



DIVISION OF ENVIRONMENTAL QUALITY

**DRAFT OPERATING AIR PERMIT**

**PERMIT NUMBER: 2111-AOP-R7**

**IS ISSUED TO:**

Crane Composites, Inc.  
8500 CW Post Road  
Jonesboro, AR 72401  
Craighead County  
**AFIN: 16-00222**

PURSUANT TO THE RULES OF THE ARKANSAS OPERATING AIR PERMIT PROGRAM, RULE 26: 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:

November 15, 2021    AND    November 14, 2026

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

**Signed:**

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Demetria Kimbrough  
Associate Director, Office of Air Quality  
Division of Environmental Quality

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Date

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#### List of Acronyms and Abbreviations

Ark. Code Ann.	Arkansas Code Annotated
AFIN	Arkansas DEQ Facility Identification Number
C.F.R.	Code of Federal Regulations
CO	Carbon Monoxide
COMS	Continuous Opacity Monitoring System
HAP	Hazardous Air Pollutant
Hp	Horsepower
lb/hr	Pound Per Hour
NESHAP	National Emission Standards (for) Hazardous Air Pollutants
MVAC	Motor Vehicle Air Conditioner
No.	Number
NO <sub>x</sub>	Nitrogen Oxide
NSPS	New Source Performance Standards
PM	Particulate Matter
PM <sub>10</sub>	Particulate Matter Equal To Or Smaller Than Ten Microns
PM <sub>2.5</sub>	Particulate Matter Equal To Or Smaller Than 2.5 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

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## **SECTION I: FACILITY INFORMATION**

PERMITTEE:	Crane Composites, Inc.
AFIN:	16-00222
PERMIT NUMBER:	2111-AOP-R7
FACILITY ADDRESS:	8500 CW Post Road Jonesboro, AR 72401
MAILING ADDRESS:	8500 CW Post Road Jonesboro, AR 72401
COUNTY:	Craighead County
CONTACT NAME:	Rachel Wildrick
CONTACT POSITION:	EHS Manager
TELEPHONE NUMBER:	(870) 933-5302
REVIEWING ENGINEER:	Derrick Brown
UTM North South (Y):	Zone 15: 3965311.64 m
UTM East West (X):	Zone 15: 719111.5 m

## **SECTION II: INTRODUCTION**

### **Summary of Permit Activity**

Crane Composites, Inc. (Crane) operates a facility located at 8500 CW Post Road, Jonesboro, Arkansas. This minor modification adds dual-fuel combustion capability to Emergency Generator (SN-09), allowing the source to combust both propane and natural gas. This minor modification increases permitted emission rates by 0.1 ton per year of VOC.

### **Process Description**

Crane produces reinforced plastic composite panels made with fiberglass reinforcement in a thermoset polymer resin matrix. The facility operates two wide lines: Line 5 and Line 8.

The facility uses two types of resin mixtures in the process: gel coat (a coating resin) and core (the body resin). The facility receives the raw resin material via tank trucks and stores it in nine aboveground tanks inside the building, each of which has a capacity of approximately 12,000 gallons. The tanks have vents that discharge to the atmosphere.

The resin is piped directly into the resin room to be blended or mixed with other ingredients such as powdered filler material in hatching tanks. The hatching tanks and carts used in the mixing room are vented by a ventilation system that discharges to the atmosphere (SN-08). Carts and tanks are kept covered or closed to minimize emissions.

Filler is delivered by truck and unloaded into the silo using a blower and bin vent filter combination (SN-02), with the discharge air vented to atmosphere. The filler is then transferred to the mix room on demand, directly to a filter /receiver at each batch/mix tank. Discharge air from each of the filter /receivers is vented through a common vent (SN-07) to the atmosphere. Pigments, promoters, and peroxide initiators may be added during the mixing operation, or injected at the line just prior to introduction onto the production line.

At the upstream 'wet end' of the production line, activated resin mix is pumped onto a carrier polyester film and spread into a thin layer by doctor blade. Chopped or woven fiberglass or nylon fibers are then applied and squeezed into the resin layer as it moves downstream. The resulting resin/fiberglass composition is then "sandwiched" by an upper layer of polyester film. The polyester film, both top and bottom, is used to contain the resin/fiberglass laminate and suppress volatile emissions while it is in a liquid state. The wet end sections of the production lines are vented to the RTO (SN-01).

For some products, a thin gel coat is applied to the upper film for extended weathering on the side of the panel that will be exposed to the elements. The gel coat is partially cured by passing through a series of ovens before the top film is inverted to sandwich the gel coat/core resin/fiberglass composite laminate. The gel coat dispensing and ovens are vented to the RTO.

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From the wet end, the laminate composition passes through two sets of natural gas-fired ovens, where curing by an exothermal process continues to harden the resin/fiberglass combination. The first set is the gel oven; the second set is the cure oven. The ovens are vented to the RTO. Depending upon whether flat or corrugated product is being manufactured, the product passes over forming shoes (for corrugated products) or pulled by edge rollers (for flat products), which are located in the upstream ovens. Heat is carefully controlled in each of the oven zones to maintain the desired panel shape and curing rate

After exiting the curing oven, the rigid laminate panel passes through a cooling station to lower the temperature and prevent dulling of the surface appearance when the upper and lower polyester films are removed at the rewind stations. Finished laminate is then trimmed to the correct width (using fluid jet cutters) and cut to length as specified by the customers using a cross-cut fluid jet shear. Fluid jet cutters do not create airborne particulate emissions. Finally, the panel is inspected, then stacked on skids or rolled into coils, banded, and processed for Shipment.

VOCs that are emitted from the gel coating, wet ends, and ovens are collected and passed through a Regenerative Thermal Oxidizer (RTO) to be destroyed. The RTO is designed to destroy VOCs by raising the temperature of the contaminated gas stream to 1,400°F during a 0.5 second retention time.

The facility uses a dual-fuel, natural/propane gas-fired emergency generator (SN-09) to provide backup power to the Catalyst Building.

### Rules and Regulations

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

Rules and Regulations
Arkansas Air Pollution Control Code, Rule 18, effective March 14, 2016
Rules of the Arkansas Plan of Implementation for Air Pollution Control, Rule 19, effective May 6, 2022
Rules of the Arkansas Operating Air Permit Program, Rule 26, effective March 14, 2016
40 C.F.R. Part 63 Subpart WWW— <i>National Emission Standards for Hazardous Air Pollutants: Reinforced Plastic Composites Production</i>
40 C.F.R. Part 63 Subpart SS— <i>National Emission Standards for Closed Vent Systems, Control Devices, Recovery Devices and Routing to a Fuel Gas System or a Process</i>
40 C.F.R. Part 63 Subpart EEEE— <i>National Emission Standards for Hazardous Air Pollutants: Organic Liquids Distribution (Non-Gasoline)</i>
40 C.F.R. Part 63 Subpart ZZZZ— <i>National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines</i>
40 C.F.R. Part 60 Subpart JJJJ— <i>Standards of Performance for Stationary Spark Ignition Internal Combustion Engines</i>

### Emission Summary

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

EMISSION SUMMARY				
Source Number	Description	Pollutant	Emission Rates	
			lb/hr	tpy
Total Allowable Emissions		PM	0.5	1.0
		PM <sub>10</sub>	0.5	1.0
		SO <sub>2</sub>	0.2	0.2
		VOC	25.3	36.3
		CO	4.0	8.2
		NO <sub>x</sub>	3.4	9.5
HAPs		Styrene	18.37	34.33
		Methyl Methacrylate	6.10	2.82
		Vinyl Acetate	3.64	0.81
		Xylene	0.05	0.09
		Ethylbenzene	0.03	0.06
		2-Phenoxyethanol	0.01	0.04
		Other HAPs**	0.06	0.18
01	Production Lines (RTO)	PM	0.2	0.7
		PM <sub>10</sub>	0.2	0.7
		SO <sub>2</sub>	0.1	0.1
		VOC	9.9	34.3
		CO	1.8	7.6
		NO <sub>x</sub>	2.1	9.1
		Styrene	9.68	33.47
		Methyl Methacrylate	0.66	2.28
		Vinyl Acetate	0.14	0.46
		Xylene	0.02	0.07
		Ethylbenzene	0.01	0.04
		2-Phenoxyethanol	0.01	0.04
		Other HAPs**	0.04	0.17
02	Filler Silo Vent (Fabric Filter 99.9%)	PM	0.1	0.1
		PM <sub>10</sub>	0.1	0.1

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EMISSION SUMMARY				
Source Number	Description	Pollutant	Emission Rates	
			lb/hr	tpy
07	Mix Room Filler Vent (Fabric Filter 99.9%)	PM	0.1	0.1
		PM <sub>10</sub>	0.1	0.1
08	Mixing and Storage Tanks	VOC	15.3	1.8
		Styrene	8.68	0.85
		Methyl Methacrylate	5.44	0.54
		Vinyl Acetate	3.50	0.35
		Xylene	0.01	0.01
		Ethylbenzene	0.01	0.01
09	Emergency Generator	PM	0.1	0.1
		PM <sub>10</sub>	0.1	0.1
		SO <sub>2</sub>	0.1	0.1
		VOC	0.6	0.2
		CO	2.2	0.6
		NO <sub>x</sub>	1.3	0.4
		Styrene	0.01	0.01
		Xylene	0.01	0.01
		Ethylbenzene	0.01	0.01
		Other HAPs**	0.02	0.01

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



### SECTION III: PERMIT HISTORY

**Permit No. 2111-AOP-R0** was issued on July 26, 2006 and modified by final Permit Appeal Resolution on February 6, 2007 (Docket No. 06-006-P). This was the first Title V Operating Air Permit issued to Crane Composites, Inc.

**Permit No. 2111-AOP-R1** was issued on August 8, 2007. The changes agreed upon in the Permit Appeal Resolution (PAR, Docket No. 06-006) were incorporated into the permit. The changes included:

- revised emission limits and demonstrating compliance with the emissions limits through tracking material usage and formulation,
- no visible emissions from the RTO (SN-01) and the raw material silos (SN-02 and SN-07),
- EPA test method 204 to evaluate the permanent total enclosure for leaks, and
- a revised schedule for submitting semi-annual compliance reports to coincide the with last day of the anniversary month of the initial Title V permit.

In addition to the PAR, Crane revised emission estimates from the regenerative thermal oxidizer. Permitted PM/PM<sub>10</sub>, VOC, and NO<sub>x</sub> decreased by 0.2 tpy, 0.1 tpy, and 0.2 tpy, respectively. Permitted CO increased by 0.1 tpy.

**Permit No. 2111-AOP-R2** was issued June 28, 2011. This permit revision was a renewal of the existing Title V permit (Permit No. 2111-AOP-R1). The emissions changed slightly because, as of the issuance of this permit, permitted rates are based off of the allowable styrene monomer usage limit, using proper speciation for the tank emissions, and rounding properly. The annual permitted emissions changes associated with this permit revision are: -0.2 tpy PM/PM<sub>10</sub>, -0.1 tpy VOC, -0.2 tpy NO<sub>x</sub>, +0.3 tpy Methyl Methacrylate, and +0.29 tpy Vinyl Acetate.

**Permit No. 2111-AOP-R3** was issued September 28, 2016. This permitting action renewed the existing permit with the following modifications:

- Applicable requirements of 40 C.F.R. Part 63 Subpart EEEE (OLD MACT) were added.
- Emissions resulting from the combustion of natural gas, at the Laminating Lines and Ovens (SN-01), were included.

Permitted emission rates increased 0.8 tpy VOC; 0.1 tpy NO<sub>x</sub>; 0.02 tpy Methyl Methacrylate, and 0.17 tpy other HAPs. Permitted emission rates decreased 0.2 tpy PM/PM<sub>10</sub>; 0.01 tpy Styrene, and 0.06 tpy Vinyl Acetate.

**Permit No. 2111-AOP-R4** was issued March 5, 2020. With this Significant Modification, a 62 HP natural gas-fired emergency generator (SN-09) was added. SN-09 was installed and operated prior to the issuance of this permit. SN-09 is subject to 40 C.F.R. Part 63 Subpart ZZZZ and 40 C.F.R. Part 60 Subpart JJJJ. As a result of this modification, permitted emissions increased 0.1 tpy PM/PM<sub>10</sub>; 0.1 tpy SO<sub>2</sub>; 0.1 tpy VOC; 0.6 tpy CO; 0.4 tpy NO<sub>x</sub>; 0.04 tpy Total HAPs.

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**Permit No. 2111-AOP-R5** was issued November 15, 2021. This permit revision renewed the Title V permit for this facility with the following modifications.

- Emission limits for the Mixing and Storage Tanks (SN-08) have been revised and include a 12,000 gallon storage tank—Core Resin Tank #6. The tank is subject to 40 C.F.R. Part 63 Subpart WWW—*National Emission Standards for Hazardous Air Pollutants: Reinforced Plastic Composites Production*. Core Resin Tank #6 was installed and operated prior to issuance of this permit.
- Styrene Storage Tank #7, which is included in the Mixing and Storage Tanks (SN-08), has been repurposed as a storage tank for Gel-Coat.
- Specific Conditions #3 and #31 (Specific Condition #30 of this permit) have been updated to clarify requirements for the sources (SN-01, SN-02 and SN-07) and for consistency.
- Limits for 2-Phenoxyethanol emissions at the Production Lines (SN-01) have been added to the permit.
- Specific Condition #4 has been removed because it did not limit throughput at SN-01. Specific Condition #5 (Specific Condition #4 of this permit) was revised to require recordkeeping to demonstrate compliance with VOC and HAP emission limits at SN-01.

Annual permitted emissions were increased 0.2 tpy PM/PM<sub>10</sub> and 0.2 tpy HAPs.

**Permit No. 2111-AOP-R6** was issued August 14, 2023. This modification allowed the use of the Gel Coat Tank for SN-08, which originally held gel resin, to be used to hold core resin. Due to this change the Gel Coat tank was renamed Tank 8. Permitted emissions for VOC increased by 0.1 tpy, Methyl Methacrylate by 0.05 tpy, and Vinyl Acetate by 0.04 tpy.

## SECTION IV: SPECIFIC CONDITIONS

SN-01

Production Lines (RTO)

### Source Description

VOC that is emitted from the production lines is collected and passed through the RTO to be destroyed. The VOC capture system is a permanent total enclosure (PTE), and it is designed to capture 100% of the VOC emitted from gelcoating, wet ends, and ovens. Through the RTO and the PTE, an overall control efficiency of 95% is achieved. The VOC emission from the RTO is approximately 98% styrene, and the remaining 2% of VOC are methyl methacrylate, vinyl acetate, xylene, and ethyl benzene, in decreasing amounts.

### 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 through performance testing for VOC and compliance with Specific Condition #4 and #7. Compliance with PM<sub>10</sub>, SO<sub>2</sub>, CO, and NO<sub>x</sub> emission limits is inherent based on the equipment's maximum natural gas combustion rate. [Rule.19.501 *et seq.* and 40 C.F.R. § 52 Subpart E]

SN	Description	Pollutant	lb/hr	tpy
01	Production Lines (RTO)	PM <sub>10</sub>	0.2	0.7
		SO <sub>2</sub>	0.1	0.1
		VOC	9.9	34.3
		CO	1.8	7.6
		NO <sub>x</sub>	2.1	9.1

2. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by compliance with Specific Condition #4 and #7. Compliance with the PM emission limit is inherent based on the equipment's maximum natural gas combustion rate. [Rule.18.801, and Ark. Code Ann. § 8-4-203 as referenced by Ark. Code Ann. §§ 8-4-304 and 8-4-311]

SN	Description	Pollutant	lb/hr	tpy
01	Production Lines (RTO)	PM	0.2	0.7
		Styrene	9.68	33.47
		Methyl Methacrylate	0.66	2.28
		Vinyl Acetate	0.14	0.46
		Xylene	0.01	0.07
		Ethylbenzene	0.01	0.04
		2-Phenoxyethanol	0.01	0.04

SN	Description	Pollutant	lb/hr	tpy
		Other HAPs*	0.04	0.17

\*Other HAPs account for combustion emissions from natural gas-fired ovens on the production lines.

3. SN-01 shall have no visible emissions. Weekly observations of the opacity from SN-01 shall be conducted by someone familiar with the source's emissions. If any visible emissions are detected, the permittee shall immediately take action to identify the cause of the visible emissions, implement corrective action, and document that visible emissions were not present following the corrective action. The permittee shall maintain records which contain the following items in order to demonstrate compliance with this specific condition. These records shall be updated weekly, kept on site, and made available to Division of Environmental Quality personnel upon request.

- a. The date and time of the observation.
- b. If visible emissions were detected.
- c. If visible emissions were detected, the cause of the exceedance of the opacity limit, the corrective action taken, and if the visible emissions were present after the corrective action was taken.
- d. The name of the person conducting the opacity observations.

[Rule.18.501, Rule.18.1004, and Ark. Code Ann. § 8-4-203 as referenced by Ark. Code Ann. §§ 8-4-304 and 8-4-311]

4. The permittee shall maintain daily records to demonstrate compliance with VOC and HAP limits in Specific Conditions **#Error! Reference source not found.** and #2. Records shall include core resin and gel coat resin throughput for the production lines (Line 5 and Line 8) and the maximum VOC and HAP weight percent. The permittee shall maintain a twelve-month rolling total and each individual month's data. These records shall be maintained on-site and be made available to Department personnel upon request. These records shall be submitted in a semiannual report in accordance with General Provision #7. [Rule.19.705 and 40 C.F.R. § 52 Subpart E]
5. The permittee shall keep MSDS or equivalent information for each formula used in manufacturing including cleaning solvents. This information shall be maintained in a database, spreadsheet, or other well organized format. Required data to be tracked include formula name, type of resin (gel coat, core resin, *etc.*), composition, threshold limit value of each constituent, and raw material density. [Rule.19.705 and 40 C.F.R. § 52 Subpart E]
6. The permittee shall not use any formula which exceeds the VOC and/or HAP contents, as applied, listed in the following table. Compliance with this condition shall be demonstrated through compliance with Specific Condition #6. [Rule.18.1004,

Rule.19.705, Ark. Code Ann. § 8-4-203 as referenced by Ark. Code Ann. §§ 8-4-304 and 8-4-311, and 40 C.F.R. § 70.6]

Maximum VOC and Maximum HAP Concentrations in Resin Formulas

Coating Type	Pollutant	Maximum Weight Percent in Formula
Core Resins	VOC	45.0
	Styrene	45.0
	Methyl Methacrylate	5.0
	Vinyl Acetate	1.0
Gel Coats	VOC	42.0
	Styrene	41.0
	Xylene	0.2
	Ethylbenzene	0.1

7. In order to demonstrate compliance with the emission limits in Specific Conditions #1 and #2, the permittee shall install, operate, and maintain a RTO which achieves a minimum VOC destruction efficiency of 95% as demonstrated by Specific Condition #12. The RTO shall be maintained and operated at all times. Any deviations shall be reported to the Department in accordance with General Provision #8 with the exception that exceedances may be reported as part of the semi-annual reporting. The Department reserves the right to review any such exceedances in accordance with provisions of § 19.601. [Rule.19.601 and Ark. Code Ann. § 8-4-203 as referenced by Ark. Code Ann. §§ 8-4-304 and 8-4-311]
8. Any permanent total enclosure access door which is not intended to be a natural draft opening shall remain closed during production except when materials, parts and/or equipment are moving through it. [Rule.19.705, Reg.18.1004, Ark. Code Ann. § 8-4-203 as referenced by Ark. Code Ann. §§ 8-4-304 and 8-4-311, and 40 C.F.R. § 70.6]

#### MACT Requirements

9. The permittee operates a facility that is an affected source of 40 C.F.R. Part 63, Subpart WWW – *National Emissions Standards for Hazardous Air Pollutants: Reinforced Plastic Composite Production*. The permittee is engaged in continuous lamination operations, mixing, cleaning of equipment used in reinforced plastic composites manufacture, and HAP-containing materials storage. The permittee shall comply with all applicable requirements of the subpart including but not limited to the requirements specified by Specific Conditions #10 through #16. [Rule.19.304 and 40 C.F.R. § 63.5790]
10. The permittee shall, through the use of an add-on control device, demonstrate that a 95 percent reduction of total organic HAP emissions from centrifugal casting and continuous lamination/casting operations is achieved. The add-on control device shall be monitored

and operated according to the procedures in 40 C.F.R. Part 63, Subpart SS. [Rule.19.304 and 40 C.F.R. § 63.5805 (a)(1) and (h)]

11. The permittee shall conduct initial and subsequent performance tests for SN-01 using Method 25A of Appendix A to 40 C.F.R. Part 60 to demonstrate compliance with the limits in Specific Condition #10. Subsequent tests shall be conducted no later than five years after the previous test. The permittee shall assume all gaseous organic emissions measured as carbon are organic HAP emissions. The performance test must be conducted according to the requirements of § 63.7(e)(1), 40 C.F.R. § 63.997(b), and paragraphs (d), (e), and (f) of § 63.5850. [Rule.19.304 and 40 C.F.R. § 63.5850 (d)]
12. The permittee shall maintain records which demonstrate that the design and proposed operation of the permanent total enclosure meet the requirements specified in EPA Method 204 of Appendix M to 40 C.F.R. Part 51. These records shall be kept onsite and made available to Department personnel upon request. [Rule.19.304 and 40 C.F.R. § 63.5875 (a)]
13. The permittee shall record daily the usage of each formula/end product combination on each line in order to determine the amount of neat resin plus and neat gel coat plus applied. This is to be recorded at each changeover in formula or product and at the end of each shift. Daily usage shall be determined using in house records which track formula usage by end product/thickness combinations. These records shall be kept on site and be made available upon request to Department personnel. [Rule.19.304 and 40 C.F.R. § 63.5880]
14. The permittee shall not use cleaning solvents that contain HAP, except that styrene may be used as a cleaner in closed systems, and organic HAP containing cleaners may be used to clean cured resin from application equipment. Application equipment includes any equipment that directly contacts resin. [Rule.19.304 and 40 C.F.R. § 63.5805]
15. The permittee shall keep containers that store HAP-containing materials closed or covered except during the addition or removal of materials. Bulk HAP-containing materials storage tanks may be vented as necessary for safety. [Rule.19.304 and 40 C.F.R. § 63.5805]
16. The permittee shall submit an initial compliance report and, thereafter, a compliance report semiannually coinciding with the last day of the anniversary month of the initial Title V permit. The reports are 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. The permittee will send the report to both EPA Region VI and ADEQ. [Rule.19.304 and 40 C.F.R. § 63.5910]
17. The permittee is an affected source of 40 C.F.R. Part 63, Subpart SS – *National Emission Standards for Closed Vent Systems, Control Devices, Recovery Devices and Routing to a*

*Fuel Gas System or a Process* because it is subject to 40 C.F.R. Part 63, Subpart WWWW which specifically references the subpart. The permittee shall comply with all applicable requirements of the subpart including but not limited to the requirements specified by Specific Conditions #18 through #22. [Rule.19.304 and 40 C.F.R. § 63.980]

18. The permittee shall perform annual inspections of the permanent total enclosure for leaks. The initial tests shall be performed while the permanent total enclosure is in service according to the procedures specified in § 63.5875 and 40 C.F.R. Part 63, Subpart WWWW Table 6. The permittee shall conduct such inspections according to EPA Method 204 for permanent total enclosure evaluations. [Rule.19.304 and 40 C.F.R. § 63.5875]
19. Records of the inspections required in Specific Condition #18 shall be generated as specified in § 63.5865(a). The records shall be kept on site and made upon request. [Rule.19.304 and 40 C.F.R. § 63.5865 (a)]
20. The permittee shall install, calibrate, operate, and maintain according to manufacturer's specification, a continuous parameter monitoring system (CPMS) to monitor the temperature of the combustion chamber of the RTO. [Rule.19.304 and 40 C.F.R. § 63.996 (c)]
21. The CPMS shall measure the temperature at least once every 15 minutes and record the measurements according to the requirements of § 63.998(b) and § 63.998(c)(1). [Rule.19.304 and 40 C.F.R. § 63.998].
22. The permittee shall submit all notifications and reports required by § 63.999. [Rule.19.304 and 40 C.F.R. § 63.999]
23. Transfer racks used for unloading styrene, methyl methacrylate, and resins are an affected source of 40 C.F.R. Part 63, Subpart EEEE – *National Emission Standards for Hazardous Air Pollutants: Organic Liquids Distribution (Non-Gasoline)*, but do not require control under this subpart. The permittee shall comply with all applicable requirements of the subpart including but not limited to requirements specified in Specific Conditions #24. [Rule.19.304 and 40 C.F.R. §§ 63.2338(b)(3)(ii) and 63.2343]
24. For each transfer rack subject to this subpart that only unloads organic liquids (i.e., no organic liquids are loaded at any of the transfer racks), the permittee must keep documentation that verifies each transfer rack is not required to be controlled. The documentation must be kept up-to-date (i.e., all such emission sources at a facility are identified in the documentation regardless of when the documentation was last compiled) and must be in a form suitable and readily available for expeditious inspection and review according to § 63.10(b)(1), including records stored in electronic form in a separate location. The documentation may consist of identification of the transfer racks on a plant site plan or process and instrumentation diagram (P&ID). [Rule.19.304 and 40 C.F.R. § 63.2343(a)]

SN-02 and SN-07

Filler Silo and Baghouse

Source Description

Filler is delivered by truck and unloaded into the silo using a blower and bin vent filter combination (SN-02), with the discharge air vented to the atmosphere. The filler is transferred to the mix room on demand, directly to a filter/receiver at each batch/mix tank. Discharge air from each of the filter/receivers is vented through a common vent (SN-07) to the atmosphere. Pigments, promoters, and peroxide initiators may be added during the mixing operation, or injected at the line just prior to introduction onto the production line.

Specific Conditions

25. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition through recordkeeping of filler throughput. [Rule.19.501 *et seq.* and 40 C.F.R. § 52 Subpart E]

SN	Description	Pollutant	lb/hr	tpy
02	Filler Silo Vent	PM <sub>10</sub>	0.1	0.1
07	Mix Room Filler Vent	PM <sub>10</sub>	0.1	0.1

26. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition through recordkeeping of filler throughput. [Rule.18.801 and Ark. Code Ann. § 8-4-203 as referenced by Ark. Code Ann. §§ 8-4-304 and 8-4-311]

SN	Description	Pollutant	lb/hr	tpy
02	Filler Silo Vent	PM	0.1	0.1
07	Mix Room Filler Vent	PM	0.1	0.1

27. The permittee shall not receive more than 2,100 tons of filler per consecutive 12-month period. [Rule.19.705, Ark. Code Ann. § 8-4-203 as referenced by Ark. Code Ann. §§ 8-4-304 and 8-4-311, and 40 C.F.R. § 70.6]
28. The permittee shall maintain monthly records to demonstrate compliance with Specific Condition #27. The permittee shall maintain a twelve month rolling total, and each individual month's data shall be maintained on-site and made available to Department personnel upon request. These records shall be submitted in a semiannual report in accordance with General Provision #7. [Rule.19.705 and 40 C.F.R. § 52 Subpart E]



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29. SN-02 and SN-07 shall have no visible emissions. Weekly observations of the opacity from SN-02 and SN-07 shall be conducted by someone familiar with the source's emissions. If any visible emissions are detected, the permittee shall immediately take action to identify the cause of the visible emissions, implement corrective action, and document that visible emissions were not present following the corrective action. The permittee shall maintain records which contain the following items in order to demonstrate compliance with this specific condition. These records shall be updated weekly, kept on site, and made available to Division of Environmental Quality personnel upon request.
- a. The date and time of the observation.
  - b. If visible emissions were detected.
  - c. If visible emissions were detected, the cause of the exceedance of the opacity limit, the corrective action taken, and if the visible emissions were present after the corrective action was taken.
  - d. The name of the person conducting the opacity observations.

[Rule.18.501, Rule.18.1004, and Ark. Code Ann. § 8-4-203 as referenced by Ark. Code Ann. §§ 8-4-304 and 8-4-311]

SN-08

Mixing and Storage Tanks

Source Description

The resin is piped directly into the resin room to be blended or mixed with other ingredients such as powdered filler material in batching tanks. The batching tanks and carts used in the mixing room are discharged to the atmosphere through the Mixing Room ventilation system (SN-08). Carts and tanks are kept covered or closed to minimize emissions.

There are twenty above ground tanks, and they are located indoors. Listed below are the tanks, their service, and capacity.

Tank	Service	Capacity (gallons)
Batch No. 1	Mixing tank for core resin for Line 8	12,000
Batch No. 2	Mixing tank for core resin for Line 8	12,000
Tank 1	Storage tank for core resin	12,000
Tank 2	Storage tank for core resin	12,000
Tank 3	Storage tank for core resin	12,000
Tank 4	Storage tank for core resin	12,000
Tank 5	Storage tank for core resin	12,000
Tank 6	Storage tank for core resin	12,000
Tank 7	Storage tank for gel resin	12,000
Tank 8	Storage tank for core resin	12,000
Mix Tank 1	Mixing tank for core resin for Line 5	1,000
Mix Tank 2	Mixing tank for core resin for Line 5	1,000
Core Hold 1	Holding tank for core resin for Line 5	500
Core Hold 2	Holding tank for core resin for Line 5	500
Core Hold 3	Holding tank for core resin for Line 5	500
Core Hold 4	Holding tank for core resin for Line 5	500
Gel Hold 1	Holding tank for gel resin	500
Gel Hold 2	Holding tank for gel resin	500
Gel Hold 3	Holding tank for gel resin	500
Gel Hold 4	Holding tank for gel resin	500

Specific Conditions

30. The permittee shall not exceed the emission rates set forth in the following table. The permittee will demonstrate compliance with this condition through compliance with Specific Conditions #4, #6, and #32. [Rule.19.501 *et seq.* and 40 C.F.R. § 52 Subpart E]

Pollutant	lb/hr	tpy
VOC	15.3	1.8

31. The permittee shall not exceed the emission rates set forth in the following table. The permittee will demonstrate compliance with this condition through compliance with Specific Conditions #4, #6, and #32. [Rule.18.801 and Ark. Code Ann. § 8-4-203 as referenced by Ark. Code Ann. §§ 8-4-304 and 8-4-311]

Pollutant	lb/hr	tpy
Styrene	8.68	0.85
Methyl Methacrylate	5.44	0.54
Vinyl Acetate	3.50	0.35
Xylene	0.02	0.01
Ethylbenzene	0.01	0.01

32. The permittee shall not receive at the facility more than 504,000 gallons of styrene per consecutive 12-month period. Raw materials, as received, which contain styrene as a solvent, do not count towards this limit. [Rule.19.705, Ark. Code Ann. § 8-4-203 as referenced by Ark. Code Ann. §§ 8-4-304 and 8-4-311, and 40 C.F.R. § 70.6]
33. The permittee will maintain monthly records to demonstrate compliance with Specific Condition #32. The permittee will maintain a twelve month rolling total and each individual month's data shall be maintained on-site, made available to Department personnel upon request. These records shall be submitted in a semiannual report in accordance with General Provision #7. [Rule.19.705 and 40 C.F.R. § 52 Subpart E]

SN-09

Emergency Generator

Source Description

A 62 HP natural gas and propane-fired emergency generator (SN-09) provides backup power to the Catalyst Building. The generator is subject to 40 C.F.R. Part 63 Subpart ZZZZ and 40 C.F.R. Part 60 Subpart JJJJ.

Specific Conditions

34. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by complying with Specific Conditions #37 and #38. [Rule.19.501 *et seq.* and 40 C.F.R. § 52 Subpart E]

SN	Description	Pollutant	lb/hr	tpy
09	Emergency Generator	PM <sub>10</sub>	0.1	0.1
		SO <sub>2</sub>	0.1	0.1
		VOC	0.6	0.2
		CO	2.2	0.6
		NO <sub>x</sub>	1.3	0.4

35. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by complying with Specific Conditions #37 and #38. [Rule.18.801 and Ark. Code Ann. § 8-4-203 as referenced by Ark. Code Ann. §§ 8-4-304 and 8-4-311]

SN	Description	Pollutant	lb/hr	tpy
09	Emergency Generator	PM	0.1	0.1
		Styrene	0.01	0.01
		Xylene	0.01	0.01
		Ethylbenzene	0.01	0.01
		Other HAPs	0.02	0.01

36. Visible emissions may not exceed the limits specified in the following table of this permit as measured by EPA Reference Method 9. Compliance with the condition shall be demonstrated by using only pipeline quality natural gas as fuel.

SN	Limit	Regulatory Citation
09	5%	Rule.18.501 and Ark. Code Ann. § 8-4-203 as referenced by Ark. Code Ann. §§ 8-4-304 and 8-4-311

37. The permittee shall not operate the Emergency Generator (SN-09) in excess of 500 total hours (emergency and non-emergency) per calendar year in order to demonstrate compliance with the annual emission rate limits. Emergency operation in excess of these hours may be allowable but shall be reported and will be evaluated in accordance with Reg.19.602 and other applicable regulations. [Rule.19.705, Ark. Code Ann. § 8-4-203 as referenced by Ark. Code Ann. §§ 8-4-304 and 8-4-311, and 40 C.F.R. § 70.6]
38. The permittee shall maintain monthly records to demonstrate compliance with Specific Condition #37. The permittee shall update these records by the fifteenth day of the month following the month to which the records pertain. The calendar year totals and each individual month's data shall be maintained on-site, made available to Department personnel upon request, and submitted in accordance with General Provision #7. [Rule.19.705 and 40 C.F.R. § 52 Subpart E]

#### MACT Requirements

39. SN-09 is an affected source of 40 C.F.R. Part 63 Subpart ZZZZ that meets the criteria below. The permittee shall meet the requirements of this part by meeting the requirements of 40 C.F.R. Part 60 Subpart JJJJ. No further requirements apply for such engines under this part. [Rule.19.304 and 40 C.F.R. § 63.6590(c)]
- a. A new or reconstructed emergency or limited use stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions. [40 C.F.R. § 63.6590(c)(6)]

#### NSPS Requirements

New Emergency SI RICE Other Fuel (Not Gasoline or Rich Burn LPG) Certified Engine 25 HP to 100 HP

40. SN-09 is subject to 40 C.F.R. § 60 Subpart JJJJ. The permittee shall comply with all applicable provisions of 40 C.F.R. § 60 Subpart JJJJ which includes, but is not limited to, Specific Conditions #41 through #51. [Rule.19.304 and 40 C.F.R. § 60 Subpart JJJJ]

41. The provisions of 40 C.F.R. Part 60 Subpart JJJJ are applicable to owners and operators of stationary spark ignition (SI) internal combustion engines (ICE) that commence construction after June 12, 2006, where the stationary SI ICE are manufactured on or after January 1, 2009, for emergency engines with a maximum engine power greater than 19 KW (25 HP). For the purposes of 40 C.F.R. Part 60 Subpart JJJJ, the date that construction commences is the date the engine is ordered by the owner or operator. [Rule.19.304 and 40 C.F.R. § 60.4230(a)(4)(iv)]
42. 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 C.F.R. 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. [Rule.19.304 and 40 C.F.R. § 60.4233(d)]

Engine type and fuel	Maximum engine power	Manufacture date	Emission standards <sup>d</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>
Emergency	25<HP<130	1/1/2009	<sup>c</sup> 10	387	N/A	N/A	N/A	N/A

<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 C.F.R. 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.

