMENTS AND INFORMATION

- 63.7565 What parts of the General Provisions apply to me?
- 63.7570 Who implements and enforces this subpart?
- 63.7575 What definitions apply to this subpart?

TABLE 1 TO SUBPART DDDDD OF PART 63—EMISSION LIMITS AND WORK PRACTICE STANDARDS

TABLE 2 TO SUBPART DDDDD OF PART 63—OPERATING LIMITS FOR BOILERS AND PROCESS HEATERS WITH PARTICULATE MATTER EMISSION LIMITS

TABLE 3 TO SUBPART DDDDD OF PART 63—OPERATING LIMITS FOR BOILERS AND PROCESS HEATERS WITH MERCURY EMISSION LIMITS AND BOILERS AND PROCESS HEATERS THAT CHOOSE TO COMPLY WITH THE ALTERNATIVE TOTAL SELECTED METALS EMISSION LIMITS

TABLE 4 TO SUBPART DDDDD OF PART 63—OPERATING LIMITS FOR BOILERS AND PROCESS HEATERS WITH HYDROGEN CHLORIDE EMISSION LIMITS

TABLE 5 TO SUBPART DDDDD OF PART 63—PERFORMANCE TESTING REQUIREMENTS

TABLE 6 TO SUBPART DDDDD OF PART 63—FUEL ANALYSIS REQUIREMENTS

TABLE 7 TO SUBPART DDDDD OF PART 63—ESTABLISHING OPERATING LIMITS

TABLE 8 TO SUBPART DDDDD OF PART 63—DEMONSTRATING CONTINUOUS COMPLIANCE

TABLE 9 TO SUBPART DDDDD OF PART 63—REPORTING REQUIREMENTS

TABLE 10 TO SUBPART DDDDD OF PART 63—APPLICABILITY OF GENERAL PROVISIONS TO SUBPART DDDDD

APPENDIX A TO SUBPART DDDDD—METHODOLOGY AND CRITERIA FOR DEMONSTRATING ELIGIBILITY FOR THE HEALTH-BASED COMPLIANCE ALTERNATIVES

Subpart EEEEE—National Emission Standards for Hazardous Air Pollutants for Iron and Steel Foundries

WHAT THIS SUBPART COVERS

- 63.7680 What is the purpose of this subpart?
- 63.7681 Am I subject to this subpart?
- 63.7682 What parts of my foundry does this subpart cover?

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63.7683 When do I have to comply with this subpart?

EMISSIONS LIMITATIONS

63.7690 What emissions limitations must I meet?

WORK PRACTICE STANDARDS

63.7700 What work practice standards must I meet?

OPERATION AND MAINTENANCE REQUIREMENTS

63.7710 What are my operation and maintenance requirements?

GENERAL COMPLIANCE REQUIREMENTS

63.7720 What are my general requirements for complying with this subpart?

INITIAL COMPLIANCE REQUIREMENTS

63.7730 By what date must I conduct performance tests or other initial compliance demonstrations?

63.7731 When must I conduct subsequent performance tests?

63.7732 What test methods and other procedures must I use to demonstrate initial compliance with the emissions limitations?

63.7733 What procedures must I use to establish operating limits?

63.7734 How do I demonstrate initial compliance with the emissions limitations that apply to me?

63.7735 How do I demonstrate initial compliance with the work practice standards that apply to me?

63.7736 How do I demonstrate initial compliance with the operation and maintenance requirements that apply to me?

CONTINUOUS COMPLIANCE REQUIREMENTS

63.7740 What are my monitoring requirements?

63.7741 What are the installation, operation, and maintenance requirements for my monitors?

63.7742 How do I monitor and collect data to demonstrate continuous compliance?

63.7743 How do I demonstrate continuous compliance with the emissions limitations that apply to me?

63.7744 How do I demonstrate continuous compliance with the work practice standards that apply to me?

63.7745 How do I demonstrate continuous compliance with the operation and maintenance requirements that apply to me?

63.7746 What other requirements must I meet to demonstrate continuous compliance?

63.7747 How do I apply for alternative monitoring requirements for a continuous emissions monitoring system?

NOTIFICATIONS, REPORTS, AND RECORDS

63.7750 What notifications must I submit and when?

63.7751 What reports must I submit and when?

63.7752 What records must I keep?

63.7753 In what form and for how long must I keep my records?

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63.7765 What definitions apply to this subpart?

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Subpart FFFFF—National Emission Standards for Hazardous Air Pollutants for Integrated Iron and Steel Manufacturing Facilities

WHAT THIS SUBPART COVERS

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63.7781 Am I subject to this subpart?

63.7782 What parts of my plant does this subpart cover?

63.7783 When do I have to comply with this subpart?

EMISSION LIMITATIONS

63.7790 What emission limitations must I meet?

OPERATION AND MAINTENANCE REQUIREMENTS

63.7800 What are my operation and maintenance requirements?

GENERAL COMPLIANCE REQUIREMENTS

63.7810 What are my general requirements for complying with this subpart?

INITIAL COMPLIANCE REQUIREMENTS

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63.7821 When must I conduct subsequent performance tests?

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63.7823 What test methods and other procedures must I use to demonstrate initial compliance with the opacity limits?

63.7824 What test methods and other procedures must I use to establish and demonstrate initial compliance with the operating limits?

- 63.7825 How do I demonstrate initial compliance with the emission limitations that apply to me?
- 63.7826 How do I demonstrate initial compliance with the operation and maintenance requirements that apply to me?

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- 63.7830 What are my monitoring requirements?
- 63.7831 What are the installation, operation, and maintenance requirements for my monitors?
- 63.7832 How do I monitor and collect data to demonstrate continuous compliance?
- 63.7833 How do I demonstrate continuous compliance with the emission limitations that apply to me?
- 63.7834 How do I demonstrate continuous compliance with the operation and maintenance requirements that apply to me?
- 63.7835 What other requirements must I meet to demonstrate continuous compliance?

NOTIFICATIONS, REPORTS, AND RECORDS

- 63.7840 What notifications must I submit and when?
- 63.7841 What reports must I submit and when?
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- 63.7843 In what form and how long must I keep my records?

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- TABLE 4 TO SUBPART FFFFF OF PART 63—APPLICABILITY OF GENERAL PROVISIONS TO SUBPART FFFFF

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- 63.7881 Am I subject to this subpart?
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- 63.7883 When do I have to comply with this subpart?

