



ARKANSAS  
Department of Environmental Quality

July 21, 2009

Tory Thompson, Operations Manager  
DeSoto Gathering Company, LLC - West Cutthroat CPF-2  
P.O. Box 789  
Conway, AR 72033

Dear Mr. Thompson:

The enclosed Permit No. 2203-AOP-R0 is issued pursuant to the Arkansas Operating Permit Program, Regulation # 26.

After considering the facts and requirements of A.C.A. §8-4-101 et seq., and implementing regulations, I have determined that Permit No. 2203-AOP-R0 for the construction, operation and maintenance of an air pollution control system for DeSoto Gathering Company, LLC - West Cutthroat CPF-2 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 8.603, within thirty (30) days after service of this decision.

All persons submitting written comments during this thirty (30) day period, and all other persons entitled to do so, may request an adjudicatory hearing and Commission review on whether the decision of the Director should be reversed or modified. Such a request shall be in the form and manner required by Regulation 8.603.

Sincerely,

A handwritten signature in black ink that reads "Mike Bates". The signature is written in a cursive style with a large, stylized "M" and "B".

Mike Bates  
Chief, Air Division



## RESPONSE TO COMMENTS

**DeSoto Gathering Company, LLC – West Cutthroat CPF-2**  
**PERMIT #2203-AOP-R0**  
**AFIN: 12-00445**

On May 13, 2009, the Director of the Arkansas Department of Environmental Quality gave notice of a draft permitting decision for the above referenced facility. During the comment period, two interested people submitted written comments, data, views, or arguments on the draft permitting decision. The Department's response to these issues follows.

**Comment #1:**

Section IV: Specific Conditions

Page 19, SN-20 thru SN-24. Please move the emission rate table so that it is below the text.

**Response to Comment #1:**

The Department will correct the page layout and move the emission rate table below the text.

**Comment #2:**

Section VI: Plantwide Conditions

Page 24, Plantwide Condition #9. The condition should read: "*Sources SN-01 through SN-19 may be subject to 40 CFR Part 63, Subpart ZZZZ...*"

**Response to Comment #2:**

The DeSoto Gathering Company, LLC – West Cutthroat CPF-2 engines are subject to 40 CFR Part 63, Subpart ZZZZ based on the supplied application information. In the event that the facility should replace an engine, the facility shall comply with Plantwide Condition #7 to demonstrate compliance.

**Comment #3:**

Section VI: Plantwide Conditions

Page 25, Plantwide Condition #12. The condition should read: "*Sources SN-01 through SN-19 may be subject to 40 CFR Part 60, Subpart JJJJ...*"

**Response to Comment #3:**

The DeSoto Gathering Company, LLC – West Cutthroat CPF-2 engines are subject to 40 CFR Part 60, Subpart JJJJ based on the supplied application information. In the event that the facility should replace an engine, the facility shall comply with Plantwide Condition #7 to demonstrate compliance.

**Comment #4:****Section VI: Plantwide Conditions**

Page 31, Plantwide Condition #35. Please update the Permit Shield inapplicable regulations table as shown below:

Source No.	Regulation	Description
Plantwide	40 CFR 60, Subpart Kb	Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced after July 23, 1984
Plantwide	40 CFR, Subpart KKK	Standards of Performance for Equipment Leaks of VOC From Onshore Natural Gas Processing Plants
Plantwide	40 CFR, Subpart LLL	Standards of Performance for Onshore Natural Gas Processing: SO2 Emissions
Plantwide	40 CFR, Subpart IIII	Standards of Performance for Stationary Compression Ignition Internal Combustion Engines
Plantwide	40 CFR , Subpart 64	Compliance Assurance Monitoring (CAM)
Plantwide	40 CFR, Subpart 68	Chemical Accident Prevention

**Response to Comment #4:**

The department will update the Permit Shield inapplicable regulations.

# ADEQ OPERATING AIR PERMIT

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

Permit No. : 2203-AOP-R0

IS ISSUED TO:

DeSoto Gathering Company, LLC - West Cutthroat CPF-2  
400 Waller Road  
Quitman, AR 72131  
Cleburne County  
AFIN: 12-00445

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:


July 21, 2009

AND

July 20, 2014

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

Signed:

  
Mike Bates  
Chief, Air Division

July 21, 2009  
\_\_\_\_\_  
Date

Table of Contents

**SECTION I: FACILITY INFORMATION ..... 4**

**SECTION II: INTRODUCTION ..... 5**

**Summary of Permit Activity ..... 5**

**Process Description ..... 5**

**Regulations ..... 6**

**Emission Summary ..... 6**

**SECTION III: PERMIT HISTORY ..... 11**

**SECTION IV: SPECIFIC CONDITIONS ..... 12**

    SN-01 through SN-04 ..... 12

    SN-05 through SN-16 ..... 14

    SN-17 through SN-19 ..... 17

    SN-20 thru SN-24 ..... 19

**SECTION V: COMPLIANCE PLAN AND SCHEDULE ..... 22**

**SECTION VI: PLANTWIDE CONDITIONS ..... 23**

**Title VI Provisions ..... 29**

**Permit Shield ..... 30**

**SECTION VII: INSIGNIFICANT ACTIVITIES..... 32**

**SECTION VIII: GENERAL PROVISIONS ..... 33**

Appendix A – 40 CFR Part 60, Subpart JJJJ- *Standards of Performance for Stationary Spark Ignition Internal Combustion Engines*

Appendix B – 40 CFR Part 63, Subpart HH-*National Emission Standards for Hazardous Air Pollutants from Oil and Natural Gas Production Facilities*

Appendix C – 40 CFR Part 63, Subpart ZZZZ-*National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines*

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 <sub>x</sub>	Nitrogen Oxide
PM	Particulate Matter
PM <sub>10</sub>	Particulate Matter Smaller Than Ten Microns
SNAP	Significant New Alternatives Program (SNAP)
SO <sub>2</sub>	Sulfur Dioxide
SSM	Startup, Shutdown, and Malfunction Plan
Tpy	Tons Per Year
UTM	Universal Transverse Mercator
VOC	Volatile Organic Compound

DeSoto Gathering Company, LLC - West Cutthroat CPF-2  
Permit #: 2203-AOP-R0  
AFIN: 12-00445

**SECTION I: FACILITY INFORMATION**

PERMITTEE:	DeSoto Gathering Company, LLC - West Cutthroat CPF-2
AFIN:	12-00445
PERMIT NUMBER:	2203-AOP-R0
FACILITY ADDRESS:	400 Waller Road Quitman, AR 72131
MAILING ADDRESS:	P.O. Box 789 Conway, AR 72033
COUNTY:	Cleburne County
CONTACT NAME:	Paul Hart
CONTACT POSITION:	HSE Coordinator
TELEPHONE NUMBER:	501-548-6712
REVIEWING ENGINEER:	Nelia Sandoval
UTM North South (Y):	Zone 15: 569.97
UTM East West (X):	Zone 15: 3,929.40



## **SECTION II: INTRODUCTION**

### **Summary of Permit Activity**

DeSoto Gathering Company, LLC - West Cutthroat CPF-2 (12-00445) operates a facility located at 400 Waller Road, Quitman, AR 72131. This facility is currently a minor source operating under general permit # 1868-AGP-201. This facility has submitted an application to expand by adding twelve Natural Gas-Fired Compressor Engines (SN-05 thru SN-16), three Natural Gas Emergency Generator Engines (SN-17 thru SN-19) and five Triethylene Glycol Dehydration Units (SN-20 through SN-24). This modification will cause the facility to become a Title V major source. The permitted emission increases are: 9.1 tpy of PM/PM<sub>10</sub>, 1.5 tpy of SO<sub>2</sub>, 166.8 tpy of VOC, 88.7 tpy of CO, 145.2 tpy of NO<sub>x</sub>, 0.20 tpy of H<sub>2</sub>S, 9.81 tpy of formaldehyde, and 0.05 tpy of benzene.

### **Process Description**

The West Cutthroat CPF-2 is a natural gas gathering facility that will perform compression, separation and treating of natural gas collected from area wells.

The produced gas from nearby wells enters the facility where it passes through inlet separators to remove entrained water. The separated water is routed to a storage tank where it is removed from the site by tanker truck.

The gas is then compressed in the compressors. The facility has two types of engines, 4SLB and 4SRB. The four stroke lean burn compressor engines (4SLB) are SN-01 thru SN-16. The four stroke rich burn (4SRB) emergency generator engines are SN-17 through SN-19. The compressor engines are fueled with natural gas and are the major emissions units at the facility. The engines are equipped with catalysts to reduce CO emissions.

The natural gas then passes to the glycol dehydration units (SN-20 through SN-24) where it is dried to sales gas contract specifications in a continuous process by contact with regenerated glycol in an absorber tower. Wet glycol will go to the glycol regenerator where absorber water is removed by heating. Regenerated glycol is cooled and pumped to the absorber tower in a continuous cycle. The dehydrator still vent is vented to the atmosphere while the sweet dry gas is delivered to the sales line. Most of the vented gas is water vapor and non-VOC organics (methane and ethane). A trace amount of VOCs (non-methane, non-ethane) are also emitted.

The dry sweet residue gas then is piped to the sales point.

DeSoto Gathering Company, LLC - West Cutthroat CPF-2  
 Permit #: 2203-AOP-R0  
 AFIN: 12-00445

### Regulations

The following table contains the regulations applicable to this permit.

Regulations
Arkansas Air Pollution Control Code, Regulation 18, effective January 25, 2009
Regulations of the Arkansas Plan of Implementation for Air Pollution Control, Regulation 19, effective January 25, 2009
Regulations of the Arkansas Operating Air Permit Program, Regulation 26, effective January 25, 2009
40 CFR Part 60, Subpart JJJJ– Stationary Spark Ignition Internal Combustion Engines
40 CFR Part 63, Subpart HH – Oil and Natural Gas Production Facilities
40 CFR Part 63, Subpart ZZZZ – Stationary Reciprocating Internal Combustion Engines

### 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	3.5	9.5
		PM <sub>10</sub>	3.5	9.5
		SO <sub>2</sub>	1.9	1.9
		VOC	45.5	182.4
		CO	44.4	181.6
		NO <sub>x</sub>	54.0	223.2
		H <sub>2</sub> S	0.05	0.20
HAPs	*Formaldehyde	2.46	9.81	
	*Benzene	0.05	0.05	
01	G3516 Natural Gas-Fired Compressor Engine w/Catalyst	**PM/PM <sub>10</sub>	0.2	0.5
		SO <sub>2</sub>	0.1	0.1
		VOC	2.1	9.1
		CO	2.1	9.1
		NO <sub>x</sub>	4.5	19.5
		*Formaldehyde	0.18	0.78

DeSoto Gathering Company, LLC - West Cutthroat CPF-2  
Permit #: 2203-AOP-R0  
AFIN: 12-00445

EMISSION SUMMARY				
Source Number	Description	Pollutant	Emission Rates	
			lb/hr	tpy
02	G3516 Natural Gas-Fired Compressor Engine w/Catalyst	**PM/PM <sub>10</sub>	0.2	0.5
		SO <sub>2</sub>	0.1	0.1
		VOC	2.1	9.1
		CO	2.1	9.1
		NO <sub>x</sub>	4.5	19.5
		*Formaldehyde	0.18	0.78
03	G3516 Natural Gas-Fired Compressor Engine w/Catalyst	**PM/PM <sub>10</sub>	0.2	0.5
		SO <sub>2</sub>	0.1	0.1
		VOC	2.1	9.1
		CO	2.1	9.1
		NO <sub>x</sub>	4.5	19.5
		*Formaldehyde	0.18	0.78
04	G3516 Natural Gas-Fired Compressor Engine w/Catalyst	**PM/PM <sub>10</sub>	0.2	0.5
		SO <sub>2</sub>	0.1	0.1
		VOC	2.1	9.1
		CO	2.1	9.1
		NO <sub>x</sub>	4.5	19.5
		*Formaldehyde	0.18	0.78
05	G3606 Natural Gas-Fired Compressor Engine w/Catalyst	**PM/PM <sub>10</sub>	0.2	0.6
		SO <sub>2</sub>	0.1	0.1
		VOC	2.8	12.0
		CO	2.8	12.0
		NO <sub>x</sub>	2.8	12.0
		*Formaldehyde	0.13	0.55
06	G3606 Natural Gas-Fired Compressor Engine w/Catalyst	**PM/PM <sub>10</sub>	0.2	0.6
		SO <sub>2</sub>	0.1	0.1
		VOC	2.8	12.0
		CO	2.8	12.0
		NO <sub>x</sub>	2.8	12.0
		*Formaldehyde	0.13	0.55
07	G3606 Natural Gas-Fired Compressor Engine w/Catalyst	**PM/PM <sub>10</sub>	0.2	0.6
		SO <sub>2</sub>	0.1	0.1
		VOC	2.8	12.0
		CO	2.8	12.0
		NO <sub>x</sub>	2.8	12.0
		*Formaldehyde	0.13	0.55

DeSoto Gathering Company, LLC - West Cutthroat CPF-2  
 Permit #: 2203-AOP-R0  
 AFIN: 12-00445

EMISSION SUMMARY				
Source Number	Description	Pollutant	Emission Rates	
			lb/hr	tpy
08	G3606 Natural Gas-Fired Compressor Engine w/Catalyst	**PM/PM <sub>10</sub>	0.2	0.6
		SO <sub>2</sub>	0.1	0.1
		VOC	2.8	12.0
		CO	2.8	12.0
		NO <sub>x</sub>	2.8	12.0
		*Formaldehyde	0.13	0.55
09	G3606 Natural Gas-Fired Compressor Engine w/Catalyst	**PM/PM <sub>10</sub>	0.2	0.6
		SO <sub>2</sub>	0.1	0.1
		VOC	2.8	12.0
		CO	2.8	12.0
		NO <sub>x</sub>	2.8	12.0
		*Formaldehyde	0.13	0.55
10	G3606 Natural Gas-Fired Compressor Engine w/Catalyst	**PM/PM <sub>10</sub>	0.2	0.6
		SO <sub>2</sub>	0.1	0.1
		VOC	2.8	12.0
		CO	2.8	12.0
		NO <sub>x</sub>	2.8	12.0
		*Formaldehyde	0.13	0.55
11	G3606 Natural Gas-Fired Compressor Engine w/Catalyst	**PM/PM <sub>10</sub>	0.2	0.6
		SO <sub>2</sub>	0.1	0.1
		VOC	2.8	12.0
		CO	2.8	12.0
		NO <sub>x</sub>	2.8	12.0
		*Formaldehyde	0.13	0.55
12	G3606 Natural Gas-Fired Compressor Engine w/Catalyst	**PM/PM <sub>10</sub>	0.2	0.6
		SO <sub>2</sub>	0.1	0.1
		VOC	2.8	12.0
		CO	2.8	12.0
		NO <sub>x</sub>	2.8	12.0
		*Formaldehyde	0.13	0.55
13	G3606 Natural Gas-Fired Compressor Engine w/Catalyst	**PM/PM <sub>10</sub>	0.2	0.6
		SO <sub>2</sub>	0.1	0.1
		VOC	2.8	12.0
		CO	2.8	12.0
		NO <sub>x</sub>	2.8	12.0
		*Formaldehyde	0.13	0.55

DeSoto Gathering Company, LLC - West Cutthroat CPF-2  
 Permit #: 2203-AOP-R0  
 AFIN: 12-00445

EMISSION SUMMARY				
Source Number	Description	Pollutant	Emission Rates	
			lb/hr	tpy
14	G3606 Natural Gas-Fired Compressor Engine w/Catalyst	**PM/PM <sub>10</sub>	0.2	0.6
		SO <sub>2</sub>	0.1	0.1
		VOC	2.8	12.0
		CO	2.8	12.0
		NO <sub>x</sub>	2.8	12.0
		*Formaldehyde	0.13	0.55
15	G3606 Natural Gas-Fired Compressor Engine w/Catalyst	**PM/PM <sub>10</sub>	0.2	0.6
		SO <sub>2</sub>	0.1	0.1
		VOC	2.8	12.0
		CO	2.8	12.0
		NO <sub>x</sub>	2.8	12.0
		*Formaldehyde	0.13	0.55
16	G3606 Natural Gas-Fired Compressor Engine w/Catalyst	**PM/PM <sub>10</sub>	0.2	0.6
		SO <sub>2</sub>	0.1	0.1
		VOC	2.8	12.0
		CO	2.8	12.0
		NO <sub>x</sub>	2.8	12.0
		*Formaldehyde	0.13	0.55
17	Cummins GTA855G2 Natural Gas-Fired Emergency Generator Engine w/Catalyst	**PM/PM <sub>10</sub>	0.1	0.1
		SO <sub>2</sub>	0.1	0.1
		VOC	1.0	0.5
		CO	0.8	0.4
		NO <sub>x</sub>	0.8	0.4
		*Formaldehyde	0.06	0.03
18	Cummins GTA855G2 Natural Gas-Fired Emergency Generator Engine w/Catalyst	**PM/PM <sub>10</sub>	0.1	0.1
		SO <sub>2</sub>	0.1	0.1
		VOC	1.0	0.5
		CO	0.8	0.4
		NO <sub>x</sub>	0.8	0.4
		*Formaldehyde	0.06	0.03
19	Cummins GTA855G2 Natural Gas-Fired Emergency Generator Engine w/Catalyst	**PM/PM <sub>10</sub>	0.1	0.1
		SO <sub>2</sub>	0.1	0.1
		VOC	1.0	0.5
		CO	0.8	0.4
		NO <sub>x</sub>	0.8	0.4
		*Formaldehyde	0.06	0.03
20	TEG Dehydrator	VOC	0.1	0.1
		*Benzene	0.01	0.01
		H <sub>2</sub> S	0.01	0.04

DeSoto Gathering Company, LLC - West Cutthroat CPF-2  
 Permit #: 2203-AOP-R0  
 AFIN: 12-00445

EMISSION SUMMARY				
Source Number	Description	Pollutant	Emission Rates	
			lb/hr	tpy
21	TEG Dehydrator	VOC	0.1	0.1
		*Benzene	0.01	0.01
		H <sub>2</sub> S	0.01	0.04
22	TEG Dehydrator	VOC	0.1	0.1
		*Benzene	0.01	0.01
		H <sub>2</sub> S	0.01	0.04
23	TEG Dehydrator	VOC	0.1	0.1
		*Benzene	0.01	0.01
		H <sub>2</sub> S	0.01	0.04
24	TEG Dehydrator	VOC	0.1	0.1
		*Benzene	0.01	0.01
		H <sub>2</sub> S	0.01	0.04

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

\*\* Unless otherwise specified, all PM will be assumed to be PM<sub>10</sub>.

DeSoto Gathering Company, LLC - West Cutthroat CPF-2  
Permit #: 2203-AOP-R0  
AFIN: 12-00445

### **SECTION III: PERMIT HISTORY**

Permit # 1868-AGP-201 was issued to DeSoto Gathering Company, LLC – West Cutthroat CPF2 on December 02, 2008. This permit included four (4) compressor engines, produced water tank, fiberglass dehydrator drip tank, glycol dehydrator, gas-fired dehydrator reboiler, lube oil, antifreeze drums and storage tanks. Emissions were permitted for 0.4 tpy of particulate matter, 0.4 tpy of sulfur dioxide, 15.6 tpy of volatile organic compounds, 92.9 tpy of carbon monoxide and 78 tpy of oxides of nitrogen.

## SECTION IV: SPECIFIC CONDITIONS

SN-01 through SN-04

G3516 Natural Gas-Fired Compressor Engine

### Source Description

Sources SN-01 through SN-04 are 1,340 HP Four-Stroke Lean Burn (4SLB) Compressor Engines which pressurize natural gas. The engines are powered by natural gas.

### 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 using natural gas to fire the engines and operating at or below the maximum capacity of the equipment. [Regulation 19, §19.501 et seq. and 40 CFR Part 52, Subpart E]

SN	Description	Pollutant	lb/hr	tpy
01	G3516 1,340 HP Compressor Engine with Catalyst	PM <sub>10</sub>	0.2	0.5
		SO <sub>2</sub>	0.1	0.1
		VOC	2.1	9.1
		CO	2.1	9.1
		NO <sub>x</sub>	4.5	19.5
02	G3516 1,340 HP Compressor Engine with Catalyst	PM <sub>10</sub>	0.2	0.5
		SO <sub>2</sub>	0.1	0.1
		VOC	2.1	9.1
		CO	2.1	9.1
		NO <sub>x</sub>	4.5	19.5
03	G3516 1,340 HP Compressor Engine with Catalyst	PM <sub>10</sub>	0.2	0.5
		SO <sub>2</sub>	0.1	0.1
		VOC	2.1	9.1
		CO	2.1	9.1
		NO <sub>x</sub>	4.5	19.5
04	G3516 1,340 HP Compressor Engine with Catalyst	PM <sub>10</sub>	0.2	0.5
		SO <sub>2</sub>	0.1	0.1
		VOC	2.1	9.1
		CO	2.1	9.1
		NO <sub>x</sub>	4.5	19.5



DeSoto Gathering Company, LLC - West Cutthroat CPF-2  
 Permit #: 2203-AOP-R0  
 AFIN: 12-00445

2. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by using natural gas to fire the engines, by operating at or below maximum capacity of the equipment, and by demonstrating compliance with Plantwide Condition #10. The HAP emissions listed for these sources are based upon published emission factors at the time of permit issuance. Any change in these emission factors will not constitute a violation of the HAP rates listed below. [Regulation 18, §18.801, and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]

SN	Description	Pollutant	lb/hr	tpy
01	G3516 1,340 HP Compressor Engine with Catalyst	PM Formaldehyde	0.2 0.18	0.5 0.78
02	G3516 1,340 HP Compressor Engine with Catalyst	PM Formaldehyde	0.2 0.18	0.5 0.78
03	G3516 1,340 HP Compressor Engine with Catalyst	PM Formaldehyde	0.2 0.18	0.5 0.78
04	G3516 1,340 HP Compressor Engine with Catalyst	PM Formaldehyde	0.2 0.18	0.5 0.78

3. 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 through the use of natural gas as the only fuel.

SN	Limit	Regulatory Citation
SN-01 through SN-04	5%	§18.501

SN-05 through SN-16

G3606 Natural Gas-Fired Compressor Engine

Source Description

Sources SN-05 through SN-16 are 1,775 HP Four-Stroke Lean Burn (4SLB) Compressor Engines which pressurize natural gas. The engines are powered by natural gas.

Specific Conditions

4. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by using natural gas to fire the engines and operating at or below the maximum capacity of the equipment. [Regulation 19, §19.501 et seq., and 40 CFR Part 52, Subpart E]

SN	Description	Pollutant	lb/hr	tpy
05	G3606 1,775 HP Compressor Engine with Catalyst	PM <sub>10</sub>	0.2	0.6
		SO <sub>2</sub>	0.1	0.1
		VOC	2.8	12.0
		CO	2.8	12.0
		NO <sub>x</sub>	2.8	12.0
06	G3606 1,775 HP Compressor Engine with Catalyst	PM <sub>10</sub>	0.2	0.6
		SO <sub>2</sub>	0.1	0.1
		VOC	2.8	12.0
		CO	2.8	12.0
		NO <sub>x</sub>	2.8	12.0
07	G3606 1,775 HP Compressor Engine with Catalyst	PM <sub>10</sub>	0.2	0.6
		SO <sub>2</sub>	0.1	0.1
		VOC	2.8	12.0
		CO	2.8	12.0
		NO <sub>x</sub>	2.8	12.0
08	G3606 1,775 HP Compressor Engine with Catalyst	PM <sub>10</sub>	0.2	0.6
		SO <sub>2</sub>	0.1	0.1
		VOC	2.8	12.0
		CO	2.8	12.0
		NO <sub>x</sub>	2.8	12.0
09	G3606 1,775 HP Compressor Engine with Catalyst	PM <sub>10</sub>	0.2	0.6
		SO <sub>2</sub>	0.1	0.1
		VOC	2.8	12.0
		CO	2.8	12.0
		NO <sub>x</sub>	2.8	12.0

DeSoto Gathering Company, LLC - West Cutthroat CPF-2  
 Permit #: 2203-AOP-R0  
 AFIN: 12-00445

SN	Description	Pollutant	lb/hr	tpy
10	G3606 1,775 HP Compressor Engine with Catalyst	PM <sub>10</sub>	0.2	0.6
		SO <sub>2</sub>	0.1	0.1
		VOC	2.8	12.0
		CO	2.8	12.0
		NO <sub>x</sub>	2.8	12.0
11	G3606 1,775 HP Compressor Engine with Catalyst	PM <sub>10</sub>	0.2	0.6
		SO <sub>2</sub>	0.1	0.1
		VOC	2.8	12.0
		CO	2.8	12.0
		NO <sub>x</sub>	2.8	12.0
12	G3606 1,775 HP Compressor Engine with Catalyst	PM <sub>10</sub>	0.2	0.6
		SO <sub>2</sub>	0.1	0.1
		VOC	2.8	12.0
		CO	2.8	12.0
		NO <sub>x</sub>	2.8	12.0
13	G3606 1,775 HP Compressor Engine with Catalyst	PM <sub>10</sub>	0.2	0.6
		SO <sub>2</sub>	0.1	0.1
		VOC	2.8	12.0
		CO	2.8	12.0
		NO <sub>x</sub>	2.8	12.0
14	G3606 1,775 HP Compressor Engine with Catalyst	PM <sub>10</sub>	0.2	0.6
		SO <sub>2</sub>	0.1	0.1
		VOC	2.8	12.0
		CO	2.8	12.0
		NO <sub>x</sub>	2.8	12.0
15	G3606 1,775 HP Compressor Engine with Catalyst	PM <sub>10</sub>	0.2	0.6
		SO <sub>2</sub>	0.1	0.1
		VOC	2.8	12.0
		CO	2.8	12.0
		NO <sub>x</sub>	2.8	12.0
16	G3606 1,775 HP Compressor Engine with Catalyst	PM <sub>10</sub>	0.2	0.6
		SO <sub>2</sub>	0.1	0.1
		VOC	2.8	12.0
		CO	2.8	12.0
		NO <sub>x</sub>	2.8	12.0

5. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by using natural gas to fire the engines, by operating at or below maximum capacity of the equipment, and by demonstrating compliance with Plantwide Condition #10. The HAP emissions listed for these sources are based upon published emission factors at the time of permit issuance. Any change in these emission factors will not constitute a violation of the HAP rates listed below. [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
05	G3606 1,775 HP Compressor Engine with Catalyst	PM	0.2	0.6
		Formaldehyde	0.13	0.55
06	G3606 1,775 HP Compressor Engine with Catalyst	PM	0.2	0.6
		Formaldehyde	0.13	0.55
07	G3606 1,775 HP Compressor Engine with Catalyst	PM	0.2	0.6
		Formaldehyde	0.13	0.55
08	G3606 1,775 HP Compressor Engine with Catalyst	PM	0.2	0.6
		Formaldehyde	0.13	0.55
09	G3606 1,775 HP Compressor Engine with Catalyst	PM	0.2	0.6
		Formaldehyde	0.13	0.55
10	G3606 1,775 HP Compressor Engine with Catalyst	PM	0.2	0.6
		Formaldehyde	0.13	0.55
11	G3606 1,775 HP Compressor Engine with Catalyst	PM	0.2	0.6
		Formaldehyde	0.13	0.55
12	G3606 1,775 HP Compressor Engine with Catalyst	PM	0.2	0.6
		Formaldehyde	0.13	0.55
13	G3606 1,775 HP Compressor Engine with Catalyst	PM	0.2	0.6
		Formaldehyde	0.13	0.55
14	G3606 1,775 HP Compressor Engine with Catalyst	PM	0.2	0.6
		Formaldehyde	0.13	0.55
15	G3606 1,775 HP Compressor Engine with Catalyst	PM	0.2	0.6
		Formaldehyde	0.13	0.55
16	G3606 1,775 HP Compressor Engine with Catalyst	PM	0.2	0.6
		Formaldehyde	0.13	0.55

6. 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 through the use of natural gas as the only fuel.

SN	Limit	Regulatory Citation
SN-05 through SN-16	5%	§18.501

SN-17 through SN-19

Emergency Generator Engine

Source Description

Sources SN-17 through SN-19 are 336 HP Four-Stroke Rich Burn (4SRB) Emergency Generator Engines. The engines are powered by natural gas. These sources provide electric power to the station in the event of a power failure.

Specific Conditions

7. The permittee shall not exceed the emission rates set forth in the following table. The pound per hour rates are based on maximum capacity and compliance with the ton per year limits will be demonstrated by compliance with Specific Condition #10 and by using natural gas to fire the engines and operating at or below the maximum capacity of the equipment.  
 [Regulation 19, §19.501 et seq. and 40 CFR Part 52, Subpart E]

SN	Description	Pollutant	lb/hr	tpy
17	Cummins GTA855G2 Natural Gas-Fired Emergency Generator Engine with Catalyst	PM <sub>10</sub>	0.1	0.1
		SO <sub>2</sub>	0.1	0.1
		VOC	1.0	0.5
		CO	0.8	0.4
		NO <sub>x</sub>	0.8	0.4
18	Cummins GTA855G2 Natural Gas-Fired Emergency Generator Engine with Catalyst	PM <sub>10</sub>	0.1	0.1
		SO <sub>2</sub>	0.1	0.1
		VOC	1.0	0.5
		CO	0.8	0.4
		NO <sub>x</sub>	0.8	0.4
19	Cummins GTA855G2 Natural Gas-Fired Emergency Generator Engine with Catalyst	PM <sub>10</sub>	0.1	0.1
		SO <sub>2</sub>	0.1	0.1
		VOC	1.0	0.5
		CO	0.8	0.4
		NO <sub>x</sub>	0.8	0.4

8. The permittee shall not exceed the emission rates set forth in the following table. The pound per hour rates are based on maximum capacity and compliance with the ton per year limits will be demonstrated by compliance with Specific Condition # 10 and burning natural gas as fuel. [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
17	Cummins GTA855G2 Natural Gas-Fired Emergency Generator Engine with Catalyst	PM Formaldehyde	0.1 0.06	0.1 0.03
18	Cummins GTA855G2 Natural Gas-Fired Emergency Generator Engine with Catalyst	PM Formaldehyde	0.1 0.06	0.1 0.03
19	Cummins GTA855G2 Natural Gas-Fired Emergency Generator Engine with Catalyst	PM Formaldehyde	0.1 0.06	0.1 0.03

9. 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 through the use of natural gas as the only fuel.

SN	Limit	Regulatory Citation
SN-17 through SN-19	5%	§18.501

10. The permittee shall not operate the emergency generator more than 1,000 hours per year in any consecutive twelve month period. [Regulation 19, §19.705, A.C.A §8-4-203 as referenced by §8-4-304 and §8-4-311, and 40 CFR 70.6]
11. The permittee shall maintain records which demonstrate compliance with the limit set in Specific Condition #10. These records shall be updated on a monthly basis, shall be kept at the nearest manned site, and shall be provided to Department personnel upon request. An annual total and each individual month's data shall be submitted in accordance with General Provision # 7. [Regulation 19, §19.705 and 40 CFR Part 52 Subpart E]

DeSoto Gathering Company, LLC - West Cutthroat CPF-2  
Permit #: 2203-AOP-R0  
AFIN: 12-00445

SN-20 thru SN-24

### Triethylene Glycol Dehydration Units

#### Source Description

The facility operates five (5) TEG dehydration units, each has benzene emissions below 0.9 Mg per year (1.0 tons/year).