43. 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. [Rule.19.304 and 40 C.F.R. § 60.4234]
44. 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. [Rule.19.304 and 40 C.F.R. § 60.4236(c)]

45. 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. [Rule.19.304 and 40 C.F.R. § 60.4237(c)]
46. 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. In addition, you must meet one of the requirements specified in (a)(1) and (2) of this section. [Rule.19.304 and 40 C.F.R. § 60.4243(a)]
  - a. 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. [40 C.F.R. § 60.4243(a)(2)]
    - 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. [40 C.F.R. § 60.4243(a)(2)(i)]
47. 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. [Rule.19.304 and 40 C.F.R. § 60.4243(b)]
  - a. 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. [40 C.F.R. § 60.4243(b)(1)]
48. If you own or operate an emergency stationary ICE, you must operate the emergency stationary ICE according to the requirements in paragraphs (d)(1) through (3) of this section. In order for the engine to be considered an emergency stationary ICE under this subpart, any operation other than emergency operation, maintenance and testing, emergency demand response, and operation in non-emergency situations for 50 hours per year, as described in paragraphs (d)(1) through (3) of this section, is prohibited. If you do not operate the engine according to the requirements in paragraphs (d)(1) through (3) of this section, the engine will not be considered an emergency engine under this subpart and must meet all requirements for non-emergency engines. [Rule.19.304 and 40 C.F.R. § 60.4243(d)]

- a. There is no time limit on the use of emergency stationary ICE in emergency situations. [40 C.F.R. § 60.4243(d)(1)]
- b. You may operate your emergency stationary ICE for any combination of the purposes specified in paragraphs (d)(2)(i) through (iii) of this section for a maximum of 100 hours per calendar year. Any operation for non-emergency situations as allowed by paragraph (d)(3) of this section counts as part of the 100 hours per calendar year allowed by this paragraph (d)(2). [40 C.F.R. § 60.4243(d)(2)]
  - i. Emergency stationary ICE may be operated for maintenance checks and readiness testing, provided that the tests are recommended by federal, state or local government, the manufacturer, the vendor, the regional transmission organization or equivalent balancing authority and transmission operator, or the insurance company associated with the engine. The owner or operator may petition the Administrator for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the owner or operator maintains records indicating that federal, state, or local standards require maintenance and testing of emergency ICE beyond 100 hours per calendar year. [40 C.F.R. § 60.4243(d)(2)(i)]
  - ii. Reserved
- c. Emergency stationary ICE may be operated for up to 50 hours per calendar year in non-emergency situations. The 50 hours of operation in non-emergency situations are counted as part of the 100 hours per calendar year for maintenance and testing and emergency demand response provided in paragraph (d)(2) of this section. Except as provided in paragraph (d)(3)(i) of this section, the 50 hours per year for non-emergency situations cannot be used for peak shaving or non-emergency demand response, or to generate income for a facility to an electric grid or otherwise supply power as part of a financial arrangement with another entity. [40 C.F.R. § 60.4243(d)(3)]
  - i. The 50 hours per year for non-emergency situations can be used to supply power as part of a financial arrangement with another entity if all of the following conditions are met: [40 C.F.R. § 60.4243(d)(3)(i)]
    - 1. The engine is dispatched by the local balancing authority or local transmission and distribution system operator; [40 C.F.R. § 60.4243(d)(3)(i)(A)]
    - 2. The dispatch is intended to mitigate local transmission and/or distribution limitations so as to avert potential voltage collapse or line overloads that could lead to the interruption of power supply in a local area or region. [40 C.F.R. § 60.4243(d)(3)(i)(B)]
    - 3. The dispatch follows reliability, emergency operation or similar protocols that follow specific NERC, regional, state, public utility



- commission or local standards or guidelines. [40 C.F.R. § 60.4243(d)(3)(i)(C)]
4. The power is provided only to the facility itself or to support the local transmission and distribution system. [40 C.F.R. § 60.4243(d)(3)(i)(D)]
  5. The owner or operator identifies and records the entity that dispatches the engine and the specific NERC, regional, state, public utility commission or local standards or guidelines that are being followed for dispatching the engine. The local balancing authority or local transmission and distribution system operator may keep these records on behalf of the engine owner or operator. [40 C.F.R. § 60.4243(d)(3)(i)(E)]
49. 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. [40 C.F.R. § 60.4243(e)]
50. Owners and operators of all stationary SI ICE must keep records of the information in paragraphs (a)(1) through (4) of this section. [Rule.19.304 and 40 C.F.R. § 60.4245(a)]
- a. All notifications submitted to comply with this subpart and all documentation supporting any notification. [40 C.F.R. § 60.4245(a)(1)]
  - b. Maintenance conducted on the engine. [40 C.F.R. § 60.4245(a)(2)]
  - c. 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 C.F.R. parts 1048, 1054, and 1060, as applicable. [40 C.F.R. § 60.4245(a)(3)]
  - d. 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. [40 C.F.R. § 60.4245(a)(4)]
51. 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

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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. [Rule.19.304 and 40 C.F.R. § 60.4245(b)]

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

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

## SECTION VI: PLANTWIDE CONDITIONS

1. The permittee shall notify the Director in writing within thirty (30) days after commencing construction, completing construction, first placing the equipment and/or facility in operation, and reaching the equipment and/or facility target production rate. [Rule 19.704, 40 C.F.R. § 52 Subpart E, and Ark. Code Ann. § 8-4-203 as referenced by Ark. Code Ann. §§ 8-4-304 and 8-4-311]
2. If the permittee fails to start construction within eighteen months or suspends construction for eighteen months or more, the Director may cancel all or part of this permit. [Rule 19.410(B) and 40 C.F.R. § 52 Subpart E]
3. The permittee must test any equipment scheduled for testing, unless otherwise stated in the Specific Conditions of this permit or by any federally regulated requirements, within the following time frames: (1) new equipment or newly modified equipment within sixty (60) days of achieving the maximum production rate, but no later than 180 days after initial start up of the permitted source or (2) operating equipment according to the time frames set forth by the Division of Environmental Quality or within 180 days of permit issuance if no date is specified. The permittee must notify the Division of Environmental Quality of the scheduled date of compliance testing at least fifteen (15) business days in advance of such test. The permittee shall submit the compliance test results to the Division of Environmental Quality within sixty (60) calendar days after completing the testing. [Rule 19.702 and/or Rule 18.1002 and Ark. Code Ann. § 8-4-203 as referenced by Ark. Code Ann. §§ 8-4-304 and 8-4-311]
4. The permittee must provide:
  - a. Sampling ports adequate for applicable test methods;
  - b. Safe sampling platforms;
  - c. Safe access to sampling platforms; and
  - d. Utilities for sampling and testing equipment.

[Rule 19.702 and/or Rule 18.1002 and Ark. Code Ann. § 8-4-203 as referenced by Ark. Code Ann. §§ 8-4-304 and 8-4-311]
5. The permittee must operate the equipment, control apparatus and emission monitoring equipment within the design limitations. The permittee shall maintain the equipment in good condition at all times. [Rule 19.303 and Ark. Code Ann. § 8-4-203 as referenced by Ark. Code Ann. §§ 8-4-304 and 8-4-311]
6. This permit subsumes and incorporates all previously issued air permits for this facility. [Rule 26 and Ark. Code Ann. § 8-4-203 as referenced by Ark. Code Ann. §§ 8-4-304 and 8-4-311]

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7. Unless otherwise specified in the permit, approval to construct any new major stationary source or a major modification subject to 40 C.F.R. § 52.21 shall become invalid if construction is not commenced within 18 months after receipt of such approval, if construction is discontinued for a period of 18 months or more, or if construction is not completed within a reasonable time. The Division of Environmental Quality may extend the 18-month period upon a satisfactory showing that an extension is justified. [Rule 19.901 *et seq.* and 40 C.F.R. § 52 Subpart E]

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## **SECTION VII: INSIGNIFICANT ACTIVITIES**

The Division of Environmental Quality deems the following types of activities or emissions as insignificant on the basis of size, emission rate, production rate, or activity in accordance with Group A of the Insignificant Activities list found in Rule 18 and Rule 19 Appendix A. Group B insignificant activities may be listed but are not required to be listed in permits. Insignificant activity emission determinations rely upon the information submitted by the permittee in an application dated February 26, 2021. [Rule 26.304 and Ark. Code Ann. § 8-4-203 as referenced by Ark. Code Ann. §§ 8-4-304 and 8-4-311]

Description	Category
Diesel Storage Tank (300 gallon)	A-3
R&D Lab Hood	A-5
Color Lab Hood	A-5

## SECTION VIII: GENERAL PROVISIONS

1. Any terms or conditions included in this permit which specify and reference Arkansas Pollution Control & Ecology Commission Rule 18 or the Arkansas Water and Air Pollution Control Act (Ark. Code Ann. § 8-4-101 *et seq.*) as the sole origin of and authority for the terms or conditions are not required under the Clean Air Act or any of its applicable requirements, and are not federally enforceable under the Clean Air Act. Arkansas Pollution Control & Ecology Commission Rule 18 was adopted pursuant to the Arkansas Water and Air Pollution Control Act (Ark. Code Ann. § 8-4-101 *et seq.*). Any terms or conditions included in this permit which specify and reference Arkansas Pollution Control & Ecology Commission Rule 18 or the Arkansas Water and Air Pollution Control Act (Ark. Code Ann. § 8-4-101 *et seq.*) as the origin of and authority for the terms or conditions are enforceable under this Arkansas statute. [40 C.F.R. § 70.6(b)(2)]
2. This permit shall be valid for a period of five (5) years beginning on the date this permit becomes effective and ending five (5) years later. [40 C.F.R. § 70.6(a)(2) and Rule 26.701(B)]
3. The permittee must submit a complete application for permit renewal at least six (6) months before permit expiration. Permit expiration terminates the permittee's right to operate unless the permittee submitted a complete renewal application at least six (6) months before permit expiration. If the permittee submits a complete application, the existing permit will remain in effect until the Division of Environmental Quality takes final action on the renewal application. The Division of Environmental Quality will not necessarily notify the permittee when the permit renewal application is due. [Rule 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 C.F.R. § 70.6(a)(1)(ii) and Rule 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 C.F.R. § 70.6(a)(3)(ii)(A) and Rule 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 C.F.R. § 70.6(a)(3)(ii)(B) and Rule 26.701(C)(2)(b)]
7. The permittee must submit reports of all required monitoring every six (6) months. If the permit establishes no other reporting period, the reporting period shall end on the last day of the month six months after the issuance of the initial Title V permit and every six months thereafter. The report is due on the first day of the second month after the end of the reporting period. The first report due after issuance of the initial Title V permit shall contain six months of data and each report thereafter shall contain 12 months of data. The report shall contain data for all monitoring requirements in effect during the reporting period. If a monitoring requirement is not in effect for the entire reporting period, only those months of data in which the monitoring requirement was in effect are required to be reported. The report must clearly identify all instances of deviations from permit requirements. A responsible official as defined in Rule 26.2 must certify all required reports. The permittee will send the reports electronically using <https://portal.adeq.state.ar.us> or mail them to the address below:

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

[40 C.F.R. § 70.6(a)(3)(iii)(A) and Rule 26.701(C)(3)(a)]

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



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

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

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

[Rule 19.601, Rule 19.602, Rule 26.701(C)(3)(b), and 40 C.F.R. § 70.6(a)(3)(iii)(B)]

- 9. If any provision of the permit or the application thereof to any person or circumstance is held invalid, such invalidity will not affect other provisions or applications hereof which can be given effect without the invalid provision or application, and to this end, provisions of this Rule are declared to be separable and severable. [40 C.F.R. § 70.6(a)(5), Rule 26.701(E), and Ark. Code Ann. § 8-4-203 as referenced by Ark. Code Ann. §§ 8-4-304 and 8-4-311]
- 10. The permittee must comply with all conditions of this Part 70 permit. Any permit noncompliance with applicable requirements as defined in Rule 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 C.F.R. § 70.6(a)(6)(i) and Rule 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 C.F.R. § 70.6(a)(6)(ii) and Rule 26.701(F)(2)]
- 12. The Division of Environmental Quality may modify, revoke, reopen and reissue the permit or terminate the permit for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, termination, or of a notification of planned changes or anticipated noncompliance does not stay any permit condition. [40 C.F.R. § 70.6(a)(6)(iii) and Rule 26.701(F)(3)]

13. This permit does not convey any property rights of any sort, or any exclusive privilege. [40 C.F.R. § 70.6(a)(6)(iv) and Rule 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 Division of Environmental Quality may require the permittee to furnish such records directly to the Director along with a claim of confidentiality. [40 C.F.R. § 70.6(a)(6)(v) and Rule 26.701(F)(5)]
15. The permittee must pay all permit fees in accordance with the procedures established in Rule 9. [40 C.F.R. § 70.6(a)(7) and Rule 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 C.F.R. § 70.6(a)(8) and Rule 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 C.F.R. § 70.6(a)(9)(i) and Rule 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 Division of Environmental Quality specifically designates terms and conditions of the permit as being federally unenforceable under the Act or under any of its applicable requirements. [40 C.F.R. § 70.6(b) and Rule 26.702(A) and (B)]
19. Any document (including reports) required by this permit pursuant to 40 C.F.R. § 70 must contain a certification by a responsible official as defined in Rule 26.2. [40 C.F.R. § 70.6(c)(1) and Rule 26.703(A)]
20. The permittee must allow an authorized representative of the Division of Environmental Quality, upon presentation of credentials, to perform the following: [40 C.F.R. § 70.6(c)(2) and Rule 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. If the permit establishes no other reporting period, the reporting period shall end on the last day of the anniversary month of the initial Title V permit. The report is due on the first day of the second month after the end of the reporting period. The permittee must also submit the compliance certification to the Administrator as well as to the Division of Environmental Quality. All compliance certifications required by this permit must include the following: [40 C.F.R. § 70.6(c)(5) and Rule 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 Division of Environmental Quality may require elsewhere in this permit or by § 114(a)(3) and § 504(b) of the Act.
- 22. Nothing in this permit will alter or affect the following: [Rule 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. [Ark. Code Ann. § 8-4-203 as referenced by Ark. Code Ann. §§ 8-4-304 and 8-4-311]
- 24. The permittee may request in writing and at least 15 days in advance of the deadline, an extension to any testing, compliance or other dates in this permit. No such extensions are authorized until the permittee receives written Division of Environmental Quality approval. The Division of Environmental Quality may grant such a request, at its discretion in the following circumstances:

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

[Rule 18.314(A), Rule 19.416(A), Rule 26.1013(A), Ark. Code Ann. § 8-4-203 as referenced by Ark. Code Ann. §§ 8-4-304 and 8-4-311, and 40 C.F.R. § 52 Subpart E]

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

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

[Rule 18.314(B), Rule 19.416(B), Rule 26.1013(B), Ark. Code Ann. § 8-4-203 as referenced by Ark. Code Ann. §§ 8-4-304 and 8-4-311, and 40 C.F.R. § 52 Subpart E]

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

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

Crane Composites, Inc.  
Permit #: 2111-AOP-R7  
AFIN: 16-00222

[Rule 18.314(C), Rule 19.416(C), Rule 26.1013(C), Ark. Code Ann. § 8-4-203 as referenced by Ark. Code Ann. §§ 8-4-304 and 8-4-311, and 40 C.F.R. § 52 Subpart E]

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

## Appendix A

### Subpart WWWW—National Emissions Standards for Hazardous Air Pollutants: Reinforced Plastic Composites Production

Source: [68 FR 19402](#), Apr. 21, 2003, unless otherwise noted.

#### What This Subpart Covers

##### § 63.5780 What is the purpose of this subpart?

This subpart establishes national emissions standards for hazardous air pollutants (NESHAP) for reinforced plastic composites production. This subpart also establishes requirements to demonstrate initial and continuous compliance with the hazardous air pollutants (HAP) emissions standards.

##### § 63.5785 Am I subject to this subpart?

- (a) You are subject to this subpart if you own or operate a reinforced plastic composites production facility that is located at a major source of HAP emissions. Reinforced plastic composites production is limited to operations in which reinforced and/or nonreinforced plastic composites or plastic molding compounds are manufactured using thermoset resins and/or gel coats that contain styrene to produce plastic composites. The resins and gel coats may also contain materials designed to enhance the chemical, physical, and/or thermal properties of the product. Reinforced plastic composites production also includes cleaning, mixing, HAP-containing materials storage, and repair operations associated with the production of plastic composites.
- (b) You are not subject to this subpart if your facility only repairs reinforced plastic composites. Repair includes the non-routine manufacture of individual components or parts intended to repair a larger item as defined in [§ 63.5935](#).
- (c) You are not subject to this subpart if your facility is a research and development facility as defined in section 112(c)(7) of the Clean Air Act (CAA).
- (d) You are not subject to this subpart if your reinforced plastic composites operations use less than 1.2 tons per year (tpy) of thermoset resins and gel coats that contain styrene combined.

##### § 63.5787 What if I also manufacture fiberglass boats or boat parts?

- (a) If your source meets the applicability criteria in [§ 63.5785](#), and is not subject to the Boat Manufacturing NESHAP ([40 CFR part 63, subpart VVVV](#)), you are subject to this subpart regardless of the final use of the parts you manufacture.
- (b) If your source is subject to [40 CFR part 63, subpart VVVV](#), and all the reinforced plastic composites you manufacture are used in manufacturing your boats, you are not subject to this subpart.

(c) If you are subject to [40 CFR part 63, subpart VVVV](#), and meet the applicability criteria in [§ 63.5785](#), and produce reinforced plastic composites that are not used in fiberglass boat manufacture at your facility, all operations associated with the manufacture of the reinforced plastic composites parts that are not used in fiberglass boat manufacture at your facility are subject to this subpart, except as noted in [paragraph \(d\)](#) of this section.

(d) Facilities potentially subject to both this subpart and [40 CFR part 63, subpart VVVV](#) may elect to have the operations in [paragraph \(c\)](#) of this section covered by [40 CFR part 63, subpart VVVV](#), in lieu of this subpart, if they can demonstrate that this will not result in any organic HAP emissions increase compared to complying with this subpart.

### **§ 63.5790 What parts of my plant does this subpart cover?**

(a) This subpart applies to each new or existing affected source at reinforced plastic composites production facilities.

(b) The affected source consists of all parts of your facility engaged in the following operations: Open molding, closed molding, centrifugal casting, continuous lamination, continuous casting, polymer casting, pultrusion, sheet molding compound (SMC) manufacturing, bulk molding compound (BMC) manufacturing, mixing, cleaning of equipment used in reinforced plastic composites manufacture, HAP-containing materials storage, and repair operations on parts you also manufacture.

(c) The following operations are specifically excluded from any requirements in this subpart: application of mold sealing and release agents; mold stripping and cleaning; repair of parts that you did not manufacture, including non-routine manufacturing of parts; personal activities that are not part of the manufacturing operations (such as hobby shops on military bases); prepreg materials as defined in [§ 63.5935](#); non-gel coat surface coatings; application of putties, polyputties, and adhesives; repair or production materials that do not contain resin or gel coat; research and development operations as defined in section 112(c)(7) of the CAA; polymer casting; and closed molding operations (except for compression/injection molding). Note that the exclusion of certain operations from any requirements applies only to operations specifically listed in this paragraph. The requirements for any co-located operations still apply.

(d) Production resins that must meet military specifications are allowed to meet the organic HAP limit contained in that specification. In order for this exemption to be used, you must supply to the permitting authority the specifications certified as accurate by the military procurement officer, and those specifications must state a requirement for a specific resin, or a specific resin HAP content. Production resins for which this exemption is used must be applied with nonatomizing resin application equipment unless you can demonstrate this is infeasible. You must keep a record of the resins for which you are using this exemption.

[[68 FR 19402](#), Apr. 21, 2003, as amended at [70 FR 50124](#), Aug. 25, 2005]

**§ 63.5795 How do I know if my reinforced plastic composites production facility is a new affected source or an existing affected source?**

(a) A reinforced plastic composites production facility is a new affected source if it meets all the criteria in [paragraphs \(a\)\(1\)](#) and [\(2\)](#) of this section.

(1) You commence construction of the source after August 2, 2001.

(2) You commence construction, and no other reinforced plastic composites production source exists at that site.

(b) For the purposes of this subpart, an existing affected source is any affected source that is not a new affected source.

[\[70 FR 50124, Aug. 25, 2005\]](#)

**Calculating Organic HAP Emissions Factors for Open Molding and Centrifugal Casting**

**§ 63.5796 What are the organic HAP emissions factor equations in Table 1 to this subpart, and how are they used in this subpart?**

Emissions factors are used in this subpart to determine compliance with certain organic HAP emissions limits in Tables 3 and 5 to this subpart. You may use the equations in Table 1 to this subpart to calculate your emissions factors. Equations are available for each open molding operation and centrifugal casting operation and have units of pounds of organic HAP emitted per ton (lb/ton) of resin or gel coat applied. These equations are intended to provide a method for you to demonstrate compliance without the need to conduct for a HAP emissions test. In lieu of these equations, you can elect to use site-specific organic HAP emissions factors to demonstrate compliance provided your site-specific organic HAP emissions factors are incorporated in the facility's air emissions permit and are based on actual facility HAP emissions test data. You may also use the organic HAP emissions factors calculated using the equations in Table 1 to this subpart, combined with resin and gel coat use data, to calculate your organic HAP emissions.

**§ 63.5797 How do I determine the organic HAP content of my resins and gel coats?**

In order to determine the organic HAP content of resins and gel coats, you may rely on information provided by the material manufacturer, such as manufacturer's formulation data and material safety data sheets (MSDS), using the procedures specified in [paragraphs \(a\)](#) through [\(c\)](#) of this section, as applicable.

(a) Include in the organic HAP total each organic HAP that is present at 0.1 percent by mass or more for Occupational Safety and Health Administration-defined carcinogens, as specified in [29 CFR 1910.1200\(d\)\(4\)](#) and at 1.0 percent by mass or more for other organic HAP compounds.

(b) If the organic HAP content is provided by the material supplier or manufacturer as a range, you must use the upper limit of the range for determining compliance. If a separate measurement



of the total organic HAP content, such as an analysis of the material by EPA Method 311 of appendix A to 40 CFR part 63, exceeds the upper limit of the range of the total organic HAP content provided by the material supplier or manufacturer, then you must use the measured organic HAP content to determine compliance.

(c) If the organic HAP content is provided as a single value, you may use that value to determine compliance. If a separate measurement of the total organic HAP content is made and is less than 2 percentage points higher than the value for total organic HAP content provided by the material supplier or manufacturer, then you still may use the provided value to demonstrate compliance. If the measured total organic HAP content exceeds the provided value by 2 percentage points or more, then you must use the measured organic HAP content to determine compliance.

**§ 63.5798 What if I want to use, or I manufacture, an application technology (new or existing) whose organic HAP emissions characteristics are not represented by the equations in Table 1 to this subpart?**

If you wish to use a resin or gel coat application technology (new or existing), whose emission characteristics are not represented by the equations in Table 1 to this subpart, you may use the procedures in [paragraphs \(a\) or \(b\)](#) of this section to establish an organic HAP emissions factor. This organic HAP emissions factor may then be used to determine compliance with the emission limits in this subpart, and to calculate facility organic HAP emissions.

(a) Perform an organic HAP emissions test to determine a site-specific organic HAP emissions factor using the test procedures in [§ 63.5850](#).

(b) Submit a petition to the Administrator for administrative review of this subpart. This petition must contain a description of the resin or gel coat application technology and supporting organic HAP emissions test data obtained using EPA test methods or their equivalent. The emission test data should be obtained using a range of resin or gel coat HAP contents to demonstrate the effectiveness of the technology under the different conditions, and to demonstrate that the technology will be effective at different sites. We will review the submitted data, and, if appropriate, update the equations in Table 1 to this subpart.

**§ 63.5799 How do I calculate my facility's organic HAP emissions on a tpy basis for purposes of determining which [paragraphs of § 63.5805](#) apply?**

To calculate your facility's organic HAP emissions in tpy for purposes of determining which [paragraphs in § 63.5805](#) apply to you, you must use the procedures in either [paragraph \(a\)](#) of this section for new facilities prior to startup, or [paragraph \(b\)](#) of this section for existing facilities and new facilities after startup. You are not required to calculate or report emissions under this section if you are an existing facility that does not have centrifugal casting or continuous lamination/casting operations, or a new facility that does not have any of the following operations: Open molding, centrifugal casting, continuous lamination/casting, pultrusion, SMC and BMC manufacturing, and mixing. Emissions calculation and emission reporting procedures

in other sections of this subpart still apply. Calculate organic HAP emissions prior to any add-on control device, and do not include organic HAP emissions from any resin or gel coat used in operations subject to the Boat Manufacturing NESHAP, [40 CFR part 63, subpart VVVV](#), or from the manufacture of large parts as defined in [§ 63.5805\(d\)\(2\)](#). For centrifugal casting operations at existing facilities, do not include any organic HAP emissions where resin or gel coat is applied to an open centrifugal mold using open molding application techniques. Table 1 and the Table 1 footnotes to this subpart present more information on calculating centrifugal casting organic HAP emissions. The timing and reporting of these calculations is discussed in [paragraph \(c\)](#) of this section.

(a) For new facilities prior to startup, calculate a weighted average organic HAP emissions factor for the operations specified in [§ 63.5805\(c\)](#) and [\(d\)](#) on a lbs/ton of resin and gel coat basis. Base the weighted average on your projected operation for the 12 months subsequent to facility startup. Multiply the weighted average organic HAP emissions factor by projected resin use over the same period. You may calculate your organic HAP emissions factor based on the factors in Table 1 to this subpart, or you may use any HAP emissions factor approved by us, such as factors from the “Compilation of Air Pollutant Emissions Factors, Volume I: Stationary Point and Area Sources (AP-42),” or organic HAP emissions test data from similar facilities.

(b) For existing facilities and new facilities after startup, you may use the procedures in either [paragraph \(b\)\(1\)](#) or [\(2\)](#) of this section. If the emission factors for an existing facility have changed over the period of time prior to their initial compliance date due to incorporation of pollution-prevention control techniques, existing facilities may base the average emission factor on their operations as they exist on the compliance date. If an existing facility has accepted an enforceable permit limit that would result in less than 100 tpy of HAP measured prior to any add-on controls, and can demonstrate that they will operate at that level subsequent to the compliance date, they can be deemed to be below the 100 tpy threshold.

(1) ***Use a calculated emission factor.*** Calculate a weighted average organic HAP emissions factor on a lbs/ton of resin and gel coat basis. Base the weighted average on the prior 12 months of operation. Multiply the weighted average organic HAP emissions factor by resin and gel coat use over the same period. You may calculate this organic HAP emissions factor based on the equations in Table 1 to this subpart, or you may use any organic HAP emissions factor approved by us, such as factors from AP-42, or site-specific organic HAP emissions factors if they are supported by HAP emissions test data.

(2) ***Conduct performance testing.*** Conduct performance testing using the test procedures in [§ 63.5850](#) to determine a site-specific organic HAP emissions factor in units of lbs/ton of resin and gel coat used. Conduct the test under conditions expected to result in the highest possible organic HAP emissions. Multiply this factor by annual resin and gel coat use to determine annual organic HAP emissions. This calculation must be repeated and reported annually.

(c) Existing facilities must initially perform this calculation based on their 12 months of operation prior to April 21, 2003, and include this information with their initial notification report. Existing facilities must repeat the calculation based on their resin and gel coat use in the 12 months prior to their initial compliance date, and submit this information with their initial compliance report. After their initial compliance date, existing and new facilities must recalculate organic HAP emissions over the 12-month period ending June 30 or December 31, whichever date is the first date following their compliance date specified in [§ 63.5800](#). Subsequent calculations should cover the periods in the semiannual compliance reports.

[[68 FR 19402](#), Apr. 21, 2003, as amended at [70 FR 50124](#), Aug. 25, 2005]

## **Compliance Dates and Standards**

### **§ 63.5800 When do I have to comply with this subpart?**

You must comply with the standards in this subpart by the dates specified in Table 2 to this subpart. Facilities meeting an organic HAP emissions standard based on a 12-month rolling average must begin collecting data on the compliance date in order to demonstrate compliance.

### **§ 63.5805 What standards must I meet to comply with this subpart?**

You must meet the requirements of [paragraphs \(a\)](#) through [\(h\)](#) of this section that apply to you. You may elect to comply using any options to meet the standards described in [§§ 63.5810](#) through [63.5830](#). Use the procedures in [§ 63.5799](#) to determine if you meet or exceed the 100 tpy threshold.

(a) If you have an existing facility that has any centrifugal casting or continuous casting/lamination operations, you must meet the requirements of [paragraph \(a\)\(1\)](#) or [\(2\)](#) of this section:

(1) If the combination of all centrifugal casting and continuous lamination/casting operations emit 100 tpy or more of HAP, you must reduce the total organic HAP emissions from centrifugal casting and continuous lamination/casting operations by at least 95 percent by weight. As an alternative to meeting the 95 percent by weight requirement, centrifugal casting operations may meet the applicable organic HAP emissions limits in Table 5 to this subpart and continuous lamination/casting operations may meet an organic HAP emissions limit of 1.47 lbs/ton of neat resin plus and neat gel coat plus applied. For centrifugal casting, the percent reduction requirement does not apply to organic HAP emissions that occur during resin application onto an open centrifugal casting mold using open molding application techniques.

(2) If the combination of all centrifugal casting and continuous lamination/casting operations emit less than 100 tpy of HAP, then centrifugal casting and continuous lamination/casting operations must meet the appropriate requirements in Table 3 to this subpart.

(b) All operations at existing facilities not listed in [paragraph \(a\)](#) of this section must meet the organic HAP emissions limits in Table 3 to this subpart and the work practice standards in Table 4 to this subpart that apply, regardless of the quantity of HAP emitted.

(c) If you have a new facility that emits less than 100 tpy of HAP from the combination of all open molding, centrifugal casting, continuous lamination/casting, pultrusion, SMC manufacturing, mixing, and BMC manufacturing, you must meet the organic HAP emissions limits in Table 3 to this subpart and the work practice standards in Table 4 to this subpart that apply to you.

(d)

(1) Except as provided in [paragraph \(d\)\(2\)](#) of this section, if you have a new facility that emits 100 tpy or more of HAP from the combination of all open molding, centrifugal casting, continuous lamination/casting, pultrusion, SMC manufacturing, mixing, and BMC manufacturing, you must reduce the total organic HAP emissions from these operations by at least 95 percent by weight and meet any applicable work practice standards in Table 4 to this subpart that apply to you. As an alternative to meeting 95 percent by weight, you may meet the organic HAP emissions limits in Table 5 to this subpart. If you have a continuous lamination/casting operation, that operation may alternatively meet an organic HAP emissions limit of 1.47 lbs/ton of neat resin plus and neat gel coat plus applied.

(2)

(i) If your new facility manufactures large reinforced plastic composites parts using open molding or pultrusion operations, the specific open molding and pultrusion operations used to produce large parts are not required to reduce HAP emissions by 95 weight percent, but must meet the emission limits in Table 3 to this subpart.

(ii) A large open molding part is defined as a part that, when the final finished part is enclosed in the smallest rectangular six-sided box into which the part can fit, the total interior volume of the box exceeds 250 cubic feet, or any interior sides of the box exceed 50 square feet.

(iii) A large pultruded part is a part that exceeds an outside perimeter of 24 inches or has more than 350 reinforcements.

(e) If you have a new or existing facility subject to [paragraph \(a\)\(2\)](#) or [\(c\)](#) of this section at its initial compliance date that subsequently meets or exceeds the 100 tpy threshold in any calendar year, you must notify your permitting authority in your compliance report. You may at the same time request a one-time exemption from the requirements of [paragraph \(a\)\(1\)](#) or [\(d\)](#) of this section in your compliance report if you can demonstrate all of the following:

(1) The exceedance of the threshold was due to circumstances that will not be repeated.

(2) The average annual organic HAP emissions from the potentially affected operations for the last 3 years were below 100 tpy.

(3) Projected organic HAP emissions for the next calendar year are below 100 tpy, based on projected resin and gel coat use and the HAP emission factors calculated according to the procedures in [§ 63.5799](#).

(f) If you apply for an exemption in [paragraph \(e\)](#) of this section and subsequently exceed the HAP emission thresholds specified in [paragraph \(a\)\(2\)](#) or [\(c\)](#) of this section over the next 12-month period, you must notify the permitting authority in your semiannual report, the exemption is removed, and your facility must comply with [paragraph \(a\)\(1\)](#) or [\(d\)](#) of this section within 3 years from the time your organic HAP emissions first exceeded the threshold.

(g) If you have repair operations subject to this subpart as defined in [§ 63.5785](#), these repair operations must meet the requirements in Tables 3 and 4 to this subpart and are not required to meet the 95 percent organic HAP emissions reduction requirements in [paragraph \(a\)\(1\)](#) or [\(d\)](#) of this section.