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- 63.7884 What are the general standards I must meet for each site remediation with affected sources?
- 63.7885 What are the general standards I must meet for my affected process vents?
- 63.7886 What are the general standards I must meet for my affected remediation material management units?
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- 63.7888 How do I implement this rule at my facility using the cross-referenced requirements in other subparts?

PROCESS VENTS

- 63.7890 What emissions limitations and work practice standards must I meet for process vents?
- 63.7891 How do I demonstrate initial compliance with the emissions limitations and work practice standards for process vents?
- 63.7892 What are my inspection and monitoring requirements for process vents?
- 63.7893 How do I demonstrate continuous compliance with the emissions limitations and work practice standards for process vents?

TANKS

- 63.7895 What emissions limitations and work practice standards must I meet for tanks?
- 63.7896 How do I demonstrate initial compliance with the emissions limitations and work practice standards for tanks?
- 63.7897 What are my inspection and monitoring requirements for tanks?
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- 63.7900 What emissions limitations and work practice standards must I meet for containers?
- 63.7901 How do I demonstrate initial compliance with the emissions limitations and work practice standards for containers?
- 63.7902 What are my inspection and monitoring requirements for containers?
- 63.7903 How do I demonstrate continuous compliance with the emissions limitations and work practice standards for containers?

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- 63.7905 What emissions limitations and work practice standards must I meet for surface impoundments?
- 63.7906 How do I demonstrate initial compliance with the emissions limitations and

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- 63.7907 What are my inspection and monitoring requirements for surface impoundments?
- 63.7908 How do I demonstrate continuous compliance with the emissions limitations and work practice standards for surface impoundments?

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- 63.7910 What emissions limitations and work practice standards must I meet for separators?
- 63.7911 How do I demonstrate initial compliance with the emissions limitations and work practice standards for separators?
- 63.7912 What are my inspection and monitoring requirements for separators?
- 63.7913 How do I demonstrate continuous compliance with the emissions limitations and work practice standards for separators?

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- 63.7915 What emissions limitations and work practice standards must I meet for transfer systems?
- 63.7916 How do I demonstrate initial compliance with the emissions limitations and work practice standards for transfer systems?
- 63.7917 What are my inspection and monitoring requirements for transfer systems?
- 63.7918 How do I demonstrate continuous compliance with the emissions limitations and work practice standards for transfer systems?

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- 63.7920 What emissions limitations and work practice standards must I meet for equipment leaks?
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- 63.7922 How do I demonstrate continuous compliance with the emissions limitations and work practice standards for equipment leaks?

CLOSED VENT SYSTEMS AND CONTROL DEVICES

- 63.7925 What emissions limitations and work practice standards must I meet for closed vent systems and control devices?
- 63.7926 How do I demonstrate initial compliance with the emissions limitations and work practice standards for closed vent systems and control devices?
- 63.7927 What are my inspection and monitoring requirements for closed vent systems and control devices?
- 63.7928 How do I demonstrate continuous compliance with the emissions limita-

tions and work practice standards for closed vent systems and control devices?

GENERAL COMPLIANCE REQUIREMENTS

- 63.7935 What are my general requirements for complying with this subpart?
- 63.7936 What requirements must I meet if I transfer remediation material off-site to another facility?
- 63.7937 How do I demonstrate initial compliance with the general standards?
- 63.7938 How do I demonstrate continuous compliance with the general standards?

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- 63.7940 By what date must I conduct performance tests or other initial compliance demonstrations?
- 63.7941 How do I conduct a performance test, design evaluation, or other type of initial compliance demonstration?
- 63.7942 When must I conduct subsequent performance tests?
- 63.7943 How do I determine the average VOHAP concentration of my remediation material?
- 63.7944 How do I determine the maximum HAP vapor pressure of my remediation material?

CONTINUOUS MONITORING SYSTEMS

- 63.7945 What are my monitoring installation, operation, and maintenance requirements?
- 63.7946 How do I monitor and collect data to demonstrate continuous compliance?
- 63.7947 What are my monitoring alternatives?

NOTIFICATIONS, REPORTS, AND RECORDS

- 63.7950 What notifications must I submit and when?
- 63.7951 What reports must I submit and when?
- 63.7952 What records must I keep?
- 63.7953 In what form and how long must I keep my records?

OTHER REQUIREMENTS AND INFORMATION

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- 63.7956 Who implements and enforces this subpart?
- 63.7957 What definitions apply to this subpart?
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- TABLE 2 TO SUBPART GGGGG OF PART 63—CONTROL LEVELS AS REQUIRED BY §63.7895(A) FOR TANKS MANAGING REMEDIATION MATERIAL WITH A MAXIMUM HAP VAPOR PRESSURE LESS THAN 76.6 kPA

TABLE 3 TO SUBPART GGGGG OF PART 63—APPLICABILITY OF GENERAL PROVISIONS TO SUBPART GGGGG

Subpart HHHHH—National Emission Standards for Hazardous Air Pollutants: Miscellaneous Coating Manufacturing

WHAT THIS SUBPART COVERS

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 63.7990 What parts of my plant does this subpart cover?

COMPLIANCE DATES

- 63.7995 When do I have to comply with this subpart?

EMISSION LIMITS, WORK PRACTICE STANDARDS, AND COMPLIANCE REQUIREMENTS

- 63.8000 What are my general requirements for complying with this subpart?
 63.8005 What requirements apply to my process vessels?
 63.8010 What requirements apply to my storage tanks?
 63.8015 What requirements apply to my equipment leaks?
 63.8020 What requirements apply to my wastewater streams?
 63.8025 What requirements apply to my transfer operations?
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ALTERNATIVE MEANS OF COMPLIANCE

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 63.8055 How do I comply with a weight percent HAP limit in coating products?

NOTIFICATIONS, REPORTS, AND RECORDS

- 63.8070 What notifications must I submit and when?
 63.8075 What reports must I submit and when?
 63.8080 What records must I keep?

OTHER REQUIREMENTS AND INFORMATION

- 63.8090 What compliance options do I have if part of my plant is subject to both this subpart and another subpart?
 63.8095 What parts of the General Provisions apply to me?
 63.8100 Who implements and enforces this subpart?
 63.8105 What definitions apply to this subpart?