#### Specific Conditions

12. The permittee shall not exceed the emission rates set forth in the following table. The pound per hour rates is based on maximum capacity. [Regulation 19, §19.501 et seq. and 40 CFR Part 52, Subpart E]

SN	Description	Pollutant	lb/hr	tpy
20	TEG dehydrator	VOC	0.1	0.1
21	TEG dehydrator	VOC	0.1	0.1
22	TEG dehydrator	VOC	0.1	0.1
23	TEG dehydrator	VOC	0.1	0.1
24	TEG dehydrator	VOC	0.1	0.1

DeSoto Gathering Company, LLC - West Cutthroat CPF-2  
Permit #: 2203-AOP-R0  
AFIN: 12-00445

13. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with the ton per year benzene limits by Specific Condition #16 or #17. [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
20	TEG dehydrator	Benzene	0.01	0.01
		H <sub>2</sub> S	0.01	0.04
21	TEG dehydrator	Benzene	0.01	0.01
		H <sub>2</sub> S	0.01	0.04
22	TEG dehydrator	Benzene	0.01	0.01
		H <sub>2</sub> S	0.01	0.04
23	TEG dehydrator	Benzene	0.01	0.01
		H <sub>2</sub> S	0.01	0.04
24	TEG dehydrator	Benzene	0.01	0.01
		H <sub>2</sub> S	0.01	0.04

#### **NESHAP Requirements**

14. The permittee is exempt from the requirements of paragraph §63.764 (c)(1) and (d) if the criteria listed in Specific Condition #15 are met, except that the records of the determination of these criteria must be maintained as required in §63.774(d)(1). [Regulation 19, §19.304 and 40 CFR Part 63, Subpart HH, §63.764(e)(1)]
15. The permittee must demonstrate that the actual annual average flowrate of natural gas to the glycol dehydration unit is less than 85 thousand standard cubic meters per day, as determined by the procedures specified in Specific Condition #16 or demonstrate that the actual average emissions of benzene from the glycol dehydration unit process vent to the atmosphere are less than 0.90 Megagram per year, as determined by the procedures specified in Specific Condition #17. [Regulation 19, §19.304 and 40 CFR Part 63, Subpart HH, §63.764(e)(1)(i) and §63.764(e)(1)(ii)]
16. If the permittee demonstrates exemption by determining glycol dehydration unit natural gas flowrate, the permittee shall do one of the following:
- The permittee shall install and operate a monitoring instrument that directly measures natural gas flowrate to each glycol dehydration unit with an accuracy of plus or minus 2 percent or better. The permittee shall convert annual natural gas flowrate to a daily average by dividing the annual flowrate by the number of days per year the glycol dehydration unit processed natural gas. [Regulation 19, §19.304 and 40 CFR Part 63, Subpart HH, §63.772(b)(1)(i)]; or
  - The permittee shall document, to the Administrator's satisfaction, that the actual annual average natural gas flowrate to each glycol dehydration unit is less than 85 thousand



standard cubic meters per day. [Regulation 19, §19.304 and 40 CFR Part 63, Subpart HH, §63.772(b)(1)(ii)]

17. If the permittee demonstrates exemption by determining the actual average emissions of benzene from the glycol dehydration unit process vent to the atmosphere are less than 0.90 Megagram per year (emissions shall be determined either uncontrolled, or with federally enforceable controls in place), the permittee shall do one of the following:
  - a. The permittee shall determine actual average benzene emissions using the model GRI-GLYCalc™, Version 3.0 or higher, and the procedures presented in the associated GRI-GLYCalc™ Technical Reference Manual. Inputs to the model shall be representative of actual operating conditions of the glycol dehydration unit and may be determined using the procedures documented in the Gas Research Institute (GRI) report entitled “Atmospheric Rich/Lean Method for Determining Glycol Dehydrator Emissions” (GRI-95/0368.1); or
  - b. The permittee shall determine an average mass rate of benzene emissions in kilograms per hour through direct measurement using the methods in §63.772(a)(1)(i) or (ii), or an alternative method according to §63.7(f). Annual emissions in kilograms per year shall be determined by multiplying the mass rate by the number of hours the unit is operated per year. This result shall be converted to Megagram per year. [Regulation 19, §19.304 and 40 CFR Part 63, Subpart HH, §63.772(b)(2)(i) and §63.772(b)(2)(ii)]
18. The permittee shall maintain records to demonstrate compliance with Specific Condition #15. The records shall be retained for at least five years following the date of each record. All applicable records shall be maintained in such a manner that they can be readily accessed. The most recent twelve months of records shall be retained on site or shall be accessible from a central location by computer or other means that provides access within two hours after a request. The remaining four years of records may be retained offsite. Records may be maintained in hard copy or computer-readable form including, but not limited to, on paper, microfilm, computer, floppy disk, magnetic tape, or microfiche. [Regulation 19, §19.304 and 40 CFR Part 63, Subpart HH, §63.774]

DeSoto Gathering Company, LLC - West Cutthroat CPF-2  
Permit #: 2203-AOP-R0  
AFIN: 12-00445

## **SECTION V: COMPLIANCE PLAN AND SCHEDULE**

DeSoto Gathering Company, LLC - West Cutthroat CPF-2 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. The permittee shall keep records of maintenance at the nearest manned facility. [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]
7. The permittee may replace any existing compressor engines on a temporary or permanent basis with engines which have the same or lower emission rates on a pound per hour

- basis, and have the same or lower horsepower, and which result in the same or lower actual emissions from the facility on pound per hour basis and which do not exceed permitted emissions on a ton per year basis, and do not violate any regulations promulgated by the EPA. The permittee shall conduct NO<sub>x</sub> and CO emission testing in accordance with Plantwide Condition #11 or Plantwide Conditions #18 through #24, whichever is applicable, within 60 days of the date of replacement to verify the emissions from the newly installed engine. The testing shall be conducted in accordance with EPA Reference Method 7E for NO<sub>x</sub> and Reference Method 10 for CO. The permittee shall notify ADEQ of the replacement within 30 days of startup. This condition does not apply to modifications which must go through a PSD review as defined in 40 CFR 52.21. Notwithstanding the above, as provided by Regulation 26, in the event an emergency occurs, the permittee shall have an affirmative defense of emergency to an action brought for non-compliance with technology-based emission limitations if the conditions of Regulation 26, Section 26.707 7(f) are met. [Regulation 19, §19.705 and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]
8. The permittee shall test the fuel combusted in the compressor engines for sulfur within 180 days of issuance of permit 2203-AOP-R0 to show compliance with SO<sub>2</sub> emission limits. The natural gas must contain 2.0 grains of sulfur per 100 standard cubic feet of natural gas or less. The permittee shall use sorbent tubes supplied by National Draeger, Incorporated or equivalent. The results of these tests shall be submitted to the Department at the address listed in General Provision # 7. Testing for sulfur shall be conducted every five years for the fuel combusted in the compressor engines or within 60 days after the volume through the compressor is altered by addition of new wells or producing zones, whichever occurs first. The natural gas testing of the fuel on one pipeline may be representative for all compressor engines located along that pipeline. [Regulation 19, §19.702, and 40 CFR Part 52, Subpart E]
9. Sources SN-01 through SN-19 are subject to 40 CFR Part 63, Subpart ZZZZ (National Emission Standard for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines). As allowed by this regulation, compliance will be achieved via compliance with the requirements of 40 CFR Part 60, Subpart JJJJ (Standards of Performance for Stationary Spark Ignition Internal Combustion Engines) for spark ignition engines. [Regulation 19, §19.304 and CFR Part 63, Subpart ZZZZ]
10. The permittee shall conduct tests for formaldehyde at the exhaust of one of each type of the compressor engines, as shown in the table below, at the time of the next otherwise required test. This is a one-time test for each model of compressor engines in accordance with Plantwide Condition No. 3. EPA Reference Method 320 or 323 of 40 CFR part 63, appendix A; or ASTM D6348-03, provided in ASTM D6348-03 Annex A5 (Analyte Spiking Technique); or an alternative method as approved by the Department prior to testing shall be used to test for formaldehyde. The permittee shall test the engine within 90% of its rated capacity. If the engine is not tested within this range, the permittee shall be limited to operating within 10% above the tested rate. The Department reserves the right to select the engine(s) to be tested. [Regulation 19 and 40 CFR Part 52, Subpart E]

DeSoto Gathering Company, LLC - West Cutthroat CPF-2  
 Permit #: 2203-AOP-R0  
 AFIN: 12-00445

SN	Description	Testing Requirements
01-04	G3516 Natural Gas-Fired Compressor Engine w/ Catalyst	One of four
05-16	G3606 Natural Gas-Fired Compressor Engine w/ Catalyst	One of eleven
17-19	Natural Gas Emergency Generator Engine w/ Catalyst	One of three

11. For compressor engines not subject to NSPS Subpart JJJJ, the permittee shall test for CO and NO<sub>x</sub> on at least one half of each type of compressor engine every 5 years. For each individual engine tested, the emissions for CO and NO<sub>x</sub> shall be tested simultaneously. These testing requirements may be satisfied in part or in whole by testing that occurred under the previous air permits. Upon the issuance of permit 2203-AOP-R0, the initial testing for previously untested compressor engines will be completed within 180 days of issuance of this permit. EPA Reference Method 7E shall be used to determine NO<sub>x</sub> and EPA Reference Method 10 shall be used to determine CO. The permittee shall test the engine within 90% of its rated capacity. If the engine is not tested within this range, the permittee shall be limited to operating within 10% above the tested rate. The Department reserves the right to select the engine(s) to be tested. The engine(s) tested shall be rotated so that no engine(s) is tested twice before another engine is tested once. If the tested emission rate for any pollutant is in excess of the permitted emission rate, the engine shall be retested for both pollutants within 60 days of receipt of the testing results. [Regulation 19, §19.702 and 40 CFR Part 52, Subpart E]

#### NSPS Subpart JJJJ Conditions

12. SN-01 through SN-19 are subject to 40 CFR Part 60, Subpart JJJJ- Standards of Performance for Stationary Spark Ignition Internal Combustion Engines. The permittee shall maintain a list of engines subject to JJJJ and the model of year of the engines and will make the list available to Department personnel upon request. The engines subject to JJJJ shall comply with all applicable requirements under 40 CFR Part 60, Subpart JJJJ. These requirements include, but are not limited to, Plantwide Conditions #13 through #29. [Regulation 19, §19.304 and 40 CFR Part 60, Subpart JJJJ]
13. The permittee shall comply with the emission standards in Table 1 of Subpart JJJJ for engines subject to Subpart JJJJ. [Regulation 19, §19.304 and 40 CFR Part 60, Subpart JJJJ, §60.4233(e)]
14. For all stationary spark ignition internal combustion engines subject to Subpart JJJJ with a maximum engine power greater than 19 KW (25 HP) that are rich burn engines that use LPG, for all, must comply with the emission standards in §60.4231(c). [Regulation 19, §19.304 and 40 CFR Part 63, Subpart JJJJ]

15. The permittee must operate and maintain all Stationary Spark Ignition (SI) Internal Combustion Engines (ICE) subject to 40 CFR Part 60 Subpart JJJJ in compliance with 40 CFR Part 60, Subpart JJJJ, §60.4233 over the entire life of the engine. [Regulation 19, §19.304 and 40 CFR Part 60, Subpart JJJJ, §60.4234]
16. After July 1, 2009, the permittee may not install stationary SI ICE subject to Subpart JJJJ with a maximum engine power of greater than or equal to 500 HP that do not meet the applicable requirements in §60.4233, except that lean burn engines with a maximum engine power greater than or equal to 500 HP and less than 1,350 HP that do not meet the applicable requirements in §60.4233 may not be installed after January 1, 2010. The requirements of this section do not apply to owners and operators of stationary SI ICE that have been modified or reconstructed, and they do not apply to engines that were removed from one existing location and reinstalled at a new location. [Regulation 19, §19.304 and 40 CFR Part 60, Subpart JJJJ, §60.4236(b) and §60.4236(e)]
17. For emergency stationary SI ICE subject to subpart JJJJ with a maximum engine power of greater than 19 KW (25 HP), the permittee may not install engines that do not meet the applicable requirements in §60.4233 after January 1, 2011. The requirements of this section do not apply to owners and operators of stationary SI ICE that have been modified or reconstructed, and they do not apply to engines that were removed from one existing location and reinstalled at a new location. [Regulation 19, §19.304 and 40 CFR Part 60, Subpart JJJJ, §60.4236(c) and §60.4236(e)]
18. For all stationary SI internal combustion engine(s) subject to Subpart JJJJ greater than or equal to 100 HP and less than or equal to 500 HP, the permittee must keep a maintenance plan and records of conducted maintenance and must, to the extent practicable, maintain and operate the engine in a manner consistent with good air pollution control practice for minimizing emissions. In addition, the permittee must conduct an initial performance test within 1 year of engine startup to demonstrate compliance. [Regulation 19, §19.304 and 40 CFR Part 60, Subpart JJJJ, §60.4243(a)(2)(ii)]
19. For all stationary SI internal combustion engine(s) subject to Subpart JJJJ greater than or equal to 500 HP, the permittee must keep a maintenance plan and records of conducted maintenance and must, to the extent practicable, maintain and operate the engine in a manner consistent with good air pollution control practice for minimizing emissions. In addition, the permittee must conduct an initial performance test and conduct subsequent performance testing every 8,760 hours or 3 years, whichever comes first to demonstrate compliance. [Regulation 19, §19.304 and 40 CFR Part 60, Subpart JJJJ, §60.4243(b)(2)(ii)]
20. For engines subject to testing under Subpart JJJJ, the permittee shall conduct performance tests within 10 percent of 100 percent peak load and according to the requirements in §60.8 and under the specific conditions that are specified by Table 2 of Subpart JJJJ. [Regulation 19, §19.304 and 40 CFR Part 60, Subpart JJJJ, §60.4244(a)]

21. The permittee shall not conduct performance tests during periods of startup, shutdown, or malfunction, as specified in §60.8(c). If the stationary Spark Ignition internal combustion engine is non-operational, the permittee must conduct the performance test immediately upon startup of the engine. [Regulation 19, §19.304 and 40 CFR Part 60, Subpart JJJJ, §60.4244(b)]
22. For engines subject to testing under Subpart JJJJ, the permittee must conduct three separate test runs for each performance test required in Plantwide Conditions #20 and #21, as specified in General Provisions to Subpart JJJJ, §60.8(f). Each test run must be conducted within 10 percent of 100 percent peak (or the highest achievable) load and last at least 1 hour. [Regulation 19, §19.304 and 40 CFR 60.4244(c)]
23. To determine compliance with the NO<sub>x</sub> mass per unit output emission limitation, the permittee shall convert the concentration of NO<sub>x</sub> in the engine exhaust using Equation 1:

$$ER = \frac{C_a \times 1.912 \times 10^{-3} \times Q \times T}{HP - hr} \quad (Eq. 1)$$

Where:

ER = Emission rate of NO<sub>x</sub> in g/HP-hr.

C<sub>a</sub> = Measured NO<sub>x</sub> concentration in parts per million by volume (ppmv).

1.912×10<sup>-3</sup> = Conversion constant for ppm NO<sub>x</sub> to grams per standard cubic meter at 20 degrees Celsius.

Q = Stack gas volumetric flow rate, in standard cubic meter per hour, dry basis.

T = Time of test run, in hours.

HP-hr = Brake work of the engine, horsepower-hour (HP-hr).

[Regulation 19, §19.304 and 40 CFR 60.4244(d)]

24. To determine compliance with the CO mass per unit output emission limitation, the permittee shall convert the concentration of CO in the engine exhaust using Equation 2:

$$ER = \frac{C_d \times 1.164 \times 10^{-3} \times Q \times T}{HP - hr} \quad (Eq. 2)$$

Where:

ER = Emission rate of CO in g/HP-hr.

C<sub>d</sub> = Measured CO concentration in ppmv.

1.164×10<sup>-3</sup> = Conversion constant for ppm CO to grams per standard cubic meter at 20 degrees Celsius.

Q = Stack gas volumetric flow rate, in standard cubic meters per hour, dry basis.

T = Time of test run, in hours.

HP-hr = Brake work of the engine, in HP-hr.

[Regulation 19, §19.304 and 40 CFR 60.4244(e)]

25. When calculating emissions of VOC, emissions of formaldehyde should not be included. To determine compliance with the VOC mass per unit output emission limitation, the permittee shall convert the concentration of VOC in the engine exhaust using Equation 3:

$$ER = \frac{C_d \times 1.833 \times 10^{-3} \times Q \times T}{HP - hr} \quad (Eq. 3)$$

Where:

ER = Emission rate of VOC in g/HP-hr.

Cd= VOC concentration measured as propane in ppmv.

$1.833 \times 10^{-3}$  = Conversion constant for ppm VOC measured as propane, to grams per standard cubic meter at 20 degrees Celsius.

Q = Stack gas volumetric flow rate, in standard cubic meters per hour, dry basis.

T = Time of test run, in hours.

HP-hr = Brake work of the engine, in HP-hr.

[Regulation 19, §19.304 and 40 CFR 60.4244(f)]

26. The permittee must meet the following notification, reporting and recordkeeping requirements for all 40 CFR Part 60 Subpart JJJJ engines.

(1) All notifications submitted to comply with 40 CFR Part 60 Subpart JJJJ and all documentation supporting any notification.

(2) Maintenance conducted on the engine.

(3) Documentation that the engine meets the emission standards.

[Regulation 19, §19.304 and 40 CFR 60.4245(a) (1-2) and (4)]

27. For all stationary SI emergency ICE greater than or equal to 130 HP and less than 500 HP manufactured on or after July 1, 2011 that do not meet the standards applicable to non-emergency engines, the permittee must keep records of the hours of operation of the engine that is recorded through the non-resettable hour meter. For all stationary SI emergency ICE greater than 25 HP and less than 130 HP manufactured on or after July 1, 2008, that do not meet the standards applicable to non-emergency engines, the permittee must keep records of the hours of operation of the engine that is recorded through the non-resettable hour meter. The permittee must document how many hours are spent for emergency operation, including what classified the operation as emergency and how many hours are spent for non-emergency operation. [Regulation 19, §19.304 and 40 CFR Part 60, Subpart JJJJ, §60.4245(b)]
28. For stationary SI ICE greater than or equal to 500 HP that have not been certified by an engine manufacturer to meet the emission standards in §60.4231, the permittee must submit an initial notification as required in §60.7(a)(1). The notification must include the following information.



- (1) Name and address of the owner or operator;
- (2) The address of the affected source;
- (3) Engine information including make, model, engine family, serial number, model year, maximum engine power, and engine displacement;
- (4) Emission control equipment; and
- (5) Fuel used.

[Regulation 19, §19.304 and 40 CFR 60.4245(c) 1-5]

29. The permittee must submit a copy of each performance test as conducted in §60.4244 within 60 days after the test has been completed. [Regulation 19, §19.304 and 40 CFR 60.4245(d)]

### **Title VI Provisions**

30. The permittee must comply with the standards for labeling of products using ozone-depleting substances. [Regulation 19, §19.304 and 40 CFR Part 82, Subpart E]
- a. All containers containing a class I or class II substance stored or transported, all products containing a class I substance, and all products directly manufactured with a class I substance must bear the required warning statement if it is being introduced to interstate commerce pursuant to §82.106.
  - b. The placement of the required warning statement must comply with the requirements pursuant to §82.108.
  - c. The form of the label bearing the required warning must comply with the requirements pursuant to §82.110.
  - d. No person may modify, remove, or interfere with the required warning statement except as described in §82.112.
31. The permittee must comply with the standards for recycling and emissions reduction, except as provided for MVACs in Subpart B. [Regulation 19, §19.304 and 40 CFR Part 82, Subpart F]
- a. Persons opening appliances for maintenance, service, repair, or disposal must comply with the required practices pursuant to §82.156.
  - b. Equipment used during the maintenance, service, repair, or disposal of appliances must comply with the standards for recycling and recovery equipment pursuant to §82.158.
  - c. Persons performing maintenance, service repair, or disposal of appliances must be certified by an approved technician certification program pursuant to §82.161.
  - d. Persons disposing of small appliances, MVACs, and MVAC like appliances must comply with record keeping requirements pursuant to §82.166. ("MVAC like appliance" as defined at §82.152)
  - e. Persons owning commercial or industrial process refrigeration equipment must comply with leak repair requirements pursuant to §82.156.

- f. Owners/operators of appliances normally containing 50 or more pounds of refrigerant must keep records of refrigerant purchased and added to such appliances pursuant to §82.166.

- 32. If the permittee manufactures, transforms, destroys, imports, or exports a class I or class II substance, the permittee is subject to all requirements as specified in 40 CFR Part 82, Subpart A, Production and Consumption Controls.
- 33. If the permittee performs a service on motor (fleet) vehicles when this service involves ozone depleting substance refrigerant (or regulated substitute substance) in the motor vehicle air conditioner (MVAC), the permittee is subject to all the applicable requirements as specified in 40 CFR part 82, Subpart B, Servicing of Motor Vehicle Air Conditioners.

The term “motor vehicle” as used in Subpart B does not include a vehicle in which final assembly of the vehicle has not been completed. The term “MVAC” as used in Subpart B does not include the air tight sealed refrigeration system used as refrigerated cargo, or the system used on passenger buses using HCFC 22 refrigerant.

- 34. The permittee can switch from any ozone depleting substance to any alternative listed in the Significant New Alternatives Program (SNAP) promulgated pursuant to 40 CFR Part 82, Subpart G.

#### **Permit Shield**

- 35. 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.

DeSoto Gathering Company, LLC - West Cutthroat CPF-2  
 Permit #: 2203-AOP-R0  
 AFIN: 12-00445

The permit specifically identifies the following as applicable requirements based upon the information submitted by the permittee in an application dated January 23, 2009.

#### Applicable Regulations

Source No.	Regulation	Description
Plantwide	Arkansas Regulation 19	Regulations of the Arkansas Plan of Implementation for Air Pollution Control
Plantwide	Arkansas Regulation 26	Regulations of the Arkansas Operating Air Permit Program
Plantwide	40 CFR 60, Subpart HH	National Emission Standards for Hazardous Air Pollutants From Oil and Natural Gas Production Facilities
Plantwide	40 CFR 60, Subpart JJJJ	Standards of Performance for Stationary Spark Ignition Internal Combustion Engines
Plantwide	40 CFR 63, Subpart ZZZZ	National Emissions Standards for Hazardous Air 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 January 23, 2009.

#### Inapplicable Regulations

Source No.	Regulation	Description
Plantwide	40 CFR 60, Subpart Kb	Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced after July 23, 1984
Plantwide	40 CFR, Subpart KKK	Standards of Performance for Equipment Leaks of VOC From Onshore Natural Gas Processing Plants
Plantwide	40 CFR, Subpart LLL	Standards of Performance for Onshore Natural Gas Processing: SO2 Emissions
Plantwide	40 CFR, Subpart IIII	Standards of Performance for Stationary Compression Ignition Internal Combustion Engines
Plantwide	40 CFR, Subpart 64	Compliance Assurance Monitoring (CAM)
Plantwide	40 CFR, Subpart 68	Chemical Accident Prevention

## 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 **January 23, 2009**.

Description	Category
Five (5) Gas-Fired Dehydrator Reboilers, 0.5 MMBtu/hr each	A-1
Twenty-one (21) Fiberglass Packing Vent Tanks, 5 bbl each	A-2
Five (5) dehydrator Vent Tanks, 5 bbl each	A-2
Two (2) TEG Tanks, 1000 gallons each	A-3
Sixteen (16) Compressor Oil Tanks, 366 gallons each	A-3
Sixteen (16) Antifreeze Tanks, 366 gallons each	A-3
Eighteen (18) Engine Oil Tanks, 366 gallons each	A-3
Blowdown Vent	A-13
Fugitive Emissions	A-13
Three (3) Produced Water Tanks, 500 bbl each	B-21

## 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 §26.701(B) of the Regulations of the Arkansas Operating Air Permit Program (Regulation 26)]
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)]

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 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 within thirty (30) days of the end of the reporting period. Although the reports are due every six months, each report shall contain a full year of data. 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 C.F.R. 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;
    - 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 A.C.A. §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)]
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;
  - 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 within 30 days following the last day of the anniversary month of the initial Title V permit. 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: [Regulation 19, §19.304 and 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 A.C.A. §8-4-304 and §8-4-311]
24. The permittee may request in writing and at least 15 days in advance of the deadline, an extension to any testing, compliance or other dates in this permit. No such extensions are authorized until the permittee receives written Department approval. The Department may grant such a request, at its discretion in the following circumstances:
- a. Such an extension does not violate a federal requirement;
  - b. The permittee demonstrates the need for the extension; and
  - c. The permittee documents that all reasonable measures have been taken to meet the current deadline and documents reasons it cannot be met.

[Regulation 18, §18.102(C-D), Regulation 19, §19.103(D), A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311, and 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, §18.102(C-D), Regulation 19, §19.103(D), A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311, and 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, §18.102(C-D), Regulation 19, §19.103(D), A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311, and 40 CFR Part 52, Subpart E]

Appendix A  
40 CFR Part 60, Subpart JJJJ  
*Standards of Performance for Stationary Spark Ignition Internal Combustion Engines*



# Electronic Code of Federal Regulations

*e-CFR*

TM

e-CFR Data is current as of January 29, 2009

## **Title 40: Protection of Environment**

### **PART 60—STANDARDS OF PERFORMANCE FOR NEW STATIONARY SOURCES**

[Browse Previous](#) | [Browse Next](#)

#### **Subpart JJJJ—Standards of Performance for Stationary Spark Ignition Internal Combustion Engines**

**Source:** 73 FR 3591, Jan. 18, 2008, unless otherwise noted.

#### **What This Subpart Covers**

##### **§ 60.4230 Am I subject to this subpart?**

(a) The provisions of this subpart are applicable to manufacturers, owners, and operators of stationary spark ignition (SI) internal combustion engines (ICE) as specified in paragraphs (a)(1) through (5) of this section. For the purposes of this subpart, the date that construction commences is the date the engine is ordered by the owner or operator.

(1) Manufacturers of stationary SI ICE with a maximum engine power less than or equal to 19 kilowatt (KW) (25 horsepower (HP)) that are manufactured on or after July 1, 2008.

(2) Manufacturers of stationary SI ICE with a maximum engine power greater than 19 KW (25 HP) that are gasoline fueled or that are rich burn engines fueled by liquefied petroleum gas (LPG), where the date of manufacture is:

(i) On or after July 1, 2008; or

(ii) On or after January 1, 2009, for emergency engines.

(3) Manufacturers of stationary SI ICE with a maximum engine power greater than 19 KW (25 HP) that are not gasoline fueled and are not rich burn engines fueled by LPG, where the manufacturer participates in the voluntary manufacturer certification program described in this subpart and where the date of manufacture is:

(i) On or after July 1, 2007, for engines with a maximum engine power greater than or equal to 500 HP (except lean burn engines with a maximum engine power greater than or equal to 500 HP and less than 1,350 HP);

(ii) On or after January 1, 2008, for lean burn engines with a maximum engine power greater than or equal to 500 HP and less than 1,350 HP;

(iii) On or after July 1, 2008, for engines with a maximum engine power less than 500 HP; or

(iv) On or after January 1, 2009, for emergency engines.

(4) Owners and operators of stationary SI ICE that commence construction after June 12, 2006, where the stationary SI ICE are manufactured:

(i) On or after July 1, 2007, for engines with a maximum engine power greater than or equal to 500 HP (except lean burn engines with a maximum engine power greater than or equal to 500 HP and less than 1,350 HP);

(ii) on or after January 1, 2008, for lean burn engines with a maximum engine power greater than or equal to 500 HP and less than 1,350 HP;

(iii) on or after July 1, 2008, for engines with a maximum engine power less than 500 HP; or

(iv) on or after January 1, 2009, for emergency engines with a maximum engine power greater than 19 KW (25 HP).

(5) Owners and operators of stationary SI ICE that commence modification or reconstruction after June 12, 2006.

(b) The provisions of this subpart are not applicable to stationary SI ICE being tested at an engine test cell/stand.

(c) If you are an owner or operator of an area source subject to this subpart, you are exempt from the obligation to obtain a permit under 40 CFR part 70 or 40 CFR part 71, provided you are not required to obtain a permit under 40 CFR 70.3(a) or 40 CFR 71.3(a) for a reason other than your status as an area source under this subpart. Notwithstanding the previous sentence, you must continue to comply with the provisions of this subpart as applicable.

(d) For the purposes of this subpart, stationary SI ICE using alcohol-based fuels are considered gasoline engines.

(e) Stationary SI ICE may be eligible for exemption from the requirements of this subpart as described in 40 CFR part 1068, subpart C (or the exemptions described in 40 CFR parts 90 and 1048, for engines that would need to be certified to standards in those parts), except that owners and operators, as well as manufacturers, may be eligible to request an exemption for national security.

(f) Owners and operators of facilities with internal combustion engines that are acting as temporary replacement units and that are located at a stationary source for less than 1 year and that have been properly certified as meeting the standards that would be applicable to such engine under the appropriate nonroad engine provisions, are not required to meet any other provisions under this subpart with regard to such engines.

#### **Emission Standards for Manufacturers**

**§ 60.4231 What emission standards must I meet if I am a manufacturer of stationary SI internal combustion engines or equipment containing such engines?**

(a) Stationary SI internal combustion engine manufacturers must certify their stationary SI ICE with a

maximum engine power less than or equal to 19 KW (25 HP) manufactured on or after July 1, 2008 to the certification emission standards and other requirements for new nonroad SI engines in 40 CFR part 90 or 1054, as follows:

<b>If engine replacement is ...</b>	<b>and manufacturing dates are ...</b>	<b>the engine must meet emission standards and related requirements for nonhandheld engines under ...</b>
(1) below 225 cc	July 1, 2008 to December 31, 2011	40 CFR part 90.
(2) below 225 cc	January 1, 2012 or later	40 CFR part 1054.
(3) at or above 225 cc	July 1, 2008 to December 31, 2010	40 CFR part 90.
(4) at or above 225 cc	January 1, 2011 or later	40 CFR part 1054.

(b) Stationary SI internal combustion engine manufacturers must certify their stationary SI ICE with a maximum engine power greater than 19 KW (25 HP) (except emergency stationary ICE with a maximum engine power greater than 25 HP and less than 130 HP) that use gasoline and that are manufactured on or after the applicable date in §60.4230(a)(2), or manufactured on or after the applicable date in §60.4230(a)(4) for emergency stationary ICE with a maximum engine power greater than or equal to 130 HP, to the certification emission standards and other requirements for new nonroad SI engines in 40 CFR part 1048. Stationary SI internal combustion engine manufacturers must certify their emergency stationary SI ICE with a maximum engine power greater than 25 HP and less than 130 HP that are manufactured on or after the applicable date in §60.4230(a)(4) to the Phase 1 emission standards in 40 CFR 90.103, applicable to class II engines, and other requirements for new nonroad SI engines in 40 CFR part 90. Stationary SI internal combustion engine manufacturers may certify their stationary SI ICE with a maximum engine power less than or equal to 30 KW (40 HP) with a total displacement less than or equal to 1,000 cubic centimeters (cc) to the certification emission standards and other requirements for new nonroad SI engines in 40 CFR part 90 or 1054, as appropriate.

(c) Stationary SI internal combustion engine manufacturers must certify their stationary SI ICE with a maximum engine power greater than 19 KW (25 HP) (except emergency stationary ICE with a maximum engine power greater than 25 HP and less than 130 HP) that are rich burn engines that use LPG and that are manufactured on or after the applicable date in §60.4230(a)(2), or manufactured on or after the applicable date in §60.4230(a)(4) for emergency stationary ICE with a maximum engine power greater than or equal to 130 HP, to the certification emission standards and other requirements for new nonroad SI engines in 40 CFR part 1048. Stationary SI internal combustion engine manufacturers must certify their emergency stationary SI ICE with a maximum engine power greater than 25 HP and less than 130 HP that are manufactured on or after the applicable date in §60.4230(a)(4) to the Phase 1 emission standards in 40 CFR 90.103, applicable to class II engines, and other requirements for new nonroad SI engines in 40 CFR part 90. Stationary SI internal combustion engine manufacturers may certify their stationary SI ICE with a maximum engine power less than or equal to 30 KW (40 HP) with a total displacement less than or equal to 1,000 cc to the certification emission standards and other requirements for new nonroad SI engines in 40 CFR part 90 or 1054, as appropriate.

(d) Stationary SI internal combustion engine manufacturers who choose to certify their stationary SI ICE with a maximum engine power greater than 19 KW (25 HP) and less than 75 KW (100 HP)

(except gasoline and rich burn engines that use LPG and emergency stationary ICE with a maximum engine power greater than 25 HP and less than 130 HP) under the voluntary manufacturer certification program described in this subpart must certify those engines to the certification emission standards for new nonroad SI engines in 40 CFR part 1048. Stationary SI internal combustion engine manufacturers who choose to certify their emergency stationary SI ICE greater than 25 HP and less than 130 HP, must certify those engines to the Phase I emission standards in 40 CFR 90.103, applicable to class II engines, for new nonroad SI engines in 40 CFR part 90. Stationary SI internal combustion engine manufacturers may certify their stationary SI ICE with a maximum engine power less than or equal to 30 KW (40 HP) with a total displacement less than or equal to 1,000 cc to the certification emission standards for new nonroad SI engines in 40 CFR part 90 or 1054, as appropriate. For stationary SI ICE with a maximum engine power greater than 19 KW (25 HP) and less than 75 KW (100 HP) (except gasoline and rich burn engines that use LPG and emergency stationary ICE with a maximum engine power greater than 25 HP and less than 130 HP) manufactured prior to January 1, 2011, manufacturers may choose to certify these engines to the standards in Table 1 to this subpart applicable to engines with a maximum engine power greater than or equal to 100 HP and less than 500 HP.

(e) Stationary SI internal combustion engine manufacturers who choose to certify their stationary SI ICE with a maximum engine power greater than or equal to 75 KW (100 HP) (except gasoline and rich burn engines that use LPG) under the voluntary manufacturer certification program described in this subpart must certify those engines to the emission standards in Table 1 to this subpart. Stationary SI internal combustion engine manufacturers may certify their stationary SI ICE with a maximum engine power greater than or equal to 75 KW (100 HP) that are lean burn engines that use LPG to the certification emission standards for new nonroad SI engines in 40 CFR part 1048. For stationary SI ICE with a maximum engine power greater than or equal to 100 HP (75 KW) and less than 500 HP (373 KW) manufactured prior to January 1, 2011, and for stationary SI ICE with a maximum engine power greater than or equal to 500 HP (373 KW) manufactured prior to July 1, 2010, manufacturers may choose to certify these engines to the certification emission standards for new nonroad SI engines in 40 CFR part 1048 applicable to engines that are not severe duty engines.