(h) If you use an add-on control device to comply with this subpart, you must meet all requirements contained in [40 CFR part 63, subpart SS](#).

[[70 FR 50124](#), Aug. 25, 2005]

## **Options for Meeting Standards**

### **§ 63.5810 What are my options for meeting the standards for open molding and centrifugal casting operations at new and existing sources?**

You must use one of the following methods in [paragraphs \(a\)](#) through [\(d\)](#) of this section to meet the standards for open molding or centrifugal casting operations in Table 3 or 5 to this subpart. You may use any control method that reduces organic HAP emissions, including reducing resin and gel coat organic HAP content, changing to nonatomized mechanical application, using covered curing techniques, and routing part or all of your emissions to an add-on control. You may use different compliance options for the different operations listed in Table 3 or 5 to this subpart. The necessary calculations must be completed within 30 days after the end of each month. You may switch between the compliance options in [paragraphs \(a\)](#) through [\(d\)](#) of this section. When you change to an option based on a 12-month rolling average, you must base the average on the previous 12 months of data calculated using the compliance option you are changing to, unless you were previously using an option that did not require you to maintain records of resin and gel coat use. In this case, you must immediately begin collecting resin and gel coat use data and demonstrate compliance 12 months after changing options.

***(a) Demonstrate that an individual resin or gel coat, as applied, meets the applicable emission limit in Table 3 or 5 to this subpart.***

(1) Calculate your actual organic HAP emissions factor for each different process stream within each operation type. A process stream is defined as each individual combination of resin or gel coat, application technique, and control technique. Process streams within operations types are considered different from each other if any of the following four characteristics vary: the neat resin plus or neat gel coat plus organic HAP content, the gel coat type, the application technique, or the control technique. You must calculate organic HAP emissions factors for each different process stream by using the appropriate equations in Table 1 to this subpart for open molding and for centrifugal casting, or site-specific organic HAP emissions factors discussed in [§ 63.5796](#). The emission factor calculation should include any and all emission reduction techniques used including any add-on controls. If you are using vapor suppressants to reduce HAP emissions, you must determine the vapor suppressant effectiveness (VSE) by conducting testing according to the procedures specified in appendix A to subpart WWW of [40 CFR part 63](#). If you are using an add-on control device to reduce HAP emissions, you must determine the add-on control factor by conducting capture and control efficiency testing using the procedures specified in [§ 63.5850](#). The organic HAP emissions factor calculated from the equations in Table 1 to this subpart, or a site-specific emissions factor, is multiplied by the add-on control factor to calculate the organic HAP emissions factor after control. Use Equation 1 of this section to calculate the add-on control factor used in the organic HAP emissions factor equations.

$$\text{Add-on Control Factor} = 1 - \frac{\% \text{ Control Efficiency}}{100} \quad (\text{Eq. 1})$$

Where:

Percent Control Efficiency = a value calculated from organic HAP emissions test measurements made according to the requirements of [§ 63.5850](#) to this subpart.

(2) If the calculated emission factor is less than or equal to the appropriate emission limit, you have demonstrated that this process stream complies with the emission limit in Table 3 to this subpart. It is not necessary that all your process streams, considered individually, demonstrate compliance to use this option for some process streams. However, for any individual resin or gel coat you use, if any of the process streams that include that resin or gel coat are to be used in any averaging calculations described in [paragraphs \(b\) through \(d\)](#) of this section, then all process streams using that individual resin or gel coat must be included in the averaging calculations.

**(b) *Demonstrate that, on average, you meet the individual organic HAP emissions limits for each combination of operation type and resin application method or gel coat type.*** Demonstrate that on average you meet the individual organic HAP emissions limits for each unique combination of operation type and resin application method or gel coat type shown in Table 3 to this subpart that applies to you.

(1)

(i) Group the process streams described in paragraph (a) to this section by operation type and resin application method or gel coat type listed in Table 3 to this subpart and then calculate a weighted average emission factor based on the amounts of each individual resin or gel coat used for the last 12 months. To do this, sum the product of each individual organic HAP emissions factor calculated in [paragraph \(a\)\(1\)](#) of this section and the amount of neat resin plus and neat gel coat plus usage that corresponds to the individual factors and divide the numerator by the total amount of neat resin plus and neat gel coat plus used in that operation type as shown in Equation 2 of this section.

$$\text{Average organic HAP Emissions Factor} = \frac{\sum_{i=1}^n (\text{Actual Process Stream EF}_i \cdot \text{Material}_i)}{\sum_{i=1}^n \text{Material}_i} \quad (\text{Eq. 2})$$

Where:

Actual Process Stream EF<sub>i</sub> = actual organic HAP emissions factor for process stream i, lbs/ton;

Material<sub>i</sub> = neat resin plus or neat gel coat plus used during the last 12 calendar months for process stream i, tons;

n = number of process streams where you calculated an organic HAP emissions factor.

(ii) You may, but are not required to, include process streams where you have demonstrated compliance as described in [paragraph \(a\)](#) of this section, subject to the limitations described in [paragraph \(a\)\(2\)](#) of this section, and you are not required to and should not include process streams for which you will demonstrate compliance using the procedures in [paragraph \(d\)](#) of this section.

(2) Compare each organic HAP emissions factor calculated in [paragraph \(b\)\(1\)](#) of this section with its corresponding organic HAP emissions limit in Table 3 or 5 to this subpart. If all emissions factors are equal to or less than their corresponding emission limits, then you are in compliance.

(c) ***Demonstrate compliance with a weighted average emission limit.*** Demonstrate each month that you meet each weighted average of the organic HAP emissions limits in Table 3 or 5 to this subpart that apply to you. When using this option, you must demonstrate compliance with the weighted average organic HAP emissions limit for all your open molding operations, and then separately demonstrate compliance with the weighted average organic HAP emissions limit for all your centrifugal casting operations. Open molding operations and centrifugal casting operations may not be averaged with each other.



(1) Each month calculate the weighted average organic HAP emissions limit for all open molding operations and the weighted average organic HAP emissions limit for all centrifugal casting operations for your facility for the last 12-month period to determine the organic HAP emissions limit you must meet. To do this, multiply the individual organic HAP emissions limits in Table 3 or 5 to this subpart for each open molding (centrifugal casting) operation type by the amount of neat resin plus or neat gel coat plus used in the last 12 months for each open molding (centrifugal casting) operation type, sum these results, and then divide this sum by the total amount of neat resin plus and neat gel coat plus used in open molding (centrifugal casting) over the last 12 months as shown in Equation 3 of this section.

$$\text{Weighted Average Emission Limit} = \frac{\sum_{i=1}^n (EL_i \cdot \text{Material}_i)}{\sum_{i=1}^n \text{Material}_i} \quad (\text{Eq. 3})$$

Where:

$EL_i$  = organic HAP emissions limit for operation type  $i$ , lbs/ton from Tables 3 or 5 to this subpart;

$\text{Material}_i$  = neat resin plus or neat gel coat plus used during the last 12-month period for operation type  $i$ , tons;

$n$  = number of operations.

(2) Each month calculate your weighted average organic HAP emissions factor for open molding and centrifugal casting. To do this, multiply your actual open molding (centrifugal casting) operation organic HAP emissions factors calculated in [paragraph \(b\)\(1\)](#) of this section and the amount of neat resin plus and neat gel coat plus used in each open molding (centrifugal casting) operation type, sum the results, and divide this sum by the total amount of neat resin plus and neat gel coat plus used in open molding (centrifugal casting) operations as shown in Equation 4 of this section.

$$\text{Actual Weighted Average organic HAP Emissions Factor} = \frac{\sum_{i=1}^n (\text{Actual Operation EF}_i \cdot \text{Material}_i)}{\sum_{i=1}^n \text{Material}_i} \quad (\text{Eq. 4})$$

Where:

Actual Individual  $EF_i$  = Actual organic HAP emissions factor for operation type  $i$ , lbs/ton;



Material<sub>i</sub> = neat resin plus or neat gel coat plus used during the last 12 calendar months for operation type i, tons;

n = number of operations.

(3) Compare the values calculated in [paragraphs \(c\)\(1\)](#) and [\(2\)](#) of this section. If each 12-month rolling average organic HAP emissions factor is less than or equal to the corresponding 12-month rolling average organic HAP emissions limit, then you are in compliance.

(d) ***Meet the organic HAP emissions limit for one application method and use the same resin(s) for all application methods of that resin type.*** This option is limited to resins of the same type. The resin types for which this option may be used are noncorrosion-resistant, corrosion-resistant and/or high strength, and tooling.

(1) For any combination of manual resin application, mechanical resin application, filament application, or centrifugal casting, you may elect to meet the organic HAP emissions limit for any one of these application methods and use the same resin in all of the resin application methods listed in this [paragraph \(d\)\(1\)](#). Table 7 to this subpart presents the possible combinations based on a facility selecting the application process that results in the highest allowable organic HAP content resin. If the resin organic HAP content is below the applicable value shown in Table 7 to this subpart, the resin is in compliance.

(2) You may also use a weighted average organic HAP content for each application method described in [paragraph \(d\)\(1\)](#) of this section. Calculate the weighted average organic HAP content monthly. Use Equation 2 in [paragraph \(b\)\(1\)](#) of this section except substitute organic HAP content for organic HAP emissions factor. You are in compliance if the weighted average organic HAP content based on the last 12 months of resin use is less than or equal to the applicable organic HAP contents in Table 7 to this subpart.

(3) You may simultaneously use the averaging provisions in [paragraph \(b\)](#) or [\(c\)](#) of this section to demonstrate compliance for any operations and/or resins you do not include in your compliance demonstrations in [paragraphs \(d\)\(1\)](#) and [\(2\)](#) of this section. However, any resins for which you claim compliance under the option in [paragraphs \(d\)\(1\)](#) and [\(2\)](#) of this section may not be included in any of the averaging calculations described in [paragraph \(b\)](#) or [\(c\)](#) of this section.

(4) You do not have to keep records of resin use for any of the individual resins where you demonstrate compliance under the option in [paragraph \(d\)\(1\)](#) of this section unless you elect to include that resin in the averaging calculations described in [paragraph \(d\)\(2\)](#) of this section.

[[70 FR 50125](#), Aug. 25, 2005]

**§ 63.5820 What are my options for meeting the standards for continuous lamination/casting operations?**

You must use one or more of the options in [paragraphs \(a\)](#) through [\(d\)](#) of this section to meet the standards in [§ 63.5805](#). Use the calculation procedures in [§§ 63.5865](#) through [63.5890](#).

(a) **Compliant line option.** Demonstrate that each continuous lamination line and each continuous casting line complies with the applicable standard.

(b) **Averaging option.** Demonstrate that all continuous lamination and continuous casting lines combined, comply with the applicable standard.

(c) **Add-on control device option.** If your operation must meet the 58.5 weight percent organic HAP emissions reduction limit in Table 3 to this subpart, you have the option of demonstrating that you achieve 95 percent reduction of all wet-out area organic HAP emissions.

(d) **Combination option.** Use any combination of options in [paragraphs \(a\)](#) and [\(b\)](#) of this section or, for affected sources at existing facilities, any combination of options in [paragraphs \(a\)](#), [\(b\)](#), and [\(c\)](#) of this section (in which one or more lines meet the standards on their own, two or more lines averaged together meet the standards, and one or more lines have their wet-out areas controlled to a level of 95 percent).

#### **§ 63.5830 What are my options for meeting the standards for pultrusion operations subject to the 60 weight percent organic HAP emissions reductions requirement?**

You must use one or more of the options in [paragraphs \(a\)](#) through [\(e\)](#) of this section to meet the 60 weight percent organic HAP emissions limit in Table 3 to this subpart, as required in [§ 63.5805](#).

(a) Achieve an overall reduction in organic HAP emissions of 60 weight percent by capturing the organic HAP emissions and venting them to a control device or any combination of control devices. Conduct capture and destruction efficiency testing as specified in 63.5850 to this subpart to determine the percent organic HAP emissions reduction.

(b) Design, install, and operate wet area enclosures and resin drip collection systems on pultrusion machines that meet the criteria in [paragraphs \(b\)\(1\)](#) through [\(10\)](#) of this section.

(1) The enclosure must cover and enclose the open resin bath and the forming area in which reinforcements are pre-wet or wet-out and moving toward the die(s). The surfaces of the enclosure must be closed except for openings to allow material to enter and exit the enclosure.

(2) For open bath pultrusion machines with a radio frequency pre-heat unit, the enclosure must extend from the beginning of the resin bath to within 12.5 inches or less of the entrance of the radio frequency pre-heat unit. If the stock that is within 12.5 inches or less of the entrance to the radio frequency pre-heat unit has any drip, it must be enclosed. The stock exiting the radio frequency pre-heat unit is not required to be in an enclosure if the stock has no drip between the exit of the radio frequency pre-heat unit to within 0.5 inches of the entrance of the die.

(3) For open bath pultrusion machines without a radio frequency pre-heat unit, the enclosure must extend from the beginning of the resin bath to within 0.5 inches or less of the die entrance.

(4) For pultrusion lines with pre-wet area(s) prior to direct die injection, no more than 12.5 inches of open wet stock is permitted between the entrance of the first pre-wet area and the entrance to the die. If the pre-wet stock has any drip, it must be enclosed.

(5) The total open area of the enclosure must not exceed two times the cross sectional area of the puller window(s) and must comply with the requirements in [paragraphs \(b\)\(5\)\(i\) through \(iii\)](#) of this section.

(i) All areas that are open need to be included in the total open area calculation with the exception of access panels, doors, and/or hatches that are part of the enclosure.

(ii) The area that is displaced by entering reinforcement or exiting product is considered open.

(iii) Areas that are covered by brush covers are considered closed.

(6) Open areas for level control devices, monitoring devices, agitation shafts, and fill hoses must have no more than 1.0 inch clearance.

(7) The access panels, doors, and/or hatches that are part of the enclosure must close tightly. Damaged access panels, doors, and/or hatches that do not close tightly must be replaced.

(8) The enclosure may not be removed from the pultrusion line, and access panels, doors, and/or hatches that are part of the enclosure must remain closed whenever resin is in the bath, except for the time period discussed in [paragraph \(b\)\(9\)](#) of this section.

(9) The maximum length of time the enclosure may be removed from the pultrusion line or the access panels, doors, and/or hatches and may be open, is 30 minutes per 8 hour shift, 45 minutes per 12 hour shift, or 90 minutes per day if the machine is operated for 24 hours in a day. The time restrictions do not apply if the open doors or panels do not cause the limit of two times the puller window area to be exceeded. Facilities may average the times that access panels, doors, and/or hatches are open across all operating lines. In that case the average must not exceed the times shown in this [paragraph \(b\)\(9\)](#). All lines included in the average must have operated the entire time period being averaged.

(10) No fans, blowers, and/or air lines may be allowed within the enclosure. The enclosure must not be ventilated.

(c) Use direct die injection pultrusion machines with resin drip collection systems that meet all the criteria specified in [paragraphs \(c\)\(1\) through \(3\)](#) of this section.

(1) All the resin that is applied to the reinforcement is delivered directly to the die.

(2) No exposed resin is present, except at the face of the die.

- (3) Resin drip is captured in a closed system and recycled back to the process.
- (d) Use a preform injection system that meets the definition in [§ 63.5935](#)
- (e) Use any combination of options in [paragraphs \(a\)](#) through [\(d\)](#) of this section in which different pultrusion lines comply with different options described in [paragraphs \(a\)](#) through [\(d\)](#) of this section, and
- (1) Each individual pultrusion machine meets the 60 percent reduction requirement, or
- (2) The weighted average reduction based on resin throughput of all machines combined is 60 percent. For purposes of the average percent reduction calculation, wet area enclosures reduce organic HAP emissions by 60 percent, and direct die injection and preform injection reduce organic HAP emissions by 90 percent.

[[68 FR 19402](#), Apr. 21, 2003, as amended at [70 FR 50127](#), Aug. 25, 2005]

### **General Compliance Requirements**

#### **§ 63.5835 What are my general requirements for complying with this subpart?**

- (a) You must be in compliance at all times with the work practice standards in Table 4 to this subpart, as well as the organic HAP emissions limits in Tables 3, or 5, or the organic HAP content limits in Table 7 to this subpart, as applicable, that you are meeting without the use of add-on controls.
- (b) You must be in compliance with all organic HAP emissions limits in this subpart that you meet using add-on controls at all times.
- (c) You must always operate and maintain your affected source, including air pollution control and monitoring equipment, according to the provisions in [§ 63.6\(e\)\(1\)\(i\)](#).

[[68 FR 19402](#), Apr. 21, 2003, as amended at [71 FR 20466](#), Apr. 20, 2006; [85 FR 15975](#), Mar. 20, 2020]

### **Testing and Initial Compliance Requirements**

#### **§ 63.5840 By what date must I conduct a performance test or other initial compliance demonstration?**

You must conduct performance tests, performance evaluations, design evaluations, capture efficiency testing, and other initial compliance demonstrations by the compliance date specified in Table 2 to this subpart, with three exceptions. Open molding and centrifugal casting operations that elect to meet an organic HAP emissions limit on a 12-month rolling average must initiate collection of the required data on the compliance date, and demonstrate compliance 1 year after the compliance date. New sources that use add-on controls to initially meet compliance must demonstrate compliance within 180 days after their compliance date.

### **§ 63.5845 When must I conduct subsequent performance tests?**

You must conduct a performance test every 5 years following the initial performance test for any standard you meet with an add-on control device.

### **§ 63.5850 How do I conduct performance tests, performance evaluations, and design evaluations?**

- (a) If you are using any add-on controls to meet an organic HAP emissions limit in this subpart, you must conduct each performance test, performance evaluation, and design evaluation in [40 CFR part 63, subpart SS](#), that applies to you. The basic requirements for performance tests, performance evaluations, and design evaluations are presented in Table 6 to this subpart.
- (b) Each performance test must be conducted according to the requirements in [§ 63.7\(e\)\(1\)](#) and under the specific conditions that [40 CFR part 63, subpart SS](#), specifies.
- (c) Each performance evaluation must be conducted according to the requirements in [§ 63.8\(e\)](#) as applicable and under the specific conditions that [40 CFR part 63, subpart SS](#), specifies.
- (d) You may not conduct performance tests or performance evaluations during periods of startup, shutdown, or malfunction, as specified in [§ 63.7\(e\)\(1\)](#).
- (e) You must conduct the control device performance test using the emission measurement methods specified in [paragraphs \(e\)\(1\) through \(5\)](#) of this section.
  - (1) Use either Method 1 or 1A of appendix A to 40 CFR part 60, as appropriate, to select the sampling sites.
  - (2) Use Method 2, 2A, 2C, 2D, 2F or 2G of appendix A to 40 CFR part 60, as appropriate, to measure gas volumetric flow rate.
  - (3) Use Method 18 of appendix A to 40 CFR part 60 to measure organic HAP emissions or use Method 25A of appendix A to 40 CFR part 60 to measure total gaseous organic emissions as a surrogate for total organic HAP emissions. If you use Method 25A, you must assume that all gaseous organic emissions measured as carbon are organic HAP emissions. If you use Method 18 and the number of organic HAP in the exhaust stream exceeds five, you must take into account the use of multiple chromatographic columns and analytical techniques to get an accurate measure of at least 90 percent of the total organic HAP mass emissions. Do not use Method 18 to measure organic HAP emissions from a combustion device; use instead Method 25A and assume that all gaseous organic mass emissions measured as carbon are organic HAP emissions.
  - (4) You may use American Society for Testing and Materials (ASTM) D6420-99 (available for purchase from at least one of the following addresses: 100 Barr Harbor Drive, West Conshohocken, PA 19428-2959; or University Microfilms International, 300 North Zeeb Road, Ann Arbor, MI 48106.) in lieu of Method 18 of [40 CFR part 60, appendix A](#), under the conditions specified in [paragraphs \(c\)\(4\)\(i\) through \(iii\)](#) of this section.

- (i) If the target compound(s) is listed in [Section 1.1](#) of ASTM D6420-99 and the target concentration is between 150 parts per billion by volume and 100 parts per million by volume.
  - (ii) If the target compound(s) is not listed in [Section 1.1](#) of ASTM D6420-99, but is potentially detected by mass spectrometry, an additional system continuing calibration check after each run, as detailed in [Section 10.5.3](#) of ASTM D6420-99, must be followed, met, documented, and submitted with the performance test report even if you do not use a moisture condenser or the compound is not considered soluble.
  - (iii) If a minimum of one sample/analysis cycle is completed at least every 15 minutes.
- (5) Use the procedures in EPA Method 3B of appendix A to 40 CFR part 60 to determine an oxygen correction factor if required by [§ 63.997\(e\)\(2\)\(iii\)\(C\)](#). You may use American Society of Mechanical Engineers (ASME) PTC 19-10-1981-Part 10 (available for purchase from ASME, P.O. Box 2900, 22 Law Drive, Fairfield, New Jersey, 07007-2900, or online at [www.asme.org/catalog](http://www.asme.org/catalog)) as an alternative to EPA Method 3B of appendix A to 40 CFR part 60.
- (f) The control device performance test must consist of three runs and each run must last at least 1 hour. The production conditions during the test runs must represent normal production conditions with respect to the types of parts being made and material application methods. The production conditions during the test must also represent maximum potential emissions with respect to the organic HAP content of the materials being applied and the material application rates.
  - (g) If you are using a concentrator/oxidizer control device, you must test the combined flow upstream of the concentrator, and the combined outlet flow from both the oxidizer and the concentrator to determine the overall control device efficiency. If the outlet flow from the concentrator and oxidizer are exhausted in separate stacks, you must test both stacks simultaneously with the inlet to the concentrator to determine the overall control device efficiency.
  - (h) During the test, you must also monitor and record separately the amounts of production resin, tooling resin, pigmented gel coat, clear gel coat, and tooling gel coat applied inside the enclosure that is vented to the control device.

#### **§ 63.5855 What are my monitor installation and operation requirements?**

You must monitor and operate all add-on control devices according to the procedures in [40 CFR part 63, subpart SS](#).

#### **§ 63.5860 How do I demonstrate initial compliance with the standards?**

- (a) You demonstrate initial compliance with each organic HAP emissions standard in paragraphs (a) through (h) of [§ 63.5805](#) that applies to you by using the procedures shown in Tables 8 and 9 to this subpart.

(b) If using an add-on control device to demonstrate compliance, you must also establish each control device operating limit in [40 CFR part 63, subpart SS](#), that applies to you.

Emission Factor, Percent Reduction, and Capture Efficiency Calculation Procedures for Continuous Lamination/Casting Operations

**§ 63.5865 What data must I generate to demonstrate compliance with the standards for continuous lamination/casting operations?**

(a) For continuous lamination/casting affected sources complying with a percent reduction requirement, you must generate the data identified in Tables 10 and 11 to this subpart for each data requirement that applies to your facility.

(b) For continuous lamination/casting affected sources complying with a lbs/ton limit, you must generate the data identified in Tables 11 and 12 to this subpart for each data requirement that applies to your facility.

**§ 63.5870 How do I calculate annual uncontrolled and controlled organic HAP emissions from my wet-out area(s) and from my oven(s) for continuous lamination/casting operations?**

To calculate your annual uncontrolled and controlled organic HAP emissions from your wet-out areas and from your ovens, you must develop uncontrolled and controlled wet-out area and uncontrolled and controlled oven organic HAP emissions estimation equations or factors to apply to each formula applied on each line, determine how much of each formula for each end product is applied each year on each line, and assign uncontrolled and controlled wet-out area and uncontrolled and controlled oven organic HAP emissions estimation equations or factors to each formula. You must determine the overall capture efficiency using the procedures in [§ 63.5850](#) to this subpart.

(a) To develop uncontrolled and controlled organic HAP emissions estimation equations and factors, you must, at a minimum, do the following, as specified in [paragraphs \(a\)\(1\)](#) through [\(6\)](#) of this section:

(1) Identify each end product and the thickness of each end product produced on the line. Separate end products into the following end product groupings, as applicable: corrosion-resistant gel coated end products, noncorrosion-resistant gel coated end products, corrosion-resistant nongel coated end products, and noncorrosion-resistant nongel coated end products. This step creates end product/thickness combinations.

(2) Identify each formula used on the line to produce each end product/thickness combination. Identify the amount of each such formula applied per year. Rank each formula used to produce each end product/thickness combination according to usage within each end product/thickness combination.



(3) For each end product/thickness combination being produced, select the formula with the highest usage rate for testing.

(4) If not already selected, also select the worst-case formula (likely to be associated with the formula with the highest organic HAP content, type of HAP, application of gel coat, thin product, low line speed, higher resin table temperature) amongst all formulae. (You may use the results of the worst-case formula test for all formulae if desired to limit the amount of testing required.)

(5) For each formula selected for testing, conduct at least one test (consisting of three runs). During the test, track information on organic HAP content and type of HAP, end product thickness, line speed, and resin temperature on the wet-out area table.

(6) Using the test results, develop uncontrolled and controlled organic HAP emissions estimation equations (or factors) or series of equations (or factors) that best fit the results for estimating uncontrolled and controlled organic HAP emissions, taking into account the organic HAP content and type of HAP, end product thickness, line speed, and resin temperature on the wet-out area table.

(b) In lieu of using the method specified in [paragraph \(a\)](#) of this section for developing uncontrolled and controlled organic HAP emissions estimation equations and factors, you may either method specified in [paragraphs \(b\)\(1\)](#) and [\(2\)](#) of this section, as applicable.

(1) For either uncontrolled or controlled organic HAP emissions estimates, you may use previously established, facility-specific organic HAP emissions equations or factors, provided they allow estimation of both wet-out area and oven organic HAP emissions, where necessary, and have been approved by your permitting authority. If a previously established equation or factor is specific to the wet-out area only, or to the oven only, then you must develop the corresponding uncontrolled or controlled equation or factor for the other organic HAP emissions source.

(2) For uncontrolled (controlled) organic HAP emissions estimates, you may use controlled (uncontrolled) organic HAP emissions estimates and control device destruction efficiency to calculate your uncontrolled (controlled) organic HAP emissions provided the control device destruction efficiency was calculated at the same time you collected the data to develop your facility's controlled (uncontrolled) organic HAP emissions estimation equations and factors.

(c) Assign to each formula an uncontrolled organic HAP emissions estimation equation or factor based on the end product/thickness combination for which that formula is used.

(d)

(1) To calculate your annual uncontrolled organic HAP emissions from wet-out areas that do not have any capture and control and from wet-out areas that are captured by an enclosure but are vented to the atmosphere and not to a control device, multiply each formula's annual usage by its appropriate organic HAP emissions estimation equation or factor and sum the individual results.



(2) To calculate your annual uncontrolled organic HAP emissions that escape from the enclosure on the wet-out area, multiply each formula's annual usage by its appropriate uncontrolled organic HAP emissions estimation equation or factor, sum the individual results, and multiply the summation by 1 minus the percent capture (expressed as a fraction).

(3) To calculate your annual uncontrolled oven organic HAP emissions, multiply each formula's annual usage by its appropriate uncontrolled organic HAP emissions estimation equation or factor and sum the individual results.

(4) To calculate your annual controlled organic HAP emissions, multiply each formula's annual usage by its appropriate organic HAP emissions estimation equation or factor and sum the individual results to obtain total annual controlled organic HAP emissions.

(e) Where a facility is calculating both uncontrolled and controlled organic HAP emissions estimation equations and factors, you must test the same formulae. In addition, you must develop both sets of equations and factors from the same tests.

**§ 63.5875 How do I determine the capture efficiency of the enclosure on my wet-out area and the capture efficiency of my oven(s) for continuous lamination/casting operations?**

(a) The capture efficiency of a wet-out area enclosure is assumed to be 100 percent if it meets the design and operation requirements for a permanent total enclosure (PTE) specified in EPA Method 204 of appendix M to 40 CFR part 51. If a PTE does not exist, then a temporary total enclosure must be constructed and verified using EPA Method 204, and capture efficiency testing must be determined using EPA Methods 204B through E of appendix M to 40 CFR part 51.

(b) The capture efficiency of an oven is to be considered 100 percent, provided the oven is operated under negative pressure.

**§ 63.5880 How do I determine how much neat resin plus is applied to the line and how much neat gel coat plus is applied to the line for continuous lamination/casting operations?**

Use the following procedures to determine how much neat resin plus and neat gel coat plus is applied to the line each year.

(a) Track formula usage by end product/thickness combinations.

(b) Use in-house records to show usage. This may be either from automated systems or manual records.

(c) Record daily the usage of each formula/end product combination on each line. This is to be recorded at the end of each run (*i.e.*, when a changeover in formula or product is made) and at the end of each shift.

(d) Sum the amounts from the daily records to calculate annual usage of each formula/end product combination by line.

**§ 63.5885 How do I calculate percent reduction to demonstrate compliance for continuous lamination/casting operations?**

You may calculate percent reduction using any of the methods in [paragraphs \(a\)](#) through [\(d\)](#) of this section.

(a) **Compliant line option.** If all of your wet-out areas have PTE that meet the requirements of EPA Method 204 of appendix M of [40 CFR part 51](#), and all of your wet-out area organic HAP emissions and oven organic HAP emissions are vented to an add-on control device, use Equation 1 of this section to demonstrate compliance. In all other situations, use Equation 2 of this section to demonstrate compliance.

$$PR = \frac{(Inlet) - (Outlet)}{(Inlet)} \times 100 \quad (Eq. 1)$$

Where:

PR = percent reduction;

Inlet = HAP emissions entering the control device, lbs per year;

Outlet = HAP emissions existing the control device to the atmosphere, lbs per year.

$$PR = \frac{(WAE_{ci} + O_{ci}) - (WAE_{co} + O_{co})}{(WAE_{ci} + WAE_{iu} + O_{ci} + O_{iu})} \times 100 \quad (Eq. 2)$$

Where:

PR = percent reduction;

WAE<sub>ci</sub> = wet-out area organic HAP emissions, lbs per year, vented to a control device;

WAE<sub>iu</sub> = wet-out area organic HAP emissions, lbs per year, not vented to a control device;

O<sub>iu</sub> = oven organic HAP emissions, lbs per year, not vented to a control device;

O<sub>ci</sub> = oven organic HAP emissions, lbs per year, vented to a control device;

WAE<sub>co</sub> = wet-out area organic HAP emissions, lbs per year, from the control device outlet;

O<sub>co</sub> = oven organic HAP emissions, lbs per year, from the control device outlet.

(b) **Averaging option.** Use Equation 3 of this section to calculate percent reduction.

$$PR = \frac{\left( \sum_{i=1}^m WAEi_o + \sum_{j=1}^n Oj_o \right) - \left( \sum_{i=1}^m WAEi_{co} + \sum_{j=1}^n Oj_{co} \right)}{\left( \sum_{i=1}^m WAEi_o + \sum_{j=1}^n Oj_o + \sum_{i=1}^m WAEi_u + \sum_{j=1}^n Oj_u \right)} \times 100 \quad (\text{Eq. 3})$$

Where:

PR = percent reduction;

WAEi<sub>ci</sub> = wet-out area organic HAP emissions from wet-out area i, lbs per year, sent to a control device;

WAEi<sub>u</sub> = wet-out area organic HAP emissions from wet-out area i, lbs per year, not sent to a control device;

WAEi<sub>co</sub> = wet-out area organic HAP emissions from wet-out area i, lbs per year, at the outlet of a control device;

Oj<sub>u</sub> = organic HAP emissions from oven j, lbs per year, not sent to a control device;

Oj<sub>ci</sub> = organic HAP emissions from oven j, lbs per year, sent to a control device;

Oj<sub>co</sub> = organic HAP emissions from oven j, lbs per year, at the outlet of the control device;

m = number of wet-out areas;

n = number of ovens.

(c) **Add-on control device option.** Use Equation 1 of this section to calculate percent reduction.

(d) **Combination option.** Use Equations 1 through 3 of this section, as applicable, to calculate percent reduction.

[[70 FR 50127](#), Aug. 25, 2005]

**§ 63.5890 How do I calculate an organic HAP emissions factor to demonstrate compliance for continuous lamination/casting operations?**

(a) **Compliant line option.** Use Equation 1 of this section to calculate an organic HAP emissions factor in lbs/ton.

$$E = \frac{WAE_u + WAE_c + O_u + O_c}{(R + G)} \quad (\text{Eq. 1})$$

Where:

E = HAP emissions factor in lbs/ton of resin and gel coat

WAE<sub>u</sub> = uncontrolled wet-out area organic HAP emissions, lbs per year

WAE<sub>c</sub> = controlled wet-out area organic HAP emissions, lbs per year

O<sub>u</sub> = uncontrolled oven organic HAP emissions, lbs per year

O<sub>c</sub> = controlled oven organic HAP emissions, lbs per year

R = total usage of neat resin plus, tpy

G = total usage of neat gel coat plus, tpy

(b) *Averaging option.* Use Equation 2 of this section to demonstrate compliance.

$$E = \frac{\sum_{i=1}^m WAE_{ui} + \sum_{i=1}^o WAE_{ci} + \sum_{j=1}^n O_{uj} + \sum_{j=1}^p O_{cj}}{(R + G)} \quad (\text{Eq. 2})$$

Where:

E = HAP emissions factor in lbs/ton of resin and gel coat

WAE<sub>ui</sub> = uncontrolled organic HAP emissions from wet-out area i, lbs per year

WAE<sub>ci</sub> = controlled organic HAP emissions from wet-out area i, lbs per year

O<sub>uj</sub> = uncontrolled organic HAP emissions from oven j, lbs per year

O<sub>cj</sub> = controlled organic HAP emissions from oven j, lbs per year

i = number of wet-out areas

j = number of ovens

m = number of wet-out areas uncontrolled

n = number of ovens uncontrolled

o = number of wet-out areas controlled

p = number of ovens controlled

R = total usage of neat resin plus, tpy

G = total usage of neat gel coat plus, tpy

(c) *Combination option.* Use Equations 1 and 2 of this section, as applicable, to demonstrate compliance.