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Subpart IHHH—National Emission Standards for Hazardous Air Pollutants: Mercury Emissions From Mercury Cell Chlor-Alkali Plants

WHAT THIS SUBPART COVERS

- 63.8180 What is the purpose of this subpart?
 63.8182 Am I subject to this subpart?
 63.8184 What parts of my plant does this subpart cover?
 63.8186 When do I have to comply with this subpart?

EMISSION LIMITATIONS AND WORK PRACTICE STANDARDS

- 63.8190 What emission limitations must I meet?
 63.8192 What work practice standards must I meet?

OPERATION AND MAINTENANCE REQUIREMENTS

- 63.8222 What are my operation and maintenance requirements?

GENERAL COMPLIANCE REQUIREMENTS

- 63.8226 What are my general requirements for complying with this subpart?

INITIAL COMPLIANCE REQUIREMENTS

- 63.8230 By what date must I conduct performance tests or other initial compliance demonstrations?
 63.8232 What test methods and other procedures must I use to demonstrate initial compliance with the emission limits?
 63.8234 What equations and procedures must I use for the initial compliance demonstration?

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63.8236 How do I demonstrate initial compliance with the emission limitations and work practice standards?

CONTINUOUS COMPLIANCE REQUIREMENTS

- 63.8240 What are my monitoring requirements?
- 63.8242 What are the installation, operation, and maintenance requirements for my continuous monitoring systems?
- 63.8243 What equations and procedures must I use to demonstrate continuous compliance?
- 63.8244 How do I monitor and collect data to demonstrate continuous compliance?
- 63.8246 How do I demonstrate continuous compliance with the emission limitations and work practice standards?
- 63.8248 What other requirements must I meet?

NOTIFICATIONS, REPORTS, AND RECORDS

- 63.8252 What notifications must I submit and when?
- 63.8254 What reports must I submit and when?
- 63.8256 What records must I keep?
- 63.8258 In what form and how long must I keep my records?

OTHER REQUIREMENTS AND INFORMATION

- 63.8262 What parts of the General Provisions apply to me?
- 63.8264 Who implements and enforces this subpart?
- 63.8266 What definitions apply to this subpart?

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TABLE 4 TO SUBPART IIIII OF PART 63—WORK PRACTICE STANDARDS—REQUIREMENTS FOR MERCURY LIQUID COLLECTION

TABLE 5 TO SUBPART IIIII OF PART 63—REQUIRED ELEMENTS OF FLOOR-LEVEL MERCURY VAPOR MEASUREMENT AND CELL ROOM MONITORING PLANS

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TABLE 7 TO SUBPART IIIII OF PART 63—REQUIRED ELEMENTS OF WASHDOWN PLANS

TABLE 8 TO SUBPART IIIII OF PART 63—REQUIREMENTS FOR CELL ROOM MONITORING PROGRAM

TABLE 9 TO SUBPART IIIII OF PART 63—REQUIRED RECORDS FOR WORK PRACTICE STANDARDS

TABLE 10 TO SUBPART IIIII OF PART 63—APPLICABILITY OF GENERAL PROVISIONS TO SUBPART IIIII

Subpart JJJJ—National Emission Standards for Hazardous Air Pollutants for Brick and Structural Clay Products Manufacturing

WHAT THIS SUBPART COVERS

- 63.8380 What is the purpose of this subpart?
- 63.8385 Am I subject to this subpart?
- 63.8390 What parts of my plant does this subpart cover?
- 63.8395 When do I have to comply with this subpart?

EMISSION LIMITATIONS

- 63.8405 What emission limitations must I meet?
- 63.8410 What are my options for meeting the emission limitations?

GENERAL COMPLIANCE REQUIREMENTS

- 63.8420 What are my general requirements for complying with this subpart?
- 63.8425 What do I need to know about operation, maintenance, and monitoring plans?

TESTING AND INITIAL COMPLIANCE REQUIREMENTS

- 63.8435 By what date must I conduct performance tests?
- 63.8440 When must I conduct subsequent performance tests?
- 63.8445 How do I conduct performance tests and establish operating limits?
- 63.8450 What are my monitoring installation, operation, and maintenance requirements?
- 63.8455 How do I demonstrate initial compliance with the emission limitations?

CONTINUOUS COMPLIANCE REQUIREMENTS

- 63.8465 How do I monitor and collect data to demonstrate continuous compliance?
- 63.8470 How do I demonstrate continuous compliance with the emission limitations?

NOTIFICATIONS, REPORTS, AND RECORDS

- 63.8480 What notifications must I submit and when?
- 63.8485 What reports must I submit and when?
- 63.8490 What records must I keep?
- 63.8495 In what form and for how long must I keep my records?

OTHER REQUIREMENTS AND INFORMATION

- 63.8505 What parts of the General Provisions apply to me?
- 63.8510 Who implements and enforces this subpart?
- 63.8515 What definitions apply to this subpart?
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- TABLE 2 TO SUBPART JJJJJ OF PART 63—OPERATING LIMITS
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- TABLE 7 TO SUBPART JJJJJ OF PART 63—APPLICABILITY OF GENERAL PROVISIONS TO SUBPART JJJJJ

Subpart KKKKK—National Emission Standards for Hazardous Air Pollutants for Clay Ceramics Manufacturing

WHAT THIS SUBPART COVERS

- 63.8530 What is the purpose of this subpart?
- 63.8535 Am I subject to this subpart?
- 63.8540 What parts of my plant does this subpart cover?
- 63.8545 When do I have to comply with this subpart?

EMISSION LIMITATIONS AND WORK PRACTICE STANDARDS

- 63.8555 What emission limitations and work practice standards must I meet?
- 63.8560 What are my options for meeting the emission limitations and work practice standards?

GENERAL COMPLIANCE REQUIREMENTS

- 63.8570 What are my general requirements for complying with this subpart?
- 63.8575 What do I need to know about operation, maintenance, and monitoring plans?

TESTING AND INITIAL COMPLIANCE REQUIREMENTS

- 63.8585 By what date must I conduct performance tests?
- 63.8590 When must I conduct subsequent performance tests?
- 63.8595 How do I conduct performance tests and establish operating limits?
- 63.8600 What are my monitoring installation, operation, and maintenance requirements?

- 63.8605 How do I demonstrate initial compliance with the emission limitations and work practice standards?

CONTINUOUS COMPLIANCE REQUIREMENTS

- 63.8615 How do I monitor and collect data to demonstrate continuous compliance?
- 63.8620 How do I demonstrate continuous compliance with the emission limitations and work practice standards?