(f) Manufacturers of equipment containing stationary SI internal combustion engines meeting the provisions of 40 CFR part 1054 must meet the provisions of 40 CFR part 1060, to the extent they apply to equipment manufacturers.

[73 FR 3591, Jan. 18, 2008, as amended by 73 FR 59175, Oct. 8, 2008]

**§ 60.4232 How long must my engines meet the emission standards if I am a manufacturer of stationary SI internal combustion engines?**

Engines manufactured by stationary SI internal combustion engine manufacturers must meet the emission standards as required in §60.4231 during the certified emissions life of the engines.

**Emission Standards for Owners and Operators**

**§ 60.4233 What emission standards must I meet if I am an owner or operator of a stationary SI internal combustion engine?**

(a) Owners and operators of stationary SI ICE with a maximum engine power less than or equal to 19 KW (25 HP) manufactured on or after July 1, 2008, must comply with the emission standards in §60.4231(a) for their stationary SI ICE.

(b) Owners and operators of stationary SI ICE with a maximum engine power greater than 19 KW (25 HP) manufactured on or after the applicable date in §60.4230(a)(4) that use gasoline must comply with the emission standards in §60.4231(b) for their stationary SI ICE.



(c) Owners and operators of stationary SI ICE with a maximum engine power greater than 19 KW (25 HP) manufactured on or after the applicable date in §60.4230(a)(4) that are rich burn engines that use LPG must comply with the emission standards in §60.4231(c) for their stationary SI ICE.

(d) Owners and operators of stationary SI ICE with a maximum engine power greater than 19 KW (25 HP) and less than 75 KW (100 HP) (except gasoline and rich burn engines that use LPG) must comply with the emission standards for field testing in 40 CFR 1048.101(c) for their non-emergency stationary SI ICE and with the emission standards in Table 1 to this subpart for their emergency stationary SI ICE. Owners and operators of stationary SI ICE with a maximum engine power greater than 19 KW (25 HP) and less than 75 KW (100 HP) manufactured prior to January 1, 2011, that were certified to the standards in Table 1 to this subpart applicable to engines with a maximum engine power greater than or equal to 100 HP and less than 500 HP, may optionally choose to meet those standards.

(e) Owners and operators of stationary SI ICE with a maximum engine power greater than or equal to 75 KW (100 HP) (except gasoline and rich burn engines that use LPG) must comply with the emission standards in Table 1 to this subpart for their stationary SI ICE. For owners and operators of stationary SI ICE with a maximum engine power greater than or equal to 100 HP (except gasoline and rich burn engines that use LPG) manufactured prior to January 1, 2011 that were certified to the certification emission standards in 40 CFR part 1048 applicable to engines that are not severe duty engines, if such stationary SI ICE was certified to a carbon monoxide (CO) standard above the standard in Table 1 to this subpart, then the owners and operators may meet the CO certification (not field testing) standard for which the engine was certified.

(f) Owners and operators of any modified or reconstructed stationary SI ICE subject to this subpart must meet the requirements as specified in paragraphs (f)(1) through (5) of this section.

(1) Owners and operators of stationary SI ICE with a maximum engine power less than or equal to 19 KW (25 HP), that are modified or reconstructed after June 12, 2006, must comply with the same emission standards as those specified in paragraph (a) of this section.

(2) Owners and operators of stationary SI ICE with a maximum engine power greater than 19 KW (25 HP) that use gasoline engines, that are modified or reconstructed after June 12, 2006, must comply with the same emission standards as those specified in paragraph (b) of this section.

(3) Owners and operators of stationary SI ICE with a maximum engine power greater than 19 KW (25 HP) that are rich burn engines that use LPG, that are modified or reconstructed after June 12, 2006, must comply with the same emission standards as those specified in paragraph (c) of this section.

(4) Owners and operators of stationary SI natural gas and lean burn LPG engines with a maximum engine power greater than 19 KW (25 HP), that are modified or reconstructed after June 12, 2006, must comply with the same emission standards as those specified in paragraph (d) or (e) of this section, except that such owners and operators of non-emergency engines and emergency engines greater than or equal to 130 HP must meet a nitrogen oxides (NO<sub>x</sub>) emission standard of 3.0 grams per HP-hour (g/HP-hr), a CO emission standard of 4.0 g/HP-hr (5.0 g/HP-hr for non-emergency engines less than 100 HP), and a volatile organic compounds (VOC) emission standard of 1.0 g/HP-hr, or a NO<sub>x</sub> emission standard of 250 ppmvd at 15 percent oxygen (O<sub>2</sub>), a CO emission standard 540 ppmvd at 15 percent O<sub>2</sub> (675 ppmvd at 15 percent O<sub>2</sub> for non-emergency engines less than 100 HP), and a VOC emission standard of 86 ppmvd at 15 percent O<sub>2</sub>, where the date of manufacture of the engine is:

(i) Prior to July 1, 2007, for non-emergency engines with a maximum engine power greater than or equal to 500 HP;

(ii) Prior to July 1, 2008, for non-emergency engines with a maximum engine power less than 500 HP;

(iii) Prior to January 1, 2009, for emergency engines.

(5) Owners and operators of stationary SI landfill/digester gas ICE engines with a maximum engine power greater than 19 KW (25 HP), that are modified or reconstructed after June 12, 2006, must comply with the same emission standards as those specified in paragraph (e) of this section for stationary landfill/digester gas engines.

(g) Owners and operators of stationary SI wellhead gas ICE engines may petition the Administrator for approval on a case-by-case basis to meet emission standards no less stringent than the emission standards that apply to stationary emergency SI engines greater than 25 HP and less than 130 HP due to the presence of high sulfur levels in the fuel, as specified in Table 1 to this subpart. The request must, at a minimum, demonstrate that the fuel has high sulfur levels that prevent the use of aftertreatment controls and also that the owner has reasonably made all attempts possible to obtain an engine that will meet the standards without the use of aftertreatment controls. The petition must request the most stringent standards reasonably applicable to the engine using the fuel.

(h) Owners and operators of stationary SI ICE that are required to meet standards that reference 40 CFR 1048.101 must, if testing their engines in use, meet the standards in that section applicable to field testing, except as indicated in paragraph (e) of this section.

**§ 60.4234 How long must I meet the emission standards if I am an owner or operator of a stationary SI internal combustion engine?**

Owners and operators of stationary SI ICE must operate and maintain stationary SI ICE that achieve the emission standards as required in §60.4233 over the entire life of the engine.

**Other Requirements for Owners and Operators**

**§ 60.4235 What fuel requirements must I meet if I am an owner or operator of a stationary SI gasoline fired internal combustion engine subject to this subpart?**

Owners and operators of stationary SI ICE subject to this subpart that use gasoline must use gasoline that meets the per gallon sulfur limit in 40 CFR 80.195.

**§ 60.4236 What is the deadline for importing or installing stationary SI ICE produced in the previous model year?**

(a) After July 1, 2010, owners and operators may not install stationary SI ICE with a maximum engine power of less than 500 HP that do not meet the applicable requirements in §60.4233.

(b) After July 1, 2009, owners and operators may not install stationary SI ICE with a maximum engine power of greater than or equal to 500 HP that do not meet the applicable requirements in §60.4233, except that lean burn engines with a maximum engine power greater than or equal to 500 HP and less than 1,350 HP that do not meet the applicable requirements in §60.4233 may not be installed after January 1, 2010.

(c) For emergency stationary SI ICE with a maximum engine power of greater than 19 KW (25 HP), owners and operators may not install engines that do not meet the applicable requirements in §60.4233 after January 1, 2011.

(d) In addition to the requirements specified in §§60.4231 and 60.4233, it is prohibited to import stationary SI ICE less than or equal to 19 KW (25 HP), stationary rich burn LPG SI ICE, and

stationary gasoline SI ICE that do not meet the applicable requirements specified in paragraphs (a), (b), and (c) of this section, after the date specified in paragraph (a), (b), and (c) of this section.

(e) The requirements of this section do not apply to owners and operators of stationary SI ICE that have been modified or reconstructed, and they do not apply to engines that were removed from one existing location and reinstalled at a new location.

**§ 60.4237 What are the monitoring requirements if I am an owner or operator of an emergency stationary SI internal combustion engine?**

(a) Starting on July 1, 2010, if the emergency stationary SI internal combustion engine that is greater than or equal to 500 HP that was built on or after July 1, 2010, does not meet the standards applicable to non-emergency engines, the owner or operator must install a non-resettable hour meter.

(b) Starting on January 1, 2011, if the emergency stationary SI internal combustion engine that is greater than or equal to 130 HP and less than 500 HP that was built on or after January 1, 2011, does not meet the standards applicable to non-emergency engines, the owner or operator must install a non-resettable hour meter.

(c) If you are an owner or operator of an emergency stationary SI internal combustion engine that is less than 130 HP, was built on or after July 1, 2008, and does not meet the standards applicable to non-emergency engines, you must install a non-resettable hour meter upon startup of your emergency engine.

**Compliance Requirements for Manufacturers**

**§ 60.4238 What are my compliance requirements if I am a manufacturer of stationary SI internal combustion engines  $\leq$ 19 KW (25 HP) or a manufacturer of equipment containing such engines?**

Stationary SI internal combustion engine manufacturers who are subject to the emission standards specified in §60.4231(a) must certify their stationary SI ICE using the certification procedures required in 40 CFR part 90, subpart B, or 40 CFR part 1054, subpart C, as applicable, and must test their engines as specified in those parts. Manufacturers of equipment containing stationary SI internal combustion engines meeting the provisions of 40 CFR part 1054 must meet the provisions of 40 CFR part 1060, subpart C, to the extent they apply to equipment manufacturers.

[73 FR 59176, Oct. 8, 2008]

**§ 60.4239 What are my compliance requirements if I am a manufacturer of stationary SI internal combustion engines >19 KW (25 HP) that use gasoline or a manufacturer of equipment containing such engines?**

Stationary SI internal combustion engine manufacturers who are subject to the emission standards specified in §60.4231(b) must certify their stationary SI ICE using the certification procedures required in 40 CFR part 1048, subpart C, and must test their engines as specified in that part. Stationary SI internal combustion engine manufacturers who certify their stationary SI ICE with a maximum engine power less than or equal to 30 KW (40 HP) with a total displacement less than or equal to 1,000 cc to the certification emission standards and other requirements for new nonroad SI engines in 40 CFR part 90 or 40 CFR part 1054, and manufacturers of stationary SI emergency engines that are greater than 25 HP and less than 130 HP who meet the Phase 1 emission standards in 40 CFR 90.103, applicable to class II engines, must certify their stationary SI ICE using the certification procedures required in 40

CFR part 90, subpart B, or 40 CFR part 1054, subpart C, as applicable, and must test their engines as specified in those parts. Manufacturers of equipment containing stationary SI internal combustion engines meeting the provisions of 40 CFR part 1054 must meet the provisions of 40 CFR part 1060, subpart C, to the extent they apply to equipment manufacturers.

[73 FR 59176, Oct. 8, 2008]

**§ 60.4240 What are my compliance requirements if I am a manufacturer of stationary SI internal combustion engines >19 KW (25 HP) that are rich burn engines that use LPG or a manufacturer of equipment containing such engines?**

Stationary SI internal combustion engine manufacturers who are subject to the emission standards specified in §60.4231(c) must certify their stationary SI ICE using the certification procedures required in 40 CFR part 1048, subpart C, and must test their engines as specified in that part. Stationary SI internal combustion engine manufacturers who certify their stationary SI ICE with a maximum engine power less than or equal to 30 KW (40 HP) with a total displacement less than or equal to 1,000 cc to the certification emission standards and other requirements for new nonroad SI engines in 40 CFR part 90 or 40 CFR part 1054, and manufacturers of stationary SI emergency engines that are greater than 25 HP and less than 130 HP who meet the Phase 1 emission standards in 40 CFR 90.103, applicable to class II engines, must certify their stationary SI ICE using the certification procedures required in 40 CFR part 90, subpart B, or 40 CFR part 1054, subpart C, as applicable, and must test their engines as specified in those parts. Manufacturers of equipment containing stationary SI internal combustion engines meeting the provisions of 40 CFR part 1054 must meet the provisions of 40 CFR part 1060, subpart C, to the extent they apply to equipment manufacturers.

[73 FR 59176, Oct. 8, 2008]

**§ 60.4241 What are my compliance requirements if I am a manufacturer of stationary SI internal combustion engines participating in the voluntary certification program or a manufacturer of equipment containing such engines?**

(a) Manufacturers of stationary SI internal combustion engines with a maximum engine power greater than 19 KW (25 HP) that do not use gasoline and are not rich burn engines that use LPG can choose to certify their engines to the emission standards in §60.4231(d) or (e), as applicable, under the voluntary certification program described in this subpart. Manufacturers who certify their engines under the voluntary certification program must meet the requirements as specified in paragraphs (b) through (g) of this section. In addition, manufacturers of stationary SI internal combustion engines who choose to certify their engines under the voluntary certification program, must also meet the requirements as specified in §60.4247.

(b) Manufacturers of engines other than those certified to standards in 40 CFR part 90 or 40 CFR part 1054 must certify their stationary SI ICE using the certification procedures required in 40 CFR part 1048, subpart C, and must follow the same test procedures that apply to large SI nonroad engines under 40 CFR part 1048, but must use the D-1 cycle of International Organization of Standardization 8178-4: 1996(E) (incorporated by reference, see 40 CFR 60.17) or the test cycle requirements specified in Table 5 to 40 CFR 1048.505, except that Table 5 of 40 CFR 1048.505 applies to high load engines only. Stationary SI internal combustion engine manufacturers who certify their stationary SI ICE with a maximum engine power less than or equal to 30 KW (40 HP) with a total displacement less than or equal to 1,000 cc to the certification emission standards and other requirements for new nonroad SI engines in 40 CFR part 90 or 40 CFR part 1054, and manufacturers of emergency engines that are greater than 25 HP and less than 130 HP who meet the Phase 1 standards in 40 CFR 90.103, applicable to class II engines, must certify their stationary SI ICE using the certification procedures required in 40 CFR part 90, subpart B, or 40 CFR part 1054, subpart C, as applicable, and must test

their engines as specified in those parts. Manufacturers of equipment containing stationary SI internal combustion engines meeting the provisions of 40 CFR part 1054 must meet the provisions of 40 CFR part 1060, subpart C, to the extent they apply to equipment manufacturers.

(c) Certification of stationary SI ICE to the emission standards specified in §60.4231(d) or (e), as applicable, is voluntary, but manufacturers who decide to certify are subject to all of the requirements indicated in this subpart with regard to the engines included in their certification. Manufacturers must clearly label their stationary SI engines as certified or non-certified engines.

(d) Manufacturers of natural gas fired stationary SI ICE who conduct voluntary certification of stationary SI ICE to the emission standards specified in §60.4231(d) or (e), as applicable, must certify their engines for operation using fuel that meets the definition of pipeline-quality natural gas. The fuel used for certifying stationary SI natural gas engines must meet the definition of pipeline-quality natural gas as described in §60.4248. In addition, the manufacturer must provide information to the owner and operator of the certified stationary SI engine including the specifications of the pipeline-quality natural gas to which the engine is certified and what adjustments the owner or operator must make to the engine when installed in the field to ensure compliance with the emission standards.

(e) Manufacturers of stationary SI ICE that are lean burn engines fueled by LPG who conduct voluntary certification of stationary SI ICE to the emission standards specified in §60.4231(d) or (e), as applicable, must certify their engines for operation using fuel that meets the specifications in 40 CFR 1065.720.

(f) Manufacturers may certify their engines for operation using gaseous fuels in addition to pipeline-quality natural gas; however, the manufacturer must specify the properties of that fuel and provide testing information showing that the engine will meet the emission standards specified in §60.4231(d) or (e), as applicable, when operating on that fuel. The manufacturer must also provide instructions for configuring the stationary engine to meet the emission standards on fuels that do not meet the pipeline-quality natural gas definition. The manufacturer must also provide information to the owner and operator of the certified stationary SI engine regarding the configuration that is most conducive to reduced emissions where the engine will be operated on gaseous fuels with different quality than the fuel that it was certified to.

(g) A stationary SI engine manufacturer may certify an engine family solely to the standards applicable to landfill/digester gas engines as specified in §60.4231(d) or (e), as applicable, but must certify their engines for operation using landfill/digester gas and must add a permanent label stating that the engine is for use only in landfill/digester gas applications. The label must be added according to the labeling requirements specified in 40 CFR 1048.135(b).

(h) For purposes of this subpart, when calculating emissions of volatile organic compounds, emissions of formaldehyde should not be included.

(i) For engines being certified to the voluntary certification standards in Table 1 of this subpart, the VOC measurement shall be made by following the procedures in 40 CFR 1065.260 and 1065.265 in order to determine the total NMHC emissions by using a flame-ionization detector and non-methane cutter. As an alternative to the nonmethane cutter, manufacturers may use a gas chromatograph as allowed under 40 CFR 1065.267 and may measure ethane, as well as methane, for excluding such levels from the total VOC measurement.

[73 FR 3591, Jan. 18, 2008, as amended by 73 FR 59176, Oct. 8, 2008]

**§ 60.4242 What other requirements must I meet if I am a manufacturer of stationary SI internal combustion engines or equipment containing stationary SI internal combustion engines**

**or a manufacturer of equipment containing such engines?**

- (a) Stationary SI internal combustion engine manufacturers must meet the provisions of 40 CFR part 90, 40 CFR part 1048, or 40 CFR part 1054, as applicable, as well as 40 CFR part 1068 for engines that are certified to the emission standards in 40 CFR part 1048 or 1054, except that engines certified pursuant to the voluntary certification procedures in §60.4241 are subject only to the provisions indicated in §60.4247 and are permitted to provide instructions to owners and operators allowing for deviations from certified configurations, if such deviations are consistent with the provisions of paragraphs §60.4241(c) through (f). Manufacturers of equipment containing stationary SI internal combustion engines meeting the provisions of 40 CFR part 1054 must meet the provisions of 40 CFR part 1060, as applicable. Labels on engines certified to 40 CFR part 1048 must refer to stationary engines, rather than or in addition to nonroad engines, as appropriate.
- (b) An engine manufacturer certifying an engine family or families to standards under this subpart that are identical to standards applicable under 40 CFR part 90, 40 CFR part 1048, or 40 CFR part 1054 for that model year may certify any such family that contains both nonroad and stationary engines as a single engine family and/or may include any such family containing stationary engines in the averaging, banking and trading provisions applicable for such engines under those parts. This provision also applies to equipment or component manufacturers certifying to standards under 40 CFR part 1060.
- (c) Manufacturers of engine families certified to 40 CFR part 1048 may meet the labeling requirements referred to in paragraph (a) of this section for stationary SI ICE by either adding a separate label containing the information required in paragraph (a) of this section or by adding the words “and stationary” after the word “nonroad” to the label.
- (d) For all engines manufactured on or after January 1, 2011, and for all engines with a maximum engine power greater than 25 HP and less than 130 HP manufactured on or after July 1, 2008, a stationary SI engine manufacturer that certifies an engine family solely to the standards applicable to emergency engines must add a permanent label stating that the engines in that family are for emergency use only. The label must be added according to the labeling requirements specified in 40 CFR 1048.135(b).
- (e) All stationary SI engines subject to mandatory certification that do not meet the requirements of this subpart must be labeled according to 40 CFR 1068.230 and must be exported under the provisions of 40 CFR 1068.230. Stationary SI engines subject to standards in 40 CFR part 90 may use the provisions in 40 CFR 90.909. Manufacturers of stationary engines with a maximum engine power greater than 25 HP that are not certified to standards and other requirements under 40 CFR part 1048 are subject to the labeling provisions of 40 CFR 1048.20 pertaining to excluded stationary engines.
- (f) For manufacturers of gaseous-fueled stationary engines required to meet the warranty provisions in 40 CFR 90.1103 or 1054.120, we may establish an hour-based warranty period equal to at least the certified emissions life of the engines (in engine operating hours) if we determine that these engines are likely to operate for a number of hours greater than the applicable useful life within 24 months. We will not approve an alternate warranty under this paragraph (f) for nonroad engines. An alternate warranty period approved under this paragraph (f) will be the specified number of engine operating hours or two years, whichever comes first. The engine manufacturer shall request this alternate warranty period in its application for certification or in an earlier submission. We may approve an alternate warranty period for an engine family subject to the following conditions:

- (1) The engines must be equipped with non-resettable hour meters.
- (2) The engines must be designed to operate for a number of hours substantially greater than the

applicable certified emissions life.

(3) The emission-related warranty for the engines may not be shorter than any published warranty offered by the manufacturer without charge for the engines. Similarly, the emission-related warranty for any component shall not be shorter than any published warranty offered by the manufacturer without charge for that component.

[73 FR 3591, Jan. 18, 2008, as amended by 73 FR 59177, Oct. 8, 2008]

## **Compliance Requirements for Owners and Operators**

### **§ 60.4243 What are my compliance requirements if I am an owner or operator of a stationary SI internal combustion engine?**

(a) If you are an owner or operator of a stationary SI internal combustion engine that is manufactured after July 1, 2008, and must comply with the emission standards specified in §60.4233(a) through (c), you must comply by purchasing an engine certified to the emission standards in §60.4231(a) through (c), as applicable, for the same engine class and maximum engine power. You must also meet the requirements as specified in 40 CFR part 1068, subparts A through D, as they apply to you. If you adjust engine settings according to and consistent with the manufacturer's instructions, your stationary SI internal combustion engine will not be considered out of compliance. In addition, you must meet one of the requirements specified in (a)(1) and (2) of this section.

(1) If you operate and maintain the certified stationary SI internal combustion engine and control device according to the manufacturer's emission-related written instructions, you must keep records of conducted maintenance to demonstrate compliance, but no performance testing is required if you are an owner or operator.

(2) If you do not operate and maintain the certified stationary SI internal combustion engine and control device according to the manufacturer's emission-related written instructions, your engine will be considered a non-certified engine, and you must demonstrate compliance according to (a)(2)(i) through (iii) of this section, as appropriate.

(i) If you are an owner or operator of a stationary SI internal combustion engine less than 100 HP, you must keep a maintenance plan and records of conducted maintenance to demonstrate compliance and must, to the extent practicable, maintain and operate the engine in a manner consistent with good air pollution control practice for minimizing emissions, but no performance testing is required if you are an owner or operator.

(ii) If you are an owner or operator of a stationary SI internal combustion engine greater than or equal to 100 HP and less than or equal to 500 HP, you must keep a maintenance plan and records of conducted maintenance and must, to the extent practicable, maintain and operate the engine in a manner consistent with good air pollution control practice for minimizing emissions. In addition, you must conduct an initial performance test within 1 year of engine startup to demonstrate compliance.

(iii) If you are an owner or operator of a stationary SI internal combustion engine greater than 500 HP, you must keep a maintenance plan and records of conducted maintenance and must, to the extent practicable, maintain and operate the engine in a manner consistent with good air pollution control practice for minimizing emissions. In addition, you must conduct an initial performance test within 1 year of engine startup and conduct subsequent performance testing every 8,760 hours or 3 years, whichever comes first, thereafter to demonstrate compliance.

(b) If you are an owner or operator of a stationary SI internal combustion engine and must comply with the emission standards specified in §60.4233(d) or (e), you must demonstrate compliance according to one of the methods specified in paragraphs (b)(1) and (2) of this section.

(1) Purchasing an engine certified according to procedures specified in this subpart, for the same model year and demonstrating compliance according to one of the methods specified in paragraph (a) of this section.

(2) Purchasing a non-certified engine and demonstrating compliance with the emission standards specified in §60.4233(d) or (e) and according to the requirements specified in §60.4244, as applicable, and according to paragraphs (b)(2)(i) and (ii) of this section.

(i) If you are an owner or operator of a stationary SI internal combustion engine greater than 25 HP and less than or equal to 500 HP, you must keep a maintenance plan and records of conducted maintenance and must, to the extent practicable, maintain and operate the engine in a manner consistent with good air pollution control practice for minimizing emissions. In addition, you must conduct an initial performance test to demonstrate compliance.

(ii) If you are an owner or operator of a stationary SI internal combustion engine greater than 500 HP, you must keep a maintenance plan and records of conducted maintenance and must, to the extent practicable, maintain and operate the engine in a manner consistent with good air pollution control practice for minimizing emissions. In addition, you must conduct an initial performance test and conduct subsequent performance testing every 8,760 hours or 3 years, whichever comes first, thereafter to demonstrate compliance.

(c) If you are an owner or operator of a stationary SI internal combustion engine that must comply with the emission standards specified in §60.4233(f), you must demonstrate compliance according paragraph (b)(2)(i) or (ii) of this section, except that if you comply according to paragraph (b)(2)(i) of this section, you demonstrate that your non-certified engine complies with the emission standards specified in §60.4233(f).

(d) Emergency stationary ICE may be operated for the purpose of maintenance checks and readiness testing, provided that the tests are recommended by Federal, State or local government, the manufacturer, the vendor, or the insurance company associated with the engine. Maintenance checks and readiness testing of such units is limited to 100 hours per year. There is no time limit on the use of emergency stationary ICE in emergency situations. The owner or operator may petition the Administrator for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the owner or operator maintains records indicating that Federal, State, or local standards require maintenance and testing of emergency ICE beyond 100 hours per year. Emergency stationary ICE may operate up to 50 hours per year in non-emergency situations, but those 50 hours are counted towards the 100 hours per year provided for maintenance and testing. The 50 hours per year for non-emergency situations cannot be used for peak shaving or to generate income for a facility to supply power to an electric grid or otherwise supply power as part of a financial arrangement with another entity. For owners and operators of emergency engines, any operation other than emergency operation, maintenance and testing, and operation in non-emergency situations for 50 hours per year, as permitted in this section, is prohibited.

(e) Owners and operators of stationary SI natural gas fired engines may operate their engines using propane for a maximum of 100 hours per year as an alternative fuel solely during emergency operations, but must keep records of such use. If propane is used for more than 100 hours per year in an engine that is not certified to the emission standards when using propane, the owners and operators are required to conduct a performance test to demonstrate compliance with the emission standards of §60.4233.



(f) If you are an owner or operator of a stationary SI internal combustion engine that is less than or equal to 500 HP and you purchase a non-certified engine or you do not operate and maintain your certified stationary SI internal combustion engine and control device according to the manufacturer's written emission-related instructions, you are required to perform initial performance testing as indicated in this section, but you are not required to conduct subsequent performance testing unless the stationary engine is rebuilt or undergoes major repair or maintenance. A rebuilt stationary SI ICE means an engine that has been rebuilt as that term is defined in 40 CFR 94.11(a).

(g) It is expected that air-to-fuel ratio controllers will be used with the operation of three-way catalysts/non-selective catalytic reduction. The AFR controller must be maintained and operated appropriately in order to ensure proper operation of the engine and control device to minimize emissions at all times.

(h) If you are an owner/operator of an stationary SI internal combustion engine with maximum engine power greater than or equal to 500 HP that is manufactured after July 1, 2007 and before July 1, 2008, and must comply with the emission standards specified in sections 60.4233(b) or (c), you must comply by one of the methods specified in paragraphs (h)(1) through (h)(4) of this section.

(1) Purchasing an engine certified according to 40 CFR part 1048. The engine must be installed and configured according to the manufacturer's specifications.

(2) Keeping records of performance test results for each pollutant for a test conducted on a similar engine. The test must have been conducted using the same methods specified in this subpart and these methods must have been followed correctly.

(3) Keeping records of engine manufacturer data indicating compliance with the standards.

(4) Keeping records of control device vendor data indicating compliance with the standards.

#### **Testing Requirements for Owners and Operators**

#### **§ 60.4244 What test methods and other procedures must I use if I am an owner or operator of a stationary SI internal combustion engine?**

Owners and operators of stationary SI ICE who conduct performance tests must follow the procedures in paragraphs (a) through (f) of this section.

(a) Each performance test must be conducted within 10 percent of 100 percent peak (or the highest achievable) load and according to the requirements in §60.8 and under the specific conditions that are specified by Table 2 to this subpart.

(b) You may not conduct performance tests during periods of startup, shutdown, or malfunction, as specified in §60.8(c). If your stationary SI internal combustion engine is non-operational, you do not need to startup the engine solely to conduct a performance test; however, you must conduct the performance test immediately upon startup of the engine.

(c) You must conduct three separate test runs for each performance test required in this section, as specified in §60.8(f). Each test run must be conducted within 10 percent of 100 percent peak (or the highest achievable) load and last at least 1 hour.

(d) To determine compliance with the NO<sub>x</sub> mass per unit output emission limitation, convert the concentration of NO<sub>x</sub> in the engine exhaust using Equation 1 of this section:

$$ER = \frac{C_d \times 1.912 \times 10^{-3} \times Q \times T}{HP - hr} \quad (\text{Eq. 1})$$

Where:

ER = Emission rate of NO<sub>x</sub> in g/HP-hr.

C<sub>d</sub> = Measured NO<sub>x</sub> concentration in parts per million by volume (ppmv).

1.912×10<sup>-3</sup> = Conversion constant for ppm NO<sub>x</sub> to grams per standard cubic meter at 20 degrees Celsius.

Q = Stack gas volumetric flow rate, in standard cubic meter per hour, dry basis.

T = Time of test run, in hours.

HP-hr = Brake work of the engine, horsepower-hour (HP-hr).

(e) To determine compliance with the CO mass per unit output emission limitation, convert the concentration of CO in the engine exhaust using Equation 2 of this section:

$$ER = \frac{C_d \times 1.164 \times 10^{-3} \times Q \times T}{HP - hr} \quad (\text{Eq. 2})$$

Where:

ER = Emission rate of CO in g/HP-hr.

C<sub>d</sub> = Measured CO concentration in ppmv.

1.164×10<sup>-3</sup> = Conversion constant for ppm CO to grams per standard cubic meter at 20 degrees Celsius.

Q = Stack gas volumetric flow rate, in standard cubic meters per hour, dry basis.

T = Time of test run, in hours.

HP-hr = Brake work of the engine, in HP-hr.

(f) For purposes of this subpart, when calculating emissions of VOC, emissions of formaldehyde should not be included. To determine compliance with the VOC mass per unit output emission limitation, convert the concentration of VOC in the engine exhaust using Equation 3 of this section:

$$ER = \frac{C_d \times 1.833 \times 10^{-3} \times Q \times T}{HP - hr} \quad (\text{Eq. 3})$$

Where:

ER = Emission rate of VOC in g/HP-hr.

Cd= VOC concentration measured as propane in ppmv.

$1.833 \times 10^{-3}$  = Conversion constant for ppm VOC measured as propane, to grams per standard cubic meter at 20 degrees Celsius.

Q = Stack gas volumetric flow rate, in standard cubic meters per hour, dry basis.

T = Time of test run, in hours.

HP-hr = Brake work of the engine, in HP-hr.

(g) If the owner/operator chooses to measure VOC emissions using either Method 18 of 40 CFR part 60, appendix A, or Method 320 of 40 CFR part 63, appendix A, then it has the option of correcting the measured VOC emissions to account for the potential differences in measured values between these methods and Method 25A. The results from Method 18 and Method 320 can be corrected for response factor differences using Equations 4 and 5 of this section. The corrected VOC concentration can then be placed on a propane basis using Equation 6 of this section.

$$RF_i = \frac{C}{C_{Ai}} \quad (\text{Eq. 4})$$

Where:

RF<sub>i</sub>= Response factor of compound i when measured with EPA Method 25A.

C<sub>Mi</sub>= Measured concentration of compound i in ppmv as carbon.

C<sub>Ai</sub>= True concentration of compound i in ppmv as carbon.

$$C_{\text{corr}} = RF_i \times C_{\text{meas}} \quad (\text{Eq. 5})$$

Where:

C<sub>corr</sub>= Concentration of compound i corrected to the value that would have been measured by EPA Method 25A, ppmv as carbon.

C<sub>meas</sub>= Concentration of compound i measured by EPA Method 320, ppmv as carbon.

$$C_{\text{Eq}} = 0.6098 \times C_{\text{corr}} \quad (\text{Eq. 6})$$

Where:

C<sub>Eq</sub>= Concentration of compound i in mg of propane equivalent per DSCM.

#### Notification, Reports, and Records for Owners and Operators

**§ 60.4245 What are my notification, reporting, and recordkeeping requirements if I am an owner or operator of a stationary SI internal combustion engine?**

Owners or operators of stationary SI ICE must meet the following notification, reporting and recordkeeping requirements.

(a) Owners and operators of all stationary SI ICE must keep records of the information in paragraphs (a)(1) through (4) of this section.

(1) All notifications submitted to comply with this subpart and all documentation supporting any notification.

(2) Maintenance conducted on the engine.