## Continuous Compliance Requirements

### § 63.5895 How do I monitor and collect data to demonstrate continuous compliance?

- (a) During production, you must collect and keep a record of data as indicated in [40 CFR part 63, subpart SS](#), if you are using an add-on control device.
- (b) You must monitor and collect data as specified in [paragraphs \(b\)\(1\) through \(4\)](#) of this section.
- (1) Except for monitoring malfunctions, associated repairs, and required quality assurance or control activities (including, as applicable, calibration checks and required zero and span adjustments), you must conduct all monitoring in continuous operation (or collect data at all required intervals) at all times that the affected source is operating.
- (2) You may not use data recorded during monitoring malfunctions, associated repairs, and required quality assurance or control activities for purposes to this subpart, including data averages and calculations, or fulfilling a minimum data availability requirement, if applicable. You must use all the data collected during all other periods in assessing the operation of the control device and associated control system.
- (3) At all times, you must maintain necessary parts for routine repairs of the monitoring equipment.
- (4) A monitoring malfunction is any sudden, infrequent, not reasonably preventable failure of the monitoring equipment to provide valid data. Monitoring failures that are caused in part by poor maintenance or careless operation are not malfunctions.
- (c) You must collect and keep records of resin and gel coat use, organic HAP content, and operation where the resin is used if you are meeting any organic HAP emissions limits based on an organic HAP emissions limit in Tables 3 or 5 to this subpart. You must collect and keep records of resin and gel coat use, organic HAP content, and operation where the resin is used if you are meeting any organic HAP content limits in Table 7 to this subpart if you are averaging organic HAP contents. Resin use records may be based on purchase records if you can reasonably estimate how the resin is applied. The organic HAP content records may be based on MSDS or on resin specifications supplied by the resin supplier.
- (d) Resin and gel coat use records are not required for the individual resins and gel coats that are demonstrated, as applied, to meet their applicable emission as defined in [§ 63.5810\(a\)](#). However, you must retain the records of resin and gel coat organic HAP content, and you must include the list of these resins and gel coats and identify their application methods in your semiannual compliance reports. If after you have initially demonstrated that a specific combination of an individual resin or gel coat, application method, and controls meets its applicable emission limit, and the resin or gel coat changes or the organic HAP content increases, or you change the application method or controls, then you again must demonstrate that the individual resin or gel

coat meets its emission limit as specified in [paragraph \(a\) of § 63.5810](#). If any of the previously mentioned changes results in a situation where an individual resin or gel coat now exceeds its applicable emission limit in Table 3 or 5 of this subpart, you must begin collecting resin and gel coat use records and calculate compliance using one of the averaging options on a 12-month rolling average.

(e) For each of your pultrusion machines, you must record all times that wet area enclosures doors or covers are open and there is resin present in the resin bath.

[[68 FR 19402](#), Apr. 21, 2003, as amended at [70 FR 50128](#), Aug. 25, 2005]

### **§ 63.5900 How do I demonstrate continuous compliance with the standards?**

(a) You must demonstrate continuous compliance with each standard in [§ 63.5805](#) that applies to you according to the methods specified in [paragraphs \(a\)\(1\) through \(3\)](#) of this section.

(1) Compliance with organic HAP emissions limits for sources using add-on control devices is demonstrated following the procedures in [40 CFR part 63, subpart SS](#). Sources using add-on controls may also use continuous emissions monitors to demonstrate continuous compliance as an alternative to control parameter monitoring.

(2) Compliance with organic HAP emissions limits is demonstrated by maintaining an organic HAP emissions factor value less than or equal to the appropriate organic HAP emissions limit listed in Table 3 or 5 to this subpart, on a 12-month rolling average, and/or by including in each compliance report a statement that individual resins and gel coats, as applied, meet the appropriate organic HAP emissions limits, as discussed in [§ 63.5895\(d\)](#).

(3) Compliance with organic HAP content limits in Table 7 to this subpart is demonstrated by maintaining an average organic HAP content value less than or equal to the appropriate organic HAP contents listed in Table 7 to this subpart, on a 12-month rolling average, and/or by including in each compliance report a statement that resins and gel coats individually meet the appropriate organic HAP content limits in Table 7 to this subpart, as discussed in [§ 63.5895\(d\)](#).

(4) Compliance with the work practice standards in Table 4 to this subpart is demonstrated by performing the work practice required for your operation.

(b) You must report each deviation from each standard in [§ 63.5805](#) that applies to you. The deviations must be reported according to the requirements in [§ 63.5910](#).

(c) You must meet the organic HAP emissions limits and work practice standards that apply to you at all times.

[[68 FR 19402](#), Apr. 21, 2003, as amended at [70 FR 50128](#), Aug. 25, 2005; [71 FR 20466](#), Apr. 20, 2006; [85 FR 15975](#), Mar. 20, 2020]

### **Notifications, Reports, and Records**

### **§ 63.5905 What notifications must I submit and when?**

- (a) You must submit all of the notifications in Table 13 to this subpart that apply to you by the dates specified in Table 13 to this subpart. The notifications are described more fully in [40 CFR part 63, subpart A](#), referenced in Table 13 to this subpart.
- (b) If you change any information submitted in any notification, you must submit the changes in writing to the Administrator within 15 calendar days after the change.

### **§ 63.5910 What reports must I submit and when?**

- (a) You must submit each report in Table 14 to 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 specified in Table 14 to this subpart and according to [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 [§ 63.5800](#) 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 [§ 63.5800](#).
  - (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 [§ 63.5800](#).
  - (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 affected source that is subject to permitting requirements pursuant to [40 CFR part 70](#) or [71](#), and if the permitting authority has established dates for submitting semiannual reports pursuant to [§ 70.6\(a\)\(3\)\(iii\)\(A\)](#) or [§ 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 truth, accuracy, and completeness of the content of the report.
  - (3) Date of the report and beginning and ending dates of the reporting period.

(4) [Reserved]

(5) If there are no deviations from any organic HAP emissions limitations (emissions limit and operating limit) that apply to you, and there are no deviations from the requirements for work practice standards in Table 4 to this subpart, a statement that there were no deviations from the organic HAP emissions limitations or work practice standards during the reporting period.

(6) If there were no periods during which the continuous monitoring system (CMS), including a continuous emissions monitoring system (CEMS) and an operating parameter monitoring system were 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 organic HAP emissions limitation or operating limit and for each deviation from the requirements for work practice standards that occurs at an affected source where you are not using a CMS to comply with the organic HAP emissions limitations or work practice standards in this subpart, the compliance report must contain the information in [paragraphs \(c\)\(1\) through \(3\)](#) of this section and in [paragraphs \(d\)\(1\) and \(2\)](#) of this section.

(1) The total operating time of each affected source 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 organic HAP emissions limitation (*i.e.*, emissions limit and operating limit) occurring at an affected source where you are using a CMS to comply with the organic HAP emissions limitation in this subpart, you must include the information in [paragraphs \(c\)\(1\) through \(3\)](#) of this section and in [paragraphs \(e\)\(1\) through \(6\)](#) of this section.

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

(2) The date and time 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.

(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.

(f) You must report if you have exceeded the 100 tpy organic HAP emissions threshold if that exceedance would make your facility subject to [§ 63.5805\(a\)\(1\)](#) or [\(d\)](#). Include with this report



any request for an exemption under [§ 63.5805\(e\)](#). If you receive an exemption under [§ 63.5805\(e\)](#) and subsequently exceed the 100 tpy organic HAP emissions threshold, you must report this exceedance as required in [§ 63.5805\(f\)](#).

(g) 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 [§ 70.6\(a\)\(3\)\(iii\)\(A\)](#) or [§ 71.6\(a\)\(3\)\(iii\)\(A\)](#). If an affected source submits a compliance report pursuant to Table 14 to this subpart along with, or as part of, the semiannual monitoring report required by [§ 70.6\(a\)\(3\)\(iii\)\(A\)](#) or [§ 71.6\(a\)\(3\)\(iii\)\(A\)](#), and the compliance report includes all required information concerning deviations from any organic HAP emissions limitation (including any operating limit) or work practice requirement 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 permitting authority.

(h) Submit compliance reports based on the requirements in [§§ 63.5910](#) and [63.5912](#) and table 14 to this subpart, and not based on the requirements in [§ 63.999](#).

(i) Where multiple compliance options are available, you must state in your next compliance report if you have changed compliance options since your last compliance report.

[[68 FR 19402](#), Apr. 21, 2003, as amended at [70 FR 50128](#), Aug. 25, 2005; [85 FR 15975](#), Mar. 20, 2020]

### **§ 63.5912 How do I submit my reports?**

(a) Within 60 days after the date of completing each performance test required by this subpart, you must submit the results of the performance test following the procedures specified in [paragraphs \(a\)\(1\)](#) through [\(3\)](#) of this section.

(1) Data collected using test methods supported by the EPA's Electronic Reporting Tool (ERT) as listed on the EPA's ERT website (<https://www.epa.gov/electronic-reporting-air-emissions/electronic-reporting-tool-ert>) at the time of the test. Submit the results of the performance test to the EPA via the Compliance and Emissions Data Reporting Interface (CEDRI), which can be accessed through the EPA's Central Data Exchange (CDX) (<https://cdx.epa.gov/>). The data must be submitted in a file format generated through the use of the EPA's ERT. Alternatively, you may submit an electronic file consistent with the extensible markup language (XML) schema listed on the EPA's ERT website.

(2) Data collected using test methods that are not supported by the EPA's ERT as listed on the EPA's ERT website at the time of the test. The results of the performance test must be included as an attachment in the ERT or an alternate electronic file consistent with the XML schema listed on

the EPA's ERT website. Submit the ERT generated package or alternative file to the EPA via CEDRI.

(3) Confidential business information (CBI). If you claim some of the information submitted under [paragraph \(a\)\(1\)](#) of this section is CBI, you must submit a complete file, including information claimed to be CBI, to the EPA. The file must be generated through the use of the EPA's ERT or an alternate electronic file consistent with the XML schema listed on the EPA's ERT website. Submit the file on a compact disc, flash drive, or other commonly used electronic storage medium and clearly mark the medium as CBI. Mail the electronic medium to U.S. EPA/OAQPS/CORE CBI Office, Attention: Group Leader, Measurement Policy Group, MD C404-02, 4930 Old Page Rd., Durham, NC 27703. The same file with the CBI omitted must be submitted to the EPA via the EPA's CDX as described in [paragraph \(a\)\(1\)](#) of this section.

(b) Within 60 days after the date of completing each continuous monitoring system (CMS) performance evaluation as defined in [§ 63.2](#), you must submit the results of the performance evaluation following the procedures specified in [paragraphs \(b\)\(1\)](#) through [\(3\)](#) of this section.

(1) Performance evaluations of CMS measuring relative accuracy test audit (RATA) pollutants that are supported by the EPA's ERT as listed on the EPA's ERT website at the time of the evaluation. Submit the results of the performance evaluation to the EPA via CEDRI, which can be accessed through the EPA's CDX. The data must be submitted in a file format generated through the use of the EPA's ERT. Alternatively, you may submit an electronic file consistent with the XML schema listed on the EPA's ERT website.

(2) Performance evaluations of CMS measuring RATA pollutants that are not supported by the EPA's ERT as listed on the EPA's ERT website at the time of the evaluation. The results of the performance evaluation must be included as an attachment in the ERT or an alternate electronic file consistent with the XML schema listed on the EPA's ERT website. Submit the ERT generated package or alternative file to the EPA via CEDRI.

(3) Confidential business information (CBI). If you claim some of the information submitted under [paragraph \(a\)\(1\)](#) of this section is CBI, you must submit a complete file, including information claimed to be CBI, to the EPA. The file must be generated through the use of the EPA's ERT or an alternate electronic file consistent with the XML schema listed on the EPA's ERT website. Submit the file on a compact disc, flash drive, or other commonly used electronic storage medium and clearly mark the medium as CBI. Mail the electronic medium to U.S. EPA/OAQPS/CORE CBI Office, Attention: Group Leader, Measurement Policy Group, MD C404-02, 4930 Old Page Rd., Durham, NC 27703. The same file with the CBI omitted must be submitted to the EPA via the EPA's CDX as described in [paragraph \(a\)\(1\)](#) of this section.

(c) For sources that commence construction or reconstruction before or on May 17, 2019, you must submit to the Administrator semiannual compliance reports of the information required in [§ 63.5910\(c\),\(d\), \(e\), \(f\), and \(i\)](#) beginning on September 16, 2020. For sources that commence

construction or reconstruction after May 17, 2019, you must submit to the Administrator semiannual compliance reports of the information required in [§ 63.5910\(c\)](#), [\(d\)](#), [\(e\)](#), [\(f\)](#), and [\(i\)](#) beginning on March 20, 2020, or upon startup, whichever is later.

(d) If you are required to submit reports following the procedure specified in this [paragraph \(d\)](#), beginning on September 17, 2020, you must submit all subsequent reports to the EPA via CEDRI, which can be accessed through the EPA's CDX (<https://cdx.epa.gov/>). You must use the appropriate electronic report template on the CEDRI website (<https://www.epa.gov/electronic-reporting-air-emissions/compliance-and-emissions-data-reporting-interface-cedri>) for this subpart. The report must be submitted by the deadline specified in this subpart, regardless of the method in which the report is submitted. If you claim some of the information required to be submitted via CEDRI is CBI, submit a complete report, including information claimed to be CBI, to the EPA. The report must be generated using the appropriate form on the CEDRI website or an alternate electronic file consistent with the XML schema listed on the CEDRI website. Submit the file on a compact disc, flash drive, or other commonly used electronic storage medium and clearly mark the medium as CBI. Mail the electronic medium to U.S. EPA/OAQPS/CORE CBI Office, Attention: Group Leader, Measurement Policy Group, MD C404-02, 4930 Old Page Rd., Durham, NC 27703. The same file with the CBI omitted must be submitted to the EPA via the EPA's CDX as described earlier in this [paragraph \(d\)](#).

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

(1) You must have been or will be precluded from accessing CEDRI and submitting a required report within the time prescribed due to an outage of either the EPA's CEDRI or CDX systems.

(2) The outage must have occurred within the period of time beginning five business days prior to the date that the submission is due.

(3) The outage may be planned or unplanned.

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

(5) You must provide to the Administrator a written description identifying:

(i) The date(s) and time(s) when CDX or CEDRI was accessed and the system was unavailable;

(ii) A rationale for attributing the delay in reporting beyond the regulatory deadline to EPA system outage;

(iii) Measures taken or to be taken to minimize the delay in reporting; and

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

### **§ 63.5915 What records must I keep?**

- (a) You must keep the records listed in [paragraphs \(a\)\(1\)](#) through [\(3\)](#) 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 requirements in [§ 63.10\(b\)\(2\)\(xiv\)](#).
- (2) [Reserved]
- (3) Records of performance tests, design, and performance evaluations as required in [§ 63.10\(b\)\(2\)](#).
- (b) If you use an add-on control device, you must keep all records required in [40 CFR part 63, subpart SS](#), to show continuous compliance with this subpart.
- (c) You must keep all data, assumptions, and calculations used to determine organic HAP emissions factors or average organic HAP contents for operations listed in tables 3, 5, and 7 to this subpart.
- (d) You must keep a certified statement that you are in compliance with the work practice requirements in Table 4 to this subpart, as applicable.
- (e) For a new or existing continuous lamination/ casting operation, you must keep the records listed in [paragraphs \(e\)\(1\)](#) through [\(4\)](#) of this section, when complying with the percent reduction and/or lbs/ton requirements specified in paragraphs (a) and (c) through (d) of [§ 63.5805](#).
- (1) You must keep all data, assumptions, and calculations used to determine percent reduction and/or lbs/ton as applicable;
- (2) You must keep a brief description of the rationale for the assignment of an equation or factor to each formula;
- (3) When using facility-specific organic HAP emissions estimation equations or factors, you must keep all data, assumptions, and calculations used to derive the organic HAP emissions estimation equations and factors and identification and rationale for the worst-case formula; and
- (4) For all organic HAP emissions estimation equations and organic HAP emissions factors, you must keep documentation that the appropriate permitting authority has approved them.

[[68 FR 19402](#), Apr. 21, 2003, as amended at [70 FR 50129](#), Aug. 25, 2005; [85 FR 15977](#), Mar. 20, 2020]

### **§ 63.5920 In what form and how long must I keep my records?**

- (a) You must maintain all applicable records in such a manner that they can be readily accessed and are suitable for inspection 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 onsite 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 offsite for the remaining 3 years.

(d) You may keep records in hard copy or computer readable form including, but not limited to, paper, microfilm, computer floppy disk, magnetic tape, or microfiche.

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

[[68 FR 19402](#), Apr. 21, 2003, as amended at [85 FR 15977](#), Mar. 20, 2020]

## **Other Requirements and Information**

### **§ 63.5925 What parts of the General Provisions apply to me?**

Table 15 to this subpart shows which parts of the General Provisions in [§§ 63.1](#) through [63.15](#) apply to you.

### **§ 63.5930 Who implements and enforces this subpart?**

(a) This subpart can be administered by us, the EPA, or a delegated authority such as your State, local, or tribal agency. If the EPA Administrator has delegated authority to your State, local, or tribal agency, then that agency has the authority to administer and enforce this subpart. You should contact your EPA Regional Office to find out if this subpart is delegated to your State, local, or tribal agency.

(b) In delegating implementation and enforcement authority of this subpart to a State, local, or tribal agency under [40 CFR part 63, subpart E](#), [the](#) authorities contained in [paragraph \(c\)](#) of this section are not delegated.

(c) The authorities that will not be delegated to State, local, or tribal agencies are listed in [paragraphs \(c\)\(1\)](#) through [\(4\)](#) of this section:

(1) Approval of alternatives to the organic HAP emissions standards in [§ 63.5805](#) under [§ 63.6\(g\)](#).

(2) Approval of major changes to test methods under [§ 63.7\(e\)\(2\)\(ii\)](#) and [\(f\)](#) and as defined in [§ 63.90](#).

(3) Approval of major changes to monitoring under [§ 63.8\(f\)](#) and as defined in [§ 63.90](#).

(4) Approval of major changes to recordkeeping and reporting under [§ 63.10\(f\)](#) and as defined in [§ 63.90](#).

### **§ 63.5935 What definitions apply to this subpart?**

Terms used in this subpart are defined in the CAA, in [40 CFR 63.2](#), and in this section as follows:

*Atomized mechanical application* means application of resin or gel coat with spray equipment that separates the liquid into a fine mist. This fine mist may be created by forcing the liquid under high pressure through an elliptical orifice, bombarding a liquid stream with directed air jets, or a combination of these techniques.

*Bulk molding compound (BMC)* means a putty-like molding compound containing resin(s) in a form that is ready to mold. In addition to resins, BMC may contain catalysts, fillers, and reinforcements. Bulk molding compound can be used in compression molding and injection molding operations to manufacture reinforced plastic composites products.

*BMC manufacturing* means a process that involves the preparation of BMC.

*Centrifugal casting* means a process for fabricating cylindrical composites, such as pipes, in which composite materials are positioned inside a rotating hollow mandrel and held in place by centrifugal forces until the part is sufficiently cured to maintain its physical shape.

*Charge* means the amount of SMC or BMC that is placed into a compression or injection mold necessary to complete one mold cycle.

*Cleaning* means removal of composite materials, such as cured and uncured resin from equipment, finished surfaces, floors, hands of employees, or any other surfaces.

*Clear production gel coat* means an unpigmented, quick-setting resin used to improve the surface appearance and/or performance of composites. It can be used to form the surface layer of any composites other than those used for molds in tooling operations.

*Closed molding* means a grouping of processes for fabricating composites in a way that HAP-containing materials are not exposed to the atmosphere except during the material loading stage (e.g., compression molding, injection molding, and resin transfer molding). Processes where the mold is covered with plastic (or equivalent material) prior to resin application, and the resin is injected into the covered mold are also considered closed molding.

*Composite* means a shaped and cured part produced by using composite materials.

*Composite materials* means the raw materials used to make composites. The raw materials include styrene containing resins. They may also include gel coat, monomer, catalyst, pigment, filler, and reinforcement.



*Compression molding* means a closed molding process for fabricating composites in which composite materials are placed inside matched dies that are used to cure the materials under heat and pressure without exposure to the atmosphere. The addition of mold paste or in-mold coating is considered part of the closed molding process. The composite materials used in this process are generally SMC or BMC.

*Compression/injection molding* means a grouping of processes that involves the use of compression molding and/or injection molding.

*Continuous casting* means a continuous process for fabricating composites in which composite materials are placed on an in-line conveyor belt to produce cast sheets that are cured in an oven.

*Continuous lamination* means a continuous process for fabricating composites in which composite materials are typically sandwiched between plastic films, pulled through compaction rollers, and cured in an oven. This process is generally used to produce flat or corrugated products on an in-line conveyor.

*Continuous lamination/casting* means a grouping of processes that involves the use of continuous lamination and/or continuous casting.

*Controlled emissions* means those organic HAP emissions that are vented from a control device to the atmosphere.

*Corrosion-resistant gel coat* means a gel coat used on a product made with a corrosion-resistant resin that has a corrosion-resistant end-use application.

*Corrosion-resistant end-use applications* means applications where the product is manufactured specifically for an application that requires a level of chemical inertness or resistance to chemical attack above that required for typical reinforced plastic composites products. These applications include, but are not limited to, chemical processing and storage; pulp and paper production; sewer and wastewater treatment; power generation; potable water transfer and storage; food and drug processing; pollution or odor control; metals production and plating; semiconductor manufacturing; petroleum production, refining, and storage; mining; textile production; nuclear materials storage; swimming pools; and cosmetic production, as well as end-use applications that require high strength resins.

*Corrosion-resistant industry standard* includes the following standards: ASME RTP-1 or Sect. X; ASTM D5364, D3299, D4097, D2996, D2997, D3262, D3517, D3754, D3840, D4024, D4160, D4161, D4162, D4184, D3982, or D3839; ANSI/AWWA C950; UL 215, 1316 or 1746, IAPMO PS-199, or written customer requirements for resistance to specified chemical environments.

*Corrosion-resistant product* means a product made with a corrosion-resistant resin and is manufactured to a corrosion-resistant industry standard, or a food contact industry standard, or is manufactured for corrosion-resistant end-use applications involving continuous or temporary chemical exposures.



*Corrosion-resistant resin* means a resin that either:

- (1) Displays substantial retention of mechanical properties when undergoing ASTM C-581 coupon testing, where the resin is exposed for 6 months or more to one of the following materials: Material with a pH  $\geq 2.0$  or  $\leq 3.0$ , oxidizing or reducing agents, organic solvents, or fuels or additives as defined in [40 CFR 79.2](#). In the coupon testing, the exposed resin needs to demonstrate a minimum of 50 percent retention of the relevant mechanical property compared to the same resin in unexposed condition. In addition, the exposed resin needs to demonstrate an increased retention of the relevant mechanical property of at least 20 percentage points when compared to a similarly exposed general-purpose resin. For example, if the general-purpose resin retains 45 percent of the relevant property when tested as specified above, then a corrosion-resistant resin needs to retain at least 65 percent (45 percent plus 20 percent) of its property. The general-purpose resin used in the test needs to have an average molecular weight of greater than 1,000, be formulated with a 1:2 ratio of maleic anhydride to phthalic anhydride and 100 percent diethylene glycol, and a styrene content between 43 to 48 percent; or
- (2) Complies with industry standards that require specific exposure testing to corrosive media, such as UL 1316, UL 1746, or ASTM F-1216.

*Deviation after September 16, 2020*, means any instance in which an affected source subject to this subpart, or an owner or operator of such a source:

- (1) Fails to meet any requirement or obligation established by this subpart, including, but not limited to, any emission limit, operating limit, or work practice standard; or
- (2) Fails to meet any term or condition that is adopted to implement an applicable requirement in this subpart and that is included in the operating permit for any affected source required to obtain such a permit.

*Deviation before September 17, 2020*, means any instance in which an affected source subject to this subpart, or an owner or operator of such a source:

- (1) Fails to meet any requirement or obligation established by this subpart, including, but not limited to, any emission limit, operating limit, or work practice standard; or
- (2) Fails to meet any term or condition that is adopted to implement an applicable requirement in this subpart and that is included in the operating permit for any affected source required to obtain such a permit; or
- (3) Fails to meet any emission limit, or operating limit, or work practice standard in this subpart during startup, shutdown, or malfunction, regardless of whether or not such failure is permitted by this subpart.

*Doctor box* means the box or trough on an SMC machine into which the liquid resin paste is delivered before it is metered onto the carrier film.

*Filament application* means an open molding process for fabricating composites in which reinforcements are fed through a resin bath and wound onto a rotating mandrel. The materials on the mandrel may be rolled out or worked by using nonmechanical tools prior to curing. Resin application to the reinforcement on the mandrel by means other than the resin bath, such as spray guns, pressure-fed rollers, flow coaters, or brushes is not considered filament application.

*Filled Resin* means that fillers have been added to a resin such that the amount of inert substances is at least 10 percent by weight of the total resin plus filler mixture. Filler putty made from a resin is considered a filled resin.

*Fillers* means inert substances dispersed throughout a resin, such as calcium carbonate, alumina trihydrate, hydrous aluminum silicate, mica, feldspar, wollastonite, silica, and talc. Materials that are not considered to be fillers are glass fibers or any type of reinforcement and microspheres.

*Fire retardant gel coat* means a gel coat used for products for which low-flame spread/low-smoke resin is used.

*Fluid impingement technology* means a spray gun that produces an expanding non-misting curtain of liquid by the impingement of low-pressure uninterrupted liquid streams.

*Food contact industry standard* means a standard related to food contact application contained in Food and Drug Administration's regulations at [21 CFR 177.2420](#).

*Gel Coat* means a quick-setting resin used to improve surface appearance and/or performance of composites. It can be used to form the surface layer of any composites other than those used for molds in tooling operations.

*Gel coat application* means a process where either clear production, pigmented production, white/off-white or tooling gel coat is applied.

*HAP-containing materials storage* means an ancillary process which involves keeping HAP-containing materials, such as resins, gel coats, catalysts, monomers, and cleaners, in containers or bulk storage tanks for any length of time. Containers may include small tanks, totes, vessels, and buckets.

*High Performance gel coat* means a gel coat used on products for which National Sanitation Foundation, United States Department of Agriculture, ASTM, durability, or other property testing is required.

*High strength gel coat* means a gel coat applied to a product that requires high strength resin.

*High strength resins* means polyester resins which have a casting tensile strength of 10,000 pounds per square inch or more and which are used for manufacturing products that have high strength requirements such as structural members and utility poles.

*Injection molding* means a closed molding process for fabricating composites in which composite materials are injected under pressure into a heated mold cavity that represents the exact shape of the product. The composite materials are cured in the heated mold cavity.

*Low Flame Spread/Low Smoke Products* means products that meet the following requirements. The products must meet both the applicable flame spread requirements and the applicable smoke requirements. Interior or exterior building application products must meet an ASTM E-84 Flame Spread Index of less than or equal to 25, and Smoke Developed Index of less than or equal to 450, or pass National Fire Protection Association 286 Room Corner Burn Test with no flash over and total smoke released not exceeding 1000 meters square. Mass transit application products must meet an ASTM E-162 Flame Spread Index of less than or equal to 35 and ASTM E662 Smoke Density  $D_s$  @ 1.5 minutes less than or equal to 100 and  $D_s$  @ 4 minutes less than or equal to 200. Duct application products must meet ASTM E084 Flame Spread Index less than or equal to 25 and Smoke Developed Index less than or equal to 50 on the interior and/or exterior of the duct.

*Manual resin application* means an open molding process for fabricating composites in which composite materials are applied to the mold by pouring or by using hands and nonmechanical tools, such as brushes and rollers. Materials are rolled out or worked by using nonmechanical tools prior to curing. The use of pressure-fed rollers and flow coaters to apply resin is not considered manual resin application.

*Mechanical resin application* means an open molding process for fabricating composites in which composite materials (except gel coat) are applied to the mold by using mechanical tools such as spray guns, pressure-fed rollers, and flow coaters. Materials are rolled out or worked by using nonmechanical tools prior to curing.

*Mixing* means the blending or agitation of any HAP-containing materials in vessels that are 5.00 gallons (18.9 liters) or larger, and includes the mixing of putties or polyputties. Mixing may involve the blending of resin, gel coat, filler, reinforcement, pigments, catalysts, monomers, and any other additives.

*Mold* means a cavity or matrix into or onto which the composite materials are placed and from which the product takes its form.

*Neat gel coat* means the resin as purchased for the supplier, but not including any inert fillers.

*Neat gel coat plus* means neat gel coat plus any organic HAP-containing materials that are added to the gel coat by the supplier or the facility, excluding catalysts and promoters. Neat gel coat plus does include any additions of styrene or methyl methacrylate monomer in any form, including in catalysts and promoters.

*Neat resin* means the resin as purchased from the supplier, but not including any inert fillers.

*Neat resin plus* means neat resin plus any organic HAP-containing materials that are added to the resin by the supplier or the facility. Neat resin plus does not include any added filler, reinforcements, catalysts, or promoters. Neat resin plus does include any additions of styrene or methyl methacrylate monomer in any form, including in catalysts and promoters.

*Nonatomized mechanical application* means the use of application tools other than brushes to apply resin and gel coat where the application tool has documentation provided by its manufacturer or user that this design of the application tool has been organic HAP emissions tested, and the test results showed that use of this application tool results in organic HAP emissions that are no greater than the organic HAP emissions predicted by the applicable nonatomized application equation(s) in Table 1 to this subpart. In addition, the device must be operated according to the manufacturer's directions, including instructions to prevent the operation of the device at excessive spray pressures. Examples of nonatomized application include flow coaters, pressure fed rollers, and fluid impingement spray guns.

*Noncorrosion-resistant resin* means any resin other than a corrosion-resistant resin or a tooling resin.

*Noncorrosion-resistant product* means any product other than a corrosion-resistant product or a mold.

*Non-routine manufacture* means that you manufacture parts to replace worn or damaged parts of a reinforced plastic composites product, or a product containing reinforced plastic composite parts, that was originally manufactured in another facility. For a part to qualify as non-routine manufacture, it must be used for repair or replacement, and the manufacturing schedule must be based on the current or anticipated repair needs of the reinforced plastic composites product, or a product containing reinforced plastic composite parts.

*Operation* means a specific process typically found at a reinforced plastic composites facility. Examples of operations are noncorrosion-resistant manual resin application, corrosion-resistant mechanical resin application, pigmented gel coat application, mixing and HAP-containing materials storage.

*Operation group* means a grouping of individual operations based primarily on mold type. Examples are open molding, closed molding, and centrifugal casting.

*Open molding* means a process for fabricating composites in a way that HAP-containing materials are exposed to the atmosphere. Open molding includes processes such as manual resin application, mechanical resin application, filament application, and gel coat application. Open molding also includes application of resins and gel coats to parts that have been removed from the open mold.

*Pigmented gel coat* means a gel coat that has a color, but does not contain 10 percent or more titanium dioxide by weight. It can be used to form the surface layer of any composites other than those used for molds in tooling operations.

*Polymer casting* means a process for fabricating composites in which composite materials are ejected from a casting machine or poured into an open, partially open, or closed mold and cured. After the composite materials are poured into the mold, they are not rolled out or worked while the mold is open, except for smoothing the material and/or vibrating the mold to remove bubbles. The composite materials may or may not include reinforcements. Products produced by the polymer casting process include cultured marble products and polymer concrete.

*Preform Injection* means a form of pultrusion where liquid resin is injected to saturate reinforcements in an enclosed system containing one or more chambers with openings only large enough to admit reinforcements. Resin, which drips out of the chamber(s) during the process, is collected in closed piping or covered troughs and then into a covered reservoir for recycle. Resin storage vessels, reservoirs, transfer systems, and collection systems are covered or shielded from the ambient air. Preform injection differs from direct die injection in that the injection chambers are not directly attached to the die.

*Prepreg materials* means reinforcing fabric received precoated with resin which is usually cured through the addition of heat.

*Pultrusion* means a continuous process for manufacturing composites that have a uniform cross-sectional shape. The process consists of pulling a fiber-reinforcing material through a resin impregnation chamber or bath and through a shaping die, where the resin is subsequently cured. There are several types of pultrusion equipment, such as open bath, resin injection, and direct die injection equipment.

*Repair* means application of resin or gel coat to a part to correct a defect, where the resin or gel coat application occurs after the part has gone through all the steps of its typical production process, or the application occurs outside the normal production area. For purposes of this subpart, rerouting a part back through the normal production line, or part of the normal production line, is not considered repair.

*Resin transfer molding* means a process for manufacturing composites whereby catalyzed resin is transferred or injected into a closed mold in which fiberglass reinforcement has been placed.

*Sheet molding compound (SMC)* means a ready-to-mold putty-like molding compound that contains resin(s) processed into sheet form. The molding compound is sandwiched between a top and a bottom film. In addition to resin(s), it may also contain catalysts, fillers, chemical thickeners, mold release agents, reinforcements, and other ingredients. Sheet molding compound can be used in compression molding to manufacture reinforced plastic composites products.

*Shrinkage controlled resin* means a resin that when promoted, catalyzed, and filled according to the resin manufacturer's recommendations demonstrates less than 0.3 percent linear shrinkage when tested according to ASTM D2566.

*Shutdown* after September 16, 2020, means the cessation of operation of the add-on control devices.

*SMC manufacturing* means a process which involves the preparation of SMC.

*Startup* after September 17, 2020, means the setting in operation of the add-on control devices.

*Tooling gel coat* means a gel coat that is used to form the surface layer of molds. Tooling gel coats generally have high heat distortion temperatures, low shrinkage, high barcol hardness, and high dimensional stability.

*Tooling resin* means a resin that is used to produce molds. Tooling resins generally have high heat distortion temperatures, low shrinkage, high barcol hardness, and high dimensional stability.

*Uncontrolled oven organic HAP emissions* means those organic HAP emissions emitted from the oven through closed vent systems to the atmosphere and not to a control device. These organic HAP emissions do not include organic HAP emissions that may escape into the workplace through the opening of panels or doors on the ovens or other similar fugitive organic HAP emissions in the workplace.