NOTIFICATIONS, REPORTS, AND RECORDS

- 63.8630 What notifications must I submit and when?
- 63.8635 What reports must I submit and when?
- 63.8640 What records must I keep?
- 63.8645 In what form and for how long must I keep my records?

OTHER REQUIREMENTS AND INFORMATION

- 63.8655 What parts of the General Provisions apply to me?
- 63.8660 Who implements and enforces this subpart?
- 63.8665 What definitions apply to this subpart?

- TABLE 1 TO SUBPART KKKKK OF PART 63—EMISSION LIMITS
- TABLE 2 TO SUBPART KKKKK OF PART 63—OPERATING LIMITS
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- TABLE 4 TO SUBPART KKKKK OF PART 63—REQUIREMENTS FOR PERFORMANCE TESTS
- TABLE 5 TO SUBPART KKKKK OF PART 63—INITIAL COMPLIANCE WITH EMISSION LIMITATIONS AND WORK PRACTICE STANDARDS
- TABLE 6 TO SUBPART KKKKK OF PART 63—CONTINUOUS COMPLIANCE WITH EMISSION LIMITATIONS AND WORK PRACTICE STANDARDS
- TABLE 7 TO SUBPART KKKKK OF PART 63—REQUIREMENTS FOR REPORTS
- TABLE 8 TO SUBPART KKKKK OF PART 63—APPLICABILITY OF GENERAL PROVISIONS TO SUBPART KKKKK

Subpart LLLLL—National Emission Standards for Hazardous Air Pollutants: Asphalt Processing and Asphalt Roofing Manufacturing

WHAT THIS SUBPART COVERS

- 63.8680 What is the purpose of this subpart?
- 63.8681 Am I subject to this subpart?
- 63.8682 What parts of my plant does this subpart cover?
- 63.8683 When must I comply with this subpart?

EMISSION LIMITATIONS

- 63.8684 What emission limitations must I meet?

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GENERAL COMPLIANCE REQUIREMENTS

63.8685 What are my general requirements for complying with this subpart?

TESTING AND INITIAL COMPLIANCE REQUIREMENTS

63.8686 By what date must I conduct performance tests or other initial compliance demonstrations?
63.8687 What performance tests, design evaluations, and other procedures must I use?
63.8688 What are my monitoring installation, operation, and maintenance requirements?
63.8689 How do I demonstrate initial compliance with the emission limitations?

CONTINUOUS COMPLIANCE REQUIREMENTS

63.8690 How do I monitor and collect data to demonstrate continuous compliance?
63.8691 How do I demonstrate continuous compliance with the operating limits?

NOTIFICATIONS, REPORTS, AND RECORDS

63.8692 What notifications must I submit and when?
63.8693 What reports must I submit and when?
63.8694 What records must I keep?
63.8695 In what form and how long must I keep my records?

OTHER REQUIREMENTS AND INFORMATION

63.8696 What parts of the General Provisions apply to me?
63.8697 Who implements and enforces this subpart?
63.8698 What definitions apply to this subpart?

TABLE 1 TO SUBPART LLLLL OF PART 63—EMISSION LIMITATIONS

TABLE 2 TO SUBPART LLLLL OF PART 63—OPERATING LIMITS

TABLE 3 TO SUBPART LLLLL OF PART 63—REQUIREMENTS FOR PERFORMANCE TESTS

TABLE 4 TO SUBPART LLLLL OF PART 63—INITIAL COMPLIANCE WITH EMISSION LIMITATIONS

TABLE 5 TO SUBPART LLLLL OF PART 63—CONTINUOUS COMPLIANCE WITH OPERATING LIMITS

TABLE 6 TO SUBPART LLLLL OF PART 63—REQUIREMENTS FOR REPORTS

TABLE 7 TO SUBPART LLLLL OF PART 63—APPLICABILITY OF GENERAL PROVISIONS TO SUBPART LLLLL

Subpart M MMMM—National Emission Standards for Hazardous Air Pollutants: Flexible Polyurethane Foam Fabrication Operations

WHAT THIS SUBPART COVERS

63.8780 What is the purpose of this subpart?

63.8782 Am I subject to this subpart?

63.8784 What parts of my plant does this subpart cover?

63.8786 When do I have to comply with this subpart?

EMISSION LIMITATIONS

63.8790 What emission limitations must I meet?

GENERAL COMPLIANCE REQUIREMENTS

63.8794 What are my general requirements for complying with this subpart?

TESTING AND INITIAL COMPLIANCE REQUIREMENTS

63.8798 By what date must I conduct performance tests or other initial compliance demonstrations?
63.8800 What performance tests and other procedures must I use to demonstrate compliance with the emission limit for flame lamination?
63.8802 What methods must I use to demonstrate compliance with the emission limitation for loop slitter adhesive use?
63.8806 How do I demonstrate initial compliance with the emission limitations?

CONTINUOUS COMPLIANCE REQUIREMENTS

63.8810 How do I monitor and collect data to demonstrate continuous compliance?
63.8812 How do I demonstrate continuous compliance with the emission limitations?

NOTIFICATIONS, REPORTS, AND RECORDS

63.8816 What notifications must I submit and when?
63.8818 What reports must I submit and when?
63.8820 What records must I keep?
63.8822 In what form and how long must I keep my records?

OTHER REQUIREMENTS AND INFORMATION

63.8826 What parts of the General Provisions apply to me?
63.8828 Who implements and enforces this subpart?
63.8830 What definitions apply to this subpart?

TABLE 1 TO SUBPART M MMMM OF PART 63—EMISSION LIMITS

TABLE 2 TO SUBPART M MMMM OF PART 63—OPERATING LIMITS FOR NEW OR RECONSTRUCTED FLAME LAMINATION AFFECTED SOURCES

TABLE 3 TO SUBPART M MMMM OF PART 63—PERFORMANCE TEST REQUIREMENTS FOR NEW OR RECONSTRUCTED FLAME LAMINATION AFFECTED SOURCES

TABLE 4 TO SUBPART M MMMM OF PART 63—INITIAL COMPLIANCE WITH EMISSION LIMITS

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TABLE 5 TO SUBPART MMMMM OF PART 63—
CONTINUOUS COMPLIANCE WITH EMISSION
LIMITS AND OPERATING LIMITS

TABLE 6 TO SUBPART MMMMM OF PART 63—
REQUIREMENTS FOR REPORTS

TABLE 7 TO SUBPART MMMMM OF PART 63—
APPLICABILITY OF GENERAL PROVISIONS TO
SUBPART MMMMM

AUTHORITY: 42 U.S.C. 7401 *et seq.*

SOURCE: 57 FR 61992, Dec. 29, 1992, unless
otherwise noted.