(3) If the stationary SI internal combustion engine is a certified engine, documentation from the manufacturer that the engine is certified to meet the emission standards and information as required in 40 CFR parts 90, 1048, 1054, and 1060, as applicable.

(4) If the stationary SI internal combustion engine is not a certified engine or is a certified engine operating in a non-certified manner and subject to §60.4243(a)(2), documentation that the engine meets the emission standards.

(b) For all stationary SI emergency ICE greater than or equal to 500 HP manufactured on or after July 1, 2010, that do not meet the standards applicable to non-emergency engines, the owner or operator of must keep records of the hours of operation of the engine that is recorded through the non-resettable hour meter. For all stationary SI emergency ICE greater than or equal to 130 HP and less than 500 HP manufactured on or after July 1, 2011 that do not meet the standards applicable to non-emergency engines, the owner or operator of must keep records of the hours of operation of the engine that is recorded through the non-resettable hour meter. For all stationary SI emergency ICE greater than 25 HP and less than 130 HP manufactured on or after July 1, 2008, that do not meet the standards applicable to non-emergency engines, the owner or operator of must keep records of the hours of operation of the engine that is recorded through the non-resettable hour meter. The owner or operator must document how many hours are spent for emergency operation, including what classified the operation as emergency and how many hours are spent for non-emergency operation.

(c) Owners and operators of stationary SI ICE greater than or equal to 500 HP that have not been certified by an engine manufacturer to meet the emission standards in §60.4231 must submit an initial notification as required in §60.7(a)(1). The notification must include the information in paragraphs (c)(1) through (5) of this section.

(1) Name and address of the owner or operator;

(2) The address of the affected source;

(3) Engine information including make, model, engine family, serial number, model year, maximum engine power, and engine displacement;

(4) Emission control equipment; and

(5) Fuel used.

(d) Owners and operators of stationary SI ICE that are subject to performance testing must submit a copy of each performance test as conducted in §60.4244 within 60 days after the test has been completed.

[73 FR 3591, Jan. 18, 2008, as amended by 73 FR 59177, Oct. 8, 2008]

## **General Provisions**

### **§ 60.4246 What parts of the General Provisions apply to me?**

Table 3 to this subpart shows which parts of the General Provisions in §§60.1 through 60.19 apply to you.

## **Mobile Source Provisions**

### **§ 60.4247 What parts of the mobile source provisions apply to me if I am a manufacturer of stationary SI internal combustion engines or a manufacturer of equipment containing such engines?**

(a) Manufacturers certifying to emission standards in 40 CFR part 90, including manufacturers certifying emergency engines below 130 HP, must meet the provisions of 40 CFR part 90. Manufacturers certifying to emission standards in 40 CFR part 1054 must meet the provisions of 40 CFR part 1054. Manufacturers of equipment containing stationary SI internal combustion engines meeting the provisions of 40 CFR part 1054 must meet the provisions of 40 CFR part 1060 to the extent they apply to equipment manufacturers.

(b) Manufacturers required to certify to emission standards in 40 CFR part 1048 must meet the provisions of 40 CFR part 1048. Manufacturers certifying to emission standards in 40 CFR part 1048 pursuant to the voluntary certification program must meet the requirements in Table 4 to this subpart as well as the standards in 40 CFR 1048.101.

(c) For manufacturers of stationary SI internal combustion engines participating in the voluntary certification program and certifying engines to Table 1 to this subpart, Table 4 to this subpart shows which parts of the mobile source provisions in 40 CFR parts 1048, 1065, and 1068 apply to you. Compliance with the deterioration factor provisions under 40 CFR 1048.205(n) and 1048.240 will be required for engines built new on and after January 1, 2010. Prior to January 1, 2010, manufacturers of stationary internal combustion engines participating in the voluntary certification program have the option to develop their own deterioration factors based on an engineering analysis.

[73 FR 3591, Jan. 18, 2008, as amended by 73 FR 59177, Oct. 8, 2008]

## **Definitions**

### **§ 60.4248 What definitions apply to this subpart?**

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

*Certified emissions life* means the period during which the engine is designed to properly function in terms of reliability and fuel consumption, without being remanufactured, specified as a number of hours of operation or calendar years, whichever comes first. The values for certified emissions life for stationary SI ICE with a maximum engine power less than or equal to 19 KW (25 HP) are given in 40 CFR 90.105, 40 CFR 1054.107, and 40 CFR 1060.101, as appropriate. The values for certified emissions life for stationary SI ICE with a maximum engine power greater than 19 KW (25 HP) certified to 40 CFR part 1048 are given in 40 CFR 1048.101(g). The certified emissions life for stationary SI ICE with a maximum engine power greater than 75 KW (100 HP) certified under the

voluntary manufacturer certification program of this subpart is 5,000 hours or 7 years, whichever comes first.

*Certified stationary internal combustion engine* means an engine that belongs to an engine family that has a certificate of conformity that complies with the emission standards and requirements in this part, or of 40 CFR part 90, 40 CFR part 1048, or 40 CFR part 1054, as appropriate.

*Combustion turbine* means all equipment, including but not limited to the turbine, the fuel, air, lubrication and exhaust gas systems, control systems (except emissions control equipment), and any ancillary components and sub-components comprising any simple cycle combustion turbine, any regenerative/recuperative cycle combustion turbine, the combustion turbine portion of any cogeneration cycle combustion system, or the combustion turbine portion of any combined cycle steam/electric generating system.

*Compression ignition* means relating to a type of stationary internal combustion engine that is not a spark ignition engine.

*Diesel fuel* means any liquid obtained from the distillation of petroleum with a boiling point of approximately 150 to 360 degrees Celsius. One commonly used form is number 2 distillate oil.

*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 carbon dioxide (CO<sub>2</sub>).

*Emergency stationary internal combustion engine* means any stationary internal combustion engine whose operation is limited to emergency situations and required testing and maintenance. Examples include stationary ICE used to produce power for critical networks or equipment (including power supplied to portions of a facility) when electric power from the local utility (or the normal power source, if the facility runs on its own power production) is interrupted, or stationary ICE used to pump water in the case of fire or flood, etc. Stationary SI ICE used for peak shaving are not considered emergency stationary ICE. 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.

*Engine manufacturer* means the manufacturer of the engine. See the definition of “manufacturer” in this section.

*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.

*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.

*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 CO<sub>2</sub>.

*Lean burn engine* means any two-stroke or four-stroke spark ignited engine that does not meet the definition of a rich burn engine.

*Liquefied petroleum gas* means any liquefied hydrocarbon gas obtained as a by-product in petroleum

refining of natural gas production.

*Manufacturer* has the meaning given in section 216(1) of the Clean Air Act. In general, this term includes any person who manufactures a stationary engine for sale in the United States or otherwise introduces a new stationary engine into commerce in the United States. This includes importers who import stationary engines for resale.

*Maximum engine power* means maximum engine power as defined in 40 CFR 1048.801.

*Model year* means either: The calendar year in which the engine was originally produced, or the annual new model production period of the engine manufacturer if it is different than the calendar year. This must include January 1 of the calendar year for which the model year is named. It may not begin before January 2 of the previous calendar year, and it must end by December 31 of the named calendar year. For an engine that is converted to a stationary engine after being placed into service as a nonroad or other non-stationary engine, model year means the calendar year or new model production period in which the engine was originally produced.

*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.

*Other internal combustion engine* means any internal combustion engine, except combustion turbines, which is not a reciprocating internal combustion engine or rotary internal combustion engine.

*Pipeline-quality natural gas* means a naturally occurring fluid mixture of hydrocarbons (e.g., methane, ethane, or propane) produced in geological formations beneath the Earth's surface that maintains a gaseous state at standard atmospheric temperature and pressure under ordinary conditions, and which is provided by a supplier through a pipeline. Pipeline-quality natural gas must either be composed of at least 70 percent methane by volume or have a gross calorific value between 950 and 1,100 British thermal units per standard cubic foot.

*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 June 12, 2006, with passive emission control technology for NO<sub>x</sub> (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.

*Rotary internal combustion engine* means any internal combustion engine which uses rotary motion to convert heat energy into mechanical work.

*Spark ignition* means relating to either: a gasoline-fueled engine; or any other type of engine with a spark plug (or other sparking device) and with operating characteristics significantly similar to the theoretical Otto combustion cycle. Spark ignition engines usually use a throttle to regulate intake air flow to control power during normal operation. Dual-fuel engines in which a liquid fuel (typically diesel fuel) is used for compression ignition and gaseous fuel (typically natural gas) is used as the primary fuel at an annual average ratio of less than 2 parts diesel fuel to 100 parts total fuel on an energy equivalent basis are spark ignition engines.

*Stationary internal combustion engine* means any internal combustion engine, except combustion turbines, that converts heat energy into mechanical work and is not mobile. Stationary ICE differ from

mobile ICE in that a stationary internal combustion engine is not a nonroad engine as defined at 40 CFR 1068.30 (excluding paragraph (2)(ii) of that definition), and is not used to propel a motor vehicle or a vehicle used solely for competition. Stationary ICE include reciprocating ICE, rotary ICE, and other ICE, except combustion turbines.

*Stationary internal combustion engine test cell/stand* means an engine test cell/stand, as defined in subpart P of this part, that test stationary ICE.

*Stoichiometric* means the theoretical air-to-fuel ratio required for complete combustion.

*Subpart* means 40 CFR part 60, subpart JJJJ.

*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.

*Volatile organic compounds* means volatile organic compounds as defined in 40 CFR 51.100(s).

*Voluntary certification program* means an optional engine certification program that manufacturers of stationary SI internal combustion engines with a maximum engine power greater than 19 KW (25 HP) that do not use gasoline and are not rich burn engines that use LPG can choose to participate in to certify their engines to the emission standards in §60.4231(d) or (e), as applicable.

[73 FR 3591, Jan. 18, 2008, as amended by 73 FR 59177, Oct. 8, 2008]

**Table 1 to Subpart JJJJ of Part 60—NO<sub>x</sub>, CO, and VOC Emission Standards for Stationary Non-Emergency SI Engines ≥100 HP (Except Gasoline and Rich Burn LPG), Stationary SI Landfill/Digester Gas Engines, and Stationary Emergency Engines >25 HP**

Engine type and fuel	Maximum engine power	Manufacture date	Emission standards <sup>a</sup>					
			g/HP-hr			ppmvd at 15% O <sub>2</sub>		
			NO <sub>x</sub>	CO	VOC <sup>d</sup>	NO <sub>x</sub>	CO	VOC <sup>d</sup>
Non-Emergency SI Natural Gas <sup>b</sup> and Non-Emergency SI Lean Burn LPG <sup>b</sup>	100≤HP<500	7/1/2008	2.0	4.0	1.0	160	540	86
		1/1/2011	1.0	2.0	0.7	82	270	60
Non-Emergency SI Lean Burn Natural Gas and LPG	500≥HP<1,350	1/1/2008	2.0	4.0	1.0	160	540	86
		7/1/2010	1.0	2.0	0.7	82	270	60
Non-Emergency SI Natural Gas and Non-Emergency SI Lean Burn LPG (except lean burn 500≥HP<1,350)	HP≥500	7/1/2007	2.0	4.0	1.0	160	540	86
		7/1/2010	1.0	2.0	0.7	82	270	60
Landfill/Digester Gas (except lean burn 500≥HP<1,350)	HP<500	7/1/2008	3.0	5.0	1.0	220	610	80
		1/1/2011	2.0	5.0	1.0	150	610	80
	HP≥500	7/1/2007	3.0	5.0	1.0	220	610	80



		7/1/2010	2.0	5.0	1.0	150	610	80
Landfill/Digester Gas Lean Burn	500≥HP<1,350	1/1/2008	3.0	5.0	1.0	220	610	80
		7/1/2010	2.0	5.0	1.0	150	610	80
Emergency	25>HP<130	1/1/2009	<sup>c</sup> 10	387	N/A	N/A	N/A	N/A
			2.0	4.0	1.0	160	540	86
	HP≥130							

<sup>a</sup>Owners and operators of stationary non-certified SI engines may choose to comply with the emission standards in units of either g/HP-hr or ppmvd at 15 percent O<sub>2</sub>.

<sup>b</sup>Owners and operators of new or reconstructed non-emergency lean burn SI stationary engines with a site rating of greater than or equal to 250 brake HP located at a major source that are meeting the requirements of 40 CFR part 63, subpart ZZZZ, Table 2A do not have to comply with the CO emission standards of Table 1 of this subpart.

<sup>c</sup>The emission standards applicable to emergency engines between 25 HP and 130 HP are in terms of NO<sub>x</sub>+HC.

<sup>d</sup>For purposes of this subpart, when calculating emissions of volatile organic compounds, emissions of formaldehyde should not be included.

**Table 2 to Subpart JJJJ of Part 60—Requirements for Performance Tests**

[As stated in §60.4244, you must comply with the following requirements for performance tests within 10 percent of 100 percent peak (or the highest achievable) load]

For each	Complying with the requirement to	You must	Using	According to the following requirements
1. Stationary SI internal combustion engine demonstrating compliance according to §60.4244.	a. limit the concentration of NO <sub>x</sub> in the stationary SI internal combustion engine exhaust.	i. Select the sampling port location and the number of traverse points;	(1) Method 1 or 1A of 40 CFR part 60, appendix A or ASTM Method D6522–00(2005) <sup>a</sup> .	(a) If using a control device, the sampling site must be located at the outlet of the control device.
	ii. Determine the O <sub>2</sub> concentration of the stationary internal combustion engine exhaust at the sampling port location;	(2) Method 3, 3A, or 3B <sup>b</sup> of 40 CFR part 60, appendix A or ASTM Method D6522–00(2005) <sup>a</sup> .	(b) Measurements to determine O <sub>2</sub> concentration must be made at the same time as the measurements for NO <sub>x</sub> concentration.	
	iii. Determine the	(3) Method 2 or 19 of		

	exhaust flowrate of the stationary internal combustion engine exhaust;	40 CFR part 60.		
	iv. If necessary, measure moisture content of the stationary internal combustion engine exhaust at the sampling port location; and	(4) Method 4 of 40 CFR part 60, appendix A, Method 320 of 40 CFR part 63, appendix A, or ASTM D6348–03 (incorporated by reference, see §60.17).	(c) Measurements to determine moisture must be made at the same time as the measurement for NO <sub>x</sub> concentration.	
	v. Measure NO <sub>x</sub> at the exhaust of the stationary internal combustion engine.	(5) Method 7E of 40 CFR part 60, appendix A, Method D6522–00(2005) <sup>a</sup> , Method 320 of 40 CFR part 63, appendix A, or ASTM D6348–03 (incorporated by reference, see §60.17).	(d) Results of this test consist of the average of the three 1-hour or longer runs.	
	b. limit the concentration of CO in the stationary SI internal combustion engine exhaust.	i. Select the sampling port location and the number of traverse points;	(1) Method 1 or 1A of 40 CFR part 60, appendix A.	(a) If using a control device, the sampling site must be located at the outlet of the control device.
	ii. Determine the O <sub>2</sub> concentration of the stationary internal combustion engine exhaust at the sampling port location;	(2) Method 3, 3A, or 3Bb of 40 CFR part 60, appendix A or ASTM Method D6522–00(2005) <sup>a</sup> .	(b) Measurements to determine O <sub>2</sub> concentration must be made at the same time as the measurements for CO concentration.	
	iii. Determine the exhaust flowrate of the stationary internal combustion engine exhaust;	(3) Method 2 or 19 of 40 CFR part 60.		
	iv. If necessary, measure moisture content of the stationary internal combustion engine exhaust at the sampling port location; and	(4) Method 4 of 40 CFR part 60, appendix A, Method 320 of 40 CFR part 63, appendix A, or ASTM D6348–03 (incorporated by reference, see §60.17).	(c) Measurements to determine moisture must be made at the same time as the measurement for CO concentration.	
	v. Measure CO at	(5) Method 10 of 40	(d) Results of this test	

	the exhaust of the stationary internal combustion engine.	CFR part 60, appendix A, ASTM Method D6522-00(2005) <sup>a</sup> , Method 320 of 40 CFR part 63, appendix A, or ASTM D 6348-03 (incorporated by reference, see §60.17).	consist of the average of the three 1-hour or longer runs.	
	c. limit the concentration of VOC in the stationary SI internal combustion engine exhaust.	i. Select the sampling port location and the number of traverse points;	(1) Method 1 or 1A of 40 CFR part 60, appendix A.	(a) If using a control device, the sampling site must be located at the outlet of the control device.
	ii. Determine the O <sub>2</sub> concentration of the stationary internal combustion engine exhaust at the sampling port location;	(2) Method 3, 3A, or 3B <sup>b</sup> of 40 CFR part 60, appendix A or ASTM Method D6522-00(2005) <sup>a</sup> .	(b) Measurements to determine O <sub>2</sub> concentration must be made at the same time as the measurements for VOC concentration.	
	iii. Determine the exhaust flowrate of the stationary internal combustion engine exhaust;	(3) Method 2 or 19 of 40 CFR part 60.		
	iv. If necessary, measure moisture content of the stationary internal combustion engine exhaust at the sampling port location; and	(4) Method 4 of 40 CFR part 60, appendix A, Method 320 of 40 CFR part 63, appendix A, or ASTM D6348-03 (incorporated by reference, see §60.17).	(c) Measurements to determine moisture must be made at the same time as the measurement for VOC concentration.	
	v. Measure VOC at the exhaust of the stationary internal combustion engine.	(5) Methods 25A and 18 of 40 CFR part 60, appendix A, Method 25A with the use of a methane cutter as described in 40 CFR 1065.265, Method 18 or 40 CFR part 60, appendix A, <sup>cd</sup> Method 320 of 40 CFR part 63, appendix A, or ASTM D6348-03 (incorporated by reference, see §60.17).	(d) Results of this test consist of the average of the three 1-hour or longer runs.	

<sup>a</sup>ASTM D6522–00 is incorporated by reference; see 40 CFR 60.17. Also, you may petition the Administrator for approval to use alternative methods for portable analyzer.

<sup>b</sup>You may use ASME PTC 19.10–1981, Flue and Exhaust Gas Analyses, for measuring the O<sub>2</sub> content of the exhaust gas as an alternative to EPA Method 3B.

<sup>c</sup>You may use EPA Method 18 of 40 CFR part 60, appendix A, provided that you conduct an adequate presurvey test prior to the emissions test, such as the one described in OTM 11 on EPA's Web site (<http://www.epa.gov/ttn/emc/prelim/otm11.pdf>).

<sup>d</sup>You may use ASTM D6420–99 (2004), Test Method for Determination of Gaseous Organic Compounds by Direct Interface Gas Chromatography/Mass Spectrometry as an alternative to EPA Method 18 for measuring total nonmethane organic.

**Table 3 to Subpart JJJJ of Part 60—Applicability of General Provisions to Subpart JJJJ**

[As stated in §60.4246, you must comply with the following applicable General Provisions]

General provisions citation	Subject of citation	Applies to subpart	Explanation
§60.1	General applicability of the General Provisions	Yes	
§60.2	Definitions	Yes	Additional terms defined in §60.4248.
§60.3	Units and abbreviations	Yes	
§60.4	Address	Yes	
§60.5	Determination of construction or modification	Yes	
§60.6	Review of plans	Yes	
§60.7	Notification and Recordkeeping	Yes	Except that §60.7 only applies as specified in §60.4245.
§60.8	Performance tests	Yes	Except that §60.8 only applies to owners and operators who are subject to performance testing in subpart JJJJ.
§60.9	Availability of information	Yes	
§60.10	State Authority	Yes	
§60.11	Compliance with standards and maintenance requirements	Yes	Requirements are specified in subpart JJJJ.
§60.12	Circumvention	Yes	

§60.13	Monitoring requirements	No	
§60.14	Modification	Yes	
§60.15	Reconstruction	Yes	
§60.16	Priority list	Yes	
§60.17	Incorporations by reference	Yes	
§60.18	General control device requirements	No	
§60.19	General notification and reporting requirements	Yes	

**Table 4 to Subpart JJJJ of Part 60—Applicability of Mobile Source Provisions for Manufacturers Participating in the Voluntary Certification Program and Certifying Stationary SI ICE to Emission Standards in Table 1 of Subpart JJJJ**

[As stated in §60.4247, you must comply with the following applicable mobile source provisions if you are a manufacturer participating in the voluntary certification program and certifying stationary SI ICE to emission standards in Table 1 of subpart JJJJ]

<b>Mobile source provisions citation</b>	<b>Subject of citation</b>	<b>Applies to subpart</b>	<b>Explanation</b>
1048 subpart A	Overview and Applicability	Yes	
1048 subpart B	Emission Standards and Related Requirements	Yes	Except for the specific sections below.
1048.101	Exhaust Emission Standards	No	
1048.105	Evaporative Emission Standards	No	
1048.110	Diagnosing Malfunctions	No	
1048.140	Certifying Blue Sky Series Engines	No	
1048.145	Interim Provisions	No	
1048 subpart C	Certifying Engine Families	Yes	Except for the specific sections below.
1048.205(b)	AECD reporting	Yes	
1048.205(c)	OBD Requirements	No	
1048.205(n)	Deterioration Factors	Yes	Except as indicated in 60.4247(c).
1048.205(p)(1)	Deterioration Factor Discussion	Yes	
1048.205(p)(2)	Liquid Fuels as they require	No	

1048.240(b)(c)(d)	Deterioration Factors	Yes	
1048 subpart D	Testing Production-Line Engines	Yes	
1048 subpart E	Testing In-Use Engines	No	
1048 subpart F	Test Procedures	Yes	
1065.5(a)(4)	Raw sampling (refers reader back to the specific emissions regulation for guidance)	Yes	
1048 subpart G	Compliance Provisions	Yes	
1048 subpart H	Reserved		
1048 subpart I	Definitions and Other Reference Information	Yes	
1048 appendix I and II	Yes		
1065 (all subparts)	Engine Testing Procedures	Yes	Except for the specific section below.
1065.715	Test Fuel Specifications for Natural Gas	No	
1068 (all subparts)	General Compliance Provisions for Nonroad Programs	Yes	Except for the specific sections below.
1068.245	Hardship Provisions for Unusual Circumstances	No	
1068.250	Hardship Provisions for Small-Volume Manufacturers	No	
1068.255	Hardship Provisions for Equipment Manufacturers and Secondary Engine Manufacturers	No	

Appendix B  
40 CFR Part 63, Subpart HH  
*National Emission Standards for Hazardous Air Pollutants from Oil and Natural Gas  
Production Facilities*





## Electronic Code of Federal Regulations

*e-CFR*

TM

e-CFR Data is current as of January 29, 2009

### **Title 40: Protection of Environment**

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

[Browse Previous](#) | [Browse Next](#)

#### **Subpart HH—National Emission Standards for Hazardous Air Pollutants From Oil and Natural Gas Production Facilities**

**Source:** 64 FR 32628, June 17, 1999, unless otherwise noted.

#### **§ 63.760 Applicability and designation of affected source.**

(a) This subpart applies to the owners and operators of the emission points, specified in paragraph (b) of this section that are located at oil and natural gas production facilities that meet the specified criteria in paragraphs (a)(1) and either (a)(2) or (a)(3) of this section.

(1) Facilities that are major or area sources of hazardous air pollutants (HAP) as defined in §63.761. Emissions for major source determination purposes can be estimated using the maximum natural gas or hydrocarbon liquid throughput, as appropriate, calculated in paragraphs (a)(1)(i) through (iii) of this section. As an alternative to calculating the maximum natural gas or hydrocarbon liquid throughput, the owner or operator of a new or existing source may use the facility's design maximum natural gas or hydrocarbon liquid throughput to estimate the maximum potential emissions. Other means to determine the facility's major source status are allowed, provided the information is documented and recorded to the Administrator's satisfaction. A facility that is determined to be an area source, but subsequently increases its emissions or its potential to emit above the major source levels (without first obtaining and complying with other limitations that keep its potential to emit HAP below major source levels), and becomes a major source, must comply thereafter with all provisions of this subpart applicable to a major source starting on the applicable compliance date specified in paragraph (f) of this section. Nothing in this paragraph is intended to preclude a source from limiting its potential to emit through other appropriate mechanisms that may be available through the permitting authority.

(i) If the owner or operator documents, to the Administrator's satisfaction, a decline in annual natural gas or hydrocarbon liquid throughput, as appropriate, each year for the 5 years prior to June 17, 1999, the owner or operator shall calculate the maximum natural gas or hydrocarbon liquid throughput used to determine maximum potential emissions according to the requirements specified in paragraph (a)(1)(i)(A) of this section. In all other circumstances, the owner or operator shall calculate the maximum throughput used to determine whether a facility is a major source in accordance with the requirements specified in paragraph (a)(1)(i)(B) of this section.

(A) The maximum natural gas or hydrocarbon liquid throughput is the average of the annual natural

gas or hydrocarbon liquid throughput for the 3 years prior to June 17, 1999, multiplied by a factor of 1.2.

(B) The maximum natural gas or hydrocarbon liquid throughput is the highest annual natural gas or hydrocarbon liquid throughput over the 5 years prior to June 17, 1999, multiplied by a factor of 1.2.

(ii) The owner or operator shall maintain records of the annual facility natural gas or hydrocarbon liquid throughput each year and upon request submit such records to the Administrator. If the facility annual natural gas or hydrocarbon liquid throughput increases above the maximum natural gas or hydrocarbon liquid throughput calculated in paragraph (a)(1)(i)(A) or (a)(1)(i)(B) of this section, the maximum natural gas or hydrocarbon liquid throughput must be recalculated using the higher throughput multiplied by a factor of 1.2.

(iii) The owner or operator shall determine the maximum values for other parameters used to calculate emissions as the maximum for the period over which the maximum natural gas or hydrocarbon liquid throughput is determined in accordance with paragraph (a)(1)(i)(A) or (B) of this section. Parameters shall be based on either highest measured values or annual average.

(2) Facilities that process, upgrade, or store hydrocarbon liquids prior to the point of custody transfer.

(3) Facilities that process, upgrade, or store natural gas prior to the point at which natural gas enters the natural gas transmission and storage source category or is delivered to a final end user. For the purposes of this subpart, natural gas enters the natural gas transmission and storage source category after the natural gas processing plant, when present. If no natural gas processing plant is present, natural gas enters the natural gas transmission and storage source category after the point of custody transfer.

(b) The affected sources for major sources are listed in paragraph (b)(1) of this section and for area sources in paragraph (b)(2) of this section.

(1) For major sources, the affected source shall comprise each emission point located at a facility that meets the criteria specified in paragraph (a) of this section and listed in paragraphs (b)(1)(i) through (b)(1)(iv) of this section.

(i) Each glycol dehydration unit;

(ii) Each storage vessel with the potential for flash emissions;

(iii) The group of all ancillary equipment, except compressors, intended to operate in volatile hazardous air pollutant service (as defined in §63.761), which are located at natural gas processing plants; and

(iv) Compressors intended to operate in volatile hazardous air pollutant service (as defined in §63.761), which are located at natural gas processing plants.

(2) For area sources, the affected source includes each triethylene glycol (TEG) dehydration unit located at a facility that meets the criteria specified in paragraph (a) of this section.

(c) [Reserved]

(d) The owner and operator of a facility that does not contain an affected source as specified in

paragraph (b) of this section are not subject to the requirements of this subpart.

(e) *Exemptions.* The facilities listed in paragraphs (e)(1) and (e)(2) of this section are exempt from the requirements of this subpart. Records shall be maintained as required in §63.10(b)(3).

(1) A facility that exclusively processes, stores, or transfers black oil (as defined in §63.761) is not subject to the requirements of this subpart. For the purposes of this subpart, a black oil facility that uses natural gas for fuel or generates gas from black oil shall qualify for this exemption.

(2) A major source facility, prior to the point of custody transfer, with a facility-wide actual annual average natural gas throughput less than 18.4 thousand standard cubic meters per day and a facility-wide actual annual average hydrocarbon liquid throughput less than 39,700 liters per day.

(f) The owner or operator of an affected major source shall achieve compliance with the provisions of this subpart by the dates specified in paragraphs (f)(1) and (f)(2) of this section. The owner or operator of an affected area source shall achieve compliance with the provisions of this subpart by the dates specified in paragraphs (f)(3) through (f)(6) of this section.

(1) The owner or operator of an affected major source, the construction or reconstruction of which commenced before February 6, 1998, shall achieve compliance with the applicable provisions of this subpart no later than June 17, 2002, except as provided for in §63.6(i). The owner or operator of an area source, the construction or reconstruction of which commenced before February 6, 1998, that increases its emissions of (or its potential to emit) HAP such that the source becomes a major source that is subject to this subpart shall comply with this subpart 3 years after becoming a major source.

(2) The owner or operator of an affected major source, the construction or reconstruction of which commences on or after February 6, 1998, shall achieve compliance with the applicable provisions of this subpart immediately upon initial startup or June 17, 1999, whichever date is later. Area sources, the construction or reconstruction of which commences on or after February 6, 1998, that become major sources shall comply with the provisions of this standard immediately upon becoming a major source.

(3) The owner or operator of an affected area source, located in an Urban-1 county, as defined in §63.761, the construction or reconstruction of which commences before February 6, 1998, shall achieve compliance with the provisions of this subpart no later than the dates specified in paragraphs (f)(3)(i) or (ii) of this section, except as provided for in §63.6(i).

(i) If the affected area source is located within any UA plus offset and UC boundary, as defined in §63.761, the compliance date is January 4, 2010.

(ii) If the affected area source is not located within any UA plus offset and UC boundary, as defined in §63.761, the compliance date is January 5, 2009.

(4) The owner or operator of an affected area source, located in an Urban-1 county, as defined in §63.761, the construction or reconstruction of which commences on or after February 6, 1998, shall achieve compliance with the provisions of this subpart immediately upon initial startup or January 3, 2007, whichever date is later.

(5) The owner or operator of an affected area source that is not located in an Urban-1 county, as defined in §63.761, the construction or reconstruction of which commences before July 8, 2005, shall achieve compliance with the provisions of this subpart no later than the dates specified in

paragraphs (f)(5)(i) or (ii) of this section, except as provided for in §3.6(i).

(i) If the affected area source is located within any UA plus offset and UC boundary, as defined in §63.761, the compliance date is January 4, 2010.

(ii) If the affected area source is not located within any UA plus offset and UC boundary, as defined in §63.761, the compliance date is January 5, 2009.

(6) The owner or operator of an affected area source that is not located in an Urban-1 county, as defined in §63.761, the construction or reconstruction of which commences on or after July 8, 2005, shall achieve compliance with the provisions of this subpart immediately upon initial startup or January 3, 2007, whichever date is later.

(g) The following provides owners or operators of an affected source at a major source with information on overlap of this subpart with other regulations for equipment leaks. The owner or operator of an affected source at a major source shall document that they are complying with other regulations by keeping the records specified in §63.774(b)(9).

(1) After the compliance dates specified in paragraph (f) of this section, ancillary equipment and compressors that are subject to this subpart and that are also subject to and controlled under the provisions of 40 CFR part 60, subpart KKK, are only required to comply with the requirements of 40 CFR part 60, subpart KKK.

(2) After the compliance dates specified in paragraph (f) of this section, ancillary equipment and compressors that are subject to this subpart and are also subject to and controlled under the provisions of 40 CFR part 61, subpart V, are only required to comply with the requirements of 40 CFR part 61, subpart V.

(3) After the compliance dates specified in paragraph (f) of this section, ancillary equipment and compressors that are subject to this subpart and are also subject to and controlled under the provisions of 40 CFR part 63, subpart H, are only required to comply with the requirements of 40 CFR part 63, subpart H.

(h) An owner or operator of an affected source that is a major source or is located at a major source and is subject to the provisions of this subpart is also subject to 40 CFR part 70 or part 71 operating permit requirements. Unless otherwise required by law, the owner or operator of an area source subject to the provisions of this subpart is exempt from the permitting requirements established by 40 CFR part 70 or 40 CFR part 71.

[64 FR 32628, June 17, 1999, as amended at 66 FR 34550, June 29, 2001; 72 FR 36, Jan. 3, 2007]

#### **§ 63.761 Definitions.**

All terms used in this subpart shall have the meaning given them in the Clean Air Act (Act), subpart A of this part (General Provisions), and in this section. If the same term is defined in subpart A and in this section, it shall have the meaning given in this section for purposes of this subpart.

*Alaskan North Slope* means the approximately 180,000 square kilometer area (69,000 square mile area) extending from the Brooks Range to the Arctic Ocean.

*Ancillary equipment* means any of the following pieces of equipment: pumps, pressure relief

devices, sampling connection systems, open-ended valves, or lines, valves, flanges, or other connectors.

*API gravity* means the weight per unit volume of hydrocarbon liquids as measured by a system recommended by the American Petroleum Institute (API) and is expressed in degrees.

*Associated equipment*, as used in this subpart and as referred to in section 112(n)(4) of the Act, means equipment associated with an oil or natural gas exploration or production well, and includes all equipment from the wellbore to the point of custody transfer, except glycol dehydration units and storage vessels with the potential for flash emissions.