*Uncontrolled wet-out area organic HAP emissions* means any or all of the following: Organic HAP emissions from wet-out areas that do not have any capture and control, organic HAP emissions that escape from wet-out area enclosures, and organic HAP emissions from wet-out areas that are captured by an enclosure but are vented to the atmosphere and not to an add-on control device.

*Unfilled* means that there has been no addition of fillers to a resin or that less than 10 percent of fillers by weight of the total resin plus filler mixture has been added.

*Vapor suppressant* means an additive, typically a wax, that migrates to the surface of the resin during curing and forms a barrier to seal in the styrene and reduce styrene emissions.

*Vapor-suppressed resin* means a resin containing a vapor suppressant added for the purpose of reducing styrene emissions during curing.

*White and off-white gel coat* means a gel coat that contains 10 percent or more titanium dioxide by weight.

[[68 FR 19402](#), Apr. 21, 2003, as amended at [70 FR 50129](#), Aug. 25, 2005; [85 FR 15977](#), Mar. 20, 2020]

**Table 1 to Subpart WWW of Part 63—Equations To Calculate Organic HAP Emissions Factors for Specific Open Molding and Centrifugal Casting Process Streams**

Table 1 to Subpart WWW of Part 63--Equations to Calculate Organic HAP Emissions Factors for Specific Open Molding and Centrifugal Casting Process Streams<sup>1</sup>

As specified in §63.5810, use the equations in the following table to calculate organic HAP emissions factors for specific open molding and centrifugal casting process streams:

If your operation type is a new or existing...	And you use...	With...	
		Use this organic HAP Emissions Factor (EF) Equation for materials with less than 33 percent organic HAP (19 percent for nonatomized gel for nonatomized gel coat)	Use this organic HAP emissions Factor (EF) Equation for materials with 33 percent or more organic HAP (19 percent for nonatomized gel coat)
1. open molding operation	a. manual resin application	i. nonvapor-suppressed resin EF = $0.126 \times \text{HAP} \times 2000$	EF = $((0.286 \times \text{HAP}) - 0.0529) \times 2000$
		ii. vapor-suppressed resin EF = $0.126 \times \text{HAP} \times 2000 \times (1 - (0.5 \times \text{VSE factor}))$	EF = $((0.286 \times \text{HAP}) - 0.0529) \times 2000 \times (1 - (0.5 \times \text{VSE factor}))$
		iii. vacuum bagging/closed-mold curing with roll-out EF = $0.126 \times \text{HAP} \times 2000 \times 0.8$	EF = $((0.286 \times \text{HAP}) - 0.0529) \times 2000 \times 0.8$
		iv. vacuum bagging/closed-mold curing without roll-out EF = $0.126 \times \text{HAP} \times 2000 \times 0.5$	EF = $((0.286 \times \text{HAP}) - 0.0529) \times 2000 \times 0.5$
	b. atomized mechanical resin application	i. nonvapor-suppressed resin EF = $0.169 \times \text{HAP} \times 2000$	EF = $((0.714 \times \text{HAP}) - 0.18) \times 2000$
		ii. vapor-suppressed resin EF = $0.169 \times \text{HAP} \times 2000 \times (1 - (0.45 \times \text{VSE factor}))$	EF = $((0.714 \times \text{HAP}) - 0.18) \times 2000 \times (1 - (0.45 \times \text{VSE factor}))$
		iii. vacuum bagging/closed-mold curing with roll-out EF = $0.169 \times \text{HAP} \times 2000 \times 0.85$	EF = $((0.714 \times \text{HAP}) - 0.18) \times 2000 \times 0.85$
		iv. vacuum bagging/closed-mold curing without roll-out EF = $0.169 \times \text{HAP} \times 2000 \times 0.55$	EF = $((0.714 \times \text{HAP}) - 0.18) \times 2000 \times 0.55$
	c. nonatomized mechanical resin application	i. nonvapor-suppressed resin EF = $0.107 \times \text{HAP} \times 2000$	EF = $((0.157 \times \text{HAP}) - 0.0165) \times 2000$
		ii. vapor-suppressed resin EF = $0.107 \times \text{HAP} \times 2000 \times (1 - (0.45 \times \text{VSE factor}))$	EF = $((0.157 \times \text{HAP}) - 0.0165) \times 2000 \times (1 - (0.45 \times \text{VSE factor}))$
		iii. closed-mold curing with roll-out EF = $0.107 \times \text{HAP} \times 2000 \times 0.85$	EF = $((0.157 \times \text{HAP}) - 0.0165) \times 2000 \times 0.85$
		iv. vacuum bagging/closed-mold curing without roll-out EF = $0.107 \times \text{HAP} \times 2000 \times 0.55$	EF = $((0.157 \times \text{HAP}) - 0.0165) \times 2000 \times 0.55$
	d. atomized mechanical resin application with robotic or automated spray control <sup>3</sup>	nonvapor-suppressed resin EF = $0.169 \times \text{HAP} \times 2000 \times 0.77$	EF = $0.77 \times ((0.714 \times \text{HAP}) - 0.18) \times 2000$
	e. filament application <sup>6</sup>	i. nonvapor-suppressed resin EF = $0.184 \times \text{HAP} \times 2000$	EF = $((0.2746 \times \text{HAP}) - 0.0298) \times 2000$
		ii. vapor-suppressed resin EF = $0.12 \times \text{HAP} \times 2000$	EF = $((0.2746 \times \text{HAP}) - 0.0298) \times 2000 \times 0.65$
	f. atomized spray gel coat application	nonvapor-suppressed gel coat EF = $0.445 \times \text{HAP} \times 2000$	EF = $((1.03646 \times \text{HAP}) - 0.195) \times 2000$

g. nonatomized spray gel coat application	nonvapor-suppressed gel coat	$EF = 0.185 \times \%HAP \times 2000$	$EF = ((0.4506 \times \%HAP) - 0.0505) \times 2000$
	nonvapor-suppressed gel coat	$EF = 0.445 \times \%HAP \times 2000 \times 0.73$	$EF = ((1.03646 \times \%HAP) - 0.195) \times 2000 \times 0.73$
h. atomized spray gel coat application using robotic or automated spray	nonvapor-suppressed resin	$EF = 0.558 \times (\%HAP) \times 2000$	$EF = 0.558 \times (\%HAP) \times 2000$
	nonvapor-suppressed resin	$EF = 0.026 \times (\%HAP) \times 2000$	$EF = 0.026 \times (\%HAP) \times 2000$
2. centrifugal casting operations <sup>78</sup>	a. heated air blown through molds		
	b. vented molds, but air vented through the molds is not heated		

#### Footnotes to Table 1

- <sup>1</sup> The equations in this table are intended for use in calculating emission factors to demonstrate compliance with the emission limits in subpart WWW. These equations may not be the most appropriate method to calculate emission estimates for other purposes. However, this does not preclude a facility from using the equations in this table to calculate emission factors for purposes other than rule compliance if these equations are the most accurate available.
- <sup>2</sup> To obtain the organic HAP emissions factor value for an operation with an add-on control device multiply the EF above by the add-on control factor calculated using Equation 1 of §63.5810. The organic HAP emissions factors have units of lbs of organic HAP per ton of resin or gel coat applied.
- <sup>3</sup> Percent HAP means total weight percent of organic HAP (styrene, methyl methacrylate, and any other organic HAP) in the resin or gel coat prior to the addition of fillers, catalyst, and promoters. Input the percent HAP as a decimal, i.e., 33 percent HAP should be input as 0.33, not 33.
- <sup>4</sup> The VSE factor means the percent reduction in organic HAP emissions expressed as a decimal measured by the VSE test method of appendix A to this subpart.
- <sup>5</sup> This equation is based on a organic HAP emissions factor equation developed for mechanical atomized controlled spray. It may only be used for automated or robotic spray systems with atomized spray. All spray operations using hand held spray guns must use the appropriate mechanical atomized or mechanical nonatomized organic HAP emissions factor equation. Automated or robotic spray systems using nonatomized spray should use the appropriate nonatomized mechanical resin application equation.
- <sup>6</sup> Applies only to filament application using an open resin bath. If resin is applied manually or with a spray gun, use the appropriate manual or mechanical application organic HAP emissions factor equation.
- <sup>7</sup> These equations are for centrifugal casting operations where the mold is vented during spinning. Centrifugal casting operations where the mold is completely sealed after resin injection are considered to be closed molding operations.
- <sup>8</sup> If a centrifugal casting operation uses mechanical or manual resin application techniques to apply resin to an open centrifugal casting mold, use the appropriate open molding equation with covered cure and no rollout to determine an emission factor for operations prior to the closing of the centrifugal casting mold. If the closed centrifugal casting mold is vented during spinning, use the appropriate centrifugal casting equation to calculate an emission factor for the portion of the process where spinning and cure occur. If a centrifugal casting operation uses mechanical or manual resin application techniques to apply resin to an open centrifugal casting mold, and the mold is then closed and is not vented, treat the entire operation as open molding with covered cure and no rollout to determine emission factors.



[[70 FR 50129](#), Aug. 26, 2005]

**Table 2 to Subpart WWW of Part 63—Compliance Dates for New and Existing Reinforced Plastic Composites Facilities**

As required in [§§ 63.5800](#) and [63.5840](#) you must demonstrate compliance with the standards by the dates in the following table:

<b>If your facility is . . .</b>	<b>And . . .</b>	<b>Then you must comply by this date . . .</b>
1. An existing source	a. Is a major source on or before the publication date of this subpart	April 21, 2006.
2. An existing source that is an area source	Becomes a major source after the publication date of this subpart	3 years after becoming a major source or April 21, 2006, whichever is later.
3. An existing source, and emits less than 100 tpy of organic HAP from the combination of all centrifugal casting and continuous lamination/casting operations at the time of initial compliance with this subpart	Subsequently increases its actual organic HAP emissions to 100 tpy or more from these operations, which requires that the facility must now comply with the standards in <a href="#">§ 63.5805(b)</a>	3 years of the date your semi-annual compliance report indicates your facility meets or exceeds the 100 tpy threshold.
4. A new source	Is a major source at startup	Upon startup or April 21, 2003, whichever is later.
5. A new source	Is an area source at startup and becomes a major source	Immediately upon becoming a major source.
6. A new source, and emits less than 100 tpy of organic HAP from the combination of all open molding, centrifugal casting, continuous lamination/casting, pultrusion, SMC and BMC manufacturing, and	Subsequently increases its actual organic HAP emissions to 100 tpy or more from the combination of these operations, which requires that the facility must now	3 years from the date that your semi-annual compliance report indicates your facility meets or exceeds the 100 tpy threshold.

<b>If your facility is . . .</b>	<b>And . . .</b>	<b>Then you must comply by this date . . .</b>
mixing operations at the time of initial compliance with this subpart	meet the standards in <a href="#">§ 63.5805(d)</a>	

[[68 FR 19402](#), Apr. 21, 2003, as amended at [85 FR 73910](#), Nov. 19, 2020]

**Table 3 to Subpart WWW of Part 63—Organic HAP Emissions Limits for Existing Open Molding Sources, New Open Molding Sources Emitting Less Than 100 TPY of HAP, and New and Existing Centrifugal Casting and Continuous Lamination/Casting Sources that Emit Less Than 100 TPY of HAP**

As specified in [§ 63.5805](#), you must meet the following organic HAP emissions limits that apply to you:

<b>If your operation type is . . .</b>	<b>And you use . . .</b>	<b><sup>1</sup> Your organic HAP emissions limit is . . .</b>
1. open molding—corrosion-resistant and/or high strength (CR/HS)	a. mechanical resin application b. filament application c. manual resin application	113 lb/ton. 171 lb/ton. 123 lb/ton.
2. open molding—non-CR/HS	a. mechanical resin application b. filament application c. manual resin application	88 lb/ton. 188 lb/ton. 87 lb/ton.
3. open molding—tooling	a. mechanical resin application b. manual resin application	254 lb/ton. 157 lb/ton.
4. open molding—low-flame spread/low-smoke products	a. mechanical resin application b. filament application c. manual resin application	497 lb/ton. 270 lb/ton. 238 lb/ton.

If your operation type is . . .	And you use . . .	<sup>1</sup> Your organic HAP emissions limit is . . .
5. open molding—shrinkage controlled resins <sup>2</sup>	a. mechanical resin application b. filament application c. manual resin application	354 lb/ton. 215 lb/ton. 180 lb/ton.
6. open molding—gel coat <sup>3</sup>	a. tooling gel coating b. white/off white pigmented gel coating c. all other pigmented gel coating d. CR/HS or high performance gel coat e. fire retardant gel coat f. clear production gel coat	440 lb/ton. 267 lb/ton. 377 lb/ton. 605 lb/ton. 854 lb/ton. 522 lb/ton.
7. centrifugal casting—CR/HS	a. resin application with the mold closed, and the mold is vented during spinning and cure b. resin application with the mold closed, and the mold is not vented during spinning and cure c. resin application with the mold open, and the mold is vented during spinning and cure d. resin application with the mold open, and the mold is not vented during spinning and cure	25 lb/ton. <sup>4</sup> NA—this is considered to be a closed molding operation. 25 lb/ton. <sup>4</sup> Use the appropriate open molding emission limit. <sup>5</sup>
8. centrifugal casting—non-CR/HS	a. resin application with the mold closed, and the mold is vented during spinning and cure	20 lb/ton. <sup>4</sup> NA—this is considered to be a closed molding operation. 20 lb/ton. <sup>4</sup>

If your operation type is . . .	And you use . . .	<sup>1</sup> Your organic HAP emissions limit is . . .
	b. resin application with the mold closed, and mold is not vented during the spinning and cure c. resin application with the mold open, and the mold is vented during spinning and cure d. resin application with the mold open, and the mold is not vented during spinning and cure	Use the appropriate open molding emission limit. <sup>5</sup>
9. pultrusion <sup>6</sup>	N/A	reduce total organic HAP emissions by at least 60 weight percent.
10. continuous lamination/casting	N/A	reduce total organic HAP emissions by at least 58.5 weight percent or not exceed an organic HAP emissions limit of 15.7 lbs of organic HAP per ton of neat resin plus and neat gel coat plus.
<sup>1</sup> Organic HAP emissions limits for open molding and centrifugal casting are expressed as lb/ton. You must be at or below these values based on a 12-month rolling average.		
<sup>2</sup> This emission limit applies regardless of whether the shrinkage controlled resin is used as a production resin or a tooling resin.		
<sup>3</sup> If you only apply gel coat with manual application, for compliance purposes treat the gel coat as if it were applied using atomized spray guns to determine both emission limits and emission factors. If you use multiple application methods and any portion of a specific gel coat is applied using nonatomized spray, you may use the nonatomized spray gel coat equation to calculate an emission factor for the manually applied portion of that gel coat. Otherwise, use the atomized spray gel coat application equation to calculate emission factors.		
<sup>4</sup> For compliance purposes, calculate your emission factor using only the appropriate centrifugal casting equation in item 2 of Table 1 to this subpart, or a site specific emission factor for after the mold is closed as discussed in <a href="#">§ 63.5796</a> .		

<b>If your operation type is . . .</b>	<b>And you use . . .</b>	<b><sup>1</sup> Your organic HAP emissions limit is . . .</b>
<sup>5</sup> Calculate your emission factor using the appropriate open molding covered cure emission factor in item 1 of Table 1 to this subpart, or a site specific emission factor as discussed in <a href="#">§ 63.5796</a> .		
<sup>6</sup> Pultrusion machines that produce parts that meet the following criteria: 1,000 or more reinforcements or the glass equivalent of 1,000 ends of 113 yield roving or more; and have a cross sectional area of 60 square inches or more are not subject to this requirement. Their requirement is the work practice of air flow management which is described in Table 4 to this subpart.		

[[70 FR 50131](#), Aug. 25, 2005]

#### **Table 4 to Subpart WWW of Part 63—Work Practice Standards**

As specified in [§ 63.5805](#), you must meet the work practice standards in the following table that apply to you:

<b>For . . .</b>	<b>You must . . .</b>
1. A new or existing closed molding operation using compression/injection molding	Uncover, unwrap or expose only one charge per mold cycle per compression/injection molding machine. For machines with multiple molds, one charge means sufficient material to fill all molds for one cycle. For machines with robotic loaders, no more than one charge may be exposed prior to the loader. For machines fed by hoppers, sufficient material may be uncovered to fill the hopper. Hoppers must be closed when not adding materials. Materials may be uncovered to feed to slitting machines. Materials must be recovered after slitting.
2. A new or existing cleaning operation	Not use cleaning solvents that contain HAP, except that styrene may be used as a cleaner in closed systems, and organic HAP containing cleaners may be used to clean cured resin from application equipment. Application equipment includes any equipment that directly contacts resin.

For . . .	You must . . .
3. A new or existing materials HAP-containing materials storage operation	Keep containers that store HAP-containing materials closed or covered except during the addition or removal of materials. Bulk HAP-containing materials storage tanks may be vented as necessary for safety.
4. An existing or new SMC manufacturing operation	Close or cover the resin delivery system to the doctor box on each SMC manufacturing machine. The doctor box itself may be open.
5. An existing or new SMC manufacturing operation	Use a nylon containing film to enclose SMC.
6. All mixing or BMC manufacturing operations <sup>1</sup>	Use mixer covers with no visible gaps present in the mixer covers, except that gaps of up to 1 inch are permissible around mixer shafts and any required instrumentation. Mixers where the emissions are fully captured and routed to a 95 percent efficient control device are exempt from this requirement.
7. All mixing or BMC manufacturing operations <sup>1</sup>	Close any mixer vents when actual mixing is occurring, except that venting is allowed during addition of materials, or as necessary prior to adding materials or opening the cover for safety. Vents routed to a 95 percent efficient control device are exempt from this requirement.
8. All mixing or BMC manufacturing operations <sup>1</sup>	Keep the mixer covers closed while actual mixing is occurring except when adding materials or changing covers to the mixing vessels.
9. A new or existing pultrusion operation manufacturing parts that meet the following criteria: 1,000 or more reinforcements or the glass equivalent of 1,000 ends of 113 yield roving or more; and have a cross sectional area of 60 square inches or more that is not subject	<ul style="list-style-type: none"> <li>i. Not allow vents from the building ventilation system, or local or portable fans to blow directly on or across the wet-out area(s),</li> <li>ii. Not permit point suction of ambient air in the wet-out area(s) unless that air is directed to a control device,</li> </ul>

For . . .	You must . . .
to the 95-percent organic HAP emission reduction requirement	<ul style="list-style-type: none"> <li>iii. Use devices such as deflectors, baffles, and curtains when practical to reduce air flow velocity across the wet-out area(s),</li> <li>iv. Direct any compressed air exhausts away from resin and wet-out area(s),</li> <li>v. Convey resin collected from drip-off pans or other devices to reservoirs, tanks, or sumps via covered troughs, pipes, or other covered conveyance that shields the resin from the ambient air,</li> <li>vi. Cover all reservoirs, tanks, sumps, or HAP-containing materials storage vessels except when they are being charged or filled, and</li> <li>vii. Cover or shield from ambient air resin delivery systems to the wet-out area(s) from reservoirs, tanks, or sumps where practical.</li> </ul>
<sup>1</sup> Containers of 5 gallons or less may be open when active mixing is taking place, or during periods when they are in process ( <i>i.e.</i> , they are actively being used to apply resin). For polymer casting mixing operations, containers with a surface area of 500 square inches or less may be open while active mixing is taking place.	

[[85 FR 15977](#), Mar. 20, 2020]

**Table 5 to Subpart WWW of Part 63—Alternative Organic HAP Emissions Limits for Open Molding, Centrifugal Casting, and SMC Manufacturing Operations Where the Standards Are Based on a 95 Percent Reduction Requirement**

As specified in [§ 63.5805](#), as an alternative to the 95 percent organic HAP emissions reductions requirement, you may meet the appropriate organic HAP emissions limits in the following table:

If your operation type is . . .	And you use . . .	Your organic HAP emissions limit is a <sup>1</sup> . . .
1. Open molding—corrosion-resistant and/or high strength (CR/HS)	a. Mechanical resin application	6 lb/ton.
	b. Filament application	9 lb/ton.
	c. Manual resin application	7 lb/ton.

If your operation type is . . .	And you use . . .	Your organic HAP emissions limit is a <sup>1</sup> . . .
2. Open molding—non-CR/HS	a. mechanical resin application	13 lb/ton.
	b. Filament application	10 lb/ton.
	c. Manual resin application	5 lb/ton.
3. Open molding—tooling	a. Mechanical resin application	13 lb/ton.
	b. Manual resin application	8 lb/ton.
4. Open molding—low flame spread/low smoke products	a. Mechanical resin application	25 lb/ton.
	b. Filament application	14 lb/ton.
	c. Manual resin application	12 lb/ton.
5. Open molding—shrinkage controlled resins	a. Mechanical resin application	18 lb/ton.
	b. Filament application	11 lb/ton.
	c. Manual resin application	9 lb/ton.
6. Open molding—gel coat <sup>2</sup>	a. Tooling gel coating	22 lb/ton.
	b. White/off white pigmented gel coating	22 lb/ton.
	c. All other pigmented gel coating	19 lb/ton.
	d. CR/HS or high performance gel coat	31 lb/ton.
	e. Fire retardant gel coat	43 lb/ton.
	f. Clear production gel coat	27 lb/ton.
7. Centrifugal casting—CR/HS <sup>3 4</sup>	A vent system that moves heated air through the mold	27 lb/ton.



If your operation type is . . .	And you use . . .	Your organic HAP emissions limit is a <sup>1</sup> . . .
8. Centrifugal casting—non-CR/HS <sup>3</sup> <sup>4</sup>	A vent system that moves heated air through the mold	21 lb/ton.
7. Centrifugal casting—CR/HS <sup>3</sup> <sup>4</sup>	A vent system that moves ambient air through the mold	2 lb/ton.
8. Centrifugal casting—non-CR/HS <sup>3</sup> <sup>4</sup>	A vent system that moves ambient air through the mold	1 lb/ton.
9. SMC Manufacturing	N/A	2.4 lb/ton.

<sup>1</sup> Organic HAP emissions limits for open molding and centrifugal casting expressed as lb/ton are calculated using the equations shown in Table 1 to this subpart. You must be at or below these values based on a 12-month rolling average.

<sup>2</sup> These limits are for spray application of gel coat. Manual gel coat application must be included as part of spray gel coat application for compliance purposes using the same organic HAP emissions factor equation and organic HAP emissions limit. If you only apply gel coat with manual application, treat the manually applied gel coat as if it were applied with atomized spray for compliance determinations.

<sup>3</sup> Centrifugal casting operations where the mold is not vented during spinning and cure are considered to be closed molding and are not subject to any emissions limit. Centrifugal casting operations where the mold is not vented during spinning and cure, and the resin is applied to the open centrifugal casting mold using mechanical or manual open molding resin application techniques are considered to be open molding operations and the appropriate open molding emission limits apply.

<sup>4</sup> Centrifugal casting operations where the mold is vented during spinning and the resin is applied to the open centrifugal casting mold using mechanical or manual open molding resin application techniques, use the appropriate centrifugal casting emission limit to determine compliance. Calculate your emission factor using the appropriate centrifugal casting emission factor in Table 1 to this subpart, or a site specific emission factor as discussed in [§ 63.5796](#).

[[68 FR 19402](#), Apr. 21, 2003, as amended at [70 FR 50133](#), Aug. 25, 2005]

**Table 6 to Subpart WWW of Part 63—Basic Requirements for Performance Tests, Performance Evaluations, and Design Evaluations for New and Existing Sources Using Add-On Control Devices**

As required in [§ 63.5850](#) you must conduct performance tests, performance evaluations, and design evaluation according to the requirements in the following table:

For . . .	You must . . .	Using . . .	According to the following requirements . . .
1. Each enclosure used to collect and route organic HAP emissions to an add-on control device that is a PTE	Meet the requirements for a PTE	EPA method 204 of appendix M of <a href="#">40 CFR part 51</a>	Enclosures that meet the requirements of EPA Method 204 of appendix M of <a href="#">40 CFR part 51</a> for a PTE are assumed to have a capture efficiency of 100%. Note that the criteria that all access doors and windows that are not treated as natural draft openings shall be closed during routine operation of the process is not intended to require that these doors and windows be closed at all times. It means that doors and windows must be closed any time that you are not actually moving parts or equipment through them. Also, any styrene retained in hollow parts and liberated outside the PTE is not considered to be a violation of the EPA Method 204 criteria.
2. Each enclosure used to collect and route organic HAP emissions to an add-on control device that is not a PTE	a. Determine the capture efficiency of each enclosure used to capture organic HAP emissions sent to an add-on control device	i. EPA methods 204B through E of appendix M of <a href="#">40 CFR part 51</a> , or	(1) Enclosures that do not meet the requirements for a PTE must determine the capture efficiency by constructing a temporary total enclosure according to the requirements of EPA Method 204 of appendix M of <a href="#">40 CFR part 51</a> and measuring the mass flow rates of the organic HAP in the exhaust streams going to the atmosphere and to the control device. Test runs for EPA Methods 204B through E

For . . .	You must . . .	Using . . .	According to the following requirements . . .
			of appendix M of <a href="#">40 CFR part 51</a> must be at least 3 hours.
		ii. An alternative test method that meets the requirements in <a href="#">40 CFR part 51, appendix M</a>	(1) The alternative test method must the data quality objectives and lower confidence limit approaches for alternative capture efficiency protocols requirements contained in <a href="#">40 CFR part 63 subpart KK, appendix A</a> .
3. Each control device used to comply with a percent reduction requirement, or an organic HAP emissions limit	Determine the control efficiency of each control device used to control organic HAP emissions	The test methods specified in <a href="#">§ 63.5850</a> to this subpart	Testing and evaluation requirements are contained in <a href="#">40 CFR part 63, subpart SS</a> , and <a href="#">§ 63.5850</a> to this subpart.
4. Determining organic HAP emission factors for any operation	Determine the mass organic HAP emissions rate	The test methods specified in <a href="#">§ 63.5850</a> to this subpart	Testing and evaluation requirements are contained in <a href="#">40 CFR part 63, subpart SS</a> , and <a href="#">§ 63.5850</a> to this subpart.

**Table 7 to Subpart WWW of Part 63—Options Allowing Use of the Same Resin Across Different Operations That Use the Same Resin Type**

As specified in [§ 63.5810\(d\)](#), when electing to use the same resin(s) for multiple resin application methods, you may use any resin(s) with an organic HAP content less than or equal to the values shown in the following table, or any combination of resins whose weighted average organic HAP content based on a 12-month rolling average is less than or equal to the values shown the following table:

If your facility has the following resin type and application method . . .	The highest resin weight is* * * percent organic HAP content, or weighted average weight percent organic HAP content, you can use for . . .	is . . .
1. CR/HS resins, centrifugal casting <sup>1 2</sup>	a. CR/HS mechanical	<sup>3</sup> 48.0

If your facility has the following resin type and application method . . .	The highest resin weight is* * * percent organic HAP content, or weighted average weight percent organic HAP content, you can use for . . .	is . . .
	b. CR/HS filament application	48.0
	c. CR/HS manual	48.0
2. CR/HS resins, nonatomized mechanical	a. CR/HS filament application	46.4
	b. CR/HS manual	46.4
3. CR/HS resins, filament application	CR/HS manual	42.0
4. non-CR/HS resins, filament application	a. non-CR/HS mechanical	<sup>3</sup> 45.0
	b. non-CR/HS manual	45.0
	c. non-CR/HS centrifugal casting <sup>1 2</sup>	45.0
5. non-CR/HS resins, nonatomized mechanical	a. non-CR/HS manual	38.5
	b. non-CR/HS centrifugal casting <sup>1 2</sup>	38.5
6. non-CR/HS resins, centrifugal casting <sup>1 2</sup>	non-CR/HS manual	37.5
7. tooling resins, nonatomized mechanical	tooling manual	91.4
8. tooling resins, manual	tooling atomized mechanical	45.9
<sup>1</sup> If the centrifugal casting operation blows heated air through the molds, then 95 percent capture and control must be used if the facility wishes to use this compliance option.		
<sup>2</sup> If the centrifugal casting molds are not vented, the facility may treat the centrifugal casting operations as if they were vented if they wish to use this compliance option.		
<sup>3</sup> Nonatomized mechanical application must be used.		

[[70 FR 50133](#), Aug. 25, 2005]

**Table 8 to Subpart WWW of Part 63—Initial Compliance With Organic HAP Emissions Limits**

As specified in [§ 63.5860\(a\)](#), you must demonstrate initial compliance with organic HAP emissions limits as specified in the following table:

<b>For . . .</b>	<b>That must meet the following organic HAP emissions limit . . .</b>	<b>You have demonstrated initial compliance if . . .</b>
1. open molding and centrifugal casting operations	a. an organic HAP emissions limit shown in Tables 3 or 5 to this subpart, or an organic HAP content limit shown in Table 7 to this subpart	i. you have met the appropriate organic HAP emissions limits for these operations as calculated using the procedures in <a href="#">§ 63.5810</a> on a 12-month rolling average 1 year after the appropriate compliance date, and/or ii. you demonstrate that any individual resins or gel coats not included in (i) above, as applied, meet their applicable emission limits, or iii. you demonstrate using the appropriate values in Table 7 to this subpart that the weighted average of all resins and gel coats for each resin type and application method meet the appropriate organic HAP contents.
2. open molding centrifugal casting, continuous lamination/casting, SMC and BMC manufacturing, and mixing operations	a. reduce total organic HAP emissions by at least 95 percent by weight	total organic HAP emissions, based on the results of the capture efficiency and destruction efficiency testing specified in Table 6 to this subpart, are reduced by at least 95 percent by weight.
3. continuous lamination/casting operations	a. reduce total organic HAP emissions, by at least 58.5 weight percent, or	total organic HAP emissions, based on the results of the capture efficiency and destruction efficiency in Table 6 to this subpart and the calculation procedures specified in <a href="#">§§ 63.5865</a> through <a href="#">63.5890</a> , are reduced by at least 58.5 percent by weight.

For . . .	That must meet the following organic HAP emissions limit . . .	You have demonstrated initial compliance if . . .
	b. not exceed an organic HAP emissions limit of 15.7 lbs of organic HAP per ton of neat resin plus and neat gel coat plus	total organic HAP emissions, based on the results of the capture efficiency and destruction efficiency testing specified in Table 6 to this subpart and the calculation procedures specified in §§ 63.5865 through 63.5890, do not exceed 15.7 lbs of organic HAP per ton of neat resin plus and neat gel coat plus.
4. continuous lamination/casting operations	a. reduce total organic HAP emissions by at least 95 weight percent or	total organic HAP emissions, based on the results of the capture efficiency and destruction efficiency testing specified in Table 6 to this subpart and the calculation procedures specified in §§ 63.5865 through 63.5890, are reduced by at least 95 percent by weight
	b. not exceed an organic HAP emissions limit of 1.47 lbs of organic HAP per ton of neat resin plus and neat gel coat plus	total organic HAP emissions, based on the results of the capture efficiency and destruction efficiency testing specified in Table 6 and the calculation procedures specified in §§ 63.5865 through 63.5890, do not exceed 1.47 lbs of organic HAP of per ton of neat resin plus and neat gel coat plus.
5. pultrusion operations	a. reduce total organic HAP emissions by at least 60 percent by weight	i. total organic HAP emissions, based on the results of the capture efficiency and add-on control device destruction efficiency testing specified in Table 6 to this subpart, are reduced by at least 60 percent by weight, and/or ii. as part of the notification of initial compliance status, the owner/operator submits a certified statement that all pultrusion lines not controlled with an add-

<b>For . . .</b>	<b>That must meet the following organic HAP emissions limit . . .</b>	<b>You have demonstrated initial compliance if . . .</b>
		on control device, but for which an emission reduction is being claimed, are using direct die injection, and/or wet-area enclosures that meet the criteria of <a href="#">§ 63.5830</a> .
6. pultrusion operations	a. reduce total organic HAP emissions by at least 95 percent by weight	i. total organic HAP emissions, based on the results of the capture efficiency and add-on control device destruction efficiency testing specified in Table 6 to this subpart, are reduced by at least 95 percent by weight.

[[70 FR 50134](#), Aug. 25, 2005]

#### **Table 9 to Subpart WWW of Part 63—Initial Compliance With Work Practice Standards**

As specified in [§ 63.5860\(a\)](#), you must demonstrate initial compliance with work practice standards as specified in the following table:

<b>For . . .</b>	<b>That must meet the following standards . . .</b>	<b>You have demonstrated initial compliance if . . .</b>
1. a new or existing closed molding operation using compression/injection molding	uncover, unwrap or expose only one charge per mold cycle per compression/injection molding machine. For machines with multiple molds, one charge means sufficient material to fill all molds for one cycle. For machines with robotic loaders, no more than one charge may be exposed prior to the loader. For machines fed by hoppers, sufficient material may be	the owner or operator submits a certified statement in the notice of compliance status that only one charge is uncovered, unwrapped, or exposed per mold cycle per compression/injection molding machine, or prior to the loader, hoppers are closed except when adding materials, and materials are recovered after slitting.

For . . .	That must meet the following standards . . .	You have demonstrated initial compliance if . . .
	uncovered to fill the hopper. Hoppers must be closed when not adding materials. Materials may be uncovered to feed to slitting machines. Materials must be recovered after slitting	
2. a new or existing cleaning operation	not use cleaning solvents that contain HAP, except that styrene may be used in closed systems, and organic HAP containing materials may be used to clean cured resin from application equipment. Application equipment includes any equipment that directly contacts resin between storage and applying resin to the mold or reinforcement	the owner or operator submits a certified statement in the notice of compliance status that all cleaning materials, except styrene contained in closed systems, or materials used to clean cured resin from application equipment, contain no HAP.
3. a new or existing materials HAP-containing materials storage operation	keep containers that store HAP-containing materials closed or covered except during the addition or removal of materials. Bulk HAP-containing materials storage tanks may be vented as necessary for safety	the owner or operator submits a certified statement in the notice of compliance status that all HAP-containing storage containers are kept closed or covered except when adding or removing materials, and that any bulk storage tanks are vented only as necessary for safety.
4. an existing or new SMC manufacturing operation	close or cover the resin delivery system to the doctor box on each SMC manufacturing machine. The doctor box itself may be open	the owner or operator submits a certified statement in the notice of compliance status that the resin delivery system is closed or covered.