**Subpart ZZZZ—National Emissions
Standards for Hazardous Air
Pollutants for Stationary Re-
ciprocating Internal Combustion
Engines**

SOURCE: 69 FR 33506, June 15, 2004, unless
otherwise noted.

WHAT THIS SUBPART COVERS

**§ 63.6580 What is the purpose of sub-
part 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.

[69 FR 33506, June 15, 2004, as amended at 73 FR 3603, Jan. 18, 2008]

**§ 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 paragraph (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(h).

(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; or

(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(h) 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) A stationary RICE which is an existing spark ignition 4 stroke rich burn (4SRB) stationary RICE located at an area source, an existing spark ignition 4SRB stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source, an existing spark ignition 2 stroke lean burn (2SLB) stationary RICE, an existing spark ignition 4 stroke lean burn (4SLB) stationary RICE, an existing compression ignition (CI) stationary RICE, an existing emergency stationary RICE, an existing limited use stationary RICE, or an existing stationary RICE that combusts landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis, does not have to meet the requirements of this subpart and of subpart A of this part. No initial notification is necessary.

(c) *Stationary RICE subject to Regulations under 40 CFR Part 60.* An affected source that is a new or reconstructed stationary RICE located at an area source, or is a new or reconstructed stationary RICE located at a major source of HAP emissions and is a spark ignition 2 stroke lean burn (2SLB) stationary RICE with a site rating of less than 500 brake HP, a spark ignition 4 stroke lean burn (4SLB) stationary RICE with a site rating of less than 250 brake HP, or a 4 stroke rich burn

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(4SRB) stationary RICE with a site rating of less than or equal to 500 brake HP, a stationary RICE with a site rating of less than or equal to 500 brake HP which combusts landfill or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis, an emergency or limited use stationary RICE with a site rating of less than or equal to 500 brake HP, or a compression ignition (CI) stationary RICE with a site rating of less than or equal to 500 brake HP, 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.

[69 FR 33506, June 15, 2004, as amended at 73 FR 3604, Jan. 18, 2008]

§ 63.6595 When do I have to comply with this subpart?

(a) *Affected Sources.* (1) If you have an existing 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 and operating limitations no later than June 15, 2007.

(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 limita-

tions 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]

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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?

(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 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 and 2a to this subpart or operating limitations in Tables 1b and 2b to this subpart: an existing 2SLB stationary RICE, an existing 4SLB stationary RICE, or an existing CI 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.

[73 FR 3605, Jan. 18, 2008]

§ 63.6601 What emission limitations must I meet if I own or operate a 4SLB stationary RICE with a site rating of greater than or equal to 250 brake HP and less than 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 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]

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 and operating limitations in this subpart that apply to you at all times, except during periods of startup, shutdown, and malfunction.

(b) If you must comply with emission limitations and operating limitations, you must operate and maintain your stationary RICE, including air pollution control and monitoring equipment, in a manner consistent with good air pollution control practices for minimizing emissions at all times, including during startup, shutdown, and malfunction.

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

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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 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]

§ 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 in § 63.7(e)(1) and under the specific conditions that this subpart specifies in Table 4. The test must be conducted at any load condition within plus or minus 10 percent of 100 percent load.

(c) You may not conduct performance tests during periods of startup, shutdown, or malfunction, as specified in § 63.7(e)(1).

(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.

(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 CO or formaldehyde at the control device inlet,
 C_o = concentration of CO or formaldehyde at the control device outlet, and
 R = percent reduction of CO or formaldehyde emissions.

(2) You must normalize the carbon monoxide (CO) 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 oxygen, as follows:

$$X_{\text{co}_2} = \frac{5.9}{F_o} \quad (\text{Eq. 3})$$

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 NO_x and SO₂ gas concentrations adjusted to 15 percent O₂ using CO₂ as follows:

$$C_{\text{adj}} = C_d \frac{X_{\text{co}_2}}{\% \text{CO}_2} \quad (\text{Eq. 4})$$

Where:

%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 dur-

ing 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 accuracy in percentage of true value must be provided.

§ 63.6625 What are my monitoring, installation, 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 oxygen or CO₂ at both the inlet and the outlet of the control device according to the requirements in paragraphs (a)(1) through (4) of this section.

(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.

(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 § 63.8.

(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

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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.

[69 FR 33506, June 15, 2004, as amended at 73 FR 3606, Jan. 18, 2008]

§ 63.6630 How do I demonstrate initial compliance with the emission limitations and operating limitations?

(a) You must demonstrate initial compliance with each emission and operating limitation 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.

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, and required quality assurance or control activities (including, as applicable, calibration checks and required zero and span adjustments), you must monitor continuously at all times that the stationary RICE is operating.

(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.

§ 63.6640 How do I demonstrate continuous compliance with the emission limitations and operating limitations?

(a) You must demonstrate continuous compliance with each emission limitation and operating limitation in Tables 1a and 1b and Tables 2a and 2b of this subpart that apply to you according to methods specified in Table 6 of 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 and Tables 2a and 2b of 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) [Reserved]

(d) Consistent with §§ 63.6(e) and 63.7(e)(1), deviations from the emission or operating limitations that occur during a period of startup, shutdown, or malfunction are not violations if you demonstrate to the Administrator's satisfaction that you were operating in accordance with § 63.6(e)(1). 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 any 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 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 CI stationary RICE, an existing emergency stationary RICE, an existing limited use emergency 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.

[69 FR 33506, June 15, 2004, as amended at 71 FR 20467, Apr. 20, 2006; 73 FR 3606, Jan. 18, 2008]

NOTIFICATIONS, REPORTS, AND RECORDS

§ 63.6645 What notifications must I submit and when?

(a) 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 or 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, 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.

(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.

(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.

(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.

(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.

(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).

(i) For each initial compliance demonstration required in Table 5 to this subpart that does not include a performance test, you must submit the

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Notification of Compliance Status before the close of business on the 30th day following the completion of the initial compliance demonstration.

(2) 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).