*Black oil* means hydrocarbon (petroleum) liquid with an initial producing gas-to-oil ratio (GOR) less than 0.31 cubic meters per liter and an API gravity less than 40 degrees.

*Boiler* means an enclosed device using controlled flame combustion and having the primary purpose of recovering and exporting thermal energy in the form of steam or hot water. Boiler also means any industrial furnace as defined in 40 CFR 260.10.

*Closed-vent system* means a system that is not open to the atmosphere and is composed of piping, ductwork, connections, and if necessary, flow inducing devices that transport gas or vapor from an emission point to one or more control devices. If gas or vapor from regulated equipment is routed to a process (e.g., to a fuel gas system), the conveyance system shall not be considered a closed-vent system and is not subject to closed-vent system standards.

*Combustion device* means an individual unit of equipment, such as a flare, incinerator, process heater, or boiler, used for the combustion of organic HAP emissions.

*Condensate* means hydrocarbon liquid separated from natural gas that condenses due to changes in the temperature, pressure, or both, and remains liquid at standard conditions, as specified in §63.2.

*Continuous recorder* means a data recording device that either records an instantaneous data value at least once every hour or records hourly or more frequent block average values.

*Control device* means any equipment used for recovering or oxidizing HAP or volatile organic compound (VOC) vapors. Such equipment includes, but is not limited to, absorbers, carbon adsorbers, condensers, incinerators, flares, boilers, and process heaters. For the purposes of this subpart, if gas or vapor from regulated equipment is used, reused (i.e., injected into the flame zone of an enclosed combustion device), returned back to the process, or sold, then the recovery system used, including piping, connections, and flow inducing devices, is not considered to be a control device or closed-vent system.

*Cover* means a device which is placed on top of or over a material such that the entire surface area of the material is enclosed and sealed. A cover may have openings (such as access hatches, sampling ports, and gauge wells) if those openings are necessary for operation, inspection, maintenance, or repair of the unit on which the cover is installed, provided that each opening is closed and sealed when the opening is not in use. In addition, a cover may have one or more safety devices. Examples of a cover include, but are not limited to, a fixed-roof installed on a tank, an external floating roof installed on a tank, and a lid installed on a drum or other container.

*Custody transfer* means the transfer of hydrocarbon liquids or natural gas: after processing and/or treatment in the producing operations, or from storage vessels or automatic transfer facilities or other such equipment, including product loading racks, to pipelines or any other forms of

transportation. For the purposes of this subpart, the point at which such liquids or natural gas enters a natural gas processing plant is a point of custody transfer.

*Equipment leaks* means emissions of HAP from ancillary equipment (as defined in this section) and compressors.

*Facility* 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 the purpose 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.

*Field natural gas* means natural gas extracted from a production well prior to entering the first stage of processing, such as dehydration.

*Fixed-roof* means a cover that is mounted on a storage vessel in a stationary manner and that does not move with fluctuations in liquid level.

*Flame zone* means the portion of the combustion chamber in a combustion device occupied by the flame envelope.

*Flash tank*. See the definition for gas-condensate-glycol (GCG) separator.

*Flow indicator* means a device which indicates whether gas flow is present in a line or whether the valve position would allow gas flow to be present in a line.

*Gas-condensate-glycol (GCG) separator* means a two- or three-phase separator through which the "rich" glycol stream of a glycol dehydration unit is passed to remove entrained gas and hydrocarbon liquid. The GCG separator is commonly referred to as a flash separator or flash tank.

*Gas-to-oil ratio (GOR)* means the number of standard cubic meters of gas produced per liter of crude oil or other hydrocarbon liquid.

*Glycol dehydration unit* means a device in which a liquid glycol (including, but not limited to, ethylene glycol, diethylene glycol, or triethylene glycol) absorbent directly contacts a natural gas stream and absorbs water in a contact tower or absorption column (absorber). The glycol contacts and absorbs water vapor and other gas stream constituents from the natural gas and becomes "rich" glycol. This glycol is then regenerated in the glycol dehydration unit reboiler. The "lean" glycol is then recycled.

*Glycol dehydration unit baseline operations* means operations representative of the glycol dehydration unit operations as of June 17, 1999. For the purposes of this subpart, for determining

the percentage of overall HAP emission reduction attributable to process modifications, baseline operations shall be parameter values (including, but not limited to, glycol circulation rate or glycol-HAP absorbency) that represent actual long-term conditions (i.e., at least 1 year). Glycol dehydration units in operation for less than 1 year shall document that the parameter values represent expected long-term operating conditions had process modifications not been made.

*Glycol dehydration unit process vent* means the glycol dehydration unit reboiler vent and the vent from the GCG separator (flash tank), if present.

*Glycol dehydration unit reboiler vent* means the vent through which exhaust from the reboiler of a glycol dehydration unit passes from the reboiler to the atmosphere or to a control device.

*Hazardous air pollutants* or *HAP* means the chemical compounds listed in section 112(b) of the Clean Air Act. All chemical compounds listed in section 112(b) of the Act need to be considered when making a major source determination. Only the HAP compounds listed in Table 1 of this subpart need to be considered when determining compliance.

*Hydrocarbon liquid* means any naturally occurring, unrefined petroleum liquid.

*In VHAP service* means that a piece of ancillary equipment or compressor either contains or contacts a fluid (liquid or gas) which has a total volatile HAP (VHAP) concentration equal to or greater than 10 percent by weight as determined according to the provisions of §63.772(a).

*In wet gas service* means that a piece of equipment contains or contacts the field gas before the extraction of natural gas liquids.

*Incinerator* means an enclosed combustion device that is used for destroying organic compounds. Auxiliary fuel may be used to heat waste gas to combustion temperatures. Any energy recovery section is not physically formed into one manufactured or assembled unit with the combustion section; rather, the energy recovery section is a separate section following the combustion section and the two are joined by ducts or connections carrying flue gas. The above energy recovery section limitation does not apply to an energy recovery section used solely to preheat the incoming vent stream or combustion air.

*Initial producing GOR* means the producing standard cubic meters of gas per liter at the time that the reservoir pressure is above the bubble point pressure (or dewpoint pressure for a gas).

*Initial startup* means the first time a new or reconstructed source begins production. For the purposes of this subpart, initial startup does not include subsequent startups (as defined in this section) of equipment, for example, following malfunctions or shutdowns.

*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) Emissions from processes, operations, or equipment that are not part of the same facility, as defined in this section, shall not be aggregated; and

(3) For facilities that are production field facilities, only HAP emissions from glycol dehydration units and storage vessels with the potential for flash emissions shall be aggregated for a major source determination. For facilities that are not production field facilities, HAP emissions from all HAP emission units shall be aggregated for a major source determination.

*Natural gas* means a naturally occurring mixture of hydrocarbon and nonhydrocarbon gases found in geologic formations beneath the earth's surface. The principal hydrocarbon constituent is methane.

*Natural gas liquids* (NGL) means the liquid hydrocarbons, such as ethane, propane, butane, pentane, natural gasoline, and condensate that are extracted from field natural gas.

*Natural gas processing plant* (gas plant) means any processing site engaged in the extraction of natural gas liquids from field gas, or the fractionation of mixed NGL to natural gas products, or a combination of both.

*No detectable emissions* means no escape of HAP from a device or system to the atmosphere as determined by:

- (1) Instrument monitoring results in accordance with the requirements of §63.772(c); and
- (2) The absence of visible openings or defects in the device or system, such as rips, tears, or gaps.

*Operating parameter value* means a minimum or maximum value established for a control device or process parameter which, if achieved by itself or in combination with one or more other operating parameter values, indicates that an owner or operator has complied with an applicable operating parameter limitation, over the appropriate averaging period as specified in §63.772(f) or (g).

*Operating permit* means a permit required by 40 CFR part 70 or part 71.

*Organic monitoring device* means an instrument used to indicate the concentration level of organic compounds exiting a control device based on a detection principle such as infra-red, photoionization, or thermal conductivity.

*Primary fuel* means the fuel that provides the principal heat input (i.e., more than 50 percent) to the device. To be considered primary, the fuel must be able to sustain operation without the addition of other fuels.

*Process heater* means an enclosed device using a controlled flame, the primary purpose of which is to transfer heat to a process fluid or process material that is not a fluid, or to a heat transfer material for use in a process (rather than for steam generation).

*Produced water* means water that is extracted from the earth from an oil or natural gas production well, or that is separated from crude oil, condensate, or natural gas after extraction.

*Production field facilities* means those 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.



*Reciprocating compressor* means a piece of equipment that increases the pressure of a process gas by positive displacement, employing linear movement of the drive shaft.

*Safety device* means a device that meets both of the following conditions: it is not used for planned or routine venting of liquids, gases, or fumes from the unit or equipment on which the device is installed; and it remains in a closed, sealed position at all times except when an unplanned event requires that the device open for the purpose of preventing physical damage or permanent deformation of the unit or equipment on which the device is installed in accordance with good engineering and safety practices for handling flammable, combustible, explosive, or other hazardous materials. Examples of unplanned events which may require a safety device to open include failure of an essential equipment component or a sudden power outage.

*Shutdown* means for purposes including, but not limited to, periodic maintenance, replacement of equipment, or repair, the cessation of operation of a glycol dehydration unit, or other affected source under this subpart, or equipment required or used solely to comply with this subpart.

*Startup* means the setting into operation of a glycol dehydration unit, or other affected equipment under this subpart, or equipment required or used to comply with this subpart. Startup includes initial startup and operation solely for the purpose of testing equipment.

*Storage vessel* means a tank or other vessel that is designed to contain an accumulation of crude oil, condensate, intermediate hydrocarbon liquids, or produced water and that is constructed primarily of non-earthen materials (e.g., wood, concrete, steel, plastic) that provide structural support.

*Storage vessel with the potential for flash emissions* means any storage vessel that contains a hydrocarbon liquid with a stock tank GOR equal to or greater than 0.31 cubic meters per liter and an API 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.

*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.

*Tank battery* means a collection of equipment used to separate, treat, store, and transfer crude oil, condensate, natural gas, and produced water. A tank battery typically receives crude oil, condensate, natural gas, or some combination of these extracted products from several production wells for accumulation and separation prior to transmission to a natural gas plant or petroleum refinery. A tank battery may or may not include a glycol dehydration unit.

*Temperature monitoring device* means an instrument used to monitor temperature and having a minimum accuracy of  $\pm 2$  percent of the temperature being monitored expressed in  $^{\circ}\text{C}$ , or  $\pm 2.5$   $^{\circ}\text{C}$ , whichever is greater. The temperature monitoring device may measure temperature in degrees Fahrenheit or degrees Celsius, or both.

*Total organic compounds* or *TOC*, as used in this subpart, means those compounds which can be measured according to the procedures of Method 18, 40 CFR part 60, appendix A.

*UA plus offset and UC* is defined as the area occupied by each urbanized area, each urban cluster that contains at least 10,000 people, and the area located two miles or less from each urbanized area boundary.

*Urban-1 County* is defined as a county that contains a part of a Metropolitan Statistical Area with a

population greater than 250,000, based on the Office of Management and Budget's *Standards for defining Metropolitan and Micropolitan Statistical Areas* (December 27, 2000), and Census 2000 Data released by the U.S. Census Bureau.

*Urbanized area* refers to Census 2000 Urbanized Area, which is defined in the *Urban Area Criteria for Census 2000* (March 15, 2002). Essentially, an urbanized area consists of densely settled territory with a population of at least 50,000 people.

*Urban cluster* refers to a Census 2000 Urban Cluster, which is defined in the *Urban Area Criteria for Census 2000* (March 15, 2002). Essentially, an urban cluster consists of densely settled territory with at least 2,500 people but fewer than 50,000 people.

*Volatile hazardous air pollutant concentration* or *VHAP concentration* means the fraction by weight of all HAP contained in a material as determined in accordance with procedures specified in §63.772(a).

[64 FR 32628, June 17, 1999, as amended at 66 FR 34551, June 29, 2001; 72 FR 37, Jan. 3, 2007]

#### **§ 63.762 Startups, shutdowns, and malfunctions.**

(a) The provisions set forth in this subpart shall apply at all times except during startups or shutdowns, during malfunctions, and during periods of non-operation of the affected sources (or specific portion thereof) resulting in cessation of the emissions to which this subpart applies. However, during the startup, shutdown, malfunction, or period of non-operation of one portion of an affected source, all emission points which can comply with the specific provisions to which they are subject must do so during the startup, shutdown, malfunction, or period of non-operation.

(b) The owner or operator shall not shut down items of equipment that are required or utilized for compliance with the provisions of this subpart during times when emissions are being routed to such items of equipment, if the shutdown would contravene requirements of this subpart applicable to such items of equipment. This paragraph does not apply if the item of equipment is malfunctioning, or if the owner or operator must shut down the equipment to avoid damage due to a contemporaneous startup, shutdown, or malfunction of the affected source or a portion thereof.

(c) During startups, shutdowns, and malfunctions when the requirements of this subpart do not apply pursuant to paragraphs (a) and (b) of this section, the owner or operator shall implement, to the extent reasonably available, measures to prevent or minimize excess emissions to the maximum extent practical. For purposes of this paragraph, the term "excess emissions" means emissions in excess of those that would have occurred if there were no startup, shutdown, or malfunction, and the owner or operator complied with the relevant provisions of this subpart. The measures to be taken shall be identified in the applicable startup, shutdown, and malfunction plan, and may include, but are not limited to, air pollution control technologies, recovery technologies, work practices, pollution prevention, monitoring, and/or changes in the manner of operation of the source. Back-up control devices are not required, but may be used if available.

(d) Except as provided in paragraph (e) of this section, the owner or operator shall prepare a startup, shutdown, and malfunction plan as required in §63.6(e)(3), except that the plan is not required to be incorporated by reference into the source's title V permit as specified in §63.6(e)(3)(i). Instead, the owner or operator shall keep the plan on record as required by §63.6(e)(3)(v). The failure of the plan to adequately minimize emissions during startup, shutdown, or malfunctions does not shield an owner or operator from enforcement actions.

(e) Owners or operators are not required to prepare a startup, shutdown, and malfunction plan for any facility where all of the affected sources meet the exemption criteria specified in §63.764(e), or for any facility that is not located within a UA plus offset and UC boundary.

[64 FR 32628, June 17, 1999, as amended at 66 FR 34551, June 29, 2001; 72 FR 38, Jan. 3, 2007]

**§ 63.763 [Reserved]**

**§ 63.764 General standards.**

(a) Table 2 of this subpart specifies the provisions of subpart A (General Provisions) of this part that apply and those that do not apply to owners and operators of affected sources subject to this subpart.

(b) All reports required under this subpart shall be sent to the Administrator at the appropriate address listed in §63.13. Reports may be submitted on electronic media.

(c) Except as specified in paragraph (e) of this section, the owner or operator of an affected source located at an existing or new major source of HAP emissions shall comply with the standards in this subpart as specified in paragraphs (c)(1) through (3) of this section.

(1) For each glycol dehydration unit process vent subject to this subpart, the owner or operator shall comply with the requirements specified in paragraphs (c)(1)(i) through (iii) of this section.

(i) The owner or operator shall comply with the control requirements for glycol dehydration unit process vents specified in §63.765;

(ii) The owner or operator shall comply with the monitoring requirements specified in §63.773; and

(iii) The owner or operator shall comply with the recordkeeping and reporting requirements specified in §§63.774 and 63.775.

(2) For each storage vessel with the potential for flash emissions subject to this subpart, the owner or operator shall comply with the requirements specified in paragraphs (c)(2)(i) through (iii) of this section.

(i) The control requirements for storage vessels specified in §63.766;

(ii) The monitoring requirements specified in §63.773; and

(iii) The recordkeeping and reporting requirements specified in §§63.774 and 63.775.

(3) For ancillary equipment (as defined in §63.761) and compressors at a natural gas processing plant subject to this subpart, the owner or operator shall comply with the requirements for equipment leaks specified in §63.769.

(d) Except as specified in paragraph (e)(1) of this section, the owner or operator of an affected source located at an existing or new area source of HAP emissions shall comply with the applicable standards specified in paragraph (d) of this section.

(1) Each owner or operator of an area source located within an UA plus offset and UC boundary (as

defined in §63.761) shall comply with the provisions specified in paragraphs (d)(1)(i) through (iii) of this section.

(i) The control requirements for glycol dehydration unit process vents specified in §63.765;

(ii) The monitoring requirements specified in §63.773; and

(iii) The recordkeeping and reporting requirements specified in §§63.774 and 63.775.

(2) Each owner or operator of an area source not located in a UA plus offset and UC boundary (as defined in §63.761) shall comply with paragraphs (d)(2)(i) through (iii) of this section.

(i) Determine the optimum glycol circulation rate using the following equation:

$$L_{OPT} = 1.15 * 3.0 \frac{\text{gal TEG}}{\text{lb H}_2\text{O}} * \left( \frac{F * (I - O)}{24 \text{ hr/day}} \right)$$

Where:

$L_{OPT}$  = Optimal circulation rate, gal/hr.

F = Gas flowrate (MMSCF/D).

I = Inlet water content (lb/MMSCF).

O = Outlet water content (lb/MMSCF).

3.0 = The industry accepted rule of thumb for a TEG-to water ratio (gal TEG/lb H<sub>2</sub>O).

1.15 = Adjustment factor included for a margin of safety.

(ii) Operate the TEG dehydration unit such that the actual glycol circulation rate does not exceed the optimum glycol circulation rate determined in accordance with paragraph (d)(2)(i) of this section. If the TEG dehydration unit is unable to meet the sales gas specification for moisture content using the glycol circulation rate determined in accordance with paragraph (d)(2)(i), the owner or operator must calculate an alternate circulation rate using GRI-GLYCalc™, Version 3.0 or higher. The owner or operator must document why the TEG dehydration unit must be operated using the alternate circulation rate and submit this documentation with the initial notification in accordance with §63.775(c)(7).

(iii) Maintain a record of the determination specified in paragraph (d)(2)(ii) in accordance with the requirements in §63.774(f) and submit the Initial Notification in accordance with the requirements in §63.775(c)(7). If operating conditions change and a modification to the optimum glycol circulation rate is required, the owner or operator shall prepare a new determination in accordance with paragraph (d)(2)(i) or (ii) of this section and submit the information specified under §63.775(c)(7)(ii) through (v).

(e) *Exemptions.* (1) The owner or operator is exempt from the requirements of paragraph (c)(1) and (d) of this section if the criteria listed in paragraph (e)(1)(i) or (ii) of this section are met, except that the records of the determination of these criteria must be maintained as required in

§63.774(d)(1).

(i) The actual annual average flowrate of natural gas to the glycol dehydration unit is less than 85 thousand standard cubic meters per day, as determined by the procedures specified in §63.772(b)(1) of this subpart; or

(ii) The actual average emissions of benzene from the glycol dehydration unit process vent to the atmosphere are less than 0.90 megagram per year, as determined by the procedures specified in §63.772(b)(2) of this subpart.

(2) The owner or operator is exempt from the requirements of paragraph (c)(3) of this section for ancillary equipment (as defined in §63.761) and compressors at a natural gas processing plant subject to this subpart if the criteria listed in paragraph (e)(2)(i) or (ii) of this section are met, except that the records of the determination of these criteria must be maintained as required in §63.774(d)(2).

(i) Any ancillary equipment and compressors that contain or contact a fluid (liquid or gas) must have a total VHAP concentration less than 10 percent by weight, as determined by the procedures specified in §63.772(a); or

(ii) That ancillary equipment and compressors must operate in VHAP service less than 300 hours per calendar year.

(f) Each owner or operator of a major HAP source subject to this subpart is required to apply for a 40 CFR part 70 or part 71 operating permit from the appropriate permitting authority. If the Administrator has approved a State operating permit program under 40 CFR part 70, the permit shall be obtained from the State authority. If a State operating permit program has not been approved, the owner or operator of a source shall apply to the EPA Regional Office pursuant to 40 CFR part 71.

(g)–(h) [Reserved]

(i) In all cases where the provisions of this subpart require an owner or operator to repair leaks by a specified time after the leak is detected, it is a violation of this standard to fail to take action to repair the leak(s) within the specified time. If action is taken to repair the leak(s) within the specified time, failure of that action to successfully repair the leak(s) is not a violation of this standard. However, if the repairs are unsuccessful, a leak is detected and the owner or operator shall take further action as required by the applicable provisions of this subpart.

[64 FR 32628, June 17, 1999, as amended at 66 FR 34551, June 29, 2001; 72 FR 38, Jan. 3, 2007]

**§ 63.765 Glycol dehydration unit process vent standards.**

(a) This section applies to each glycol dehydration unit subject to this subpart with an actual annual average natural gas flowrate equal to or greater than 85 thousand standard cubic meters per day and with actual average benzene glycol dehydration unit process vent emissions equal to or greater than 0.90 megagrams per year, that must be controlled for HAP emissions as specified in either paragraph (c)(1)(i) or paragraph (d)(1)(i) of §63.764.

(b) Except as provided in paragraph (c) of this section, an owner or operator of a glycol dehydration unit process vent shall comply with the requirements specified in paragraphs (b)(1) and (b)(2) of this section.

(1) For each glycol dehydration unit process vent, the owner or operator shall control air emissions by either paragraph (b)(1)(i) or (b)(1)(ii) of this section.

(i) The owner or operator shall connect the process vent to a control device or a combination of control devices through a closed-vent system. The closed-vent system shall be designed and operated in accordance with the requirements of §63.771(c). The control device(s) shall be designed and operated in accordance with the requirements of §63.771(d).

(ii) The owner or operator shall connect the process vent to a control device or combination of control devices through a closed-vent system and the outlet benzene emissions from the control device(s) shall be reduced to a level less than 0.90 megagrams per year. The closed-vent system shall be designed and operated in accordance with the requirements of §63.771(c). The control device(s) shall be designed and operated in accordance with the requirements of §63.771(d), except that the performance levels specified in §63.771(d)(1)(i) and (ii) do not apply.

(2) One or more safety devices that vent directly to the atmosphere may be used on the air emission control equipment installed to comply with paragraph (b)(1) of this section.

(c) As an alternative to the requirements of paragraph (b) of this section, the owner or operator may comply with one of the requirements specified in paragraphs (c)(1) through (3) of this section.

(1) The owner or operator shall control air emissions by connecting the process vent to a process natural gas line.

(2) The owner or operator shall demonstrate, to the Administrator's satisfaction, that the total HAP emissions to the atmosphere from the glycol dehydration unit process vent are reduced by 95.0 percent through process modifications, or a combination of process modifications and one or more control devices, in accordance with the requirements specified in §63.771(e).

(3) Control of HAP emissions from a GCG separator (flash tank) vent is not required if the owner or operator demonstrates, to the Administrator's satisfaction, that total emissions to the atmosphere from the glycol dehydration unit process vent are reduced by one of the levels specified in paragraph (c)(3)(i) or (ii) of this section, through the installation and operation of controls as specified in paragraph (b)(1) of this section.

(i) HAP emissions are reduced by 95.0 percent or more.

(ii) Benzene emissions are reduced to a level less than 0.90 megagrams per year.

[64 FR 32628, June 17, 1999, as amended at 66 FR 34551, June 29, 2001; 72 FR 38, Jan. 3, 2007]

#### **§ 63.766 Storage vessel standards.**

(a) This section applies to each storage vessel with the potential for flash emissions (as defined in §63.761) subject to this subpart.

(b) The owner or operator of a storage vessel with the potential for flash emissions (as defined in §63.761) shall comply with one of the control requirements specified in paragraphs (b)(1) and (2) of this section.

(1) The owner or operator shall equip the affected storage vessel with the potential for flash emissions with a cover that is connected, through a closed-vent system that meets the conditions

specified in §63.771(c), to a control device or a combination of control devices that meets any of the conditions specified in §63.771(d). The cover shall be designed and operated in accordance with the requirements of §63.771(b).

(2) The owner or operator of a pressure storage vessel that is designed to operate as a closed system shall operate the storage vessel with no detectable emissions at all times that material is in the storage vessel, except as provided for in paragraph (c) of this section.

(c) One or more safety devices that vent directly to the atmosphere may be used on the storage vessel and air emission control equipment complying with paragraphs (b)(1) and (2) of this section.

(d) This section does not apply to storage vessels for which the owner or operator is meeting the requirements specified in 40 CFR part 60, subpart Kb; or is meeting the requirements specified in 40 CFR part 63, subparts G or CC.

#### **§§ 63.767-63.768 [Reserved]**

#### **§ 63.769 Equipment leak standards.**

(a) This section applies to equipment subject to this subpart and specified in paragraphs (a)(1) and (2) of this section that is located at a natural gas processing plant and operates in VHAP service equal to or greater than 300 hours per calendar year.

(1) Ancillary equipment, as defined in §63.761; and

(2) Compressors.

(b) This section does not apply to ancillary equipment and compressors for which the owner or operator is meeting the requirements specified in subpart H of this part; or is meeting the requirements specified in 40 CFR part 60, subpart KKK.

(c) For each piece of ancillary equipment and each compressor subject to this section located at an existing or new source, the owner or operator shall meet the requirements specified in 40 CFR part 61, subpart V, §§61.241 through 61.247, except as specified in paragraphs (c)(1) through (8) of this section.

(1) Each pressure relief device in gas/vapor service shall be monitored quarterly and within 5 days after each pressure release to detect leaks, except under the following conditions.

(i) The owner or operator has obtained permission from the Administrator to use an alternative means of emission limitation that achieves a reduction in emissions of VHAP at least equivalent to that achieved by the control required in this subpart.

(ii) The pressure relief device is located in a nonfractionating facility that is monitored only by non-facility personnel, it may be monitored after a pressure release the next time the monitoring personnel are on site, instead of within 5 days. Such a pressure relief device shall not be allowed to operate for more than 30 days after a pressure release without monitoring.

(2) For pressure relief devices, if an instrument reading of 10,000 parts per million or greater is measured, a leak is detected.

(3) For pressure relief devices, when a leak is detected, it shall be repaired as soon as practicable, but no later than 15 calendar days after it is detected, unless a delay in repair of equipment is granted under 40 CFR 61.242-10.

(4) Sampling connection systems are exempt from the requirements of 40 CFR 61.242-5.

(5) Pumps in VHAP service, valves in gas/vapor and light liquid service, and pressure relief devices in gas/vapor service that are located at a nonfractionating plant that does not have the design capacity to process 283,000 standard cubic meters per day or more of field gas are exempt from the routine monitoring requirements of 40 CFR 61.242-2(a)(1) and 61.242-7(a), and paragraphs (c)(1) through (3) of this section.

(6) Pumps in VHAP service, valves in gas/vapor and light liquid service, and pressure relief devices in gas/vapor service located within a natural gas processing plant that is located on the Alaskan North Slope are exempt from the routine monitoring requirements of 40 CFR 61.242-2(a)(1) and 61.242-7(a), and paragraphs (c)(1) through (3) of this section.

(7) Reciprocating compressors in wet gas service are exempt from the compressor control requirements of 40 CFR 61.242-3.

(8) Flares used to comply with this subpart shall comply with the requirements of §63.11(b).

[64 FR 32628, June 17, 1999, as amended at 66 FR 34551, June 29, 2001]

#### **§ 63.770 [Reserved]**

#### **§ 63.771 Control equipment requirements.**

(a) This section applies to each cover, closed-vent system, and control device installed and operated by the owner or operator to control air emissions as required by the provisions of this subpart. Compliance with paragraphs (b), (c), and (d) of this section will be determined by review of the records required by §63.774 and the reports required by §63.775, by review of performance test results, and by inspections.

(b) *Cover requirements.* (1) The cover and all openings on the cover (e.g., access hatches, sampling ports, and gauge wells) shall be designed to form a continuous barrier over the entire surface area of the liquid in the storage vessel.

(2) Each cover opening shall be secured in a closed, sealed position (e.g., covered by a gasketed lid or cap) whenever material is in the unit on which the cover is installed except during those times when it is necessary to use an opening as follows:

(i) To add material to, or remove material from the unit (this includes openings necessary to equalize or balance the internal pressure of the unit following changes in the level of the material in the unit);

(ii) To inspect or sample the material in the unit;

(iii) To inspect, maintain, repair, or replace equipment located inside the unit; or

(iv) To vent liquids, gases, or fumes from the unit through a closed-vent system to a control device



designed and operated in accordance with the requirements of paragraphs (c) and (d) of this section.

(c) *Closed-vent system requirements.* (1) The closed-vent system shall route all gases, vapors, and fumes emitted from the material in a HAP emissions unit to a control device that meets the requirements specified in paragraph (d) of this section.

(2) The closed-vent system shall be designed and operated with no detectable emissions.

(3) If the closed-vent system contains one or more bypass devices that could be used to divert all or a portion of the gases, vapors, or fumes from entering the control device, the owner or operator shall meet the requirements specified in paragraphs (c)(3)(i) and (c)(3)(ii) of this section.

(i) For each bypass device, except as provided for in paragraph (c)(3)(ii) of this section, the owner or operator shall either:

(A) At the inlet to the bypass device that could divert the stream away from the control device to the atmosphere, properly install, calibrate, maintain, and operate a flow indicator that is capable of taking periodic readings and sounding an alarm when the bypass device is open such that the stream is being, or could be, diverted away from the control device to the atmosphere; or

(B) Secure the bypass device valve installed at the inlet to the bypass device in the non-diverting position using a car-seal or a lock-and-key type configuration.

(ii) Low leg drains, high point bleeds, analyzer vents, open-ended valves or lines, and safety devices are not subject to the requirements of paragraph (c)(3)(i) of this section.

(d) *Control device requirements.* (1) The control device used to reduce HAP emissions in accordance with the standards of this subpart shall be one of the control devices specified in paragraphs (d)(1)(i) through (iii) of this section.

(i) An enclosed combustion device (e.g., thermal vapor incinerator, catalytic vapor incinerator, boiler, or process heater) that is designed and operated in accordance with one of the following performance requirements:

(A) Reduces the mass content of either TOC or total HAP in the gases vented to the device by 95.0 percent by weight or greater as determined in accordance with the requirements of §63.772(e); or

(B) Reduces the concentration of either TOC or total HAP in the exhaust gases at the outlet to the device to a level equal to or less than 20 parts per million by volume on a dry basis corrected to 3 percent oxygen as determined in accordance with the requirements of §63.772(e); or

(C) Operates at a minimum residence time of 0.5 seconds at a minimum temperature of 760°C.

(D) If a boiler or process heater is used as the control device, then the vent stream shall be introduced into the flame zone of the boiler or process heater.

(ii) A vapor recovery device (e.g., carbon adsorption system or condenser) or other control device that is designed and operated to reduce the mass content of either TOC or total HAP in the gases vented to the device by 95.0 percent by weight or greater as determined in accordance with the requirements of §63.772(e).

(iii) A flare that is designed and operated in accordance with the requirements of §63.11(b).

(2) [Reserved]

(3) The owner or operator shall demonstrate that a control device achieves the performance requirements of paragraph (d)(1) of this section as specified in §63.772(e).

(4) The owner or operator shall operate each control device in accordance with the requirements specified in paragraphs (d)(4)(i) and (ii) of this section.

(i) Each control device used to comply with this subpart shall be operating at all times when gases, vapors, and fumes are vented from the HAP emissions unit or units through the closed-vent system to the control device, as required under §§63.765, 63.766, and 63.769, except when maintenance or repair on a unit cannot be completed without a shutdown of the control device. An owner or operator may vent more than one unit to a control device used to comply with this subpart.

(ii) For each control device monitored in accordance with the requirements of §63.773(d), the owner or operator shall demonstrate compliance according to the requirements of §63.772(f) or (g), as applicable.

(5) For each carbon adsorption system used as a control device to meet the requirements of paragraph (d)(1) of this section, the owner or operator shall manage the carbon as follows:

(i) Following the initial startup of the control device, all carbon in the control device shall be replaced with fresh carbon on a regular, predetermined time interval that is no longer than the carbon service life established for the carbon adsorption system.

(ii) The spent carbon removed from the carbon adsorption system shall be either regenerated, reactivated, or burned in one of the units specified in paragraphs (d)(5)(ii)(A) through (d)(5)(ii)(G) of this section.

(A) Regenerated or reactivated in a thermal treatment unit for which the owner or operator has been issued a final permit under 40 CFR part 270 that implements the requirements of 40 CFR part 264, subpart X.

(B) Regenerated or reactivated in a thermal treatment unit equipped with and operating air emission controls in accordance with this section.

(C) Regenerated or reactivated in a thermal treatment unit equipped with and operating organic air emission controls in accordance with a national emissions standard for HAP under another subpart in 40 CFR part 61 or this part.

(D) Burned in a hazardous waste incinerator for which the owner or operator has been issued a final permit under 40 CFR part 270 that implements the requirements of 40 CFR part 264, subpart O.

(E) Burned in a hazardous waste incinerator which the owner or operator has designed and operates in accordance with the requirements of 40 CFR part 265, subpart O.

(F) Burned in a boiler or industrial furnace for which the owner or operator has been issued a final permit under 40 CFR part 270 that implements the requirements of 40 CFR part 266, subpart H.