<b>For . . .</b>	<b>That must meet the following standards . . .</b>	<b>You have demonstrated initial compliance if . . .</b>
5. an existing or new SMC manufacturing operation	use a nylon containing film to enclose SMC	the owner or operator submits a certified statement in the notice of compliance status that a nylon-containing film is used to enclose SMC.
6. an existing or new mixing or BMC manufacturing operation	use mixer covers with no visible gaps present in the mixer covers, except that gaps of up to 1 inch are permissible around mixer shafts and any required instrumentation	the owner or operator submits a certified statement in the notice of compliance status that mixer covers are closed during mixing except when adding materials to the mixers, and that gaps around mixer shafts and required instrumentation are less than 1 inch.
7. an existing mixing or BMC manufacturing operation	not actively vent mixers to the atmosphere while the mixing agitator is turning, except that venting is allowed during addition of materials, or as necessary prior to adding materials for safety	the owner or operator submits a certified statement in the notice of compliance status that mixers are not actively vented to the atmosphere when the agitator is turning except when adding materials or as necessary for safety.
8. a new or existing mixing or BMC manufacturing operation	keep the mixer covers closed during mixing except when adding materials to the mixing vessels	the owner or operator submits a certified statement in the notice of compliance status that mixers closed except when adding materials to the mixing vessels.
9. a new or existing pultrusion operation manufacturing parts that meet the following criteria: 1,000 or more reinforcements or the glass equivalent of 1,000	i. Not allow vents from the building ventilation system, or local or portable fans to blow directly on or across the wet-out area(s),	the owner or operator submits a certified statement in the notice of compliance status that they have complied with

For . . .	That must meet the following standards . . .	You have demonstrated initial compliance if . . .
ends of 113 yield roving or more; and have a cross sectional area of 60 square inches or more that is not subject to the 95 percent organic HAP emission reduction requirement	<ul style="list-style-type: none"> <li>ii. not permit point suction of ambient air in the wet-out area(s) unless that air is directed to a control device,</li> <li>iii. use devices such as deflectors, baffles, and curtains when practical to reduce air flow velocity across the wet-out area(s),</li> <li>iv. direct any compressed air exhausts away from resin and wet-out area(s),</li> <li>v. convey resin collected from drip-off pans or other devices to reservoirs, tanks, or sumps via covered troughs, pipes, or other covered conveyance that shields the resin from the ambient air,</li> <li>vi. cover all reservoirs, tanks, sumps, or HAP-containing materials storage vessels except when they are being charged or filled, and</li> <li>vii. cover or shield from ambient air resin delivery systems to the wet-out area(s) from reservoirs, tanks, or sumps where practical.</li> </ul>	all the requirements listed in 9.i through 9.vii.

[[70 FR 50135](#), Aug. 25, 2005]

**Table 10 to Subpart WWW of Part 63—Data Requirements for New and Existing Continuous Lamination Lines and Continuous Casting Lines Complying With a Percent Reduction Limit on a Per Line Basis**

As required in [§ 63.5865\(a\)](#), in order to comply with a percent reduction limit for continuous lamination lines and continuous casting lines you must determine the data in the following table:

For each line where the wet-out area . . .	And the oven . . .	You must determine . . .
1. Has an enclosure that is not a permanent total enclosure (PTE) and the captured organic HAP emissions are controlled by an add-on control device	a. Is uncontrolled	i. Annual uncontrolled wet-out area organic HAP emissions, ii. Annual controlled wet-out area organic HAP emissions, iii. Annual uncontrolled oven organic HAP emissions, iv. The capture efficiency of the wet-out area enclosure, v. The destruction efficiency of the add-on control device, and vi. The amount of neat resin plus and neat gel coat plus applied.
2. Has an enclosure that is a PTE and the captured organic HAP emissions are controlled by an add-on control device	a. Is uncontrolled	i. Annual uncontrolled wet-out area organic HAP emissions, ii. Annual controlled wet-out area organic HAP emissions, iii. Annual uncontrolled oven organic HAP emissions, iv. That the wet-out area enclosure meets the requirements of EPA Method 204 of appendix M to 40 CFR part 51 for a PTE, v. The destruction efficiency of the add-on control device, and vi. The amount of neat resin plus and neat gel coat plus applied.
3. Is uncontrolled	a. Is controlled by an add-on control device	i. Annual uncontrolled wet-out area organic HAP emissions, ii. Annual uncontrolled oven organic HAP emissions, iii. Annual controlled oven organic HAP emissions, iv. The capture efficiency of the oven, v. the destruction efficiency of the

For each line where the wet-out area . . .	And the oven . . .	You must determine . . .
		add-on control device, and vi. the amount of neat resin plus and neat gel coat plus applied.
4. Has an enclosure that is not a PTE and the captured organic HAP emissions are controlled by an add-on control device	a. Is controlled by an add-on control device	i. Annual uncontrolled wet-out area organic HAP emissions, ii. Annual controlled wet-out area organic HAP emissions, iii. Annual uncontrolled oven organic HAP emissions, iv. Annual controlled oven organic HAP emissions; v. The capture efficiency of the wet-out area enclosure, vi. Inlet organic HAP emissions to the add-on control device, vii. Outlet organic HAP emissions from the add-on control device, and viii. The amount of neat resin plus and neat gel coat plus applied.
5. Has an enclosure that is a PTE and the captured organic HAP emissions are controlled by an add-on control device	a. Is controlled by an add-on control device	i. That the wet-out area enclosure meets the requirements of EPA Method 204 of appendix M to 40 CFR part 51 for a PTE, ii. The capture efficiency of the oven, and
		iii. The destruction efficiency of the add-on control device.

**Table 11 to Subpart WWW of Part 63—Data Requirements for New and Existing Continuous Lamination and Continuous Casting Lines Complying With a Percent Reduction Limit or a Lbs/Ton Limit on an Averaging Basis**

As required in [§ 63.5865](#), in order to comply with a percent reduction limit or a lbs/ton limit on an averaging basis for continuous lamination lines and continuous casting lines you must determine the data in the following table:

For each . . .	That . . .	You must determine . . .
1. Wet-out area	Is uncontrolled	Annual uncontrolled wet-out area organic HAP emissions.
2. Wet-out area	a. Has an enclosure that is not a PTE	i. The capture efficiency of the enclosure, and ii. Annual organic HAP emissions that escape the enclosure.
3. Wet-out area	Has an enclosure that is a PTE	That the enclosure meets the requirements of EPA Method 204 of appendix M to 40 CFR part 51 for a PTE.
4. Oven	Is uncontrolled	Annual uncontrolled oven organic HAP emissions.
5. Line	a. Is controlled or uncontrolled	i. The amount of neat resin plus applied, and ii. The amount of neat gel coat plus applied.
6. Add-on control device		i. Total annual inlet organic HAP emissions, and total annual outlet organic HAP emissions.

**Table 12 to Subpart WWW of Part 63—Data Requirements for New and Existing Continuous Lamination Lines and Continuous Casting Lines Complying With a Lbs/Ton Organic HAP Emissions Limit on a Per Line Basis**

As required in [§ 63.5865\(b\)](#), in order to comply with a lbs/ton organic HAP emissions limit for continuous lamination lines and continuous casting lines you must determine the data in the following table:

For each line where the wet- out area . . .	And the oven . . .	You must determine . . .
1. Is uncontrolled	a. Is uncontrolled	i. Annual uncontrolled wet-out area organic HAP emissions, ii. Annual uncontrolled oven organic HAP emissions, and iii. Annual neat resin plus and neat gel coat plus applied.
2. Has an enclosure that is not a PTE and the captured organic HAP emissions are controlled by an add-on control device	a. Is uncontrolled	i. Annual uncontrolled wet-out area organic HAP emissions, ii. Annual controlled wet-out area organic HAP emissions,

For each line where the wet- out area . . .	And the oven . . .	You must determine . . .
		iii. Annual uncontrolled oven organic HAP emissions,
		iv. The capture efficiency of the wet-out area enclosure, v. The destruction efficiency of the add-on control device, and vi. The amount of neat resin plus and neat gel coat plus applied.
3. Has an enclosure that is a PTE, and the captured organic HAP emissions are controlled by an add-on control device	a. Is uncontrolled	i. Annual uncontrolled wet-out area organic HAP emissions, ii. Annual controlled wet-out area organic HAP emissions, iii. Annual uncontrolled oven organic HAP emissions,
		iv. That the wet-out area enclosure meets the requirements of EPA Method 204 of appendix M to 40 CFR part 51 for a PTE, v. The destruction efficiency of the add-on control device, and vi. The amount of neat resin plus and neat gel coat plus applied.
4. Is uncontrolled	a. Is controlled by an add-on control device	i. Annual uncontrolled wet-out area organic HAP emissions, ii. Annual uncontrolled oven organic HAP emissions, iii. Annual controlled oven organic HAP emissions,
		iv. The capture efficiency of the oven, v. The destruction efficiency of the add-on control device, and vi. The amount of neat resin plus and neat gel coat plus applied.

For each line where the wet- out area . . .	And the oven . . .	You must determine . . .
5. Has an enclosure that is not a PTE and the captured organic HAP emissions are controlled by an add-on control device	a. Is controlled by an add-on control device	i. Annual uncontrolled wet-out area organic HAP emissions, ii. Annual controlled wet-out area organic HAP emissions, iii. Annual uncontrolled oven organic HAP emissions,
		iv. Annual controlled oven organic HAP emissions, v. The capture efficiency of the wet-out area enclosure, vi. The capture efficiency of the oven,
		vii. The destruction efficiency of the add-on control device, and viii. The amount of neat resin plus and neat gel coat plus applied.
6. Has an enclosure that is a PTE, and the captured organic HAP emissions are controlled by add-on control device	a. Is controlled by an add-on control device	i. That the wet-out area enclosure meets the requirements of EPA Method 204 of appendix M to 40 CFR part 51 for a PTE, ii. The capture efficiency of the oven, iii. Inlet organic HAP emissions to the an add-on control device, and
		iv. Outlet organic HAP emissions from the add-on control device.

**Table 13 to Subpart WWW of Part 63—Applicability and Timing of Notifications**

As required in [§ 63.5905\(a\)](#), you must determine the applicable notifications and submit them by the dates shown in the following table:

If your facility . . .	You must submit . . .	By this date . . .
1. Is an existing source subject to this subpart	An Initial Notification containing the	No later than the dates specified in <a href="#">§ 63.9(b)(2)</a> .

If your facility . . .	You must submit . . .	By this date . . .
	information specified in <a href="#">§ 63.9(b)(2)</a>	
2. Is a new source subject to this subpart	The notifications specified in <a href="#">§ 63.9(b)(4)</a> and <a href="#">(5)</a>	No later than the dates specified <a href="#">§ 63.9(b)(4)</a> and <a href="#">(5)</a> .
3. Qualifies for a compliance extension as specified in <a href="#">§ 63.9(c)</a>	A request for a compliance extension as specified in <a href="#">§ 63.9(c)</a>	No later than the dates specified in <a href="#">§ 63.6(i)</a> .
4. Is complying with organic HAP emissions limit averaging provisions	A Notification of Compliance Status as specified in <a href="#">§ 63.9(h)</a>	No later than 1 year plus 30 days after your facility's compliance date.
5. Is complying with organic HAP content limits, application equipment requirements, or organic HAP emissions limit other than organic HAP emissions limit averaging	A Notification of Compliance Status as specified in <a href="#">§ 63.9(h)</a>	No later than 30 calendar days after your facility's compliance date.
6. Is complying by using an add-on control device	a. A notification of intent to conduct a performance test as specified in <a href="#">§ 63.9(e)</a>	No later than the date specified in <a href="#">§ 63.9(e)</a> .
	b. A notification of the date for the CMS performance evaluation as specified in <a href="#">§ 63.9(g)</a>	The date of submission of notification of intent to conduct a performance test.
	c. A Notification of Compliance Status as specified in <a href="#">§ 63.9(h)</a>	No later than 60 calendar days after the completion of the add-on control device performance test and CMS performance evaluation.

**Table 14 to Subpart WWW of Part 63—Requirements for Reports**

As required in [§ 63.5910\(a\)](#), [\(b\)](#), [\(g\)](#), and [\(h\)](#), you must submit reports on the schedule shown in the following table:



You must submit a(n)	The report must contain . . .	You must submit the report . . .
1. Compliance report	a. A statement that there were no deviations during that reporting period if there were no deviations from any emission limitations (emission limit, operating limit, opacity limit, and visible emission limit) that apply to you and there were no deviations from the requirements for work practice standards in Table 4 to this subpart that apply to you. If there were no periods during which the CMS, including CEMS, and operating parameter monitoring systems, was out of control as specified in <a href="#">§ 63.8(c)(7)</a> , the report must also contain a statement that there were no periods during which the CMS was out of control during the reporting period	Semiannually according to the requirements in <a href="#">§ 63.5910(b)</a> .
	b. The information in <a href="#">§ 63.5910(d)</a> if you have a deviation from any emission limitation (emission limit, operating limit, or work practice standard) during the reporting period. If there were periods during which the CMS, including CEMS, and operating parameter monitoring systems, was out of control, as specified in <a href="#">§ 63.8(c)(7)</a> , the report must contain the information in <a href="#">§ 63.5910(e)</a>	Semiannually according to the requirements in <a href="#">§ 63.5910(b)</a> .

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**Table 15 to Subpart WWWW of Part 63—Applicability of General Provisions (Subpart A) to Subpart WWWW of Part 63**

As specified in [§ 63.5925](#), the parts of the General Provisions which apply to you are shown in the following table:

The general provisions reference . . .	That addresses . . .	And applies to subpart WWWW of part 63 . . .	Subject to the following additional information . . .
§ 63.1(a)(1)	General applicability of the general provisions	Yes	Additional terms defined in subpart WWWW of part 63, when overlap between

<b>The general provisions reference . . .</b>	<b>That addresses . . .</b>	<b>And applies to subpart WWW of part 63 . .</b>	<b>Subject to the following additional information . . .</b>
			<a href="#">subparts A</a> and <a href="#">WWW of this part</a> , subpart WWW of part 63 takes precedence.
§ 63.1(a)(2) through (4)	General applicability of the general provisions	Yes	
§ 63.1(a)(5)	Reserved	No	
§ 63.1(a)(6)	General applicability of the general provisions	Yes	
§ 63.1(a)(7) through (9)	Reserved	No	
§ 63.1(a)(10) through (14)	General applicability of the general provisions	Yes	
§ 63.1(b)(1)	Initial applicability determination	Yes	Subpart WWW of part 63 clarifies the applicability in <a href="#">§§ 63.5780</a> and <a href="#">63.5785</a> .
§ 63.1(b)(2)	Reserved	No	
§ 63.1(b)(3)	Record of the applicability determination	Yes	
§ 63.1(c)(1)	Applicability of this part after a relevant standard has been set under this part	Yes	Subpart WWW of part 63 clarifies the applicability of each paragraph of subpart A to sources subject to subpart WWW of part 63.
§ 63.1(c)(2)	Title V operating permit requirement	Yes	All major affected sources are required to obtain a title V operating permit. Area

The general provisions reference . . .	That addresses . . .	And applies to subpart WWW of part 63 . .	Subject to the following additional information . . .
			sources are not subject to subpart WWW of part 63.
§ 63.1(c)(3) and (4)	Reserved	No	
§ 63.1(c)(5)	Notification requirements for an area source that increases HAP emissions to major source levels	Yes	
§ 63.1(c)(6)	Reclassification	Yes	
§ 63.1(d)	Reserved	No	
§ 63.1(e)	Applicability of permit program before a relevant standard has been set under this part	Yes	
§ 63.2	Definitions	Yes	Subpart WWW of part 63 defines terms in <a href="#">§ 63.5935</a> . When overlap between subparts A and WWW of part 63 occurs, you must comply with the subpart WWW of part 63 definitions, which take precedence over the subpart A definitions.
§ 63.3	Units and abbreviations	Yes	Other units and abbreviations used in subpart WWW of part 63 are defined in subpart WWW of part 63.

<b>The general provisions reference . . .</b>	<b>That addresses . . .</b>	<b>And applies to subpart WWW of part 63 . .</b>	<b>Subject to the following additional information . . .</b>
§ 63.4	Prohibited activities and circumvention	Yes	§ 63.4(a)(3) through (5) is reserved and does not apply.
§ 63.5(a)(1) and (2)	Applicability of construction and reconstruction	Yes	Existing facilities do not become reconstructed under subpart WWW of part 63.
§ 63.5(b)(1)	Relevant standards for new sources upon construction	Yes	Existing facilities do not become reconstructed under subpart WWW of part 63.
§ 63.5(b)(2)	Reserved	No	
§ 63.5(b)(3)	New construction/reconstruction	Yes	Existing facilities do not become reconstructed under subpart WWW of part 63.
§ 63.5(b)(4)	Construction/reconstruction notification	Yes	Existing facilities do not become reconstructed under subpart WWW of part 63.
§ 63.5(b)(5)	Reserved	No	
§ 63.5(b)(6)	Equipment addition or process change	Yes	Existing facilities do not become reconstructed under subpart WWW of part 63.
§ 63.5(c)	Reserved	No	
§ 63.5(d)(1)	General application for approval of construction or reconstruction	Yes	Existing facilities do not become reconstructed under subpart WWW of part 63.
§ 63.5(d)(2)	Application for approval of construction	Yes	

<b>The general provisions reference . . .</b>	<b>That addresses . . .</b>	<b>And applies to subpart WWW of part 63 . .</b>	<b>Subject to the following additional information . . .</b>
§ 63.5(d)(3)	Application for approval of reconstruction	No	
§ 63.5(d)(4)	Additional information	Yes	
§ 63.5(e)(1) through (5)	Approval of construction or reconstruction	Yes	
§ 63.5(f)(1) and (2)	Approval of construction or reconstruction based on prior State preconstruction review	Yes	
§ 63.6(a)(1)	Applicability of compliance with standards and maintenance requirements	Yes	
§ 63.6(a)(2)	Applicability of area sources that increase HAP emissions to become major sources	Yes	
§ 63.6(b)(1) through (5)	Compliance dates for new and reconstructed sources	Yes	Subpart WWW of part 63 clarifies compliance dates in <a href="#">§ 63.5800</a> .
§ 63.6(b)(6)	Reserved	No	
§ 63.6(b)(7)	Compliance dates for new operations or equipment that cause an area source to become a major source	Yes	New operations at an existing facility are not subject to new source standards.
§ 63.6(c)(1) and (2)	Compliance dates for existing sources	Yes	Subpart WWW of part 63 clarifies compliance dates in <a href="#">§ 63.5800</a> .

<b>The general provisions reference . . .</b>	<b>That addresses . . .</b>	<b>And applies to subpart WWW of part 63 . .</b>	<b>Subject to the following additional information . . .</b>
§ 63.6(c)(3) and (4)	Reserved	No	
§ 63.6(c)(5)	Compliance dates for existing area sources that become major	Yes	Subpart WWW of part 63 clarifies compliance dates in <a href="#">§ 63.5800</a> .
§ 63.6(d)	Reserved	No	
§ 63.6(e)(1)	Operation and maintenance requirements	Yes	Except portions of <a href="#">§ 63.6(e)(1)(i)</a> and <a href="#">(ii)</a> specific to conditions during startup, shutdown, or malfunction.
§ 63.6(e)(3)	SSM plan and recordkeeping	No	
§ 63.6(f)(1)	Compliance except during periods of startup, shutdown, and malfunction	No	Subpart WWW of part 63 requires compliance at all times.
§ 63.6(f)(2) and (3)	Methods for determining compliance	Yes	
§ 63.6(g)(1) through (3)	Alternative standard	Yes	
§ 63.6(h)	Opacity and visible emission Standards	No	Subpart WWW of part 63 does not contain opacity or visible emission standards.
§ 63.6(i)(1) through (14)	Compliance extensions	Yes	
§ 63.6(i)(15)	Reserved	No	
§ 63.6(i)(16)	Compliance extensions	Yes	

The general provisions reference . . .	That addresses . . .	And applies to subpart WWW of part 63 . .	Subject to the following additional information . . .
§ 63.6(j)	Presidential compliance exemption	Yes	
§ 63.7(a)(1)	Applicability of performance testing requirements	Yes	
§ 63.7(a)(2)	Performance test dates	No	Subpart WWW of part 63 initial compliance requirements are in <a href="#">§ 63.5840</a> .
§ 63.7(a)(3)	CAA Section 114 authority	Yes	
§ 63.7(b)(1)	Notification of performance test	Yes	
§ 63.7(b)(2)	Notification rescheduled performance test	Yes	
§ 63.7(c)	Quality assurance program, including test plan	Yes	Except that the test plan must be submitted with the notification of the performance test.
§ 63.7(d)	Performance testing facilities	Yes	
§ 63.7(e)	Conditions for conducting performance tests	Yes	Performance test requirements are contained in <a href="#">§ 63.5850</a> . Additional requirements for conducting performance tests for continuous lamination/casting are included in <a href="#">§ 63.5870</a> . Conditions specific to operations during periods of startup, shutdown, and

<b>The general provisions reference . . .</b>	<b>That addresses . . .</b>	<b>And applies to subpart WWW of part 63 . .</b>	<b>Subject to the following additional information . . .</b>
			malfunction in <a href="#">§ 63.7(e)(1)</a> do not apply.
§ 63.7(f)	Use of alternative test method	Yes	
§ 63.7(g)	Performance test data analysis, recordkeeping, and reporting	Yes	
§ 63.7(h)	Waiver of performance tests	Yes	
§ 63.8(a)(1) and (2)	Applicability of monitoring requirements	Yes	
§ 63.8(a)(3)	Reserved	No	
§ 63.8(a)(4)	Monitoring requirements when using flares	Yes	
§ 63.8(b)(1)	Conduct of monitoring exceptions	Yes	
§ 63.8(b)(2) and (3)	Multiple effluents and multiple monitoring systems	Yes	
§ 63.8(c)(1)	Compliance with CMS operation and maintenance requirements	Yes	This section applies if you elect to use a CMS to demonstrate continuous compliance with an emission limit. Except references to SSM plans in <a href="#">§ 63.8(c)(1)(i)</a> and <a href="#">(iii)</a> .
§ 63.8(c)(2) and (3)	Monitoring system installation	Yes	This section applies if you elect to use a CMS to demonstrate continuous



The general provisions reference . . .	That addresses . . .	And applies to subpart WWW of part 63 . .	Subject to the following additional information . . .
			compliance with an emission limit.
§ 63.8(c)(4)	CMS requirements	Yes	This section applies if you elect to use a CMS to demonstrate continuous compliance with an emission limit.
§ 63.8(c)(5)	Continuous Opacity Monitoring System (COMS) minimum procedures	No	Subpart WWW of part 63 does not contain opacity standards.
§ 63.8(c)(6) through (8)	CMS calibration and periods CMS is out of control	Yes	This section applies if you elect to use a CMS to demonstrate continuous compliance with an emission limit.
§ 63.8(d)(1)-(2)	CMS quality control program, including test plan and all previous versions	Yes	This section applies if you elect to use a CMS to demonstrate continuous compliance with an emission limit.
§ 63.8(d)(3)	CMS quality control program, including test plan and all previous versions	Yes	Except references to SSM plans in <a href="#">§ 63.8(d)(3)</a> .
§ 63.8(e)(1)	Performance evaluation of CMS	Yes	This section applies if you elect to use a CMS to demonstrate continuous compliance with an emission limit.

<b>The general provisions reference . . .</b>	<b>That addresses . . .</b>	<b>And applies to subpart WWW of part 63 . .</b>	<b>Subject to the following additional information . . .</b>
§ 63.8(e)(2)	Notification of performance evaluation	Yes	This section applies if you elect to use a CMS to demonstrate continuous compliance with an emission limit.
§ 63.8(e)(3) and (4)	CMS requirements/alternatives	Yes	This section applies if you elect to use a CMS to demonstrate continuous compliance with an emission limit.
§ 63.8(e)(5)(i)	Reporting performance evaluation results	Yes	This section applies if you elect to use a CMS to demonstrate continuous compliance with an emission limit.
§ 63.8(e)(5)(ii)	Results of COMS performance evaluation	No	Subpart WWW of part 63 does not contain opacity standards.
§ 63.8(f)(1) through (3)	Use of an alternative monitoring method	Yes	
§ 63.8(f)(4)	Request to use an alternative monitoring method	Yes	
§ 63.8(f)(5)	Approval of request to use an alternative monitoring method	Yes	
§ 63.8(f)(6)	Request for alternative to relative accuracy test and associated records	Yes	This section applies if you elect to use a CMS to demonstrate continuous

<b>The general provisions reference . . .</b>	<b>That addresses . . .</b>	<b>And applies to subpart WWW of part 63 . .</b>	<b>Subject to the following additional information . . .</b>
			compliance with an emission limit.
§ 63.8(g)(1) through (5)	Data reduction	Yes	
§ 63.9(a)(1) through (4)	Notification requirements and general information	Yes	
§ 63.9(b)(1)	Initial notification applicability	Yes	
§ 63.9(b)(2)	Notification for affected source with initial startup before effective date of standard	Yes	
§ 63.9(b)(3)	Reserved	No	
§ 63.9(b)(4)(i)	Notification for a new or reconstructed major affected source with initial startup after effective date for which an application for approval of construction or reconstruction is required	Yes	
§ 63.9(b)(4)(ii) through (iv)	Reserved	No	
§ 63.9(b)(4)(v)	Notification for a new or reconstructed major affected source with initial startup after effective date for which an application for approval of construction or reconstruction is required	Yes	Existing facilities do not become reconstructed under subpart WWW of part 63.

<b>The general provisions reference . . .</b>	<b>That addresses . . .</b>	<b>And applies to subpart WWW of part 63 . .</b>	<b>Subject to the following additional information . . .</b>
§ 63.9(b)(5)	Notification that you are subject to this subpart for new or reconstructed affected source with initial startup after effective date and for which an application for approval of construction or reconstruction is not required	Yes	Existing facilities do not become reconstructed under subpart WWW of part 63.
§ 63.9(c)	Request for compliance extension	Yes	
§ 63.9(d)	Notification of special compliance requirements for new source	Yes	
§ 63.9(e)	Notification of performance test	Yes	
§ 63.9(f)	Notification of opacity and visible emissions observations	No	Subpart WWW of part 63 does not contain opacity or visible emission standards.
§ 63.9(g)(1)	Additional notification requirements for sources using CMS	Yes	This section applies if you elect to use a CMS to demonstrate continuous compliance with an emission limit.
§ 63.9(g)(2)	Notification of compliance with opacity emission standard	No	Subpart WWW of part 63 does not contain opacity emission standards.
§ 63.9(g)(3)	Notification that criterion to continue use of alternative to relative accuracy testing has been exceeded	Yes	This section applies if you elect to use a CMS to demonstrate continuous compliance with an emission limit.

<b>The general provisions reference . . .</b>	<b>That addresses . . .</b>	<b>And applies to subpart WWW of part 63 . .</b>	<b>Subject to the following additional information . . .</b>
§ 63.9(h)(1) through (3)	Notification of compliance status	Yes	
§ 63.9(h)(4)	Reserved	No	
§ 63.9(h)(5) and (6)	Notification of compliance status	Yes	
§ 63.9(i)	Adjustment of submittal deadlines	Yes	
§ 63.9(j)	Change in information provided	Yes	
§ 63.9(k)	Electronic reporting procedures	Yes	Only as specified in <a href="#">§ 63.9(j)</a> .
§ 63.10(a)	Applicability of recordkeeping and reporting	Yes	
§ 63.10(b)(1)	Records retention	Yes	
§ 63.10(b)(2)(i) through (v)	Records related to startup, shutdown, and malfunction	No	
§ 63.10(b)(2)(vi) through (xi)	CMS records, data on performance tests, CMS performance evaluations, measurements necessary to determine conditions of performance tests, and performance evaluations	Yes	
§ 63.10(b)(2)(xii)	Record of waiver of recordkeeping and reporting	Yes	
§ 63.10(b)(2)(xiii)	Record for alternative to the relative accuracy test	Yes	

<b>The general provisions reference . . .</b>	<b>That addresses . . .</b>	<b>And applies to subpart WWW of part 63 . .</b>	<b>Subject to the following additional information . . .</b>
§ 63.10(b)(2)(xiv)	Records supporting initial notification and notification of compliance status	Yes	
§ 63.10(b)(3)	Records for applicability determinations	Yes	
§ 63.10(c)(1)	CMS records	Yes	This section applies if you elect to use a CMS to demonstrate continuous compliance with an emission limit.
§ 63.10(c)(2) through (4)	Reserved	No	
§ 63.10(c)(5) through (8)	CMS records	Yes	This section applies if you elect to use a CMS to demonstrate continuous compliance with an emission limit.
§ 63.10(c)(9)	Reserved	No	
§ 63.10(c)(10) through (14)	CMS records	Yes	This section applies if you elect to use a CMS to demonstrate continuous compliance with an emission limit.
§ 63.10(c)(15)	CMS records	No	
§ 63.10(d)(1)	General reporting requirements	Yes	
§ 63.10(d)(2)	Report of performance test results	Yes	

<b>The general provisions reference . . .</b>	<b>That addresses . . .</b>	<b>And applies to subpart WWW of part 63 . .</b>	<b>Subject to the following additional information . . .</b>
§ 63.10(d)(3)	Reporting results of opacity or visible emission observations	No	Subpart WWW of part 63 does not contain opacity or visible emission standards.
§ 63.10(d)(4)	Progress reports as part of extension of compliance	Yes	
§ 63.10(d)(5)	Startup, shutdown, and malfunction reports	No	
§ 63.10(e)(1) through (3)	Additional reporting requirements for CMS	Yes	This section applies if you have an add-on control device and elect to use a CEM to demonstrate continuous compliance with an emission limit.
§ 63.10(e)(4)	Reporting COMS data	No	Subpart WWW of part 63 does not contain opacity standards.
§ 63.10(f)	Waiver for recordkeeping or reporting	Yes	
§ 63.11	Control device requirements	Yes	Only applies if you elect to use a flare as a control device.
§ 63.12	State authority and delegations	Yes	
§ 63.13	Addresses of state air pollution control agencies and EPA Regional offices	Yes	
§ 63.14	Incorporations by reference	Yes	

The general provisions reference . . .	That addresses . . .	And applies to subpart WWW of part 63 . . .	Subject to the following additional information . . .
§ 63.15	Availability of information and confidentiality	Yes	

[[85 FR 15979](#), Mar. 20, 2020, as amended at [85 FR 73911](#), Nov. 19, 2020]

## Appendix A to Subpart WWW of Part 63—Test Method for Determining Vapor Suppressant Effectiveness

### 1. Scope and Application

1.1 **Applicability.** If a facility is using vapor suppressants to reduce hazardous air pollutant (HAP) emissions, the organic HAP emission factor equations in Table 1 to this subpart require that the vapor suppressant effectiveness factor be determined. The vapor suppressant effectiveness factor is then used as one of the inputs into the appropriate organic HAP emission factor equation. The vapor suppressant effectiveness factor test is not intended to quantify overall volatile emissions from a resin, nor to be used as a stand-alone test for emissions determination. This test is designed to evaluate the performance of film forming vapor suppressant resin additives. The results of this test are used only in combination with the organic HAP emissions factor equations in Table 1 to this subpart to generate emission factors.

1.1.1 The open molding process consists of application of resin and reinforcements to the mold surface, followed by a manual rollout process to consolidate the laminate, and the curing stage where the laminate surface is not disturbed. Emission studies have shown that approximately 50 percent to 55 percent of the emissions occur while the resin is being applied to the mold. Vapor suppressants have little effect during this portion of the lamination process, but can have a significant effect during the curing stage. Therefore, if a suppressant is 100 percent effective, the overall emissions from the process would be reduced by 45 percent to 50 percent, representing the emissions generated during the curing stage. In actual practice, vapor suppressant effectiveness will be less than 100 percent and the test results determine the specific effectiveness in terms of the vapor suppressant effectiveness factor. This factor represents the effectiveness of a specific combination of suppressant additive and resin formulation.

1.1.2 A resin manufacturer may supply a molder with a vapor-suppressed resin, and employ this test to provide the molder with the vapor suppressant effectiveness factor for that combination of resin and vapor suppressant. The factor qualifies the effectiveness of the vapor suppressant when the resin is tested in the specific formulation supplied to the molder. The addition of fillers or



other diluents by the molder may impact the effectiveness of the vapor suppressant. The formulation, including resin/glass ratio and filler content, used in the test should be similar to the formulation to be used in production. The premise of this method is to compare laminate samples made with vapor suppressant additive and made without the additive. The difference in emissions between the two yields the vapor suppressant effectiveness factor.

1.1.3 The method uses a mass balance determination to establish the relative loss of the volatile component from unsaturated polyester or vinyl ester resins, with and without vapor suppressant additives. The effectiveness of a specific vapor suppressant and resin mixture is determined by comparing the relative volatile weight losses from vapor suppressed and non-suppressed resins. The volatile species are not separately analyzed. While the species contained in the volatile component are not determined, an extended listing of potential monomer that may be contained in unsaturated polyester or vinyl ester resins is provided in Table 1.1. However, most polyester and vinyl ester resin formulations presently used by the composites industry only contain styrene monomer.

Table 1.1—List of Monomers Potentially Present in Unsaturated Polyester/Vinyl Ester Resins	
Monomer	CAS No.
Styrene	100-42-5.
Vinyl toluene	25013-15-4.
Methyl methacrylate	80-62-6.
Alpha methyl styrene	98-83-9.
Para methyl styrene	Vinyl toluene isomer.
Chlorostyrene	1331-28-8.
Diallyl phthalate	131-17-9.
Other volatile monomers	Various.

## 2. Summary of Method

2.1 Differences in specific resin and suppressant additive chemistry affect the performance of a vapor suppressant. The purpose of this method is to quantify the effectiveness of a specific combination of vapor suppressant and unsaturated polyester or vinyl ester resin as they are to be used in production. This comparative test quantifies the loss of volatiles from a fiberglass reinforced laminate during the roll-out and curing emission phases, for resins formulated with and without a suppressant additive. A criterion for this method is the testing of a non-vapor suppressed resin system and testing the same resin with a vapor suppressant. The two resins are

as identical as possible with the exception of the addition of the suppressant to one. The exact formulation used for the test will be determined by the in-use production requirements. Each formulation of resin, glass, fillers, and additives is developed to meet particular customer and or performance specifications.