[73 FR 3606, Jan. 18, 2008]

§ 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 (5) of this section.

(1) The first Compliance report must cover the period beginning on the compliance date that is specified for your affected source in § 63.6595 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) 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) Each subsequent Compliance report must cover the semiannual reporting period from January 1 through June 30 or the semiannual reporting period from July 1 through December 31.

(4) Each subsequent Compliance report must be postmarked or delivered no later than July 31 or January 31, 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 pur-

suant 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 (4) of this section.

(c) The Compliance report must contain the information in paragraphs (c)(1) through (6) 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 startup, shutdown, or malfunction during the reporting period, the compliance report must include the information in § 63.10(d)(5)(i).

(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.

(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 (4) of this section and the information in paragraphs (d)(1) and (2) of this section.

(1) The total operating time of the stationary RICE at which the deviation occurred during the reporting period.

(2) Information on the number, duration, and cause of deviations (including unknown cause, if applicable), as applicable, and the corrective action taken.

(e) For each deviation from 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 (4) and (e)(1) through (12) of this section.

(1) The date and time that each malfunction started and stopped.

(2) The date, time, and duration that each CMS was inoperative, except for zero (low-level) and high-level checks.

(3) The date, time, and duration that each 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 of the deviation during the reporting period, and the total duration as a percent of the total source operating time during that reporting period.

(6) A breakdown of the total duration of the deviations during the reporting period into those that are due to control equipment problems, process problems, other known causes, and other unknown causes.

(7) A summary of the total duration of 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) A brief description of the stationary RICE.

(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.

(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.

(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.

§ 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)(3), (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) The records in § 63.6(e)(3)(iii) through (v) related to startup, shutdown, and malfunction.

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(3) Records of performance tests and performance evaluations as required in § 63.10(b)(2)(viii).

(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.

§ 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 on-site for at least 2 years after the date of each occurrence, measurement, maintenance, corrective action, report, or record, according to § 63.10(b)(1). You can keep the records off-site for the remaining 3 years.

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 any 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 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: An existing 2SLB RICE, an existing 4SLB stationary RICE, an existing CI stationary RICE, an existing 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 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 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.

[73 FR 3606, Jan. 18, 2008]

§ 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).

§ 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:

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.

CAA means the Clean Air Act (42 U.S.C. 7401 *et seq.*, as amended by Public Law 101-549, 104 Stat. 2399).

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 proc-

essing 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 or 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.

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 RICE whose operation is limited to emergency situations and required testing and maintenance. 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. Stationary RICE used for peak shaving are not considered emergency stationary RICE. Stationary ICE used to supply power to an electric grid or that supply power as part of a financial arrangement with another entity are not considered to be emergency engines. Emergency stationary RICE with a site-rating of more than 500 brake HP located at a major source of HAP emissions that were installed prior to June 12, 2006, may be operated for the purpose of maintenance checks and readiness testing, provided that the tests are recommended by the manufacturer, the vendor, or the insurance company associated with the engine. Required testing of such units should be minimized, but there is no time limit on the use of emergency stationary RICE in emergency situations and for routine testing and maintenance. Emergency stationary RICE with a site-rating of more than 500 brake HP located at a major source of HAP emissions that were installed prior to June 12, 2006, may also operate an additional 50 hours per year in non-emergency situations. Emergency stationary RICE with a site-rating of more than 500 brake HP located at a major source of HAP emissions that were installed on or after June 12, 2006, must comply with requirements specified in 40 CFR 60.4243(d).

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 gly-

col) 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.

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

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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 C₃H₈.

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 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]

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, you must comply with the following emission limitations for existing, new and reconstructed 4SRB stationary RICE >500 HP located at a major source of HAP emissions at 100 percent load plus or minus 10 percent]

For each...	You must meet the following emission limitations...
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 b. limit the concentration of formaldehyde in the stationary RICE exhaust 350 ppbvd or less at 15 percent O ₂ .

[73 FR 3607, Jan. 18, 2008]

TABLE 1b TO SUBPART ZZZZ OF PART 63—OPERATING 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, 63.6630 and 63.6640, you must comply with the following operating emission 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...
1. 4SRB stationary RICE 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	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
4SRB stationary RICE complying with the requirement to limit the concentration of formaldehyde in the stationary RICE exhaust to 350 ppbvd or less at 15 percent O ₂ and using NSCR..	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.
2. 4SRB stationary RICE 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.
4SRB stationary RICE complying with the requirement to limit the concentration of formaldehyde in the stationary RICE exhaust to 350 ppbvd or less at 15 percent O ₂ and not using NSCR..	

[73 FR 3607, Jan. 18, 2008]

TABLE 2a TO SUBPART ZZZZ OF PART 63—EMISSION LIMITATIONS FOR NEW AND RECONSTRUCTED 2SLB AND COMPRESSION IGNITION STATIONARY RICE >500 HP AND 4SLB STATIONARY RICE ≥250 HP LOCATED AT A MAJOR SOURCE OF HAP EMISSIONS

[As stated in §§ 63.6600 and 63.6601, 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...
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.
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

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[As stated in §§ 63.6600 and 63.6601, 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...
	b. limit concentration of formaldehyde in the stationary RICE exhaust to 580 ppbvd or less at 15 percent O ₂ .

[73 FR 3608, Jan. 18, 2008]

TABLE 2b TO SUBPART ZZZZ OF PART 63—OPERATING LIMITATIONS FOR NEW AND RE-CONSTRUCTED 2SLB AND COMPRESSION IGNITION STATIONARY RICE >500 HP AND 4SLB BURN STATIONARY RICE ≥250 HP LOCATED AT A MAJOR SOURCE OF HAP EMISSIONS

[As stated in §§ 63.6600, 63.6601, 63.6630, and 63.6640, you must comply with the following operating limitations for new and reconstructed lean burn and new and reconstructed compression ignition stationary]

For each...	You must meet the following operating limitation...
1. 2SLB and 4SLB stationary RICE and CI stationary RICE complying with the requirement to reduce CO emissions and using an oxidation catalyst; or 2SLB and 4SLB stationary RICE and CI stationary RICE 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.
2. 2SLB and 4SLB stationary RICE and CI stationary RICE complying with the requirement to reduce CO emissions and not using an oxidation catalyst; or 2SLB and 4SLB stationary RICE and CI stationary RICE complying with the requirement to limit the concentration of formaldehyde in the stationary RICE exhaust and not using an oxidation catalyst.	Comply with any operating limitations approved by the Administrator.