(G) Burned in a boiler or industrial furnace which the owner or operator has designed and operates in accordance with the interim status requirements of 40 CFR part 266, subpart H.

(e) *Process modification requirements.* Each owner or operator that chooses to comply with §63.765(c)(2) shall meet the requirements specified in paragraphs (e)(1) through (e)(3) of this section.

(1) The owner or operator shall determine glycol dehydration unit baseline operations (as defined in §63.761). Records of glycol dehydration unit baseline operations shall be retained as required under §63.774(b)(10).

(2) The owner or operator shall document, to the Administrator's satisfaction, the conditions for which glycol dehydration unit baseline operations shall be modified to achieve the 95.0 percent overall HAP emission reduction, either through process modifications or through a combination of process modifications and one or more control devices. If a combination of process modifications and one or more control devices are used, the owner or operator shall also establish the percent HAP reduction to be achieved by the control device to achieve an overall HAP emission reduction of 95.0 percent for the glycol dehydration unit process vent. Only modifications in glycol dehydration unit operations directly related to process changes, including but not limited to changes in glycol circulation rate or glycol-HAP absorbency, shall be allowed. Changes in the inlet gas characteristics or natural gas throughput rate shall not be considered in determining the overall HAP emission reduction due to process modifications.

(3) The owner or operator that achieves a 95.0 percent HAP emission reduction using process modifications alone shall comply with paragraph (e)(3)(i) of this section. The owner or operator that achieves a 95.0 percent HAP emission reduction using a combination of process modifications and one or more control devices shall comply with paragraphs (e)(3)(i) and (e)(3)(ii) of this section.

(i) The owner or operator shall maintain records, as required in §63.774(b)(11), that the facility continues to operate in accordance with the conditions specified under paragraph (e)(2) of this section.

(ii) The owner or operator shall comply with the control device requirements specified in paragraph (d) of this section, except that the emission reduction achieved shall be the emission reduction specified for the control device(s) in paragraph (e)(2) of this section.

[64 FR 32628, June 17, 1999, as amended at 66 FR 34552, June 29, 2001; 68 FR 37353, June 23, 2003]

**§ 63.772 Test methods, compliance procedures, and compliance demonstrations.**

(a) *Determination of material VHAP or HAP concentration to determine the applicability of the equipment leak standards under this subpart (§63.769).* Each piece of ancillary equipment and compressors are presumed to be in VHAP service or in wet gas service unless an owner or operator demonstrates that the piece of equipment is not in VHAP service or in wet gas service.

(1) For a piece of ancillary equipment and compressors to be considered not in VHAP service, it must be determined that the percent VHAP content can be reasonably expected never to exceed 10.0 percent by weight. For the purposes of determining the percent VHAP content of the process fluid that is contained in or contacts a piece of ancillary equipment or compressor, you shall use the method in either paragraph (a)(1)(i) or paragraph (a)(1)(ii) of this section.

(i) Method 18 of 40 CFR part 60, appendix A, or

(ii) ASTM D6420–99 (2004), Standard Test Method for Determination of Gaseous Organic Compounds by Direct Interface Gas Chromatography-Mass Spectrometry (incorporated by reference—see §63.14), provided that the provisions of paragraphs (a)(1)(ii)(A) through (D) of this section are followed:

(A) The target compound(s) are those listed in section 1.1 of ASTM D6420–99 (2004);

(B) The target concentration is between 150 parts per billion by volume and 100 parts per million by volume;

(C) For target compound(s) not listed in Table 1.1 of ASTM D6420–99 (2004), but potentially detected by mass spectrometry, the additional system continuing calibration check after each run, as detailed in section 10.5.3 of ASTM D6420–99 (2004), is conducted, met, documented, and submitted with the data report, even if there is no moisture condenser used or the compound is not considered water soluble; and

(D) For target compound(s) not listed in Table 1.1 of ASTM D6420–99 (2004), and not amenable to detection by mass spectrometry, ASTM D6420–99 (2004) may not be used.

(2) For a piece of ancillary equipment and compressors to be considered in wet gas service, it must be determined that it contains or contacts the field gas before the extraction of natural gas liquids.

(b) *Determination of glycol dehydration unit flowrate or benzene emissions.* The procedures of this paragraph shall be used by an owner or operator to determine glycol dehydration unit natural gas flowrate or benzene emissions to meet the criteria for an exemption from control requirements under §63.764(e)(1).

(1) The determination of actual flowrate of natural gas to a glycol dehydration unit shall be made using the procedures of either paragraph (b)(1)(i) or (b)(1)(ii) of this section.

(i) The owner or operator shall install and operate a monitoring instrument that directly measures natural gas flowrate to the glycol dehydration unit with an accuracy of plus or minus 2 percent or better. The owner or operator shall convert annual natural gas flowrate to a daily average by dividing the annual flowrate by the number of days per year the glycol dehydration unit processed natural gas.

(ii) The owner or operator shall document, to the Administrator's satisfaction, that the actual annual average natural gas flowrate to the glycol dehydration unit is less than 85 thousand standard cubic meters per day.

(2) The determination of actual average benzene emissions from a glycol dehydration unit shall be made using the procedures of either paragraph (b)(2)(i) or (b)(2)(ii) of this section. Emissions shall be determined either uncontrolled, or with federally enforceable controls in place.

(i) The owner or operator shall determine actual average benzene emissions using the model GRI-GLYCalc™, Version 3.0 or higher, and the procedures presented in the associated GRI-GLYCalc™ Technical Reference Manual. Inputs to the model shall be representative of actual operating conditions of the glycol dehydration unit and may be determined using the procedures documented in the Gas Research Institute (GRI) report entitled "Atmospheric Rich/Low Method for Determining Glycol Dehydrator Emissions" (GRI-95/0368.1); or

(ii) The owner or operator shall determine an average mass rate of benzene emissions in kilograms per hour through direct measurement using the methods in §63.772(a)(1)(i) or (ii), or an alternative method according to §63.7(f). Annual emissions in kilograms per year shall be determined by multiplying the mass rate by the number of hours the unit is operated per year. This result shall be converted to megagrams per year.

(c) *No detectable emissions test procedure.* (1) The no detectable emissions test procedure shall be conducted in accordance with Method 21, 40 CFR part 60, appendix A.

(2) The detection instrument shall meet the performance criteria of Method 21, 40 CFR part 60, appendix A, except that the instrument response factor criteria in section 3.1.2(a) of Method 21 shall be for the average composition of the fluid and not for each individual organic compound in the stream.

(3) The detection instrument shall be calibrated before use on each day of its use by the procedures specified in Method 21, 40 CFR part 60, appendix A.

(4) Calibration gases shall be as follows:

(i) Zero air (less than 10 parts per million by volume hydrocarbon in air); and

(ii) A mixture of methane in air at a concentration less than 10,000 parts per million by volume.

(5) An owner or operator may choose to adjust or not adjust the detection instrument readings to account for the background organic concentration level. If an owner or operator chooses to adjust the instrument readings for the background level, the background level value must be determined according to the procedures in Method 21 of 40 CFR part 60, appendix A.

(6)(i) Except as provided in paragraph (c)(6)(ii) of this section, the detection instrument shall meet the performance criteria of Method 21 of 40 CFR part 60, appendix A, except the instrument response factor criteria in section 3.1.2(a) of Method 21 shall be for the average composition of the process fluid, not each individual volatile organic compound in the stream. For process streams that contain nitrogen, air, or other inerts which are not organic hazardous air pollutants or volatile organic compounds, the average stream response factor shall be calculated on an inert-free basis.

(ii) If no instrument is available at the facility that will meet the performance criteria specified in paragraph (c)(6)(i) of this section, the instrument readings may be adjusted by multiplying by the average response factor of the process fluid, calculated on an inert-free basis as described in paragraph (c)(6)(i) of this section.

(7) An owner or operator must determine if a potential leak interface operates with no detectable emissions using the applicable procedure specified in paragraph (c)(7)(i) or (c)(7)(ii) of this section.

(i) If an owner or operator chooses not to adjust the detection instrument readings for the background organic concentration level, then the maximum organic concentration value measured by the detection instrument is compared directly to the applicable value for the potential leak interface as specified in paragraph (c)(8) of this section.

(ii) If an owner or operator chooses to adjust the detection instrument readings for the background organic concentration level, the value of the arithmetic difference between the maximum organic concentration value measured by the instrument and the background organic concentration value as determined in paragraph (c)(5) of this section is compared with the applicable value for the

potential leak interface as specified in paragraph (c)(8) of this section.

(8) A potential leak interface is determined to operate with no detectable organic emissions if the organic concentration value determined in paragraph (c)(7) of this section, is less than 500 parts per million by volume.

(d) [Reserved]

(e) *Control device performance test procedures.* This paragraph applies to the performance testing of control devices. The owners or operators shall demonstrate that a control device achieves the performance requirements of §63.771(d)(1) or (e)(3)(ii) using either a performance test as specified in paragraph (e)(3) of this section or a design analysis as specified in paragraph (e)(4) of this section. The owner or operator may elect to use the alternative procedures in paragraph (e)(5) of this section for performance testing of a condenser used to control emissions from a glycol dehydration unit process vent.

(1) The following control devices are exempt from the requirements to conduct performance tests and design analyses under this section:

(i) Except as specified in paragraph (e)(2) of this section, a flare that is designed and operated in accordance with §63.11(b);

(ii) A boiler or process heater with a design heat input capacity of 44 megawatts or greater;

(iii) A boiler or process heater into which the vent stream is introduced with the primary fuel or is used as the primary fuel;

(iv) A boiler or process heater burning hazardous waste for which the owner or operator has either been issued a final permit under 40 CFR part 270 and complies with the requirements of 40 CFR part 266, subpart H; or has certified compliance with the interim status requirements of 40 CFR part 266, subpart H;

(v) A hazardous waste incinerator for which the owner or operator has been issued a final permit under 40 CFR part 270 and complies with the requirements of 40 CFR part 264, subpart O; or has certified compliance with the interim status requirements of 40 CFR part 265, subpart O.

(vi) A control device for which a performance test was conducted for determining compliance with a regulation promulgated by the EPA and the test was conducted using the same methods specified in this section and either no process changes have been made since the test, or the owner or operator can demonstrate that the results of the performance test, with or without adjustments, reliably demonstrate compliance despite process changes.

(2) An owner or operator shall design and operate each flare in accordance with the requirements specified in §63.11(b) and in paragraphs (e)(2)(i) and (e)(2)(ii) of this section.

(i) The compliance determination shall be conducted using Method 22 of 40 CFR part 60, appendix A, to determine visible emissions.

(ii) An owner or operator is not required to conduct a performance test to determine percent emission reduction or outlet organic HAP or TOC concentration when a flare is used.

(3) For a performance test conducted to demonstrate that a control device meets the requirements of

§63.771(d)(1) or (e)(3)(ii), the owner or operator shall use the test methods and procedures specified in paragraphs (e)(3)(i) through (iv) of this section. The performance test results shall be submitted in the Notification of Compliance Status Report as required in §63.775(d)(1)(ii).

(i) Method 1 or 1A, 40 CFR part 60, appendix A, as appropriate, shall be used for selection of the sampling sites in paragraphs (e)(3)(i)(A) and (B) of this section. Any references to particulate mentioned in Methods 1 and 1A do not apply to this section.

(A) To determine compliance with the control device percent reduction requirement specified in §63.771(d)(1)(i)(A), (d)(1)(ii) or (e)(3)(ii), sampling sites shall be located at the inlet of the first control device, and at the outlet of the final control device.

(B) To determine compliance with the enclosed combustion device total HAP concentration limit specified in §63.771(d)(1)(i)(B), the sampling site shall be located at the outlet of the combustion device.

(ii) The gas volumetric flowrate shall be determined using Method 2, 2A, 2C, or 2D, 40 CFR part 60, appendix A, as appropriate.

(iii) To determine compliance with the control device percent reduction performance requirement in §63.771(d)(1)(i)(A), (d)(1)(ii), and (e)(3)(ii), the owner or operator shall use one of the following methods: Method 18, 40 CFR part 60, appendix A; Method 25A, 40 CFR part 60, appendix A; ASTM D6420–99 (2004), as specified in §63.772(a)(1)(ii); or any other method or data that have been validated according to the applicable procedures in Method 301, 40 CFR part 63, appendix A. The following procedures shall be used to calculate percent reduction efficiency:

(A) The minimum sampling time for each run shall be 1 hour in which either an integrated sample or a minimum of four grab samples shall be taken. If grab sampling is used, then the samples shall be taken at approximately equal intervals in time, such as 15-minute intervals during the run.

(B) The mass rate of either TOC (minus methane and ethane) or total HAP ( $E_i$ ,  $E_o$ ) shall be computed using the equations and procedures specified in paragraphs (e)(3)(iii)(B)(1) through (3) of this section. As an alternative, the mass rate of either TOC (minus methane and ethane) or total HAP at the inlet of the control device ( $E_i$ ) may be calculated using the procedures specified in paragraph (e)(3)(iii)(B)(4) of this section.

(1) The following equations shall be used:

$$E_i = K_2 \left( \sum_{j=1}^n C_{ij} M_{ij} \right) Q_i$$

$$E_o = K_2 \left( \sum_{j=1}^n C_{oj} M_{oj} \right) Q_o$$

Where:

$C_{ij}$ ,  $C_{oj}$  = Concentration of sample component j of the gas stream at the inlet and outlet of the control device, respectively, dry basis, parts per million by volume.

$E_i$ ,  $E_o$ = Mass rate of TOC (minus methane and ethane) or total HAP at the inlet and outlet of the control device, respectively, dry basis, kilogram per hour.

$M_{ij}$ ,  $M_{oj}$ = Molecular weight of sample component  $j$  of the gas stream at the inlet and outlet of the control device, respectively, gram/gram-mole.

$Q_i$ ,  $Q_o$ = Flowrate of gas stream at the inlet and outlet of the control device, respectively, dry standard cubic meter per minute.

$K_2$ = Constant,  $2.494 \times 10^{-6}$  (parts per million) (gram-mole per standard cubic meter) (kilogram/gram) (minute/hour), where standard temperature (gram-mole per standard cubic meter) is 20 °C.

$n$  = Number of components in sample.

( 2 ) When the TOC mass rate is calculated, all organic compounds (minus methane and ethane) measured by Method 18, 40 CFR part 60, appendix A, or Method 25A, 40 CFR part 60, appendix A, or ASTM D6420–99 (2004) as specified in §63.772(a)(1)(ii), shall be summed using the equations in paragraph (e)(3)(iii)(B)( 1 ) of this section.

( 3 ) When the total HAP mass rate is calculated, only HAP chemicals listed in Table 1 of this subpart shall be summed using the equations in paragraph (e)(3)(iii)(B)( 1 ) of this section.

( 4 ) As an alternative to the procedures for calculating  $E_i$  specified in paragraph (e)(3)(iii)(B)( 1 ) of this section, the owner or operator may use the model GRI-GLYCalc<sup>TM</sup>, Version 3.0 or higher, and the procedures presented in the associated GRI-GLYCalc<sup>TM</sup> Technical Reference Manual. Inputs to the model shall be representative of actual operating conditions of the glycol dehydration unit and shall be determined using the procedures documented in the Gas Research Institute (GRI) report entitled “Atmospheric Rich/Lean Method for Determining Glycol Dehydrator Emissions” (GRI–95/0368.1). When the TOC mass rate is calculated for glycol dehydration units using the model GRI-GLYCalc<sup>TM</sup>, all organic compounds (minus methane and ethane) measured by Method 18, 40 CFR part 60, appendix A, or Method 25A, 40 CFR part 60, appendix A, shall be summed. When the total HAP mass rate is calculated for glycol dehydration units using the model GRI-GLYCalc<sup>TM</sup>, only HAP chemicals listed in Table 1 of this subpart shall be summed.

(C) The percent reduction in TOC (minus methane and ethane) or total HAP shall be calculated as follows:

$$R_{cd} = \frac{E_i - E_o}{E_i} \times 100\%$$

Where:

$R_{cd}$ = Control efficiency of control device, percent.

$E_i$ = Mass rate of TOC (minus methane and ethane) or total HAP at the inlet to the control device as calculated under paragraph (e)(3)(iii)(B) of this section, kilograms TOC per hour or kilograms HAP per hour.

$E_o$ = Mass rate of TOC (minus methane and ethane) or total HAP at the outlet of the control device, as calculated under paragraph (e)(3)(iii)(B) of this section, kilograms TOC per hour or kilograms



HAP per hour.

(D) If the vent stream entering a boiler or process heater with a design capacity less than 44 megawatts is introduced with the combustion air or as a secondary fuel, the weight-percent reduction of total HAP or TOC (minus methane and ethane) across the device shall be determined by comparing the TOC (minus methane and ethane) or total HAP in all combusted vent streams and primary and secondary fuels with the TOC (minus methane and ethane) or total HAP exiting the device, respectively.

(iv) To determine compliance with the enclosed combustion device total HAP concentration limit specified in §63.771(d)(1)(i)(B), the owner or operator shall use one of the following methods to measure either TOC (minus methane and ethane) or total HAP: Method 18, 40 CFR part 60, appendix A; Method 25A, 40 CFR part 60, appendix A; ASTM D6420–99 (2004), as specified in §63.772(a)(1)(ii), or any other method or data that have been validated according to Method 301 of appendix A of this part. The following procedures shall be used to calculate parts per million by volume concentration, corrected to 3 percent oxygen:

(A) The minimum sampling time for each run shall be 1 hour, in which either an integrated sample or a minimum of four grab samples shall be taken. If grab sampling is used, then the samples shall be taken at approximately equal intervals in time, such as 15-minute intervals during the run.

(B) The TOC concentration or total HAP concentration shall be calculated according to paragraph (e)(3)(iv)(B)( 1 ) or (e)(3)(iv)(B)( 2 ) of this section.

( 1 ) The TOC concentration is the sum of the concentrations of the individual components and shall be computed for each run using the following equation:

$$C_{TOC} = \sum_{i=1}^x \frac{\left( \sum_{j=1}^n C_{ji} \right)}{x}$$

Where:

$C_{TOC}$  = entration of total organic compounds minus methane and ethane, dry basis, parts per million by volume.

$C_{ji}$  = Concentration of sample component j of sample i, dry basis, parts per million by volume.

n = Number of components in the sample.

x = Number of samples in the sample run.

( 2 ) The total HAP concentration shall be computed according to the equation in paragraph (e)(3)(iv)(B)( 1 ) of this section, except that only HAP chemicals listed in Table 1 of this subpart shall be summed.

(C) The TOC concentration or total HAP concentration shall be corrected to 3 percent oxygen as follows:

( 1 ) The emission rate correction factor for excess air, integrated sampling and analysis procedures

of Method 3B, 40 CFR part 60, appendix A, shall be used to determine the oxygen concentration. The samples shall be taken during the same time that the samples are taken for determining TOC concentration or total HAP concentration.

(2) The TOC or HAP concentration shall be corrected for percent oxygen by using the following equation:

$$C_c = C_m \left( \frac{17.9}{20.9 - \%O_{2d}} \right)$$

Where:

$C_c$  = TOC concentration or total HAP concentration corrected to 3 percent oxygen, dry basis, parts per million by volume.

$C_m$  = TOC concentration or total HAP concentration, dry basis, parts per million by volume.

$\%O_{2d}$  = Concentration of oxygen, dry basis, percent by volume.

(4) For a design analysis conducted to meet the requirements of §63.771(d)(1) or (e)(3)(ii), the owner or operator shall meet the requirements specified in paragraphs (e)(4)(i) and (e)(4)(ii) of this section. Documentation of the design analysis shall be submitted as a part of the Notification of Compliance Status Report as required in §63.775(d)(1)(i).

(i) The design analysis shall include analysis of the vent stream characteristics and control device operating parameters for the applicable control device as specified in paragraphs (e)(4)(i)(A) through (F) of this section.

(A) For a thermal vapor incinerator, the design analysis shall include the vent stream composition, constituent concentrations, and flowrate and shall establish the design minimum and average temperatures in the combustion zone and the combustion zone residence time.

(B) For a catalytic vapor incinerator, the design analysis shall include the vent stream composition, constituent concentrations, and flowrate and shall establish the design minimum and average temperatures across the catalyst bed inlet and outlet, and the design service life of the catalyst.

(C) For a boiler or process heater, the design analysis shall include the vent stream composition, constituent concentrations, and flowrate; shall establish the design minimum and average flame zone temperatures and combustion zone residence time; and shall describe the method and location where the vent stream is introduced into the flame zone.

(D) For a condenser, the design analysis shall include the vent stream composition, constituent concentrations, flowrate, relative humidity, and temperature, and shall establish the design outlet organic compound concentration level, design average temperature of the condenser exhaust vent stream, and the design average temperatures of the coolant fluid at the condenser inlet and outlet. As an alternative to the design analysis, an owner or operator may elect to use the procedures specified in paragraph (e)(5) of this section.

(E) For a regenerable carbon adsorption system, the design analysis shall include the vent stream composition, constituent concentrations, flowrate, relative humidity, and temperature, and shall establish the design exhaust vent stream organic compound concentration level, adsorption cycle

time, number and capacity of carbon beds, type and working capacity of activated carbon used for the carbon beds, design total regeneration stream flow over the period of each complete carbon bed regeneration cycle, design carbon bed temperature after regeneration, design carbon bed regeneration time, and design service life of the carbon.

(F) For a nonregenerable carbon adsorption system, such as a carbon canister, the design analysis shall include the vent stream composition, constituent concentrations, flowrate, relative humidity, and temperature, and shall establish the design exhaust vent stream organic compound concentration level, capacity of the carbon bed, type and working capacity of activated carbon used for the carbon bed, and design carbon replacement interval based on the total carbon working capacity of the control device and source operating schedule. In addition, these systems will incorporate dual carbon canisters in case of emission breakthrough occurring in one canister.

(ii) If the owner or operator and the Administrator do not agree on a demonstration of control device performance using a design analysis then the disagreement shall be resolved using the results of a performance test performed by the owner or operator in accordance with the requirements of paragraph (e)(3) of this section. The Administrator may choose to have an authorized representative observe the performance test.

(5) As an alternative to the procedures in paragraphs (e)(3) and (e)(4)(i)(D) of this section, an owner or operator may elect to use the procedures documented in the GRI report entitled, "Atmospheric Rich/Lean Method for Determining Glycol Dehydrator Emissions" (GRI-95/0368.1) as inputs for the model GRI-GLYCalc™, Version 3.0 or higher, to determine condenser performance.

(f) *Compliance demonstration for control device performance requirements.* This paragraph applies to the demonstration of compliance with the control device performance requirements specified in §63.771(d)(1)(i) and (e)(3). Compliance shall be demonstrated using the requirements in paragraphs (f)(1) through (3) of this section. As an alternative, an owner or operator that installs a condenser as the control device to achieve the requirements specified in §63.771(d)(1)(ii) or (e)(3) may demonstrate compliance according to paragraph (g) of this section. An owner or operator may switch between compliance with paragraph (f) of this section and compliance with paragraph (g) of this section only after at least 1 year of operation in compliance with the selected approach. Notification of such a change in the compliance method shall be reported in the next Periodic Report, as required in §63.775(e), following the change.

(1) The owner or operator shall establish a site specific maximum or minimum monitoring parameter value (as appropriate) according to the requirements of §63.773(d)(5)(i).

(2) The owner or operator shall calculate the daily average of the applicable monitored parameter in accordance with §63.773(d)(4).

(3) Compliance with the operating parameter limit is achieved when the daily average of the monitoring parameter value calculated under paragraph (f)(2) of this section is either equal to or greater than the minimum or equal to or less than the maximum monitoring value established under paragraph (f)(1) of this section.

(g) *Compliance demonstration with percent reduction performance requirements—condensers.* This paragraph applies to the demonstration of compliance with the performance requirements specified in §63.771(d)(1)(ii) or (e)(3) for condensers. Compliance shall be demonstrated using the procedures in paragraphs (g)(1) through (3) of this section.

(1) The owner or operator shall establish a site-specific condenser performance curve according to

§63.773(d)(5)(ii).

(2) Compliance with the percent reduction requirement in §63.771(d)(1)(ii) or (e)(3) shall be demonstrated by the procedures in paragraphs (g)(2)(i) through (iii) of this section.

(i) The owner or operator must calculate the daily average condenser outlet temperature in accordance with §63.773(d)(4).

(ii) The owner or operator shall determine the condenser efficiency for the current operating day using the daily average condenser outlet temperature calculated under paragraph (g)(2)(i) of this section and the condenser performance curve established under paragraph (g)(1) of this section.

(iii) Except as provided in paragraphs (g)(2)(iii)(A) and (B) of this section, at the end of each operating day, the owner or operator shall calculate the 365-day average HAP emission reduction from the condenser efficiencies as determined in paragraph (g)(2)(ii) of this section for the preceding 365 operating days. If the owner or operator uses a combination of process modifications and a condenser in accordance with the requirements of §63.771(e), the 365-day average HAP emission reduction shall be calculated using the emission reduction achieved through process modifications and the condenser efficiency as determined in paragraph (g)(2)(ii) of this section, both for the previous 365 operating days.

(A) After the compliance dates specified in §63.760(f), an owner or operator with less than 120 days of data for determining average HAP emission reduction, shall calculate the average HAP emission reduction for the first 120 days of operation after the compliance dates. Compliance with the performance requirements is achieved if the 120-day average HAP emission reduction is equal to or greater than 90.0 percent.

(B) After 120 days and no more than 364 days of operation after the compliance dates specified in §63.760(f), the owner or operator shall calculate the average HAP emission reduction as the HAP emission reduction averaged over the number of days between the current day and the applicable compliance date. Compliance with the performance requirements is achieved if the average HAP emission reduction is equal to or greater than 90.0 percent.

(3) If the owner or operator has data for 365 days or more of operation, compliance is achieved with the emission limitation specified in §63.771(d)(1)(ii) or (e)(3) if the average HAP emission reduction calculated in paragraph (g)(2)(iii) of this section is equal to or greater than 95.0 percent.

[64 FR 32628, June 17, 1999, as amended at 66 FR 34552, June 29, 2001; 72 FR 38, Jan. 3, 2007]

**§ 63.773 Inspection and monitoring requirements.**

(a) This section applies to an owner or operator using air emission controls in accordance with the requirements of §§63.765 and 63.766.

(b) [Reserved]

(c) *Cover and closed-vent system inspection and monitoring requirements.* (1) For each closed-vent system or cover required to comply with this section, the owner or operator shall comply with the requirements of paragraphs (c) (2) through (7) of this section.

(2) Except as provided in paragraphs (c)(5) and (6) of this section, each closed-vent system shall be inspected according to the procedures and schedule specified in paragraphs (c)(2)(i) and (ii) of this

section, each cover shall be inspected according to the procedures and schedule specified in paragraph (c)(2)(iii) of this section, and each bypass device shall be inspected according to the procedures of paragraph (c)(2)(iv) of this section.

(i) For each closed-vent system joints, seams, or other connections that are permanently or semi-permanently sealed (e.g., a welded joint between two sections of hard piping or a bolted and gasketed ducting flange), the owner or operator shall:

(A) Conduct an initial inspection according to the procedures specified in §63.772(c) to demonstrate that the closed-vent system operates with no detectable emissions. Inspection results shall be submitted with the Notification of Compliance Status Report as specified in §63.775(d)(1) or (2).

(B) Conduct annual visual inspections for defects that could result in air emissions. Defects include, but are not limited to, visible cracks, holes, or gaps in piping; loose connections; or broken or missing caps or other closure devices. The owner or operator shall monitor a component or connection using the procedures in §63.772(c) to demonstrate that it operates with no detectable emissions following any time the component is repaired or replaced or the connection is unsealed. Inspection results shall be submitted in the Periodic Report as specified in §63.775(e)(2)(iii).

(ii) For closed-vent system components other than those specified in paragraph (c)(2)(i) of this section, the owner or operator shall:

(A) Conduct an initial inspection according to the procedures specified in §63.772(c) to demonstrate that the closed-vent system operates with no detectable emissions. Inspection results shall be submitted with the Notification of Compliance Status Report as specified in §63.775(d)(1) or (2).

(B) Conduct annual inspections according to the procedures specified in §63.772(c) to demonstrate that the components or connections operate with no detectable emissions. Inspection results shall be submitted in the Periodic Report as specified in §63.775(e)(2)(iii).

(C) Conduct annual visual inspections for defects that could result in air emissions. Defects include, but are not limited to, visible cracks, holes, or gaps in ductwork; loose connections; or broken or missing caps or other closure devices. Inspection results shall be submitted in the Periodic Report as specified in §63.775(e)(2)(iii).

(iii) For each cover, the owner or operator shall:

(A) Conduct visual inspections for defects that could result in air emissions. Defects include, but are not limited to, visible cracks, holes, or gaps in the cover, or between the cover and the separator wall; broken, cracked, or otherwise damaged seals or gaskets on closure devices; and broken or missing hatches, access covers, caps, or other closure devices. In the case where the storage vessel is buried partially or entirely underground, inspection is required only for those portions of the cover that extend to or above the ground surface, and those connections that are on such portions of the cover (e.g., fill ports, access hatches, gauge wells, etc.) and can be opened to the atmosphere.

(B) The inspections specified in paragraph (c)(2)(iii)(A) of this section shall be conducted initially, following the installation of the cover. Inspection results shall be submitted with the Notification of Compliance Status Report as specified in §63.775(d)(12). Thereafter, the owner or operator shall perform the inspection at least once every calendar year, except as provided in paragraphs (c)(5) and (6) of this section. Annual inspection results shall be submitted in the Periodic Report as

specified in §63.775(e)(2)(iii).

(iv) For each bypass device, except as provided for in §63.771(c)(3)(ii), the owner or operator shall either:

(A) At the inlet to the bypass device that could divert the steam away from the control device to the atmosphere, set the flow indicator to take a reading at least once every 15 minutes; or

(B) If the bypass device valve installed at the inlet to the bypass device is secured in the non-diverting position using a car-seal or a lock-and-key type configuration, visually inspect the seal or closure mechanism at least once every month to verify that the valve is maintained in the non-diverting position and the vent stream is not diverted through the bypass device.

(3) In the event that a leak or defect is detected, the owner or operator shall repair the leak or defect as soon as practicable, except as provided in paragraph (c)(4) of this section.

(i) A first attempt at repair shall be made no later than 5 calendar days after the leak is detected.

(ii) Repair shall be completed no later than 15 calendar days after the leak is detected.

(4) Delay of repair of a closed-vent system or cover for which leaks or defects have been detected is allowed if the repair is technically infeasible without a shutdown, as defined in §63.761, or if the owner or operator determines that emissions resulting from immediate repair would be greater than the fugitive emissions likely to result from delay of repair. Repair of such equipment shall be complete by the end of the next shutdown.

(5) Any parts of the closed-vent system or cover that are designated, as described in paragraphs (c)(5) (i) and (ii) of this section, as unsafe to inspect are exempt from the inspection requirements of paragraphs (c)(2)(i), (ii), and (iii) of this section if:

(i) The owner or operator determines that the equipment is unsafe to inspect because inspecting personnel would be exposed to an imminent or potential danger as a consequence of complying with paragraphs (c)(2)(i), (ii), or (iii) of this section; and

(ii) The owner or operator has a written plan that requires inspection of the equipment as frequently as practicable during safe-to-inspect times.

(6) Any parts of the closed-vent system or cover that are designated, as described in paragraphs (c)(6) (i) and (ii) of this section, as difficult to inspect are exempt from the inspection requirements of paragraphs (c)(2)(i), (ii), and (iii) of this section if:

(i) The owner or operator determines that the equipment cannot be inspected without elevating the inspecting personnel more than 2 meters above a support surface; and

(ii) The owner or operator has a written plan that requires inspection of the equipment at least once every 5 years.

(7) Records shall be maintained as specified in §63.774(b)(5) through (8).

(d) *Control device monitoring requirements.* (1) For each control device, except as provided for in paragraph (d)(2) of this section, the owner or operator shall install and operate a continuous

parameter monitoring system in accordance with the requirements of paragraphs (d)(3) through (9) of this section. Owners or operators that install and operate a flare in accordance with §63.771(d)(1)(iii) are exempt from the requirements of paragraphs (d)(4) and (5) of this section. The continuous monitoring system shall be designed and operated so that a determination can be made on whether the control device is achieving the applicable performance requirements of §63.771(d) or (e)(3). The continuous parameter monitoring system shall meet the following specifications and requirements:

(i) Each continuous parameter monitoring system shall measure data values at least once every hour and record either:

(A) Each measured data value; or

(B) Each block average value for each 1-hour period or shorter periods calculated from all measured data values during each period. If values are measured more frequently than once per minute, a single value for each minute may be used to calculate the hourly (or shorter period) block average instead of all measured values.

(ii) The monitoring system must be installed, calibrated, operated, and maintained in accordance with the manufacturer's specifications or other written procedures that provide reasonable assurance that the monitoring equipment is operating properly.