2.2 The result of this test is used as an input factor in the organic HAP emissions factor equations in Table 1 to this subpart, which allows these equations to predict emissions from a specific combination of resin and suppressant. This test does not provide an emission rate for the entire lamination process.

### 3. Definitions and Acronyms

#### 3.1 Definitions

3.1.1 **Vapor suppressant.** An additive that inhibits the evaporation of volatile components in unsaturated polyester or vinyl ester resins.

3.1.2 **Unsaturated polyester resin.** A thermosetting resin commonly used in composites molding.

3.1.3 **Unsaturated vinyl ester resin.** A thermosetting resin used in composites molding for corrosion resistant and high performance applications.

3.1.4 **Laminate.** A combination of fiber reinforcement and a thermoset resin.

3.1.5 **Chopped strand mat.** Glass fiber reinforcement with random fiber orientation.

3.1.6 **Initiator.** A curing agent added to an unsaturated polyester or vinyl ester resin.

3.1.7 **Resin application roller.** A tool used to saturate and compact a wet laminate.

3.1.8 **Gel time.** The time from the addition of initiator to a resin to the state of resin gelation.

3.1.9 **Filled resin system.** A resin, which includes the addition of inert organic or inorganic materials to modify the resin properties, extend the volume and to lower the cost. Fillers include, but are not limited to; mineral particulates; microspheres; or organic particulates. This test is not intended to be used to determine the vapor suppressant effectiveness of a filler.

3.1.10 **Material safety data sheet.** Data supplied by the manufacturer of a chemical product, listing hazardous chemical components, safety precautions, and required personal protection equipment for a specific product.

3.1.11 **Tare(ed).** Reset a balance to zero after a container or object is placed on the balance; that is to subtract the weight of a container or object from the balance reading so as to weigh only the material placed in the container or on the object.

3.1.12 **Percent glass.** The specified glass fiber weight content in a laminate. It is usually determined by engineering requirements for the laminate.

## 3.2 Acronyms:

3.2.1 **VS** —vapor suppressed or vapor suppressant.

3.2.2 **NVS** —non-vapor suppressed.

3.2.3 **VSE** —vapor suppressant effectiveness.

3.2.4 **VSE Factor** —vapor suppressant effectiveness, factor used in the equations in Table 1 to this subpart.

3.2.5 **CSM** —chopped strand mat.

3.2.6 **MSDS** —material safety data sheet.

## 4. Interferences

There are no identified interferences which affect the results of this test.

## 5. Safety

Standard laboratory safety procedures should be used when conducting this test. Refer to specific MSDS for handling precautions.

## 6. Equipment and Supplies

Note:

Mention of trade names or specific products or suppliers does not constitute an endorsement by the Environmental Protection Agency.

### 6.1 Required Equipment.

6.1.1 Balance enclosure.<sup>1</sup>

6.1.2 Two (2) laboratory balances—accurate to  $\pm 0.01\text{g}$ .<sup>2</sup>

6.1.3 Stop watch or balance data recording output to data logger with accuracy  $\pm 1$  second.<sup>3</sup>

6.1.4 Thermometer—accurate to  $\pm 2.0$  °F( $\pm 1.0$  °C).<sup>4</sup>

6.1.5 A lipped pan large enough to hold the cut glass without coming into contact with the vertical sides, *e.g.* a pizza pan.<sup>5</sup>

6.1.6 Mylar film sufficient to cover the bottom of the pan.<sup>6</sup>

6.1.7 Tape to keep the Mylar from shifting in the bottom of the pan.<sup>7</sup>

6.1.8 Plastic tri-corner beakers of equivalent—250 ml to 400 ml capacity.<sup>8</sup>

6.1.9 Eye dropper or pipette.<sup>9</sup>

6.1.10 Disposable resin application roller, 3/16"- 3/4" diameter × 3"-6" roller length.<sup>10</sup>

6.1.11 Hygrometer or psychrometer<sup>11</sup> accurate to ±5 percent

6.1.12 Insulating board, (Teflon, cardboard, foam board etc.) to prevent the balance from becoming a heat sink.<sup>12</sup>

## 6.2 Optional Equipment.

6.2.1 Laboratory balance—accurate to ±.01g with digital output, such as an RS-232 bi-directional interface<sup>13</sup> for use with automatic data recording devices.

6.2.2 Computer with recording software configured to link to balance digital output. Must be programmed to record data at the minimum intervals required for manual data acquisition.

## 6.3 Supplies.

6.3.1 Chopped strand mat—1.5 oz/ft.<sup>214</sup>

## 7. Reagents and Standards

7.1 **Initiator.** The initiator type, brand, and concentration will be specified by resin manufacturer, or as required by production operation.

7.2 Polyester or vinyl ester resin.

7.3 Vapor suppressant additive.

## 8. Sample Collection, Preservation, and Storage

This test method involves the immediate recording of data during the roll out and curing phases of the lamination process during each test run. Samples are neither collected, preserved, nor stored.

## 9. Quality Control

Careful attention to the prescribed test procedure, routing equipment calibration, and replicate testing are the quality control activities for this test method. Refer to the procedures in section 11. A minimum of six test runs of a resin system without a suppressant and six test runs of the same resin with a suppressant shall be performed for each resin and suppressant test combination.

## 10. Calibration and Standardization

10.1 The laboratory balances, stopwatch, hygrometer and thermometer shall be maintained in a state of calibration prior to testing and thereafter on a scheduled basis as determined by the testing laboratory. This shall be accomplished by using certified calibration standards.

10.2 Calibration records shall be maintained for a period of 3 years.

## 11. Test Procedure

### 11.1 Test Set-up.

11.1.1 The laboratory balance is located in an enclosure to prevent fluctuations in balance readings due to localized air movement. The front of enclosure is open to permit work activity, but positioned so that local airflow will not effect balance readings. The ambient temperature is determined by suspending the thermometer at a point inside the enclosure.

11.1.2 The bottom of the aluminum pan is covered with the Mylar film. The film is held in position with tape or by friction between the pan and the film.

11.1.3 The resin and pan are brought to room temperature. This test temperature must be between 70 °F and 80 °F. The testing temperature cannot vary more than  $\pm 2$  °F during the measurement of test runs. Temperature shall be recorded at the same time weight is recorded on suppressed and non-suppressed test data sheets, shown in Table 17.1.

11.1.4 The relative humidity may not change more than  $\pm 15$  percent during the test runs. This is determined by recording the relative humidity in the vicinity of the test chamber at the beginning and end of an individual test run. This data is recorded on the test data sheets shown in Table 17.1.

11.1.5 Two plies of nominal 1.5 oz/ft<sup>2</sup> chopped strand mat (CSM) are cut into a square or rectangle with the minimum surface area of 60 square inches (*i.e.* a square with a side dimension of 7.75 inches).

11.1.6 The appropriate resin application roller is readily available.

### 11.2 Resin Gel Time/Initiator Percentage

11.2.1 Previous testing has indicated that resin gel time influences the emissions from composite production. The testing indicated that longer the gel times led to higher emissions. There are a number of factors that influence gel time including initiator type, initiator brand, initiator level, temperature and resin additives. Under actual usage conditions a molder will adjust the initiator to meet a gel time requirement. In this test procedure, the vapor suppressed and non-vapor suppressed resin systems will be adjusted to the same gel time by selecting the appropriate initiator level for each.

11.2.2 All test runs within a test will be processed in a manner that produces the same resin gel time  $\pm 2$  minutes. To facilitate the resin mixing procedure, master batches of resin and resin plus vapor suppressant of resin are prepared. These resin master batches will have all of the required ingredients except initiator; this includes filler for filled systems. The gel times for the tests are conducted using the master batch and adjustments to meet gel time requirements shall be made to the master batch before emission testing is conducted. Test temperatures must be maintained within the required range, during gel time testing. Further gel time testing is not required after

the non-vapor suppressed and vapor suppressed master batches are established with gel times within  $\pm 2$  minutes. A sufficient quantity of each resin should be prepared to allow for additional test specimens in the event one or more test fails to meet the data acceptance criteria discussed in Section 11.5 and shown in Table 17.2.

11.2.3 The specific brand of initiator and the nominal percentage level recommended by the resin manufacturer will be indicated on the resin certificate of analysis<sup>15</sup>; or, if a unique gel time is required in a production laminate, initiator brand and percentage will be determined by that specific requirement.

#### 11.2.4 Examples:

11.2.4.1 The resin for a test run is specified as having a 15-minute cup gel time at 77 °F using Brand X initiator at 1.5 percent by weight. The non-suppressed control resin has a 15-minute gel time. The suppressed resin has a gel time of 17-minutes. An initiator level of 1.5 percent would be selected for the both the non-suppressed and the suppressed test samples.

11.2.4.2 Based on a specific production requirement, a resin is processed in production using 2.25 percent of Brand Y initiator, which produces a 20-minute gel time. This initiator at level of 2.25 percent produces a 20 minute gel time for the non-suppressed control resin, but yields a 25-minute gel time for the suppressed resin sample. The suppressed resin is retested at 2.50 percent initiator and produces a 21-minute gel time. The initiator levels of 2.25 percent and 2.50 percent respectively would yield gel times within  $\pm 2$  minutes.

#### 11.3 Test Run Procedure for Unfilled Resin (see the data sheet shown in Table 17.1).

11.3.1 The insulating board is placed on the balance.

11.3.2 The aluminum pan with attached Mylar film is placed on the balance, and the balance is tared (weight reading set to zero with the plate on the balance.)

11.3.3 Place two plies of 1.5 oz. CSM on the balance and record the weight (glass weight).

11.3.4 The resin beaker and stirring rod are put on the second balance and tared.

11.3.5 The required resin weight and initiator weight are calculated (refer to calculation formulas in 12.2).

11.3.6 The disposable resin application roller is placed on the edge of the plate.

11.3.7 The balance is tared, with the aluminum pan, Mylar film, glass mat, and resin application roller on the balance pan.

11.3.8 Resin is weighed into a beaker, as calculated, using the second balance. The mixing stick should be tared with the beaker weight.

11.3.9 Initiator is weighed into the resin, as calculated, using an eyedropper or a pipette, and the combination is mixed.

11.3.10 Initiated resin is poured on chopped strand mat in a pre-determined pattern (see Figure 11.6).

11.3.11 A stopwatch is started from zero.

11.3.12 The initial laminate weight is recorded.

11.3.13 The plate is removed from balance to enable roll-out of the laminate.

11.3.14 The wet laminate is rolled with the resin application roller to completely distribute the resin, saturate the chopped strand mat, and eliminate air voids. Roll-out time should be in the range of 2 to 3<sup>16</sup> minutes and vary less than  $\pm 10$  percent of the average time required for the complete set of six suppressed and six non-suppressed runs.

11.3.15 Record the rollout end time (time from start to completion of rollout).

11.3.16 Place the resin application roller on the edge of the plate when rollout is completed.

11.3.17 Place the plate back on the balance pan. Immediately record the weight.

11.3.18 For the first test in a series of six tests, weight is recorded every 5-minute interval (suppressed and non-suppressed). The end of the test occurs when three consecutive equal weights are recorded or a weight gain is observed (the last weight before the increased weight is the end of test weight). For the remaining five tests in the series, after the initial weights are taken, the next weight is recorded 30 minutes before the end of the test, as suggested by the results from the first test. It is likely that the time to reach the end point of a suppressed resin test will be shorter than the time required to complete a non-suppressed test. Therefore, the time to start taking data manually may be different for suppressed and non-suppressed resins.

11.4 Test Run Procedures for Filled Resin Systems<sup>17</sup> Note that the procedure for filled systems differs from the procedure for unfilled systems. With filled systems, resin is applied to one ply of the CSM and the second ply is placed on top of the resin.

11.4.1 The insulating board is placed on the balance.

11.4.2 The aluminum pan with attached Mylar film is placed on the balance, and the balance is tared (weight reading set to zero with the plate on the balance.)

11.4.3 Place two plies of 1.5 oz. CSM on the balance and record the weight (glass weight).

11.4.4 Remove the top ply of fiberglass and record its weight (weight of 1st layer of glass).

11.4.5 The required resin weight and initiator weight are calculated (refer to calculation formulas in 12.2). Calculate the weight of filled resin and initiator based on the 2 layers of fiberglass.

11.4.6 The resin beaker and stirring rod are put on the second balance and tared.

11.4.7 A disposable resin application roller is placed on the edge of the plate.

11.4.8 The balance is tared, with the aluminum pan, Mylar film, glass mat, and resin application roller on the balance pan.

11.4.9 Resin is weighed into the beaker, as calculated, using the second balance. The mixing stick should be tared with the beaker weight.

11.4.10 Initiator is weighed into the resin, as calculated, using an eyedropper or a pipette, and the combination is mixed.

11.4.11 Initiated resin is poured on the single ply of CSM in a pre-determined pattern. Refer to Figure 11.6.

11.4.12 A stopwatch is started from zero.

11.4.13 Record the weight of the resin and single ply of CSM ( $L_1$ ). The initial laminate weight equals  $L_1$  plus the weight of second glass layer.

11.4.14 Replace the second layer of fiberglass.

11.4.15 Remove the plate from the balance to allow roll-out of the laminate.

11.4.16 Roll the wet laminate with the resin application roller to completely distribute the resin, saturate the chopped strand mat, and eliminate air voids. Roll-out time should be in the range of 2 to 3<sup>16</sup> minutes and vary less than  $\pm 10$  percent of the average time required for the complete set of six suppressed and six non-suppressed runs.

11.4.17 Record the roll-out end time (time from start to completion of rollout).

11.4.18 Place the resin application roller on the edge of the plate when rollout is completed.

11.4.19 Place the plate back on the balance pan. The initial weight is recorded immediately.

11.4.20 For the first test run in a series of six, weight is recorded at every 5-minute interval (suppressed and non-suppressed). The end of the test occurs when three consecutive equal weights are recorded or a weight gain is observed (the last weight before the increased weight is the end of test weight). For the remaining five tests in the series, after the initial weights are taken, the next weight is recorded 30 minutes before the end of the test, as suggested by the results from the first test. It is likely that the time to reach the end point of a suppressed resin test will be shorter than the time required to complete a non-suppressed test. Therefore, the time to start taking data manually may be different for suppressed and non-suppressed resins.

11.5 Data Acceptance Criteria:



11.5.1 A test set is designed as twelve individual test runs using the same resin, initiator, and gel time, six of the test runs use the resin non-vapor suppressed and the other six use it vapor suppressed.

11.5.2 If a test run falls outside any of the time, temperature, weight or humidity variation requirements, it must be discarded and run again.

11.5.3 The laminate roll out time for each individual test run must vary less than  $\pm 10$  percent of the average time required for the complete set of six suppressed and six non-suppressed runs.

11.5.4 Test temperature for each test run must be maintained within  $\pm 2$  °F and the average must be between 70° and 80 °F. Refer to 11.1.3.

11.5.5 The difference in the amount of resin for each run must be within  $\pm 10$  percent of the average weight for the complete set of six suppressed and six non-suppressed runs.

11.5.6 The relative humidity from each test run must be within  $\pm 15$  percent of the average humidity for the complete set of six suppressed and six non-suppressed tests. Refer to 11.1.4

11.5.7 The glass content for each test set must be within  $\pm 10$  percent of the average resin-to-glass ratio for the complete set of six suppressed and six non-suppressed runs. Refer to 12.2).

11.5.8 The filler content for each test of a test set must be within  $\pm 5$  percent of the average filler content for the complete set of six suppressed and six non-suppressed runs. Refer to 12.2.

#### 11.6 Resin Application Pour Pattern:

11.6.1 To facilitate the distribution of resin across the chopped strand mat, and to provide consistency from test to test, a uniform pour pattern should be used. A typical pour pattern is shown below:

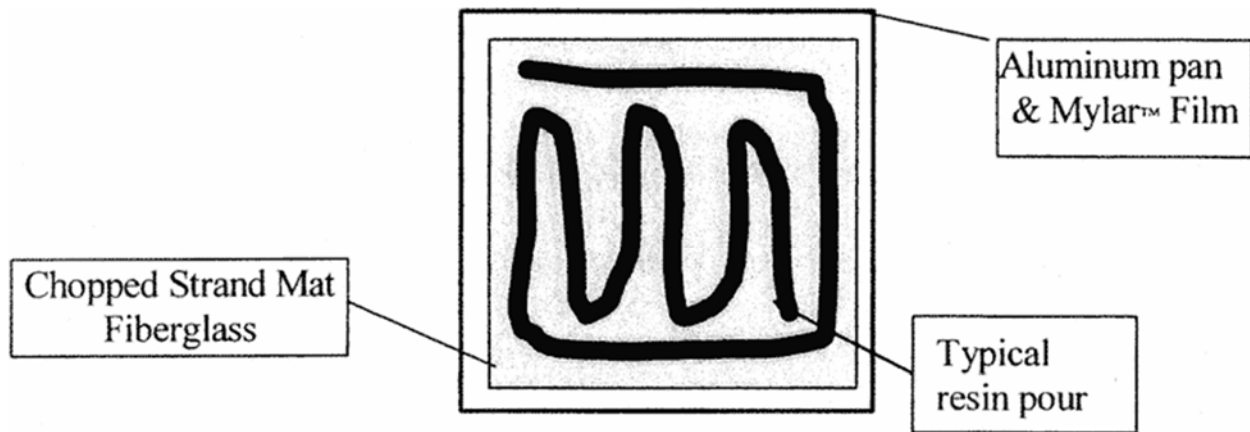


Figure 11.6 Resin Distribution Diagram

11.6.2 The resin is to be evenly distributed across the entire surface of the chopped strand mat using the resin application roller to achieve a wet look across the surface of the laminate. Pushing excess resin off the reinforcement and onto the Mylar sheet should be avoided. No resin is to be pushed more than 1/2 inch beyond the edge of the glass mat. If excess resin is pushed further from the glass mat, it will void the test run. As part of this process, typical visible air voids are to be eliminated by the rollout process. If the pour pattern is different from the above, it must be recorded and attached to test data sheet 17.1.

## 12. Data Analysis and Calculations

### 12.1 Data Analysis:

This test method requires a simple mass balance calculation, no special data analysis is necessary.

### 12.2 Calculations:

12.2.1 The target glass content (percent) for unfilled resin systems is determined from the specific production parameters being evaluated. In absence of any specific production requirements the target may be set at the tester's discretion.

12.2.2 Glass content determination (expressed as a per cent):

$$\% \text{ Glass} = \text{Glass wt(g)} / (\text{Glass wt(g)} + \text{Resin weight (g)})$$

12.2.3 Weight of resin required:

Resin weight required = (Glass wt (g)/% glass)—Glass wt (g)

12.2.4 Filled resin formulation determination for filled resin systems (*e.g.* >30 percent filler by weight for a particulate filler, or >1 percent by weight for a lightweight filler, such as hollow microspheres):

% Resin content = resin

weight(g)/(resin weight(g) + glass

weight(g) + filler weight(g))

% Glass content = glass

weight(g)/(resin weight(g) + glass

weight(g) + filler weight(g))

Filler content = filler

weight(g)/(resin weight(g) + glass

weight(g) + filler weight(g))

12.2.5 Initiator weight determination:

Initiator weight (g) = Resin weight(g) × Initiator %

12.2.6 Emission weight loss determination:

Emissions weight loss (g) = Initial resin weight (g)—Final resin weight (g)

12.2.7 % Emission weight loss:

% Emission Weight Loss = (Emission weight loss (g) Initial resin weight (g) × 100

12.2.8 Average % Emission Weight Loss (assuming six test runs):

$$\text{Average \% Emission Weight Loss} = \sum_{i=1}^{N=6} (\% \text{ Emission Weight Loss}_i) / 6$$

12.2.9 VSE Factor calculation:

VSE Factor = 1 —(Average % VS Emission Weight Loss/Average NVS Emission Weight Loss)

Table 12.1—Example Calculation

Test #	% VS weight loss	% NVS weight loss
1	6.87	10.86
2	6.76	11.23
3	5.80	12.02
4	5.34	11.70
5	6.11	11.91
6	6.61	10.63
Average Weight Loss	6.25	11.39
VSE Factor		0.4

VSE Factor = 0.45

VSE Factor is used as input into the appropriate equation in Table 1 to this subpart.

Example from Table 1 to this subpart:

Manual Resin Application, 35 percent HAP resin, VSE Factor of 0.45

HAP Emissions with vapor suppressants =  $((0.286 \times \% \text{HAP}) - 0.0529) \times 2000 \times (1 - (0.5 \times \text{VSE factor}))$

HAP Emissions with vapor suppressants =  $((0.286 \times .35) - 0.0529) \times 2000 \times (1 - (0.5 \times .45))$

HAP Emissions with vapor suppressants = 73 pounds of HAP emissions per ton of resin.

### 13. Method Performance

#### 13.1 Bias:

The bias of this test method has not been determined.

#### 13.2 Precision Testing

13.2.1 Subsequent to the initial development of this test protocol by the Composites Fabricators Association, a series of tests were conducted in three different laboratory facilities. The purpose of this round robin testing was to verify the precision of the test method in various laboratories. Each laboratory received a sample of an orthophthalic polyester resin from the same production

batch, containing 48 per cent styrene by weight. Each testing site was also provided with the same vapor suppressant additive. The suppressant manufacturer specified the percentage level of suppressant additive. The resin manufacturer specified the type and level of initiator required to produce a 20 minute gel time. The target glass content was 30 percent by weight.

13.2.2 Each laboratory independently conducted the VSE test according to this method. A summary of the results is included in Table 13.1.

Table 13.1—Round Robin Testing Results						
	Test Lab 1		Test Lab 2		Test Lab 3	
	NVS	VS	NVS	S	NVS	VS
Average percent WT Loss	4.24	1.15	4.69	1.84	5.73	1.61
Standard Deviation	0.095	0.060	0.002	0.002	0.020	0.003
VSE Factor		0.730		0.607		0.720

13.3 Comparison to EPA Reference Methods This test has no corresponding EPA reference method.

#### 14. Pollution Prevention

The sample size used in this method produces a negligible emission of HAP, and has an insignificant impact upon the atmosphere.

#### 15. Waste Management

The spent and waste materials generated during this test are disposed according to required facility procedures, and waste management recommendations on the corresponding material safety data sheets.

#### 16. References and footnotes

##### 16.1 Footnotes:

<sup>1</sup> Balance Enclosure—The purpose of the balance enclosure is to prevent localized airflow from adversely affecting the laboratory balance. The enclosure may be a simple three-sided box with a top and an open face. The configuration of the enclosure is secondary to the purpose of providing a stable and steady balance reading, free from the effects of airflow, for accurate measurements. The enclosure can be fabricated locally. A typical enclosure is shown in Figure 17.1.

<sup>2</sup> Laboratory Balance—Ohaus Precision Standard Series P/N TS400D or equivalent—Paul N. Gardner Co. 316 NE 1st St. Pompano Beach, FL 33060 or other suppliers.

<sup>3</sup> Stop Watch—Local supply.

<sup>4</sup> Thermometer—Mercury thermometer—ASTM No. 21C or equivalent; Digital thermometer—P/N TH-33033 or equivalent—Paul N. Gardner Co. 316 NE 1st St. Pompano Beach, FL 33060 or other suppliers.

<sup>5</sup> Aluminum Pan—Local supply.

<sup>6</sup> Mylar—Local supply.

<sup>7</sup> Double Sided Tape—3M Double Stick Tape or equivalent, local supply.

<sup>8</sup> Laboratory Beakers—250 to 400ml capacity—Local laboratory supply.

<sup>9</sup> Eye Dropper or Pipette—Local laboratory supply.

<sup>10</sup> Disposable Resin Application Roller Source—Wire Handle Roller P/N 205-050-300 or Plastic Handle Roller P/N 215-050-300 or equivalent; ES Manufacturing Inc., 2500 26st Ave. North, St. Petersburg, FL 33713, [www.esmfg.com](http://www.esmfg.com), or other source. Refer to Figure 17.3.

<sup>11</sup> Hygrometer or Psychrometer—Model# THWD-1, or equivalent—Part # 975765 by Amprobe Instrument, 630 Merrick Road, P.O. Box 329, Lynbrook, NY 11563, 516-593-5600

<sup>12</sup> Insulating Board (Teflon, cardboard, foam board etc.)—Local supply.

<sup>13</sup> Laboratory Balance With Digital Output—Ohaus Precision Standard Series P/N TS120S or equivalent—Paul N. Gardner Co. 316 NE 1st St. Pompano Beach, FL 33060 or other suppliers.

<sup>14</sup> Chopped Strand Mat—1.5 oz/ft<sup>2</sup> Sources: Owens Corning Fiberglas—Fiberglas M-723; PPG Industries—ABM HTX; Vetrotex America—M-127 or equivalent.

<sup>15</sup> Certificate of Analysis: Resin gel time, as recorded on the resin certificate of analysis, is measured using a laboratory standard gel time procedure. This procedure typically uses a 100 gram cup sample at 77 °F (25 °C), a specific type of initiator and a specified percentage.

<sup>16</sup> Roll-out times may vary with resin viscosity or resin additive. The important aspect of this step is to produce the same roll-out time for both the suppressed and non-suppressed samples.

<sup>17</sup> While this test can be used with filled resin systems, the test is not designed to determine the effect of the filler on emissions, but rather to measure the effect of the suppressant additive in the resin system. When evaluating a filled system both the non-vapor suppressed and vapor suppressed samples should be formulated with the same type and level of filler.

## 16.2 References

1. Phase 1—Baseline Study Hand Lay-up, CFA, 1996

2. CFA Vapor Suppressant Effectiveness Test Development, 4/3/98, correspondence with Dr. Madeleine Strum, EPA, OAQPS

3. CFA Vapor Suppressant Effectiveness Screening Tests, 4/4/98
4. Styrene Suppressant Systems Study, Reichhold Chemical, 11/30/98
5. Evaluation of the CFA's New Proposed Vapor Suppressant Effectiveness Test, Technical Service Request #: ED-01-98, BYK Chemie, 6/3/98
6. Second Evaluation of the CFA's New Proposed Vapor Suppressant Effectiveness Test, Technical Service Request #: ED-02-98, BYK Chemie, 1/26/99

#### 17. Data Sheets and Figures

17.1 This data sheet, or a similar data sheet, is used to record the test data for filled, unfilled, suppressed and non-suppressed tests. If additional time is required, the data sheet may be extended.

Table 17.1 Test Data Sheet

<u>Test Number</u>				<u>Test Type</u>	
				VS (____)	NVS (____)
Resin				Filled (____)	Unfilled (____)
Initiator				Initiator, %	_____
Vapor Suppressant				VS, %	_____
Weight of 2 layers of glass, g	_____	Weight of 1 <sup>st</sup> glass layer, g	_____	Weight of 2 <sup>nd</sup> glass layer, g	_____
Initial Resin Weight, (g)		Time (Min.)	Weight g	Temp °F	
Glass content, (%)		55			
Initial Temperature °F:		60			
Initial Humidity %		65			
Resin Initiator Level, %		70			
Resin gel time, (min.)		75			
Resin filler content, %		80			
Roll out time, (min.)		85			
Time, (min.)	Weight, g	Temp, °F	90		





Table 17.2—Data Acceptance Criteria Worksheet

Test No.	Temperature			Laminate roll out time, min	Relative humidity, %		Resin weight, (g)	Glass content, %	Resin distribution	Meets criteria Y/N
	Min	Max	Delta		Initial	Final				
3										
4										
5										
6										
7										
8										
9										
10										
11										
12										
Average										
Criteria	±2 °F	±10% of Average	±15 of Average	±15 of Average	±10% of Avg.	±10% of Avg.	<1/2 inch off mat	All Y		

## 17.3 VSE Factor Calculation

Table 17.3—Calculations Worksheet

Vapor suppressed		Non-vapor suppressed	
Test #	% Weight loss	Test #	% Weight loss
Average Weight Loss			
VSE Factor			

Table 17.3—Calculations Worksheet

Vapor suppressed		Non-vapor suppressed	
Test #	% Weight loss	Test #	% Weight loss
VSE Factor = $1 - (\% \text{ Average Weight Loss}_{\text{VS}} / \% \text{ Average Weight Loss}_{\text{NVS}})$			

17.4 Figures

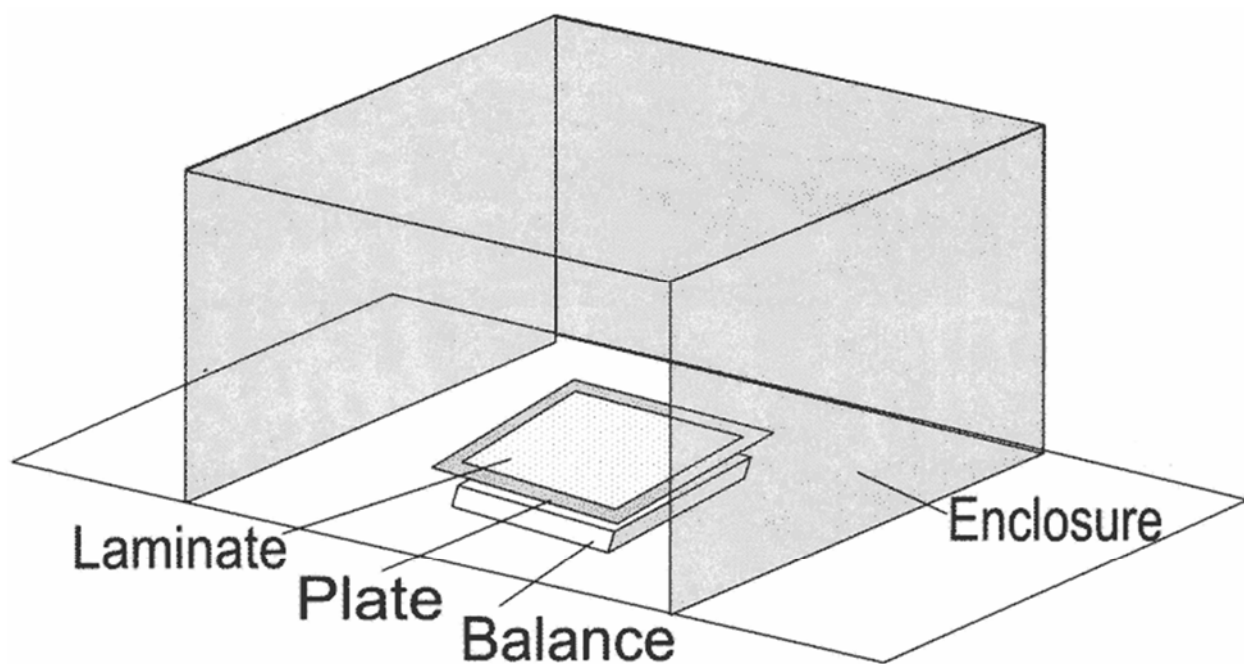


Figure 17.1. Typical Balance Enclosure

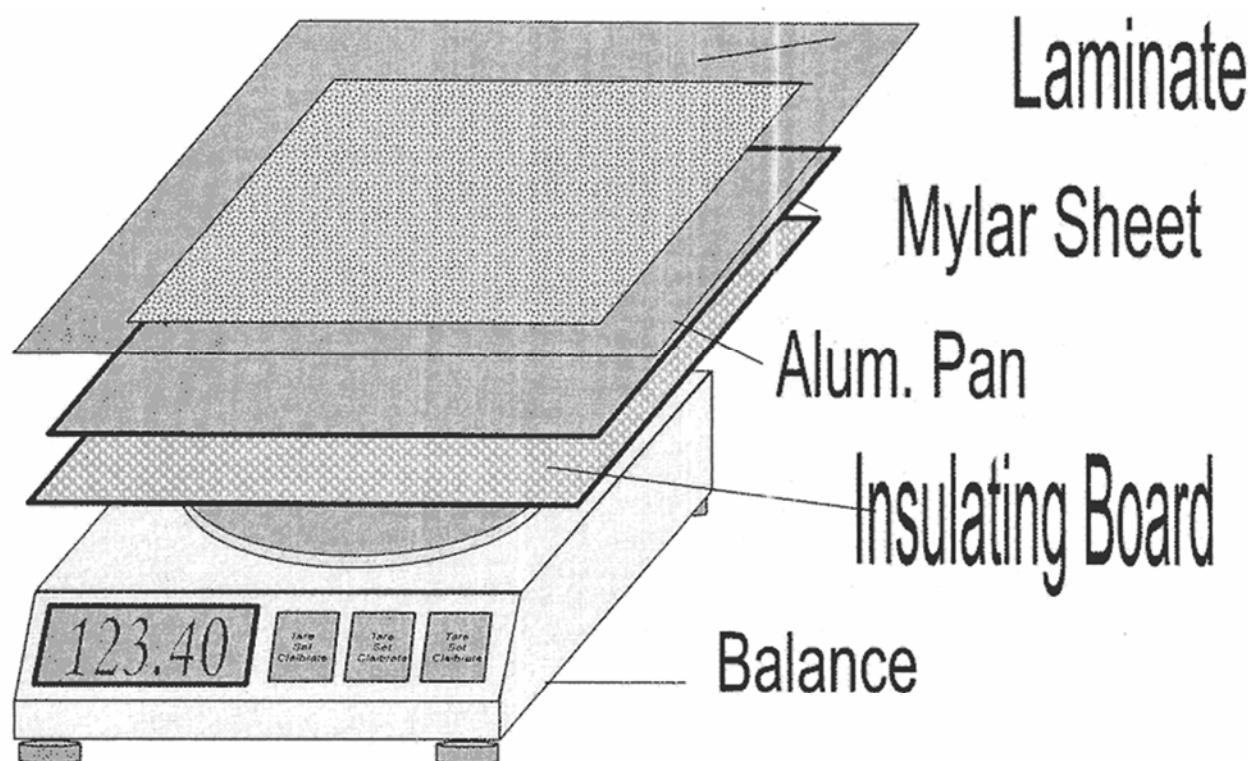
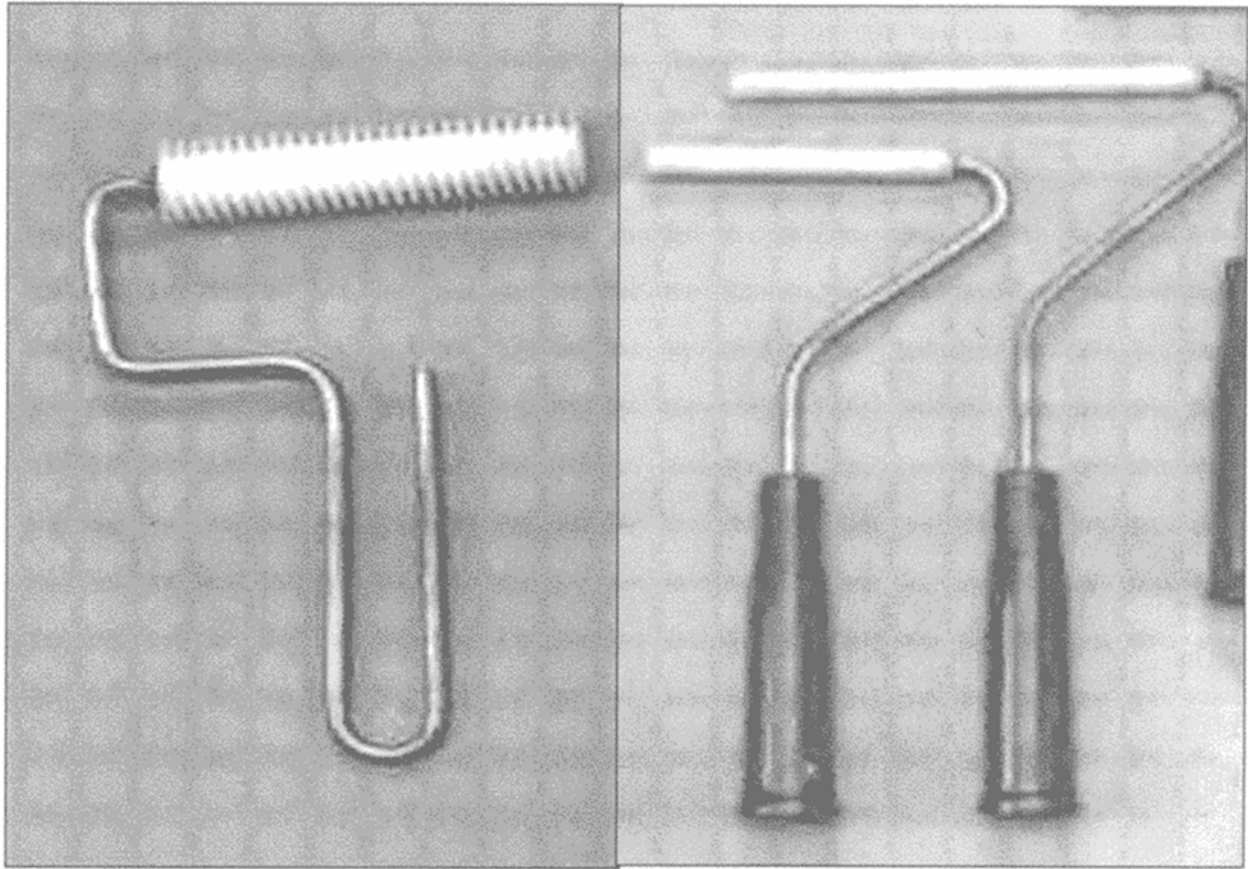


Figure 17.2. Scale, Plate, Insulating Board, Mylar, Laminate Order



# FRP Rollers

Figure 17.3. Typical FRP Rollers

## Appendix B

### Subpart SS—National Emission Standards for Closed Vent Systems, Control Devices, Recovery Devices and Routing to a Fuel Gas System or a Process

Source: [64 FR 34866](#), June 29, 1999, unless otherwise noted.