[73 FR 3608, Jan. 18, 2008]

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. 2SLB and 4SLB stationary RICE and CI stationary RICE.	Reduce CO emissions and not using a CEMS.	Conduct subsequent performance tests semiannually. ¹
2. 4SRB stationary RICE with a brake horsepower ≥5,000.	Reduce formaldehyde emissions	Conduct subsequent performance tests semiannually. ¹
3. Stationary RICE (all stationary RICE subcategories and all brake horsepower ratings).	Limit the concentration of formaldehyde in the stationary RICE exhaust.	Conduct subsequent performance tests semiannually. ¹

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 semi-annual performance tests.

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. Measure the O ₂ at the inlet and outlet of the control device; and.	(1) Portable CO and O ₂ analyzer.	(a) Using ASTM D6522-00 (2005) ^a (incorporated by reference, see § 63.14). Measurements to determine O ₂ must be made at the same time as the measurements for CO concentration.

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[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 . . .
2. 4SRB stationary RICE.	a. Reduce formaldehyde emissions.	<p>ii. Measure the CO at the inlet and the outlet of the control device.</p> <p>i. Select the sampling port location and the number of traverse points; and.</p> <p>ii. Measure O₂ at the inlet and outlet of the control device; and.</p> <p>iii. Measure moisture content at the inlet and outlet of the control device; and.</p> <p>iv. Measure formaldehyde at the inlet and the outlet of the control device.</p>	<p>(1) Portable CO and O₂ analyzer.</p> <p>(1) Method 1 or 1A of 40 CFR part 60, appendix A § 63.7(d)(1)(i).</p> <p>(1) Method 3 or 3A or 3B of 40 CFR part 60, appendix A, or ASTM Method D6522-00 (2005)..</p> <p>(1) Method 4 of 40 CFR part 60, appendix A, or Test Method 320 of 40 CFR part 63, appendix A, or ASTM D 6348-03.</p> <p>(1) Method 320 or 323 of 40 CFR part 63, appendix A; or ASTM D6348-03^b, 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.</p>	<p>(a) Using ASTM D6522-00 (2005)^a (incorporated by reference, see § 63.14) or Method 10 of 40 CFR, appendix A. The CO concentration must be at 15 percent O₂, dry basis.</p> <p>(a) Sampling sites must be located at the inlet and outlet of the control device.</p> <p>(a) Measurements to determine O₂ concentration must be made at the same time as the measurements for formaldehyde concentration.</p> <p>(a) Measurements to determine moisture content must be made at the same time and location as the measurements for formaldehyde concentration.</p> <p>(a) Formaldehyde concentration must be at 15 percent O₂, dry basis. Results of this test consist of the average of the three 1-hour or longer runs.</p>
3. Stationary RICE	a. Limit the concentration of formaldehyde in the stationary RICE exhaust.	<p>i. Select the sampling port location and the number of traverse points; and.</p> <p>ii. Determine the O₂ concentration of the stationary RICE exhaust at the sampling port location; and.</p> <p>iii. Measure moisture content of the stationary RICE exhaust at the sampling port location; and.</p>	<p>(1) Method 1 or 1A of 40 CFR part 60, appendix A § 63.7(d)(1)(i).</p> <p>(1) Method 3 or 3A or 3B of 40 CFR part 60, appendix A, or ASTM Method D6522-00 (2005).</p> <p>(1) Method 4 of 40 CFR part 60, appendix A, or Test Method 320 of 40 CFR part 63, appendix A, or ASTM D 6348-03.</p>	<p>(a) If using a control device, the sampling site must be located at the outlet of the control device.</p> <p>(a) Measurements to determine O₂ concentration must be made at the same time and location as the measurements for formaldehyde concentration.</p> <p>(a) Measurements to determine moisture content must be made at the same time and location as the measurements for formaldehyde concentration.</p>

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[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 . . .
		iv. Measure formaldehyde at the exhaust of the stationary RICE.	(1) Method 320 or 323 of 40 CFR part 63, appendix A; or ASTM D6348-03 ^b , 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.	(a) 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.

^aYou may also use Methods 3A and 10 as options to ASTM-D6522-00 (2005). You may obtain a copy of ASTM-D6522-00 (2005) 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.

^bYou 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.

[73 FR 3609, Jan. 18, 2008]

TABLE 5 TO SUBPART ZZZZ OF PART 63—INITIAL COMPLIANCE WITH EMISSION LIMITATIONS AND OPERATING LIMITATIONS

[As stated in §§ 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. 2SLB and 4SLB stationary RICE and CI stationary RICE.	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 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. 2SLB and 4SLB stationary RICE and CI stationary RICE.	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 operating parameters (if any) during the initial performance test.
3. 2SLB and 4SLB stationary RICE and CI stationary RICE.	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. Compliance is based on the average percent reduction achieved during the 4-hour period.

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[As stated in §§ 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 . . .
4. 4SRB stationary RICE	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; 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.
5. 4SRB stationary RICE	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; 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.
6. Stationary RICE	a. Limit the concentration of formaldehyde in the stationary RICE exhaust and 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 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.
7. Stationary RICE	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.

TABLE 6 TO SUBPART ZZZZ OF PART 63—CONTINUOUS COMPLIANCE WITH EMISSION LIMITATIONS AND OPERATING LIMITATIONS

[As stated in § 63.6640, you must continuously comply with the emissions and operating limitations as required by the following]

For each . . .	Complying with the requirement to . . .	You must demonstrate continuous compliance by . . .
1. 2SLB and 4SLB stationary RICE and CI stationary RICE.	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 ¹ ; and ii. Collecting the catalyst inlet temperature data according to § 63.6625(b); and iii. Reducing these data to 4-hour rolling averages; and

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[As stated in § 63.6640, you must continuously comply with the emissions and operating limitations as required by the following]