(2) An owner or operator is exempt from the monitoring requirements specified in paragraphs (d)(3) through (9) of this section for the following types of control devices:

(i) A boiler or process heater in which all vent streams are introduced with the primary fuel or is used as the primary fuel; or

(ii) A boiler or process heater with a design heat input capacity equal to or greater than 44 megawatts.

(3) The owner or operator shall install, calibrate, operate, and maintain a device equipped with a continuous recorder to measure the values of operating parameters appropriate for the control device as specified in either paragraph (d)(3)(i), (d)(3)(ii), or (d)(3)(iii) of this section.

(i) A continuous monitoring system that measures the following operating parameters as applicable:

(A) For a thermal vapor incinerator, a temperature monitoring device equipped with a continuous recorder. The monitoring device shall have a minimum accuracy of  $\pm 2$  percent of the temperature being monitored in  $^{\circ}\text{C}$ , or  $\pm 2.5$   $^{\circ}\text{C}$ , whichever value is greater. The temperature sensor shall be installed at a location in the combustion chamber downstream of the combustion zone.

(B) For a catalytic vapor incinerator, a temperature monitoring device equipped with a continuous recorder. The device shall be capable of monitoring temperature at two locations and have a minimum accuracy of  $\pm 2$  percent of the temperature being monitored in  $^{\circ}\text{C}$ , or  $\pm 2.5$   $^{\circ}\text{C}$ , whichever value is greater. One temperature sensor shall be installed in the vent stream at the nearest feasible point to the catalyst bed inlet and a second temperature sensor shall be installed in the vent stream at the nearest feasible point to the catalyst bed outlet.

(C) For a flare, a heat sensing monitoring device equipped with a continuous recorder that indicates the continuous ignition of the pilot flame.

(D) For a boiler or process heater with a design heat input capacity of less than 44 megawatts, a temperature monitoring device equipped with a continuous recorder. The temperature monitoring device shall have a minimum accuracy of  $\pm 2$  percent of the temperature being monitored in  $^{\circ}\text{C}$ , or  $\pm 2.5$   $^{\circ}\text{C}$ , whichever value is greater. The temperature sensor shall be installed at a location in the combustion chamber downstream of the combustion zone.

(E) For a condenser, a temperature monitoring device equipped with a continuous recorder. The temperature monitoring device shall have a minimum accuracy of  $\pm 2$  percent of the temperature being monitored in  $^{\circ}\text{C}$ , or  $\pm 2.5$   $^{\circ}\text{C}$ , whichever value is greater. The temperature sensor shall be installed at a location in the exhaust vent stream from the condenser.

(F) For a regenerative-type carbon adsorption system:

( 1 ) A continuous parameter monitoring system to measure and record the average total regeneration stream mass flow or volumetric flow during each carbon bed regeneration cycle. The integrating regenerating stream flow monitoring device must have an accuracy of  $\pm 10$  percent; and

( 2 ) A continuous parameter monitoring system to measure and record the average carbon bed temperature for the duration of the carbon bed steaming cycle and to measure the actual carbon bed temperature after regeneration and within 15 minutes of completing the cooling cycle. The temperature monitoring device shall have a minimum accuracy of  $\pm 2$  percent of the temperature being monitored in  $^{\circ}\text{C}$ , or  $\pm 2.5$   $^{\circ}\text{C}$ , whichever value is greater.

(G) For a nonregenerative-type carbon adsorption system, the owner or operator shall monitor the design carbon replacement interval established using a performance test performed in accordance with §63.772(e)(3) or a design analysis in accordance with §63.772(e)(4)(i)(F) and shall be based on the total carbon working capacity of the control device and source operating schedule.

(ii) A continuous monitoring system that measures the concentration level of organic compounds in the exhaust vent stream from the control device using an organic monitoring device equipped with a continuous recorder. The monitor must meet the requirements of Performance Specification 8 or 9 of appendix B of 40 CFR part 60 and must be installed, calibrated, and maintained according to the manufacturer's specifications.

(iii) A continuous monitoring system that measures alternative operating parameters other than those specified in paragraph (d)(3)(i) or (d)(3)(ii) of this section upon approval of the Administrator as specified in §63.8(f)(1) through (5).

(4) Using the data recorded by the monitoring system, the owner or operator must calculate the daily average value for each monitored operating parameter for each operating day. If the HAP emissions unit operation is continuous, the operating day is a 24-hour period. If HAP emissions unit operation is not continuous, the operating day is the total number of hours of control device operation per 24-hour period. Valid data points must be available for 75 percent of the operating hours in an operating day to compute the daily average.

(5) For each operating parameter monitor installed in accordance with the requirements of paragraph (d)(3) of this section, the owner or operator shall comply with paragraph (d)(5)(i) of this section for all control devices, and when condensers are installed, the owner or operator shall also comply with paragraph (d)(5)(ii) of this section.

(i) The owner or operator shall establish a minimum operating parameter value or a maximum operating parameter value, as appropriate for the control device, to define the conditions at which



the control device must be operated to continuously achieve the applicable performance requirements of §63.771(d)(1) or §63.771(e)(3)(ii). Each minimum or maximum operating parameter value shall be established as follows:

(A) If the owner or operator conducts performance tests in accordance with the requirements of §63.772(e)(3) to demonstrate that the control device achieves the applicable performance requirements specified in §63.771(d)(1) or §63.771(e)(3)(ii), then the minimum operating parameter value or the maximum operating parameter value shall be established based on values measured during the performance test and supplemented, as necessary, by control device design analysis or control device manufacturer recommendations or a combination of both.

(B) If the owner or operator uses a control device design analysis in accordance with the requirements of §63.772(e)(4) to demonstrate that the control device achieves the applicable performance requirements specified in §63.771(d)(1) or (e)(3)(ii), then the minimum operating parameter value or the maximum operating parameter value shall be established based on the control device design analysis and may be supplemented by the control device manufacturer's recommendations.

(ii) The owner or operator shall establish a condenser performance curve showing the relationship between condenser outlet temperature and condenser control efficiency. The curve shall be established as follows:

(A) If the owner or operator conducts a performance test in accordance with the requirements of §63.772(e)(3) to demonstrate that the condenser achieves the applicable performance requirements in §63.771(d)(1) or (e)(3)(ii), then the condenser performance curve shall be based on values measured during the performance test and supplemented as necessary by control device design analysis, or control device manufacturer's recommendations, or a combination or both.

(B) If the owner or operator uses a control device design analysis in accordance with the requirements of §63.772(e)(4)(i)(D) to demonstrate that the condenser achieves the applicable performance requirements specified in §63.771(d)(1) or (e)(3)(ii), then the condenser performance curve shall be based on the condenser design analysis and may be supplemented by the control device manufacturer's recommendations.

(C) As an alternative to paragraphs (d)(5)(ii)(A) and (B) of this section, the owner or operator may elect to use the procedures documented in the GRI report entitled, "Atmospheric Rich/Lean Method for Determining Glycol Dehydrator Emissions" (GRI-95/0368.1) as inputs for the model GRI-GLYCalc™, Version 3.0 or higher, to generate a condenser performance curve.

(6) An excursion for a given control device is determined to have occurred when the monitoring data or lack of monitoring data result in any one of the criteria specified in paragraphs (d)(6)(i) through (d)(6)(v) of this section being met. When multiple operating parameters are monitored for the same control device and during the same operating day and more than one of these operating parameters meets an excursion criterion specified in paragraphs (d)(6)(i) through (d)(6)(v) of this section, then a single excursion is determined to have occurred for the control device for that operating day.

(i) An excursion occurs when the daily average value of a monitored operating parameter is less than the minimum operating parameter limit (or, if applicable, greater than the maximum operating parameter limit) established for the operating parameter in accordance with the requirements of paragraph (d)(5)(i) of this section.

(ii) An excursion occurs when the 365-day average condenser efficiency calculated according to the

requirements specified in §63.772(g)(2)(iii) is less than 95.0 percent.

(iii) If an owner or operator has less than 365 days of data, an excursion occurs when the average condenser efficiency calculated according to the procedures specified in §63.772(g)(2)(iii)(A) or (B) is less than 90.0 percent.

(iv) An excursion occurs when the monitoring data are not available for at least 75 percent of the operating hours in a day.

(v) If the closed-vent system contains one or more bypass devices that could be used to divert all or a portion of the gases, vapors, or fumes from entering the control device, an excursion occurs when:

(A) For each bypass line subject to §63.771(c)(3)(i)(A) the flow indicator indicates that flow has been detected and that the stream has been diverted away from the control device to the atmosphere.

(B) For each bypass line subject to §63.771(c)(3)(i)(B), if the seal or closure mechanism has been broken, the bypass line valve position has changed, the key for the lock-and-key type lock has been checked out, or the car-seal has broken.

(7) For each excursion, except as provided for in paragraph (d)(8) of this section, the owner or operator shall be deemed to have failed to have applied control in a manner that achieves the required operating parameter limits. Failure to achieve the required operating parameter limits is a violation of this standard.

(8) An excursion is not a violation of the operating parameter limit as specified in paragraphs (d)(8)(i) and (d)(8)(ii) of this section.

(i) An excursion does not count toward the number of excused excursions allowed under paragraph (d)(8)(ii) of this section when the excursion occurs during any one of the following periods:

(A) During a period of startup, shutdown, or malfunction when the affected facility is operated during such period in accordance with §63.6(e)(1); or

(B) During periods of non-operation of the unit or the process that is vented to the control device (resulting in cessation of HAP emissions to which the monitoring applies).

(ii) For each control device, or combinations of control devices installed on the same HAP emissions unit, one excused excursion is allowed per semiannual period for any reason. The initial semiannual period is the 6-month reporting period addressed by the first Periodic Report submitted by the owner or operator in accordance with §63.775(e) of this subpart.

(9) Nothing in paragraphs (d)(1) through (d)(8) of this section shall be construed to allow or excuse a monitoring parameter excursion caused by any activity that violates other applicable provisions of this subpart.

[64 FR 32628, June 17, 1999, as amended at 66 FR 34553, June 29, 2001; 68 FR 37353, June 23, 2003; 71 FR 20457, Apr. 20, 2006]

#### **§ 63.774 Recordkeeping requirements.**

(a) The recordkeeping provisions of 40 CFR part 63, subpart A, that apply and those that do not apply to owners and operators of sources subject to this subpart are listed in Table 2 of this subpart.

(b) Except as specified in paragraphs (c), (d), and (f) of this section, each owner or operator of a facility subject to this subpart shall maintain the records specified in paragraphs (b)(1) through (11) of this section:

(1) The owner or operator of an affected source subject to the provisions of this subpart shall maintain files of all information (including all reports and notifications) required by this subpart. The files shall be retained for at least 5 years following the date of each occurrence, measurement, maintenance, corrective action, report or period.

(i) All applicable records shall be maintained in such a manner that they can be readily accessed.

(ii) The most recent 12 months of records shall be retained on site or shall be accessible from a central location by computer or other means that provides access within 2 hours after a request.

(iii) The remaining 4 years of records may be retained offsite.

(iv) Records may be maintained in hard copy or computer-readable form including, but not limited to, on paper, microfilm, computer, floppy disk, magnetic tape, or microfiche.

(2) Records specified in §63.10(b)(2);

(3) Records specified in §63.10(c) for each monitoring system operated by the owner or operator in accordance with the requirements of §63.773(d). Notwithstanding the requirements of §63.10(c), monitoring data recorded during periods identified in paragraphs (b)(3)(i) through (b)(3)(iv) of this section shall not be included in any average or percent leak rate computed under this subpart. Records shall be kept of the times and durations of all such periods and any other periods during process or control device operation when monitors are not operating.

(i) Monitoring system breakdowns, repairs, calibration checks, and zero (low-level) and high-level adjustments;

(ii) Startups, shutdowns, or malfunctions events. During startups, shutdowns, or malfunction events, the owner or operator shall maintain records indicating whether or not the startup, shutdown or malfunction plan required under §63.762(d), was followed.

(iii) Periods of non-operation resulting in cessation of the emissions to which the monitoring applies; and

(iv) Excursions due to invalid data as defined in §63.773(d)(6)(iv).

(4) Each owner or operator using a control device to comply with §63.764 of this subpart shall keep the following records up-to-date and readily accessible:

(i) Continuous records of the equipment operating parameters specified to be monitored under §63.773(d) or specified by the Administrator in accordance with §63.773(d)(3)(iii). For flares, the hourly records and records of pilot flame outages specified in paragraph (e) of this section shall be maintained in place of continuous records.

(ii) Records of the daily average value of each continuously monitored parameter for each operating day determined according to the procedures specified in §63.773(d)(4) of this subpart, except as specified in paragraphs (b)(4)(ii)(A) and (B) of this section.

(A) For flares, the records required in paragraph (e) of this section.

(B) For condensers installed to comply with §63.765, records of the annual 365-day rolling average condenser efficiency determined under §63.772(g) shall be kept in addition to the daily averages.

(iii) Hourly records of whether the flow indicator specified under §63.771(c)(3)(i)(A) was operating and whether flow was detected at any time during the hour, as well as records of the times and durations of all periods when the vent stream is diverted from the control device or the monitor is not operating.

(iv) Where a seal or closure mechanism is used to comply with §63.771(c)(3)(i)(B), hourly records of flow are not required. In such cases, the owner or operator shall record that the monthly visual inspection of the seals or closure mechanism has been done, and shall record the duration of all periods when the seal mechanism is broken, the bypass line valve position has changed, or the key for a lock-and-key type lock has been checked out, and records of any car-seal that has broken.

(5) Records identifying all parts of the cover or closed-vent system that are designated as unsafe to inspect in accordance with §63.773(c)(5), an explanation of why the equipment is unsafe to inspect, and the plan for inspecting the equipment.

(6) Records identifying all parts of the cover or closed-vent system that are designated as difficult to inspect in accordance with §63.773(c)(6), an explanation of why the equipment is difficult to inspect, and the plan for inspecting the equipment.

(7) For each inspection conducted in accordance with §63.773(c), during which a leak or defect is detected, a record of the information specified in paragraphs (b)(7)(i) through (b)(7)(viii) of this section.

(i) The instrument identification numbers, operator name or initials, and identification of the equipment.

(ii) The date the leak or defect was detected and the date of the first attempt to repair the leak or defect.

(iii) Maximum instrument reading measured by the method specified in §63.772(c) after the leak or defect is successfully repaired or determined to be nonrepairable.

(iv) "Repair delayed" and the reason for the delay if a leak or defect is not repaired within 15 calendar days after discovery of the leak or defect.

(v) The name, initials, or other form of identification of the owner or operator (or designee) whose decision it was that repair could not be effected without a shutdown.

(vi) The expected date of successful repair of the leak or defect if a leak or defect is not repaired within 15 calendar days.

(vii) Dates of shutdowns that occur while the equipment is unrepaired.

(viii) The date of successful repair of the leak or defect.

(8) For each inspection conducted in accordance with §63.773(c) during which no leaks or defects are detected, a record that the inspection was performed, the date of the inspection, and a statement that no leaks or defects were detected.

(9) Records identifying ancillary equipment and compressors that are subject to and controlled under the provisions of 40 CFR part 60, subpart KKK; 40 CFR part 61, subpart V; or 40 CFR part 63, subpart H.

(10) Records of glycol dehydration unit baseline operations calculated as required under §63.771(e)(1).

(11) Records required in §63.771(e)(3)(i) documenting that the facility continues to operate under the conditions specified in §63.771(e)(2).

(c) An owner or operator that elects to comply with the benzene emission limit specified in §63.765(b)(1)(ii) shall document, to the Administrator's satisfaction, the following items:

(1) The method used for achieving compliance and the basis for using this compliance method; and

(2) The method used for demonstrating compliance with 0.90 megagrams per year of benzene.

(3) Any information necessary to demonstrate compliance as required in the methods specified in paragraphs (c)(1) and (c)(2) of this section.

(d)(1) An owner or operator of a glycol dehydration unit that meets the exemption criteria in §63.764(e)(1)(i) or §63.764(e)(1)(ii) shall maintain the records specified in paragraph (d)(1)(i) or paragraph (d)(1)(ii) of this section, as appropriate, for that glycol dehydration unit.

(i) The actual annual average natural gas throughput (in terms of natural gas flowrate to the glycol dehydration unit per day) as determined in accordance with §63.772(b)(1), or

(ii) The actual average benzene emissions (in terms of benzene emissions per year) as determined in accordance with §63.772(b)(2).

(2) An owner or operator that is exempt from the control requirements under §63.764(e)(2) of this subpart shall maintain the following records:

(i) Information and data used to demonstrate that a piece of ancillary equipment or a compressor is not in VHAP service or not in wet gas service shall be recorded in a log that is kept in a readily accessible location.

(ii) Identification and location of ancillary equipment or compressors, located at a natural gas processing plant subject to this subpart, that is in VHAP service less than 300 hours per year.

(e) Record the following when using a flare to comply with §63.771(d):

(1) Flare design (i.e., steam-assisted, air-assisted, or non-assisted);

(2) All visible emission readings, heat content determinations, flowrate measurements, and exit

velocity determinations made during the compliance determination required by §63.772(e)(2); and

(3) All hourly records and other recorded periods when the pilot flame is absent.

(f) The owner or operator of an area source not located within a UA plus offset and UC boundary must keep a record of the calculation used to determine the optimum glycol circulation rate in accordance with §63.764(d)(2)(i) or §63.764(d)(2)(ii), as applicable.

[64 FR 32628, June 17, 1999, as amended at 66 FR 34554, June 29, 2001; 72 FR 39, Jan. 3, 2007]

#### **§ 63.775 Reporting requirements.**

(a) The reporting provisions of subpart A of this part, that apply and those that do not apply to owners and operators of sources subject to this subpart are listed in Table 2 of this subpart.

(b) Each owner or operator of a major source subject to this subpart shall submit the information listed in paragraphs (b)(1) through (b)(6) of this section, except as provided in paragraphs (b)(7) and (b)(8) of this section.

(1) The initial notifications required for existing affected sources under §63.9(b)(2) shall be submitted by 1 year after an affected source becomes subject to the provisions of this subpart or by June 17, 2000, whichever is later. Affected sources that are major sources on or before June 17, 2000 and plan to be area sources by June 17, 2002 shall include in this notification a brief, nonbinding description of a schedule for the action(s) that are planned to achieve area source status.

(2) The date of the performance evaluation as specified in §63.8(e)(2), required only if the owner or operator is required by the Administrator to conduct a performance evaluation for a continuous monitoring system. A separate notification of the performance evaluation is not required if it is included in the initial notification submitted in accordance with paragraph (b)(1) of this section.

(3) The planned date of a performance test at least 60 days before the test in accordance with §63.7(b). Unless requested by the Administrator, a site-specific test plan is not required by this subpart. If requested by the Administrator, the owner or operator must also submit the site-specific test plan required by §63.7(c) with the notification of the performance test. A separate notification of the performance test is not required if it is included in the initial notification submitted in accordance with paragraph (b)(1) of this section.

(4) A Notification of Compliance Status report as described in paragraph (d) of this section;

(5) Periodic Reports as described in paragraph (e) of this section; and

(6) Startup, shutdown, and malfunction reports specified in §63.10(d)(5) shall be submitted as required. Separate startup, shutdown, and malfunction reports as described in §63.10(d)(5) are not required if the information is included in the Periodic Report specified in paragraph (e) of this section.

(7) Each owner or operator of a glycol dehydration unit subject to this subpart that is exempt from the control requirements for glycol dehydration unit process vents in §63.765, is exempt from all reporting requirements for major sources in this subpart, for that unit.

(8) Each owner or operator of ancillary equipment and compressors subject to this subpart that are exempt from the control requirements for equipment leaks in §63.769, are exempt from all

reporting requirements for major sources in this subpart, for that equipment.

(c) Except as provided in paragraph (c)(8), each owner or operator of an area source subject to this subpart shall submit the information listed in paragraph (c)(1) of this section. If the source is located within a UA plus offset and UC boundary, the owner or operator shall also submit the information listed in paragraphs (c)(2) through (6) of this section. If the source is not located within any UA plus offset and UC boundaries, the owner or operator shall also submit the information listed within paragraph (c)(7).

(1) The initial notifications required under §63.9(b)(2) not later than January 3, 2008. In addition to submitting your initial notification to the addressees specified under §63.9(a), you must also submit a copy of the initial notification to EPA's Office of Air Quality Planning and Standards. Send your notification via e-mail to [CCG-ONG@EPA.GOV](mailto:CCG-ONG@EPA.GOV) or via U.S. mail or other mail delivery service to U.S. EPA, Sector Policies and Programs Division/Coatings and Chemicals Group (E143-01), Attn: Oil and Gas Project Leader, Research Triangle Park, NC 27711.

(2) The date of the performance evaluation as specified in §63.8(e)(2) if an owner or operator is required by the Administrator to conduct a performance evaluation for a continuous monitoring system.

(3) The planned date of a performance test at least 60 days before the test in accordance with §63.7(b). Unless requested by the Administrator, a site-specific test plan is not required by this subpart. If requested by the Administrator, the owner or operator must submit the site-specific test plan required by §63.7(c) with the notification of the performance test. A separate notification of the performance test is not required if it is included in the initial notification submitted in accordance with paragraph (c)(1) of this section.

(4) A Notification of Compliance Status as described in paragraph (d) of this section;

(5) Periodic reports as described in paragraph (e)(3) of this section; and

(6) Startup, shutdown, and malfunction reports specified in §63.10(d)(5). Separate startup, shutdown, and malfunction reports as described in §63.10(d)(5) are not required if the information is included in the Periodic Report specified in paragraph (e) of this section.

(7) The information listed in paragraphs (c)(1)(i) through (v) of this section. This information shall be submitted with the initial notification.

(i) Documentation of the source's location relative to the nearest UA plus offset and UC boundaries. This information shall include the latitude and longitude of the affected source; whether the source is located in an urban cluster with 10,000 people or more; the distance in miles to the nearest urbanized area boundary if the source is not located in an urban cluster with 10,000 people or more; and the names of the nearest urban cluster with 10,000 people or more and nearest urbanized area.

(ii) Calculation of the optimum glycol circulation rate determined in accordance with §63.764(d)(2)(i).

(iii) If applicable, documentation of the alternate glycol circulation rate calculated using GRI-GLYCalc™, Version 3.0 or higher and documentation stating why the TEG dehydration unit must operate using the alternate glycol circulation rate.

(iv) The name of the manufacturer and the model number of the glycol circulation pump(s) in

operation.

(v) Statement by a responsible official, with that official's name, title, and signature, certifying that the facility will always operate the glycol dehydration unit using the optimum circulation rate determined in accordance with §63.764(d)(2)(i) or §63.764(d)(2)(ii), as applicable.

(8) An owner or operator of a TEG dehydration unit located at an area source that meets the criteria in §63.764(e)(1)(i) or §63.764(e)(1)(ii) is exempt from the reporting requirements for area sources in paragraphs (c)(1) through (7) of this section, for that unit.

(d) Each owner or operator of a source subject to this subpart shall submit a Notification of Compliance Status Report as required under §63.9(h) within 180 days after the compliance date specified in §63.760(f). In addition to the information required under §63.9(h), the Notification of Compliance Status Report shall include the information specified in paragraphs (d)(1) through (12) of this section. This information may be submitted in an operating permit application, in an amendment to an operating permit application, in a separate submittal, or in any combination of the three. If all of the information required under this paragraph has been submitted at any time prior to 180 days after the applicable compliance dates specified in §63.760(f), a separate Notification of Compliance Status Report is not required. If an owner or operator submits the information specified in paragraphs (d)(1) through (12) of this section at different times, and/or different submittals, subsequent submittals may refer to previous submittals instead of duplicating and resubmitting the previously submitted information.

(1) If a closed-vent system and a control device other than a flare are used to comply with §63.764, the owner or operator shall submit the information in paragraph (d)(1)(iii) of this section and the information in either paragraph (d)(1)(i) or (ii) of this section.

(i) The design analysis documentation specified in §63.772(e)(4) of this subpart, if the owner or operator elects to prepare a design analysis.

(ii) If the owner or operator elects to conduct a performance test, the performance test results including the information specified in paragraphs (d)(1)(ii)(A) and (B) of this section. Results of a performance test conducted prior to the compliance date of this subpart can be used provided that the test was conducted using the methods specified in §63.772(e)(3) and that the test conditions are representative of current operating conditions.

(A) The percent reduction of HAP or TOC, or the outlet concentration of HAP or TOC (parts per million by volume on a dry basis), determined as specified in §63.772(e)(3) of this subpart; and

(B) The value of the monitored parameters specified in §773(d) of this subpart, or a site-specific parameter approved by the permitting agency, averaged over the full period of the performance test.

(iii) The results of the closed-vent system initial inspections performed according to the requirements in §63.773(c)(2)(i) and (ii).

(2) If a closed-vent system and a flare are used to comply with §63.764, the owner or operator shall submit performance test results including the information in paragraphs (d)(2)(i) and (ii) of this section. The owner or operator shall also submit the information in paragraph (d)(2)(iii) of this section.

(i) All visible emission readings, heat content determinations, flowrate measurements, and exit velocity determinations made during the compliance determination required by §63.772(e)(2) of



this subpart.

(ii) A statement of whether a flame was present at the pilot light over the full period of the compliance determination.

(iii) The results of the closed-vent system initial inspections performed according to the requirements in §63.773(c)(2)(i) and (ii).

(3) For each owner or operator subject to the provisions specified in §63.769, the owner or operator shall submit the information required by §61.247(a), except that the initial report required in §61.247(a) shall be submitted as a part of the Notification of Compliance Status Report required in paragraph (d) of this section. The owner or operator shall also submit the information specified in paragraphs (d)(3) (i) and (ii) of this section.

(i) The number of each equipment (e.g., valves, pumps, etc.) excluding equipment in vacuum service, and

(ii) Any change in the information submitted in this paragraph shall be provided to the Administrator as a part of subsequent Periodic Reports described in paragraph (e)(2)(iv) of this section.

(4) The owner or operator shall submit one complete test report for each test method used for a particular source.

(i) For additional tests performed using the same test method, the results specified in paragraph (d)(1)(ii) of this section shall be submitted, but a complete test report is not required.

(ii) A complete test report shall include a sampling site description, description of sampling and analysis procedures and any modifications to standard procedures, quality assurance procedures, record of operating conditions during the test, record of preparation of standards, record of calibrations, raw data sheets for field sampling, raw data sheets for field and laboratory analyses, documentation of calculations, and any other information required by the test method.

(5) For each control device other than a flare used to meet the requirements of §63.764, the owner or operator shall submit the information specified in paragraphs (d)(5) (i) through (iii) of this section for each operating parameter required to be monitored in accordance with the requirements of §63.773(d).

(i) The minimum operating parameter value or maximum operating parameter value, as appropriate for the control device, established by the owner or operator to define the conditions at which the control device must be operated to continuously achieve the applicable performance requirements of §63.771(d)(1) or (e)(3)(ii).

(ii) An explanation of the rationale for why the owner or operator selected each of the operating parameter values established in §63.773(d)(5). This explanation shall include any data and calculations used to develop the value and a description of why the chosen value indicates that the control device is operating in accordance with the applicable requirements of §63.771(d)(1) or §63.771(e)(3)(ii).

(iii) A definition of the source's operating day for purposes of determining daily average values of monitored parameters. The definition shall specify the times at which an operating day begins and ends.

(6) Results of any continuous monitoring system performance evaluations shall be included in the Notification of Compliance Status Report.

(7) After a title V permit has been issued to the owner or operator of an affected source, the owner or operator of such source shall comply with all requirements for compliance status reports contained in the source's title V permit, including reports required under this subpart. After a title V permit has been issued to the owner or operator of an affected source, and each time a notification of compliance status is required under this subpart, the owner or operator of such source shall submit the notification of compliance status to the appropriate permitting authority following completion of the relevant compliance demonstration activity specified in this subpart.

(8) The owner or operator that elects to comply with the requirements of §63.765(b)(1)(ii) shall submit the records required under §63.774(c).

(9) The owner or operator shall submit the analysis performed under §63.760(a)(1).

(10) The owner or operator shall submit a statement as to whether the source has complied with the requirements of this subpart.

(11) The owner or operator shall submit the analysis prepared under §63.771(e)(2) to demonstrate the conditions by which the facility will be operated to achieve an overall HAP emission reduction of 95.0 percent through process modifications or a combination of process modifications and one or more control devices.

(12) If a cover is installed to comply with §63.764, the results of the initial inspection performed according to the requirements specified in §63.773(c)(2)(iii).

(e) *Periodic Reports.* An owner or operator of a major source shall prepare Periodic Reports in accordance with paragraphs (e) (1) and (2) of this section and submit them to the Administrator. An owner or operator of an area source shall prepare Periodic Reports in accordance with paragraph (e)(3) of this section and submit them to the Administrator.

(1) An owner or operator shall submit Periodic Reports semiannually beginning 60 calendar days after the end of the applicable reporting period. The first report shall be submitted no later than 240 days after the date the Notification of Compliance Status Report is due and shall cover the 6-month period beginning on the date the Notification of Compliance Status Report is due.

(2) The owner or operator shall include the information specified in paragraphs (e)(2)(i) through (x) of this section, as applicable.

(i) The information required under §63.10(e)(3). For the purposes of this subpart and the information required under §63.10(e)(3), excursions (as defined in §63.773(d)(6)) shall be considered excess emissions.

(ii) A description of all excursions as defined in §63.773(d)(6) of this subpart that have occurred during the 6-month reporting period.

(A) For each excursion caused when the daily average value of a monitored operating parameter is less than the minimum operating parameter limit (or, if applicable, greater than the maximum operating parameter limit), as specified in §63.773(d)(6)(i), the report must include the daily average values of the monitored parameter, the applicable operating parameter limit, and the date and duration of the period that the excursion occurred.

(B) For each excursion caused when the 365-day average condenser control efficiency is less than 95.0 percent, as specified in §63.773(d)(6)(ii), the report must include the 365-day average values of the condenser control efficiency, and the date and duration of the period that the excursion occurred.

(C) For each excursion caused when condenser control efficiency is less than 90.0 percent, as calculated according to the procedures specified in §63.772(g)(2)(iii) (A) or (B), the report must include the average values of the condenser control efficiency, and the date and duration of the period that the excursion occurred.

(D) For each excursion caused by the lack of monitoring data, as specified in §63.773(d)(6)(iv), the report must include the date and duration of the period when the monitoring data were not collected and the reason why the data were not collected.

(iii) For each inspection conducted in accordance with §63.773(c) during which a leak or defect is detected, the records specified in §63.774(b)(7) must be included in the next Periodic Report.

(iv) For each owner or operator subject to the provisions specified in §63.769, the owner or operator shall comply with the reporting requirements specified in 40 CFR 61.247, except that the Periodic Reports shall be submitted on the schedule specified in paragraph (e)(1) of this section.

(v) For each closed-vent system with a bypass line subject to §63.771(c)(3)(i)(A), records required under §63.774(b)(4)(iii) of all periods when the vent stream is diverted from the control device through a bypass line. For each closed-vent system with a bypass line subject to §63.771(c)(3)(i)(B), records required under §63.774(b)(4)(iv) of all periods in which the seal mechanism is broken, the bypass valve position has changed, or the key to unlock the bypass line valve was checked out.

(vi) If an owner or operator elects to comply with §63.765(b)(1)(ii), the records required under §63.774(c)(3).

(vii) The information in paragraphs (e)(2)(vii) (A) and (B) of this section shall be stated in the Periodic Report, when applicable.

(A) No excursions.

(B) No continuous monitoring system has been inoperative, out of control, repaired, or adjusted.

(viii) Any change in compliance methods as specified in §63.772(f).

(ix) If the owner or operator elects to comply with §63.765(c)(2), the records required under §63.774(b)(11).

(x) For flares, the records specified in §63.774(e)(3).

(3) An owner or operator of an area source located inside a UA plus offset and UC boundary shall prepare and submit Periodic Reports in accordance with paragraphs (e)(3)(i) through (iii) of this section.

(i) Periodic reports must be submitted on an annual basis. The first reporting period shall cover the period beginning on the date the Notification of Compliance Status Report is due and ending on December 31. The report shall be submitted within 30 days after the end of the reporting period.

(ii) Subsequent reporting periods begin every January 1 and end on December 31. Subsequent reports shall be submitted within 30 days following the end of the reporting period.

(iii) The periodic reports must contain the information included in paragraph (e)(2) of this section.

(f) *Notification of process change.* Whenever a process change is made, or a change in any of the information submitted in the Notification of Compliance Status Report, the owner or operator shall submit a report within 180 days after the process change is made or as a part of the next Periodic Report as required under paragraph (e) of this section, whichever is sooner. The report shall include:

(1) A brief description of the process change;

(2) A description of any modification to standard procedures or quality assurance procedures;

(3) Revisions to any of the information reported in the original Notification of Compliance Status Report under paragraph (d) of this section; and

(4) Information required by the Notification of Compliance Status Report under paragraph (d) of this section for changes involving the addition of processes or equipment.