For each . . .	Complying with the requirement to . . .	You must demonstrate continuous compliance by . . .
2. 2SLB and 4SLB stationary RICE and CI stationary RICE.	a. Reduce CO emissions and not using an oxidation catalyst, and using a CPMS.	<ul style="list-style-type: none"> 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. i. Conducting semiannual performance tests for CO to demonstrate that the required CO percent reduction is achieved¹; 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. 2SLB and 4SLB stationary RICE and CI stationary RICE.	a. Reduce CO emissions and using a CEMS.	<ul style="list-style-type: none"> i. Collecting the monitoring data according to § 63.6625(a), reducing the measurements to 1-hour averages, calculating the percent reduction 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; 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.
4. 4SRB stationary RICE	a. Reduce formaldehyde emissions and using NSCR.	<ul style="list-style-type: none"> 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. 4SRB stationary RICE	a. Reduce formaldehyde emissions and not using NSCR.	<ul style="list-style-type: none"> i. Collecting the approved operating parameter (if any) data according to § 63.6625(b); and ii. Reducing these data to 4-hour rolling averages; iii. Maintaining the 4-hour rolling averages within the operating limitations for the operating parameters established during the performance test.
6. 4SRB stationary RICE with a brake horsepower ≥5,000.	Reduce formaldehyde emissions	Conducting semiannual performance tests for formaldehyde to demonstrate that the required formaldehyde percent reduction is achieved ¹ .
7. Stationary RICE	Limit the concentration of formaldehyde in the stationary RICE exhaust and using oxidation catalyst or NSCR.	<ul style="list-style-type: none"> i. Conducting semiannual performance tests for formaldehyde to demonstrate that your emissions remain at or below the formaldehyde concentration limit¹; and

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[As stated in § 63.6640, you must continuously comply with the emissions and operating limitations as required by the following]

For each . . .	Complying with the requirement to . . .	You must demonstrate continuous compliance by . . .
8. Stationary RICE	Limit the concentration of formaldehyde in the stationary RICE exhaust and not using oxidation catalyst or NSCR.	<ul style="list-style-type: none"> 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. i. Conducting semiannual performance tests for formaldehyde to demonstrate that your emissions remain at or below the formaldehyde concentration limit¹; and ii. 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.

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 semi-annual performance tests.

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]

You must submit a(n)	The report must contain . . .	You must submit the report . . .
1. Compliance report	<ul style="list-style-type: none"> 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 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 c. If you had a startup, shutdown or malfunction during the reporting period, the information in § 63.10(d)(5)(i). 	<ul style="list-style-type: none"> i. Semiannually according to the requirements in § 63.6650(b). i. Semiannually according to the requirements in § 63.6650(b). i. Semiannually according to the requirements in § 63.6650(b).
2. An immediate startup, shutdown, and malfunction report if actions addressing the startup, shutdown, or malfunction were inconsistent with your startup, shutdown, or malfunction plan during the reporting period.	<ul style="list-style-type: none"> a. Actions taken for the event; and 	<ul style="list-style-type: none"> i. By fax or telephone within 2 working days after starting actions inconsistent with the plan.

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[As stated in § 63.6650, you must comply with the following requirements for reports]

You must submit a(n)	The report must contain . . .	You must submit the report . . .
3. Report	<p>b. The information in § 63.10(d)(5)(ii).</p> <p>a. The fuel flow rate of each fuel and the heating values that were used in your calculations, and you 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</p> <p>b. The operating limits provided in your federally enforceable permit, and any deviations from these limits; and</p> <p>c. Any problems or errors suspected with the meters.</p>	<p>i. By letter within 7 working days after the end of the event unless you have made alternative arrangements with the permitting authorities. (§ 63.10(d)(5)(ii))</p> <p>i. Annually, according to the requirements in § 63.6650.</p> <p>i. See item 3.a.i.</p> <p>i. See item 3.a.i.</p>

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].		
§ 36.6(c)(5)	Compliance dates for existing area sources that become major sources.	Yes.	
§ 63.6(d)	[Reserved].		
§ 63.6(e)(1)	Operation and maintenance ..	Yes.	
§ 63.6(e)(2)	[Reserved].		
§ 63.6(e)(3)	Startup, shutdown, and malfunction plan.	Yes.	
§ 63.6(f)(1)	Applicability of standards except during startup shutdown malfunction (SSM).	Yes.	
§ 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 and 63.6611.

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[As stated in § 63.6665, you must comply with the following applicable general provisions]

General provisions citation	Subject of citation	Applies to subpart	Explanation
§ 63.7(a)(3)	CAA section 114 authority	Yes.	
§ 63.7(b)(1)	Notification of performance test.	Yes.	
§ 63.7(b)(2)	Notification of rescheduling	Yes.	
§ 63.7(c)	Quality assurance/test plan	Yes.	
§ 63.7(d)	Testing facilities	Yes.	
§ 63.7(e)(1)	Conditions for conducting performance tests.	Yes.	
§ 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.	
§ 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	Yes.	
§ 63.8(c)(1)(ii)	SSM not in Startup Shutdown Malfunction Plan.	Yes.	
§ 63.8(c)(1)(iii)	Compliance with operation and maintenance requirements.	Yes.	
§ 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.
§ 63.8(f)(1)-(5)	Alternative monitoring method	Yes.	
§ 63.8(f)(6)	Alternative to relative accuracy test.	Yes.	
§ 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.
§ 63.9(c)	Request for compliance extension.	Yes.	
§ 63.9(d)	Notification of special compliance requirements for new sources.	Yes.	
§ 63.9(e)	Notification of performance test.	Yes.	

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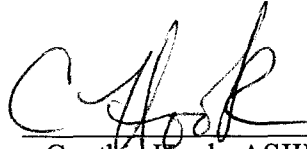
[As stated in § 63.6665, you must comply with the following applicable general provisions]

General provisions citation	Subject of citation	Applies to subpart	Explanation
§ 63.9(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.	
§ 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.
§ 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.
§ 63.9(i)	Adjustment of submittal deadlines.	Yes.	
§ 63.9(j)	Change in previous information.	Yes.	
§ 63.10(a)	Administrative provisions for record keeping/reporting.	Yes.	
§ 63.10(b)(1)	Record retention	Yes.	
§ 63.10(b)(2)(i)–(v)	Records related to SSM	Yes.	
§ 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.	Yes.	
§ 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.	Yes	Except that § 63.10(e)(3)(i)(C) is reserved.
§ 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.	

[73 FR 3610, Jan. 18, 2008]

CERTIFICATE OF SERVICE

I, Cynthia Hook, hereby certify that a copy of this permit has been mailed by first class mail to Great Lakes Chemical Corporation (West Plant), P.O. Box 7020, El Dorado, AR, 71731-7020, on this 22nd day of February, 2013.



Cynthia Hook, ASIII, Air Division