[64 FR 32628, June 17, 1999, as amended at 66 FR 34554, June 29, 2001; 72 FR 39, Jan. 3, 2007]

#### **§ 63.776 Implementation and enforcement.**

(a) This subpart can be implemented and enforced by the U.S. EPA, or a delegated authority such as the applicable State, local, or Tribal agency. If the U.S. EPA Administrator has delegated authority to a State, local, or Tribal agency, then that agency, in addition to the U.S. EPA, has the authority to implement and enforce this subpart. Contact the applicable U.S. EPA Regional Office to find out if this subpart is delegated to a State, local, or Tribal agency.

(b) In delegating implementation and enforcement authority of this subpart to a State, local, or Tribal agency under subpart E of this part, the authorities contained in paragraph (c) of this section are retained by the Administrator of U.S. EPA and cannot be transferred to the State, local, or Tribal agency.

(c) The authorities that cannot be delegated to State, local, or Tribal agencies are as specified in paragraphs (c)(1) through (4) of this section.

(1) Approval of alternatives to the requirements in §§63.760, 63.764 through 63.766, 63.769, 63.771, and 63.777.

(2) Approval of major alternatives to test methods under §63.7(e)(2)(ii) and (f), as defined in §63.90, and as required in this subpart.

(3) Approval of major alternatives to monitoring under §63.8(f), as defined in §63.90, and as required in this subpart.

(4) Approval of major alternatives to recordkeeping and reporting under §63.10(f), as defined in §63.90, and as required in this subpart.

**§ 63.777 Alternative means of emission limitation.**

(a) If, in the judgment of the Administrator, an alternative means of emission limitation will achieve a reduction in HAP emissions at least equivalent to the reduction in HAP emissions from that source achieved under the applicable requirements in §§63.764 through 63.771, the Administrator will publish in the Federal Register a notice permitting the use of the alternative means for purposes of compliance with that requirement. The notice may condition the permission on requirements related to the operation and maintenance of the alternative means.

(b) Any notice under paragraph (a) of this section shall be published only after public notice and an opportunity for a hearing.

(c) Any person seeking permission to use an alternative means of compliance under this section shall collect, verify, and submit to the Administrator information demonstrating that the alternative achieves equivalent emission reductions.

**§§ 63.778-63.779 [Reserved]**

**Appendix to Subpart HH of Part 63—Tables**

**Table 1 to Subpart HH of Part 63—List of Hazardous Air Pollutants for Subpart HH**

<b>CAS Number<sup>a</sup></b>	<b>Chemical name</b>
75070	Acetaldehyde
71432	Benzene (includes benzene in gasoline)
75150	Carbon disulfide
463581	Carbonyl sulfide
100414	Ethyl benzene
107211	Ethylene glycol
50000	Formaldehyde
110543	n-Hexane
91203	Naphthalene
108883	Toluene
540841	2,2,4-Trimethylpentane
1330207	Xylenes (isomers and mixture)
95476	o-Xylene
108383	m-Xylene
106423	p-Xylene

<sup>a</sup>CAS numbers refer to the Chemical Abstracts Services registry number assigned to specific compounds, isomers, or mixtures of compounds.

**Table 2 to Subpart HH of Part 63—Applicability of 40 CFR Part 63 General Provisions to Subpart HH**

<b>General provisions reference</b>	<b>Applicable to subpart HH</b>	<b>Explanation</b>
§63.1(a)(1)	Yes.	
§63.1(a)(2)	Yes.	
§63.1(a)(3)	Yes.	
§63.1(a)(4)	Yes.	
§63.1(a)(5)	No	Section reserved.
§63.1(a)(6)	Yes.	
§63.1(a)(7) through (a)(9)	No	Section reserved.
§63.1(a)(10)	Yes.	
§63.1(a)(11)	Yes.	
§63.1(a)(12)	Yes.	
§63.1(b)(1)	No	Subpart HH specifies applicability.
§63.1(b)(2)	No	Section reserved.
§63.1(b)(3)	Yes.	
§63.1(c)(1)	No	Subpart HH specifies applicability.
§63.1(c)(2)	Yes.	Subpart HH exempts area sources from the requirement to obtain a title V permit unless otherwise required by law as specified in §63.760(h).
§63.1(c)(3) and (c)(4)	No	Section reserved.
§63.1(c)(5)	Yes.	
§63.1(d)	No	Section reserved.
§63.1(e)	Yes.	
§63.2	Yes.	Except definition of major source is unique for this source category and there are additional definitions in subpart HH.
§63.3(a) through (c)	Yes.	
§63.4(a)(1) through (a)(2)	Yes.	

§63.4(a)(3) through (a)(5)	No	Section reserved.
§63.4(b)	Yes.	
§63.4(c)	Yes.	
§63.5(a)(1)	Yes.	
§63.5(a)(2)	Yes.	
§63.5(b)(1)	Yes.	
§63.5(b)(2)	No	Section reserved.
§63.5(b)(3)	Yes.	
§63.5(b)(4)	Yes.	
§63.5(b)(5)	No	Section Reserved.
§63.5(b)(6)	Yes.	
§63.5(c)	No	Section reserved.
§63.5(d)(1)	Yes.	
§63.5(d)(2)	Yes.	
§63.5(d)(3)	Yes.	
§63.5(d)(4)	Yes.	
§63.5(e)	Yes.	
§63.5(f)(1)	Yes.	
§63.5(f)(2)	Yes.	
§63.6(a)	Yes.	
§63.6(b)(1)	Yes.	
§63.6(b)(2)	Yes.	
§63.6(b)(3)	Yes.	
§63.6(b)(4)	Yes.	
§63.6(b)(5)	Yes.	
§63.6(b)(6)	No	Section reserved.
§63.6(b)(7)	Yes.	
§63.6(c)(1)	Yes.	
§63.6(c)(2)	Yes.	

§63.6(c)(3) through (c)(4)	No	Section reserved.
§63.6(c)(5)	Yes.	
§63.6(d)	No	Section reserved.
§63.6(e)	Yes.	
§63.6(e)(1)(i)	No	Except as otherwise specified. Addressed in §63.762.
§63.6(e)(1)(ii)	Yes.	
§63.6(e)(1)(iii)	Yes.	
§63.6(e)(2)	No	Section reserved.
§63.6(e)(3)(i)	Yes.	Sources exempt under §63.764(e) and sources located outside UA plus offset and UC boundaries are not required to develop startup, shutdown, and malfunction plans as stated in §63.762(e).
§63.6(e)(3)(i)(A)	No	Except as otherwise specified. Addressed in §63.762(c).
§63.6(e)(3)(i)(B)	Yes.	
§63.6(e)(3)(i)(C)	Yes.	
§63.6(e)(3)(ii)	No	Section reserved.
§63.6(e)(3)(iii) through (3)(vi)	Yes.	
§63.6(e)(3)(vii)	Yes.	
§63.6(e)(3)(vii) (A)	Yes.	
§63.6(e)(3)(vii) (B)	Yes	Except that the plan must provide for operation in compliance with §63.762(c).
§63.6(e)(3)(viii) through (ix)	Yes.	
§63.6(f)(1)	Yes.	
§63.6(f)(2)	Yes.	
§63.6(f)(3)	Yes.	
§63.6(g)	Yes.	
§63.6(h)	No	Subpart HH does not contain opacity or visible emission standards.
§63.6(i)(1) through (i)(14)	Yes.	
§63.6(i)(15)	No	Section reserved.



§63.6(i)(16)	Yes.	
§63.6(j)	Yes.	
§63.7(a)(1)	Yes.	
§63.7(a)(2)	Yes	But the performance test results must be submitted within 180 days after the compliance date.
§63.7(a)(3)	Yes.	
§63.7(b)	Yes.	
§63.7(c)	Yes.	
§63.7(d)	Yes.	
§63.7(e)(1)	Yes.	
§63.7(e)(2)	Yes.	
§63.7(e)(3)	Yes.	
§63.7(e)(4)	Yes.	
§63.7(f)	Yes.	
§63.7(g)	Yes.	
§63.7(h)	Yes.	
§63.8(a)(1)	Yes.	
§63.8(a)(2)	Yes.	
§63.8(a)(3)	No	Section reserved.
§63.8(a)(4)	Yes.	
§63.8(b)(1)	Yes.	
§63.8(b)(2)	Yes.	
§63.8(b)(3)	Yes.	
§63.8(c)(1)	Yes.	
§63.8(c)(2)	Yes.	
§63.8(c)(3)	Yes.	
§63.8(c)(4)	Yes.	
§63.8(c)(4)(i)	No	Subpart HH does not require continuous opacity monitors.
§63.8(c)(4)(ii)	Yes.	
§63.8(c)(5) through (c)(8)	Yes.	

§63.8(d)	Yes.	
§63.8(e)	Yes	Subpart HH does not specifically require continuous emissions monitor performance evaluation, however, the Administrator can request that one be conducted.
§63.8(f)(1) through (f)(5)	Yes.	
§63.8(f)(6)	Yes.	
§63.8(g)	No	Subpart HH specifies continuous monitoring system data reduction requirements.
§63.9(a)	Yes.	
§63.9(b)(1)	Yes.	
§63.9(b)(2)	Yes	Existing sources are given 1 year (rather than 120 days) to submit this notification. Major and area sources that meet §63.764(e) do not have to submit initial notifications.
§63.9(b)(3)	No	Section reserved.
§63.9(b)(4)	Yes.	
§63.9(b)(5)	Yes.	
§63.9(c)	Yes.	
§63.9(d)	Yes.	
§63.9(e)	Yes.	
§63.9(f)	No	Subpart HH does not have opacity or visible emission standards.
§63.9(g)(1)	Yes.	
§63.9(g)(2)	No	Subpart HH does not have opacity or visible emission standards.
§63.9(g)(3)	Yes.	
§63.9(h)(1) through (h)(3)	Yes	Area sources located outside UA plus offset and UC boundaries are not required to submit notifications of compliance status.
§63.9(h)(4)	No	Section reserved.
§63.9(h)(5) through (h)(6)	Yes.	
§63.9(i)	Yes.	
§63.9(j)	Yes.	
§63.10(a)	Yes.	

§63.10(b)(1)	Yes.	§63.774(b)(1) requires sources to maintain the most recent 12 months of data on site and allows offsite storage for the remaining 4 years of data.
§63.10(b)(2)	Yes.	
§63.10(b)(3)	Yes	§63.774(b)(1) requires sources to maintain the most recent 12 months of data on site and allows offsite storage for the remaining 4 years of data.
§63.10(c)(1)	Yes.	
§63.10(c)(2) through (c)(4)	No	Sections reserved.
§63.10(c)(5) through (c)(8)	Yes.	
§63.10(c)(9)	No	Section reserved.
§63.10(c)(10) through(c)(15)	Yes.	
§63.10(d)(1)	Yes.	
§63.10(d)(2)	Yes	Area sources located outside UA plus offset and UC boundaries do not have to submit performance test reports.
§63.10(d)(3)	Yes.	
§63.10(d)(4)	Yes.	
§63.10(d)(5)(i)	Yes	Subpart HH requires major sources to submit a startup, shutdown, and malfunction report semi-annually. Area sources located within UA plus offset and UC boundaries are required to submit startup, shutdown, and malfunction reports annually. Area sources located outside UA plus offset and UC boundaries are not required to submit startup, shutdown, and malfunction reports.
§63.10(e)(1)	Yes	Area sources located outside UA plus offset and UC boundaries are not required to submit reports.
§63.10(e)(2)	Yes	Area sources located outside UA plus offset and UC boundaries are not required to submit reports.
§63.10(e)(3)(i)	Yes	Subpart HH requires major sources to submit Periodic Reports semi-annually. Area sources are required to submit Periodic Reports annually. Area sources located outside UA plus offset and UC boundaries are not required to submit reports.
§63.10(e)(3)(i)(A)	Yes.	
§63.10(e)(3)(i)(B)	Yes.	
§63.10(e)(3)(i)(C)	No	Section reserved.

§63.10(e)(3)(ii) through (viii)	Yes.	
§63.10(f)	Yes.	
§63.11(a) and (b)	Yes.	
§63.11(c), (d), and (e)	Yes	
§63.12(a) through (c)	Yes.	
§63.13(a) through (c)	Yes.	
§63.14(a) and (b)	Yes.	
§63.15(a) and (b)	Yes	
§63.16	Yes.	

[64 FR 32628, June 17, 1999, as amended at 66 FR 34554, June 29, 2001; 71 FR 20457, Apr. 20, 2006; 72 FR 40, Jan. 3, 2007; 73 FR 78214, Dec. 22, 2008]

Appendix C  
40 CFR Part 63, Subpart ZZZZ  
*National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal  
Combustion Engines*



## Electronic Code of Federal Regulations

*e-CFR*

TM

e-CFR Data is current as of January 29, 2009

### **Title 40: Protection of Environment**

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

[Browse Next](#)

#### **Subpart ZZZZ—National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines**

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

#### **What This Subpart Covers**

##### **§ 63.6580 What is the purpose of subpart ZZZZ?**

Subpart ZZZZ establishes national emission limitations and operating limitations for hazardous air pollutants (HAP) emitted from stationary reciprocating internal combustion engines (RICE) located at major and area sources of HAP emissions. This subpart also establishes requirements to demonstrate initial and continuous compliance with the emission limitations and operating limitations.

[73 FR 3603, Jan. 18, 2008]

##### **§ 63.6585 Am I subject to this subpart?**

You are subject to this subpart if you own or operate a stationary RICE at a major or area source of HAP emissions, except if the stationary RICE is being tested at a stationary RICE test cell/stand.

(a) A stationary RICE is any internal combustion engine which uses reciprocating motion to convert heat energy into mechanical work and which is not mobile. Stationary RICE differ from mobile RICE in that a stationary RICE is not a non-road engine as defined at 40 CFR 1068.30, and is not used to propel a motor vehicle or a vehicle used solely for competition.

(b) A major source of HAP emissions is a plant site that emits or has the potential to emit any single HAP at a rate of 10 tons (9.07 megagrams) or more per year or any combination of HAP at a rate of 25 tons (22.68 megagrams) or more per year, except that for oil and gas production facilities, a major source of HAP emissions is determined for each surface site.

(c) An area source of HAP emissions is a source that is not a major source.

(d) If you are an owner or operator of an area source subject to this subpart, your status as an entity

subject to a standard or other requirements under this subpart does not subject you to the obligation to obtain a permit under 40 CFR part 70 or 71, provided you are not required to obtain a permit under 40 CFR 70.3(a) or 40 CFR 71.3(a) for a reason other than your status as an area source under this subpart. Notwithstanding the previous sentence, you must continue to comply with the provisions of this subpart as applicable.

(e) If you are an owner or operator of a stationary RICE used for national security purposes, you may be eligible to request an exemption from the requirements of this subpart as described in 40 CFR part 1068, subpart C.

[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 (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 limitations in this subpart no later than January 18, 2008.

(5) If you start up your new or reconstructed stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions after January 18, 2008, you must comply with the applicable emission limitations and operating limitations in this subpart upon startup of your affected source.

(6) If you start up your new or reconstructed stationary RICE located at an area source of HAP emissions before January 18, 2008, you must comply with the applicable emission limitations and operating limitations in this subpart no later than January 18, 2008.

(7) If you start up your new or reconstructed stationary RICE located at an area source of HAP emissions after January 18, 2008, you must comply with the applicable emission limitations and operating limitations in this subpart upon startup of your affected source.

(b) *Area sources that become major sources.* If you have an area source that increases its emissions or its potential to emit such that it becomes a major source of HAP, the compliance dates in paragraphs (b)(1) and (2) of this section apply to you.

(1) Any stationary RICE for which construction or reconstruction is commenced after the date when your area source becomes a major source of HAP must be in compliance with this subpart upon startup of your affected source.

(2) Any stationary RICE for which construction or reconstruction is commenced before your area source becomes a major source of HAP must be in compliance with the provisions of this subpart that are applicable to RICE located at major sources within 3 years after your area source becomes a major source of HAP.

(c) If you own or operate an affected source, you must meet the applicable notification requirements in §63.6645 and in 40 CFR part 63, subpart A.

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

#### **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 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 (CO<sub>2</sub>). If pollutant concentrations are to be corrected to 15 percent oxygen and CO<sub>2</sub> concentration is measured in lieu of oxygen concentration measurement, a CO<sub>2</sub> correction factor is needed. Calculate the CO<sub>2</sub> 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  $\text{CO}_2$  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,  $\text{dsm}^3/\text{J}$  ( $\text{dscf}/10^6 \text{ Btu}$ ).

$F_c$  = Ratio of the volume of  $\text{CO}_2$  produced to the gross calorific value of the fuel from Method 19,  $\text{dsm}^3/\text{J}$  ( $\text{dscf}/10^6 \text{ Btu}$ ).

(ii) Calculate the  $\text{CO}_2$  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:

$X_{\text{co}_2}$  =  $\text{CO}_2$  correction factor, percent.

5.9 = 20.9 percent  $\text{O}_2$  - 15 percent  $\text{O}_2$ , the defined  $\text{O}_2$  correction value, percent.

(iii) Calculate the  $\text{NO}_x$  and  $\text{SO}_2$  gas concentrations adjusted to 15 percent  $\text{O}_2$  using  $\text{CO}_2$  as follows:

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

Where:

$\% \text{CO}_2$  = Measured  $\text{CO}_2$  concentration measured, dry basis, percent.

(f) If you comply with the emission limitation to reduce CO and you are not using an oxidation catalyst, if you comply with the emission limitation to reduce formaldehyde and you are not using NSCR, or if you comply with the emission limitation to limit the concentration of formaldehyde in the stationary RICE exhaust and you are not using an oxidation catalyst or NSCR, you must petition the Administrator for operating limitations to be established during the initial performance test and continuously monitored thereafter; or for approval of no operating limitations. You must not conduct the initial performance test until after the petition has been approved by the Administrator.

(g) If you petition the Administrator for approval of operating limitations, your petition must include the information described in paragraphs (g)(1) through (5) of this section.

- (1) Identification of the specific parameters you propose to use as operating limitations;
  - (2) A discussion of the relationship between these parameters and HAP emissions, identifying how HAP emissions change with changes in these parameters, and how limitations on these parameters will serve to limit HAP emissions;
  - (3) A discussion of how you will establish the upper and/or lower values for these parameters which will establish the limits on these parameters in the operating limitations;
  - (4) A discussion identifying the methods you will use to measure and the instruments you will use to monitor these parameters, as well as the relative accuracy and precision of these methods and instruments; and
  - (5) A discussion identifying the frequency and methods for recalibrating the instruments you will use for monitoring these parameters.
- (h) If you petition the Administrator for approval of no operating limitations, your petition must include the information described in paragraphs (h)(1) through (7) of this section.
- (1) Identification of the parameters associated with operation of the stationary RICE and any emission control device which could change intentionally ( *e.g.*, operator adjustment, automatic controller adjustment, etc.) or unintentionally ( *e.g.*, wear and tear, error, etc.) on a routine basis or over time;
  - (2) A discussion of the relationship, if any, between changes in the parameters and changes in HAP emissions;
  - (3) For the parameters which could change in such a way as to increase HAP emissions, a discussion of whether establishing limitations on the parameters would serve to limit HAP emissions;
  - (4) For the parameters which could change in such a way as to increase HAP emissions, a discussion of how you could establish upper and/or lower values for the parameters which would establish limits on the parameters in operating limitations;
  - (5) For the parameters, a discussion identifying the methods you could use to measure them and the instruments you could use to monitor them, as well as the relative accuracy and precision of the methods and instruments;
  - (6) For the parameters, a discussion identifying the frequency and methods for recalibrating the instruments you could use to monitor them; and
  - (7) A discussion of why, from your point of view, it is infeasible or unreasonable to adopt the parameters as operating limitations.
- (i) The engine percent load during a performance test must be determined by documenting the calculations, assumptions, and measurement devices used to measure or estimate the percent load in a specific application. A written report of the average percent load determination must be included in the notification of compliance status. The following information must be included in the written report: the engine model number, the engine manufacturer, the year of purchase, the manufacturer's site-rated brake horsepower, the ambient temperature, pressure, and humidity during the performance test, and all assumptions that were made to estimate or calculate percent load during

the performance test must be clearly explained. If measurement devices such as flow meters, kilowatt meters, beta analyzers, stain gauges, etc. are used, the model number of the measurement device, and an estimate of its accurate in percentage of true value must be provided.

**§ 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 CO<sub>2</sub> 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 CO<sub>2</sub> 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 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).

(1) For each initial compliance demonstration required in Table 5 to this subpart that does not include a performance test, you must submit the Notification of Compliance Status before the close of business on the 30th day following the completion of the initial compliance demonstration.

(2) 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 pursuant to 40 CFR part 70 or 71, and if the permitting authority has established dates for submitting semiannual reports pursuant to 40 CFR 70.6 (a)(3)(iii)(A) or 40 CFR 71.6 (a)(3)(iii)(A), you may submit the first and subsequent Compliance reports according to the dates the permitting authority has established instead of according to the dates in paragraphs (b)(1) through (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.

(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.

#### **§ 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 processing plant is a point of custody transfer.

*Deviation* means any instance in which an affected source subject to this subpart, or an owner or operator of such a source:

- (1) Fails to meet any requirement or obligation established by this subpart, including but not limited to any emission limitation or operating limitation;
- (2) Fails to meet any term or condition that is adopted to implement an applicable requirement in this subpart and that is included in the operating permit for any affected source required to obtain such a permit; or
- (3) Fails to meet any emission limitation or operating limitation in this subpart during malfunction, regardless of whether or not such failure is permitted by this subpart.
- (4) Fails to satisfy the general duty to minimize emissions established by §63.6(e)(1)(i).

*Diesel engine* means any stationary RICE in which a high boiling point liquid fuel injected into the combustion chamber ignites when the air charge has been compressed to a temperature sufficiently high for auto-ignition. This process is also known as compression ignition.

*Diesel fuel* means any liquid obtained from the distillation of petroleum with a boiling point of approximately 150 to 360 degrees Celsius. One commonly used form is fuel oil number 2.

*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 CO<sub>2</sub>.

*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 glycol) absorbent directly contacts a natural gas stream and absorbs water in a contact tower or absorption column (absorber). The glycol contacts and absorbs water vapor and other gas stream constituents from the natural gas and becomes "rich" glycol. This glycol is then regenerated in the glycol dehydration unit reboiler. The "lean" glycol is then recycled.

*Hazardous air pollutants (HAP)* means any air pollutants listed in or pursuant to section 112(b) of the CAA.

*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 CO<sub>2</sub>.

*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<sub>x</sub>) control device for rich burn engines that, in a two-step reaction, promotes the conversion of excess oxygen, NO<sub>x</sub>, CO, and volatile organic compounds (VOC) into CO<sub>2</sub>, nitrogen, and water.

*Oil and gas production facility* as used in this subpart means any grouping of equipment where hydrocarbon liquids are processed, upgraded ( *i.e.*, remove impurities or other constituents to meet contract specifications), or stored prior to the point of custody transfer; or where natural gas is processed, upgraded, or stored prior to entering the natural gas transmission and storage source category. For purposes of a major source determination, facility (including a building, structure, or installation) means oil and natural gas production and processing equipment that is located within the boundaries of an individual surface site as defined in this section. Equipment that is part of a facility will typically be located within close proximity to other equipment located at the same facility. Pieces of production equipment or groupings of equipment located on different oil and gas leases, mineral fee tracts, lease tracts, subsurface or surface unit areas, surface fee tracts, surface lease tracts, or separate surface sites, whether or not connected by a road, waterway, power line or pipeline, shall not be considered part of the same facility. Examples of facilities in the oil and natural gas production source category include, but are not limited to, well sites, satellite tank batteries, central tank batteries, a compressor station that transports natural gas to a natural gas processing plant, and natural gas processing plants.

*Oxidation catalyst* means an add-on catalytic control device that controls CO and VOC by oxidation.

*Peaking unit or engine* means any standby engine intended for use during periods of high demand that are not emergencies.

*Percent load* means the fractional power of an engine compared to its maximum manufacturer's design capacity at engine site conditions. Percent load may range between 0 percent to above 100 percent.

*Potential to emit* means the maximum capacity of a stationary source to emit a pollutant under its physical and operational design. Any physical or operational limitation on the capacity of the stationary source to emit a pollutant, including air pollution control equipment and restrictions on hours of operation or on the type or amount of material combusted, stored, or processed, shall be treated as part of its design if the limitation or the effect it would have on emissions is federally enforceable. For oil and natural gas production facilities subject to subpart HH of this part, the potential to emit provisions in §63.760(a) may be used. For natural gas transmission and storage facilities subject to subpart HHH of this part, the maximum annual facility gas throughput for storage facilities may be determined according to §63.1270(a)(1) and the maximum annual

throughput for transmission facilities may be determined according to §63.1270(a)(2).

*Production field facility* means those oil and gas production facilities located prior to the point of custody transfer.

*Production well* means any hole drilled in the earth from which crude oil, condensate, or field natural gas is extracted.

*Propane* means a colorless gas derived from petroleum and natural gas, with the molecular structure  $C_3H_8$ .

*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 <sub>2</sub> .

[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	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

exhaust to 350 ppbvd or less at 15 percent O <sub>2</sub> and using NSCR.	°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 <sub>2</sub> and not using NSCR.	

[73 FR 3607, Jan. 18, 2008]

**Table 2 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 <sub>2</sub> . 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 <sub>2</sub> 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 <sub>2</sub> .
3. CI stationary RICE	a. reduce CO emissions by 70 percent or more;
	or
	b. limit concentration of formaldehyde in the stationary RICE exhaust to 580 ppbvd

	or less at 15 percent O <sub>2</sub> .
--	--

[73 FR 3608, Jan. 18, 2008]

**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 ≥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. <sup>1</sup>
2. 4SRB stationary RICE with a brake horsepower ≥5,000	Reduce formaldehyde emissions	Conduct subsequent performance tests

		semiannually. <sup>1</sup>
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. <sup>1</sup>

<sup>1</sup>After you have demonstrated compliance for two consecutive tests, you may reduce the frequency of subsequent performance tests to annually. If the results of any subsequent annual performance test indicate the stationary RICE is not in compliance with the CO or formaldehyde emission limitation, or you deviate from any of your operating limitations, you must resume semiannual performance tests.

**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 <sub>2</sub> at the inlet and outlet of the control device; and	(1) Portable CO and O <sub>2</sub> analyzer	(a) Using ASTM D6522– 00 (2005) <sup>a</sup> (incorporated by reference, see §63.14). Measurements to determine O <sub>2</sub> must be made at the same time as the measurements for CO concentration.
		ii. Measure the CO at the inlet and the outlet of the control device	(1) Portable CO and O <sub>2</sub> analyzer	(a) Using ASTM D6522– 00 (2005) <sup>a</sup> (incorporated by reference, see §63.14) or Method 10 of 40 CFR, appendix A. The CO concentration must be at 15 percent O <sub>2</sub> , dry basis.
2. 4SRB stationary RICE	a. Reduce formaldehyde emissions	i. Select the sampling port location and the number of traverse points; and	(1) Method 1 or 1A of 40 CFR part 60, appendix A §63.7(d)(1)(i)	(a) Sampling sites must be located at the inlet and outlet of the control device.
		ii. Measure O <sub>2</sub> at the inlet and outlet of the control device; and	(1) Method 3 or 3A or 3B of 40 CFR part 60, appendix A, or ASTM Method D6522–00 (2005).	(a) Measurements to determine O <sub>2</sub> concentration must be made at the same time as the measurements for formaldehyde concentration.

		iii. Measure moisture content at the inlet and outlet of the control device; and	(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	(a) Measurements to determine moisture content must be made at the same time and location as the measurements for formaldehyde concentration.
		iv. Measure formaldehyde at the inlet and the outlet of the control device	(1) Method 320 or 323 of 40 CFR part 63, appendix A; or ASTM D6348-03 <sup>b</sup> , 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 <sub>2</sub> , dry basis. Results of this test consist of the average of the three 1-hour or longer runs.
3. Stationary RICE	a. Limit the concentration of formaldehyde in the stationary RICE exhaust	i. Select the sampling port location and the number of traverse points; and	(1) Method 1 or 1A of 40 CFR part 60, appendix A §63.7(d)(1)(i)	(a) If using a control device, the sampling site must be located at the outlet of the control device.
		ii. Determine the O <sub>2</sub> concentration of the stationary RICE exhaust at the sampling port location; and	(1) Method 3 or 3A or 3B of 40 CFR part 60, appendix A, or ASTM Method D6522-00 (2005)	(a) Measurements to determine O <sub>2</sub> concentration must be made at the same time and location as the measurements for formaldehyde concentration.
		iii. Measure moisture content of the stationary RICE exhaust at the sampling port location; and	(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	(a) Measurements to determine moisture content must be made at the same time and location as the measurements for formaldehyde concentration.
		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 <sup>b</sup> , provided in ASTM D6348-03 Annex A5 (Analyte Spiking Technique), the percent R must be greater than or equal	(a) Formaldehyde concentration must be at 15 percent O <sub>2</sub> , dry basis. Results of this test consist of the average of the three 1-hour or longer runs.



			to 70 and less than or equal to 130	
--	--	--	-------------------------------------	--

<sup>a</sup>You 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.

<sup>b</sup>You may obtain a copy of ASTM–D6348–03 from at least one of the following addresses: American Society for Testing and Materials, 100 Barr Harbor Drive, West Conshohocken, PA 19428–2959, or University Microfilms International, 300 North Zeeb Road, Ann Arbor, MI 48106.

[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 <sub>2</sub> or CO <sub>2</sub> 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.
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 <sub>2</sub> , 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 <sub>2</sub> , 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 <sup>1</sup> ; and
		ii. Collecting the catalyst inlet temperature data according to §63.6625(b); and
		iii. Reducing these data to 4-hour rolling averages; and
		iv. Maintaining the 4-hour rolling averages within the operating limitations for the catalyst inlet temperature; and
		v. Measuring the pressure drop across the catalyst once per month and demonstrating that the pressure drop across the catalyst is within the operating limitation established during the performance test.
2. 2SLB and 4SLB stationary RICE and CI stationary RICE	a. Reduce CO emissions and not using an oxidation catalyst, and using a CPMS	i. Conducting semiannual performance tests for CO to demonstrate that the required CO percent reduction is achieved <sup>1</sup> ; 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	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	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	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 $\geq 5,000$	Reduce formaldehyde emissions	Conducting semiannual performance tests for formaldehyde to demonstrate that the required formaldehyde percent reduction is achieved <sup>1</sup> .
7. Stationary RICE	Limit the concentration of formaldehyde in the stationary RICE exhaust and using oxidation catalyst or NSCR	i. Conducting semiannual performance tests for formaldehyde to demonstrate that your emissions remain at or below the formaldehyde concentration limit <sup>1</sup> ; and

		ii. Collecting the catalyst inlet temperature data according to §63.6625(b); and
		iii. Reducing these data to 4-hour rolling averages; and
		iv. Maintaining the 4-hour rolling averages within the operating limitations for the catalyst inlet temperature; and
		v. Measuring the pressure drop across the catalyst once per month and demonstrating that the pressure drop across the catalyst is within the operating limitation established during the performance test.
8. Stationary RICE	Limit the concentration of formaldehyde in the stationary RICE exhaust and not using oxidation catalyst or NSCR	i. Conducting semiannual performance tests for formaldehyde to demonstrate that your emissions remain at or below the formaldehyde concentration limit <sup>1</sup> ; 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.

<sup>1</sup>After you have demonstrated compliance for two consecutive tests, you may reduce the frequency of subsequent performance tests to annually. If the results of any subsequent annual performance test indicate the stationary RICE is not in compliance with the CO or formaldehyde emission limitation, or you deviate from any of your operating limitations, you must resume semiannual performance tests.

**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]

<b>You must submit a(n)</b>	<b>The report must contain . . .</b>	<b>You must submit the report . . .</b>
1. Compliance report	a. If there are no deviations from any emission limitations or operating limitations that apply to you, a statement that there were no deviations from the emission limitations or operating limitations during the reporting period. If there were no periods during which the	i. Semiannually according to the requirements in §63.6650(b).

	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	i. Semiannually according to the requirements in §63.6650(b).
	c. If you had a startup, shutdown or malfunction during the reporting period, the information in §63.10(d)(5)(i)	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	a. Actions taken for the event; and	i. By fax or telephone within 2 working days after starting actions inconsistent with the plan.
	b. The information in §63.10(d)(5)(ii).	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))
3. Report	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	i. Annually, according to the requirements in §63.6650.
	b. The operating limits provided in your federally enforceable permit, and any deviations from these limits; and	i. See item 3.a.i.
	c. Any problems or errors suspected with the meters	i. See item 3.a.i.

**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.
§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	
§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  
DeSoto Gathering Company, LLC - West Cutthroat CPF-2, P.O. Box 789, Conway, AR, 72033,  
on this 21<sup>st</sup> day of July, 2009.

A handwritten signature in cursive script, appearing to read 'C Hook', written over a horizontal line.

Cynthia Hook, AAIL, Air Division