#### § 63.980 Applicability.

The provisions of this subpart include requirements for closed vent systems, control devices and routing of air emissions to a fuel gas system or process. These provisions apply when another subpart references the use of this subpart for such air emission control. These air emission standards are placed here for administrative convenience and only apply to those owners and operators of facilities subject to a referencing subpart. The provisions of [40 CFR part 63, subpart A](#) (General Provisions) do not apply to this subpart except as specified in a referencing subpart.

#### § 63.981 Definitions.

*Alternative test method* means any method of sampling and analyzing for an air pollutant that is not a reference test or equivalent method, and that has been demonstrated to the Administrator's satisfaction, using Method 301 in [appendix A of this part 63](#), or previously approved by the Administrator prior to the promulgation date of standards for an affected source or affected facility under a referencing subpart, to produce results adequate for the Administrator's determination that it may be used in place of a test method specified in this subpart.

*Boiler* means any enclosed combustion device that extracts useful energy in the form of steam and is not an incinerator or a process heater.

*By compound* means by individual stream components, not carbon equivalents.

*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 a control device. Closed vent system does not include the vapor collection system that is part of any tank truck or railcar.

*Closed vent system shutdown* means a work practice or operational procedure that stops production from a process unit or part of a process unit during which it is technically feasible to clear process material from a closed vent system or part of a closed vent system consistent with safety constraints and during which repairs can be effected. An unscheduled work practice or operational procedure that stops production from a process unit or part of a process unit for less than 24 hours is not a closed vent system shutdown. An unscheduled work practice or operational procedure that would stop production from a process unit or part of a process unit for a shorter period of time than would be required to clear the closed vent system or part of the closed vent system of materials and start up the unit, and would result in greater emissions than delay of repair of leaking components until the next scheduled closed vent system shutdown, is not a

closed vent system shutdown. The use of spare equipment and technically feasible bypassing of equipment without stopping production are not closed vent system shutdowns.

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

*Continuous parameter monitoring system (CPMS)* means the total equipment that may be required to meet the data acquisition and availability requirements of this part, used to sample, condition (if applicable), analyze, and provide a record of process or control system parameters.

*Continuous record* means documentation, either in hard copy or computer readable form, of data values measured at least once every 15 minutes and recorded at the frequency specified in [§ 63.998\(b\)](#).

*Control device* means, with the exceptions noted below, a combustion device, recovery device, recapture device, or any combination of these devices used to comply with this subpart or a referencing subpart. For process vents from continuous unit operations at affected sources in subcategories where the applicability criteria includes a TRE index value, recovery devices are not considered to be control devices. Primary condensers on steam strippers or fuel gas systems are not considered to be control devices.

*Control System* means the combination of the closed vent system and the control devices used to collect and control vapors or gases from a regulated emission source.

*Day* means a calendar day.

*Ductwork* means a conveyance system such as those commonly used for heating and ventilation systems. It is often made of sheet metal and often has sections connected by screws or crimping. Hard-piping is not ductwork.

*Final recovery device* means the last recovery device on a process vent stream from a continuous unit operation at an affected source in a subcategory where the applicability criteria includes a TRE index value. The final recovery device usually discharges to a combustion device, recapture device, or directly to the atmosphere.

*First attempt at repair*, for the purposes of this subpart, means to take action for the purpose of stopping or reducing leakage of organic material to the atmosphere, followed by monitoring as specified in [§ 63.983\(c\)](#) to verify whether the leak is repaired, unless the owner or operator determines by other means that the leak is not repaired.

*Flame zone* means the portion of the combustion chamber in a boiler or process heater occupied by the flame envelope.

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



*Fuel gas* means gases that are combusted to derive useful work or heat.

*Fuel gas system* means the offsite and onsite piping and flow and pressure control system that gathers gaseous streams generated by onsite operations, may blend them with other sources of gas, and transports the gaseous streams for use as fuel gas in combustion devices or in-process combustion equipment such as furnaces and gas turbines, either singly or in combination.

*Hard-piping* means pipe or tubing that is manufactured and properly installed using good engineering judgment and standards, such as ANSI B31.3.

*High throughput transfer rack* means those transfer racks that transfer a total of 11.8 million liters per year or greater of liquid containing regulated material.

*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 present 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.

*Low throughput transfer rack* means those transfer racks that transfer less than a total of 11.8 million liters per year of liquid containing regulated material.

*Operating parameter value* means a minimum or maximum value established for a control device parameter which, if achieved by itself or in combination with one or more other operating parameter values, determines that an owner or operator has complied with an applicable emission limit or operating limit.

*Organic monitoring device* means a unit of equipment used to indicate the concentration level of organic compounds based on a detection principle such as infra-red, photo ionization, or thermal conductivity.

*Owner or operator* means any person who owns, leases, operates, controls, or supervises a regulated source or a stationary source of which a regulated source is a part.

*Performance level* means the level at which the regulated material in the gases or vapors vented to a control or recovery device is removed, recovered, or destroyed. Examples of control device performance levels include: achieving a minimum organic reduction efficiency expressed as a percentage of regulated material removed or destroyed in the control device inlet stream on a weight-basis; achieving an organic concentration in the control device exhaust stream that is less than a maximum allowable limit expressed in parts per million by volume on a dry basis corrected to 3 percent oxygen if a combustion device is the control device and supplemental combustion air is used to combust the emissions; or maintaining appropriate control device operating parameters indicative of the device performance at specified values.

*Performance test* means the collection of data resulting from the execution of a test method (usually three emission test runs) used to demonstrate compliance with a relevant emission limit as specified in the performance test section of this subpart or in the referencing subpart.

*Primary fuel* means the fuel that provides the principal heat input to a device. To be considered primary, the fuel must be able to sustain operation without the addition of other fuels.

*Process heater* means an enclosed combustion device that transfers heat liberated by burning fuel directly to process streams or to heat transfer liquids other than water. A process heater may, as a secondary function, heat water in unfired heat recovery sections.

*Recapture device* means an individual unit of equipment capable of and used for the purpose of recovering chemicals, but not normally for use, reuse, or sale. For example, a recapture device may recover chemicals primarily for disposal. Recapture devices include, but are not limited to, absorbers, carbon adsorbers, and condensers. For purposes of the monitoring, recordkeeping and reporting requirements of this subpart, recapture devices are considered recovery devices.

*Recovery device* means an individual unit of equipment capable of and normally used for the purpose of recovering chemicals for fuel value (i.e., net positive heating value), use, reuse, or for sale for fuel value, use, or reuse. Examples of equipment that may be recovery devices include absorbers, carbon adsorbers, condensers, oil-water separators or organic-water separators, or organic removal devices such as decanters, strippers, or thin-film evaporation units. For purposes of the monitoring, recordkeeping, and reporting requirements of this subpart, recapture devices are considered recovery devices.

*Recovery operations equipment* means the equipment used to separate the components of process streams. Recovery operations equipment includes distillation units, condensers, etc. Equipment used for wastewater treatment shall not be considered recovery operations equipment.

*Referencing subpart* means the subpart which refers an owner or operator to this subpart.

*Regulated material*, for purposes of this subpart, refers to vapors from volatile organic liquids (VOL), volatile organic compounds (VOC), or hazardous air pollutants (HAP), or other chemicals or groups of chemicals that are regulated by a referencing subpart.

*Regulated source* for the purposes of this subpart, means the stationary source, the group of stationary sources, or the portion of a stationary source that is regulated by a relevant standard or other requirement established pursuant to a referencing subpart.

*Repaired*, for the purposes of this subpart, means that equipment; is adjusted, or otherwise altered, to eliminate a leak as defined in the applicable sections of this subpart; and unless otherwise specified in applicable provisions of this subpart, is inspected as specified in [§ 63.983\(c\)](#) to verify that emissions from the equipment are below the applicable leak definition.

*Routed to a process or route to a process* means the gas streams are conveyed to any enclosed portion of a process unit where the emissions are recycled and/or consumed in the same manner as a material that fulfills the same function in the process; and/or transformed by chemical reaction into materials that are not regulated materials; and/or incorporated into a product; and/or recovered.

*Run* means one of a series of emission or other measurements needed to determine emissions for a representative operating period or cycle as specified in this subpart. Unless otherwise specified, a run may be either intermittent or continuous within the limits of good engineering practice.

*Secondary fuel* means a fuel fired through a burner other than the primary fuel burner that provides supplementary heat in addition to the heat provided by the primary fuel.

*Sensor* means a device that measures a physical quantity or the change in a physical quantity, such as temperature, pressure, flow rate, pH, or liquid level.

*Specific gravity monitoring device* means a unit of equipment used to monitor specific gravity and having a minimum accuracy of  $\pm 0.02$  specific gravity units.

*Supplemental combustion air* means the air that is added to a vent stream after the vent stream leaves the unit operation. Air that is part of the vent stream as a result of the nature of the unit operation is not considered supplemental combustion air. Air required to operate combustion device burner(s) is not considered supplemental combustion air. Air required to ensure the proper operation of catalytic oxidizers, to include the intermittent addition of air upstream of the catalyst bed to maintain a minimum threshold flow rate through the catalyst bed or to avoid excessive temperatures in the catalyst bed, is not considered to be supplemental combustion air.

*Temperature monitoring device* means a unit of equipment used to monitor temperature and having a minimum accuracy of  $\pm 1$  percent of the temperature being monitored expressed in degrees Celsius or  $\pm 1.2$  degrees Celsius ( $^{\circ}\text{C}$ ), whichever is greater.

[[64 FR 34866](#), June 29, 1999, as amended at [64 FR 63705](#), Nov. 22, 1999; [67 FR 46277](#), July 12, 2002]

## **§ 63.982 Requirements.**

(a) ***General compliance requirements for storage vessels, process vents, transfer racks, and equipment leaks.*** An owner or operator who is referred to this subpart for controlling regulated material emissions from storage vessels, process vents, low and high throughput transfer racks, or equipment leaks by venting emissions through a closed vent system to a flare, nonflare control device or routing to a fuel gas system or process shall comply with the applicable requirements of [paragraphs \(a\)\(1\)](#) through [\(4\)](#) of this section.

(1) ***Storage vessels.*** The owner or operator shall comply with the applicable provisions of [paragraphs \(b\)](#), [\(c\)\(1\)](#), and [\(d\)](#) of this section.

(2) **Process vents.** The owner or operator shall comply with the applicable provisions of [paragraphs \(b\)](#), [\(c\)\(2\)](#), and [\(e\)](#) of this section.

(3) **Transfer racks.**

(i) For low throughput transfer racks, the owner or operator shall comply with the applicable provisions of [paragraphs \(b\)](#), [\(c\)\(1\)](#), and [\(d\)](#) of this section.

(ii) For high throughput transfer racks, the owner or operator shall comply with the applicable provisions of [paragraphs \(b\)](#), [\(c\)\(2\)](#), and [\(d\)](#) of this section.

(4) **Equipment leaks.** The owner or operator shall comply with the applicable provisions of [paragraphs \(b\)](#), [\(c\)\(3\)](#), and [\(d\)](#) of this section.

(b) **Closed vent system and flare.** Owners or operators that vent emissions through a closed vent system to a flare shall meet the requirements in [§ 63.983](#) for closed vent systems; [§ 63.987](#) for flares; [§ 63.997 \(a\)](#), [\(b\)](#) and [\(c\)](#) for provisions regarding flare compliance assessments; the monitoring, recordkeeping, and reporting requirements referenced therein; and the applicable recordkeeping and reporting requirements of [§§ 63.998](#) and [63.999](#). No other provisions of this subpart apply to emissions vented through a closed vent system to a flare.

(c) **Closed vent system and nonflare control device.** Owners or operators who control emissions through a closed vent system to a nonflare control device shall meet the requirements in [§ 63.983](#) for closed vent systems, the applicable recordkeeping and reporting requirements of [§§ 63.998](#) and [63.999](#), and the applicable requirements listed in [paragraphs \(c\)\(1\)](#) through [\(3\)](#) of this section.

(1) For storage vessels and low throughput transfer racks, the owner or operator shall meet the requirements in [§ 63.985](#) for nonflare control devices and the monitoring, recordkeeping, and reporting requirements referenced therein. No other provisions of this subpart apply to low throughput transfer rack emissions or storage vessel emissions vented through a closed vent system to a nonflare control device unless specifically required in the monitoring plan submitted under [§ 63.985\(c\)](#).

(2) For process vents and high throughput transfer racks, the owner or operator shall meet the requirements applicable to the control devices being used in [§ 63.988](#), [§ 63.990](#) or [§ 63.995](#); the applicable general monitoring requirements of [§ 63.996](#) and the applicable performance test requirements and procedures of [§ 63.997](#); and the monitoring, recordkeeping and reporting requirements referenced therein. Owners or operators subject to halogen reduction device requirements under a referencing subpart must also comply with [§ 63.994](#) and the monitoring, recordkeeping, and reporting requirements referenced therein. The requirements of [§§ 63.984](#) through [63.986](#) do not apply to process vents or high throughput transfer racks.

(3) For equipment leaks, owners or operators shall meet the requirements in [§ 63.986](#) for nonflare control devices used for equipment leak emissions and the monitoring, recordkeeping,

and reporting requirements referenced therein. No other provisions of this subpart apply to equipment leak emissions vented through a closed vent system to a nonflare control device.

(d) ***Route to a fuel gas system or process.*** Owners or operators that route emissions to a fuel gas system or to a process shall meet the requirements in [§ 63.984](#), the monitoring, recordkeeping, and reporting requirements referenced therein, and the applicable recordkeeping and reporting requirements of [§§ 63.998](#) and [63.999](#). No other provisions of this subpart apply to emissions being routed to a fuel gas system or process.

(e) ***Final recovery devices.*** Owners or operators who use a final recovery device to maintain a TRE above a level specified in a referencing subpart shall meet the requirements in [§ 63.993](#) and the monitoring, recordkeeping, and reporting requirements referenced therein that are applicable to the recovery device being used; the applicable monitoring requirements in [§ 63.996](#) and the recordkeeping and reporting requirements referenced therein; and the applicable recordkeeping and reporting requirements of [§§ 63.998](#) and [63.999](#). No other provisions of this subpart apply to process vent emissions routed to a final recovery device.

(f) ***Combined emissions.*** When emissions from different emission types (e.g., emissions from process vents, transfer racks, and/or storage vessels) are combined, an owner or operator shall comply with the requirements of either [paragraph \(f\)\(1\)](#) or [\(2\)](#) of this section.

(1) Comply with the applicable requirements of this subpart for each kind of emissions in the stream (e.g., the requirements of [paragraph \(a\)\(2\)](#) of this section for process vents, and the requirements of [paragraph \(a\)\(3\)](#) of this section for transfer racks); or

(2) Comply with the first set of requirements identified in [paragraphs \(f\)\(2\)\(i\)](#) through [\(iii\)](#) of this section which applies to any individual emission stream that is included in the combined stream. Compliance with [paragraphs \(f\)\(2\)\(i\)](#) through [\(iii\)](#) of this section constitutes compliance with all other emissions requirements for other emission streams.

(i) The requirements of [§ 63.982\(a\)\(2\)](#) for process vents, including applicable monitoring, recordkeeping, and reporting;

(ii) The requirements of [§ 63.982\(a\)\(3\)\(ii\)](#) for high throughput transfer racks, including applicable monitoring, recordkeeping, and reporting;

(iii) The requirements of [§ 63.982\(a\)\(1\)](#) or [\(a\)\(3\)\(i\)](#) for control of emissions from storage vessels or low throughput transfer racks, including applicable monitoring, recordkeeping, and reporting.

[[64 FR 34866](#), June 29, 1999, as amended at [64 FR 63705](#), Nov. 22, 1999]

### **§ 63.983 Closed vent systems.**

(a) ***Closed vent system equipment and operating requirements.*** Except for closed vent systems operated and maintained under negative pressure, the provisions of this paragraph apply to closed vent systems collecting regulated material from a regulated source.

(1) **Collection of emissions.** Each closed vent system shall be designed and operated to collect the regulated material vapors from the emission point, and to route the collected vapors to a control device.

(2) **Period of operation.** Closed vent systems used to comply with the provisions of this subpart shall be operated at all times when emissions are vented to, or collected by, them.

(3) **Bypass monitoring.** Except for equipment needed for safety purposes such as pressure relief devices, low leg drains, high point bleeds, analyzer vents, and open-ended valves or lines, the owner or operator shall comply with the provisions of either [paragraphs \(a\)\(3\)\(i\)](#) or [\(ii\)](#) of this section for each closed vent system that contains bypass lines that could divert a vent stream to the atmosphere.

(i) Properly install, maintain, and operate a flow indicator that is capable of taking periodic readings. Records shall be generated as specified in [§ 63.998\(d\)\(1\)\(ii\)\(A\)](#). The flow indicator shall be installed at the entrance to any bypass line.

(ii) Secure the bypass line valve in the non-diverting position with a car-seal or a lock-and-key type configuration. Records shall be generated as specified in [§ 63.998\(d\)\(1\)\(ii\)\(B\)](#).

(4) **Loading arms at transfer racks.** Each closed vent system collecting regulated material from a transfer rack shall be designed and operated so that regulated material vapors collected at one loading arm will not pass through another loading arm in the rack to the atmosphere.

(5) **Pressure relief devices in a transfer rack's closed vent system.** The owner or operator of a transfer rack subject to the provisions of this subpart shall ensure that no pressure relief device in the transfer rack's closed vent system shall open to the atmosphere during loading. Pressure relief devices needed for safety purposes are not subject to this paragraph.

(b) **Closed vent system inspection and monitoring requirements.** The provisions of this subpart apply to closed vent systems collecting regulated material from a regulated source. Inspection records shall be generated as specified in [§ 63.998\(d\)\(1\)\(iii\)](#) and [\(iv\)](#) of this section.

(1) Except for any closed vent systems that are designated as unsafe or difficult to inspect as provided in [paragraphs \(b\)\(2\)](#) and [\(3\)](#) of this section, each closed vent system shall be inspected as specified in [paragraph \(b\)\(1\)\(i\)](#) or [\(ii\)](#) of this section.

(i) If the closed vent system is constructed of hard-piping, the owner or operator shall comply with the requirements specified in [paragraphs \(b\)\(1\)\(i\)\(A\)](#) and [\(B\)](#) of this section.

(A) Conduct an initial inspection according to the procedures in [paragraph \(c\)](#) of this section; and

(B) Conduct annual inspections for visible, audible, or olfactory indications of leaks.

(ii) If the closed vent system is constructed of ductwork, the owner or operator shall conduct an initial and annual inspection according to the procedures in [paragraph \(c\)](#) of this section.

(2) Any parts of the closed vent system that are designated, as described in [§ 63.998\(d\)\(1\)\(i\)](#), as unsafe to inspect are exempt from the inspection requirements of [paragraph \(b\)\(1\)](#) of this section if the conditions of [paragraphs \(b\)\(2\)\(i\)](#) and [\(ii\)](#) of this section are met.

(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 [paragraph \(b\)\(1\)](#) of this section; and

(ii) The owner or operator has a written plan that requires inspection of the equipment as frequently as practical during safe-to-inspect times. Inspection is not required more than once annually.

(3) Any parts of the closed vent system that are designated, as described in [§ 63.998\(d\)\(1\)\(i\)](#), as difficult-to-inspect are exempt from the inspection requirements of [paragraph \(b\)\(1\)](#) of this section if the provisions of [paragraphs \(b\)\(3\)\(i\)](#) and [\(ii\)](#) of this section apply.

(i) The owner or operator determines that the equipment cannot be inspected without elevating the inspecting personnel more than 2 meters (7 feet) 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.

(4) For each bypass line, the owner or operator shall comply with [paragraph \(b\)\(4\)\(i\)](#) or [\(ii\)](#) of this section.

(i) If a flow indicator is used, take a reading at least once every 15 minutes.

(ii) If the bypass line valve is secured in the non-diverting position, 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 line.

(c) ***Closed vent system inspection procedures.*** The provisions of this paragraph apply to closed vent systems collecting regulated material from a regulated source.

(1) Each closed vent system subject to this paragraph shall be inspected according to the procedures specified in [paragraphs \(c\)\(1\)\(i\)](#) through [\(vii\)](#) of this section.

(i) Inspections shall be conducted in accordance with Method 21 of [40 CFR part 60, appendix A](#), except as specified in this section.

(ii) Except as provided in [\(c\)\(1\)\(iii\)](#) 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 must be for the representative composition of the process fluid and not of each individual VOC in the stream. For process streams that contain nitrogen, air, water, or other inerts that are not organic HAP or VOC, the representative stream response factor must be determined on an inert-free basis. The response



factor may be determined at any concentration for which the monitoring for leaks will be conducted.

(iii) If no instrument is available at the plant site that will meet the performance criteria of Method 21 specified in [paragraph \(c\)\(1\)\(ii\)](#) of this section, the instrument readings may be adjusted by multiplying by the representative response factor of the process fluid, calculated on an inert-free basis as described in [paragraph \(c\)\(1\)\(ii\)](#) of this section.

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

(v) Calibration gases shall be as specified in [paragraphs \(c\)\(1\)\(v\)\(A\)](#) through [\(C\)](#) of this section.

(A) Zero air (less than 10 parts per million hydrocarbon in air); and

(B) Mixtures of methane in air at a concentration less than 10,000 parts per million. A calibration gas other than methane in air may be used if the instrument does not respond to methane or if the instrument does not meet the performance criteria specified in [paragraph \(c\)\(1\)\(ii\)](#) of this section. In such cases, the calibration gas may be a mixture of one or more of the compounds to be measured in air.

(C) If the detection instrument's design allows for multiple calibration scales, then the lower scale shall be calibrated with a calibration gas that is no higher than 2,500 parts per million.

(vi) An owner or operator may elect to adjust or not adjust instrument readings for background. If an owner or operator elects not to adjust readings for background, all such instrument readings shall be compared directly to 500 parts per million to determine whether there is a leak. If an owner or operator elects to adjust instrument readings for background, the owner or operator shall measure background concentration using the procedures in this section. The owner or operator shall subtract the background reading from the maximum concentration indicated by the instrument.

(vii) If the owner or operator elects to adjust for background, the arithmetic difference between the maximum concentration indicated by the instrument and the background level shall be compared with 500 parts per million for determining whether there is a leak.

(2) The instrument probe shall be traversed around all potential leak interfaces as described in Method 21 of [40 CFR part 60, appendix A](#).

(3) Except as provided in [paragraph \(c\)\(4\)](#) of this section, inspections shall be performed when the equipment is in regulated material service, or in use with any other detectable gas or vapor.

(4) Inspections of the closed vent system collecting regulated material from a transfer rack shall be performed only while a tank truck or railcar is being loaded or is otherwise pressurized to normal operating conditions with regulated material or any other detectable gas or vapor.



(d) ***Closed vent system leak repair provisions.*** The provisions of this paragraph apply to closed vent systems collecting regulated material from a regulated source.

(1) If there are visible, audible, or olfactory indications of leaks at the time of the annual visual inspections required by [paragraph \(b\)\(1\)\(i\)\(B\)](#) of this section, the owner or operator shall follow the procedure specified in either [paragraph \(d\)\(1\)\(i\)](#) or [\(ii\)](#) of this section.

(i) The owner or operator shall eliminate the leak.

(ii) The owner or operator shall monitor the equipment according to the procedures in [paragraph \(c\)](#) of this section.

(2) Leaks, as indicated by an instrument reading greater than 500 parts per million by volume above background or by visual inspections, shall be repaired as soon as practical, except as provided in [paragraph \(d\)\(3\)](#) of this section. Records shall be generated as specified in [§ 63.998\(d\)\(1\)\(iii\)](#) when a leak is detected.

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

(ii) Except as provided in [paragraph \(d\)\(3\)](#) of this section, repairs shall be completed no later than 15 days after the leak is detected or at the beginning of the next introduction of vapors to the system, whichever is later.

(3) Delay of repair of a closed vent system for which leaks have been detected is allowed if repair within 15 days after a leak is detected is technically infeasible or unsafe without a closed vent system shutdown, as defined in [§ 63.981](#), or if the owner or operator determines that emissions resulting from immediate repair would be greater than the emissions likely to result from delay of repair. Repair of such equipment shall be completed as soon as practical, but not later than the end of the next closed vent system shutdown.

[[64 FR 34866](#), June 29, 1999, as amended at [64 FR 63705](#), Nov. 22, 1999; [67 FR 46277](#), July 12, 2002]

**§ 63.984 Fuel gas systems and processes to which storage vessel, transfer rack, or equipment leak regulated material emissions are routed.**

(a) ***Equipment and operating requirements for fuel gas systems and processes.***

(1) Except during periods of start-up, shutdown and malfunction as specified in the referencing subpart, the fuel gas system or process shall be operating at all times when regulated material emissions are routed to it.

(2) The owner or operator of a transfer rack subject to the provisions of this subpart shall ensure that no pressure relief device in the transfer rack's system returning vapors to a fuel gas system or process shall open to the atmosphere during loading. Pressure relief devices needed for safety purposes are not subject to this paragraph.

**(b) *Fuel gas system and process compliance assessment.***

(1) If emissions are routed to a fuel gas system, there is no requirement to conduct a performance test or design evaluation.

(2) If emissions are routed to a process, the regulated material in the emissions shall meet one or more of the conditions specified in [paragraphs \(b\)\(2\)\(i\)](#) through [\(iv\)](#) of this section. The owner or operator of storage vessels subject to this paragraph shall comply with the compliance demonstration requirements in [paragraph \(b\)\(3\)](#) of this section.

(i) Recycled and/or consumed in the same manner as a material that fulfills the same function in that process;

(ii) Transformed by chemical reaction into materials that are not regulated materials;

(iii) Incorporated into a product; and/or

(iv) Recovered.

(3) To demonstrate compliance with [paragraph \(b\)\(2\)](#) of this section for a storage vessel, the owner or operator shall prepare a design evaluation (or engineering assessment) that demonstrates the extent to which one or more of the conditions specified in [paragraphs \(b\)\(2\)\(i\)](#) through [\(iv\)](#) of this section are being met.

(c) ***Statement of connection.*** For storage vessels and transfer racks, the owner or operator shall submit the statement of connection reports for fuel gas systems specified in [§ 63.999\(b\)\(1\)\(ii\)](#), as appropriate.

**§ 63.985 Nonflare control devices used to control emissions from storage vessels and low throughput transfer racks.**

(a) ***Nonflare control device equipment and operating requirements.*** The owner or operator shall operate and maintain the nonflare control device so that the monitored parameters defined as required in [paragraph \(c\)](#) of this section remain within the ranges specified in the Notification of Compliance Status whenever emissions of regulated material are routed to the control device except during periods of start-up, shutdown, and malfunction as specified in the referencing subpart.

(b) ***Nonflare control device design evaluation or performance test requirements.*** When using a control device other than a flare, the owner or operator shall comply with the requirements in [paragraphs \(b\)\(1\)\(i\)](#) or [\(ii\)](#) of this section, except as provided in [paragraphs \(b\)\(2\)](#) and [\(3\)](#) of this section.

(1) ***Design evaluation or performance test results.*** The owner or operator shall prepare and submit with the Notification of Compliance Status, as specified in [§ 63.999\(b\)\(2\)](#), either a design

evaluation that includes the information specified in [paragraph \(b\)\(1\)\(i\)](#) of this section, or the results of the performance test as described in [paragraph \(b\)\(1\)\(ii\)](#) of this section.

(i) **Design evaluation.** The design evaluation shall include documentation demonstrating that the control device being used achieves the required control efficiency during the reasonably expected maximum storage vessel filling or transfer loading rate. This documentation is to include a description of the gas stream that enters the control device, including flow and regulated material content, and the information specified in [paragraphs \(b\)\(1\)\(i\)\(A\)](#) through [\(E\)](#) of this section, as applicable. For storage vessels, the description of the gas stream that enters the control device shall be provided for varying liquid level conditions. This documentation shall be submitted with the Notification of Compliance Status as specified in [§ 63.999\(b\)\(2\)](#).

(A) The efficiency determination is to include consideration of all vapors, gases, and liquids, other than fuels, received by the control device.

(B) If an enclosed combustion device with a minimum residence time of 0.5 seconds and a minimum temperature of 760 °C is used to meet an emission reduction requirement specified in a referencing subpart for storage vessels and transfer racks, documentation that those conditions exist is sufficient to meet the requirements of [paragraph \(b\)\(1\)\(i\)](#) of this section.

(C) Except as provided in [paragraph \(b\)\(1\)\(i\)\(B\)](#) of this section for enclosed combustion devices, the design evaluation shall include the estimated autoignition temperature of the stream being combusted, the flow rate of the stream, the combustion temperature, and the residence time at the combustion temperature.

(D) For carbon adsorbers, the design evaluation shall include the estimated affinity of the regulated material vapors for carbon, the amount of carbon in each bed, the number of beds, the humidity, the temperature, the flow rate of the inlet stream and, if applicable, the desorption schedule, the regeneration stream pressure or temperature, and the flow rate of the regeneration stream. For vacuum desorption, pressure drop shall be included.

(E) For condensers, the design evaluation shall include the final temperature of the stream vapors, the type of condenser, and the design flow rate of the emission stream.

(ii) **Performance test.** A performance test, whether conducted to meet the requirements of this section, or to demonstrate compliance for a process vent or high throughput transfer rack as required by [§ 63.988\(b\)](#), [§ 63.990\(b\)](#), or [§ 63.995\(b\)](#), is acceptable to demonstrate compliance with emission reduction requirements for storage vessels and transfer racks. The owner or operator is not required to prepare a design evaluation for the control device as described in [paragraph \(b\)\(1\)\(i\)](#) of this section if a performance test will be performed that meets the criteria specified in [paragraphs \(b\)\(1\)\(ii\)\(A\)](#) and [\(B\)](#) of this section.

(A) The performance test will demonstrate that the control device achieves greater than or equal to the required control device performance level specified in a referencing subpart for storage vessels or transfer racks; and

(B) The performance test meets the applicable performance test requirements and the results are submitted as part of the Notification of Compliance Status as specified in [§ 63.999\(b\)\(2\)](#).

(2) **Exceptions.** A design evaluation or performance test is not required if the owner or operator uses a combustion device meeting the criteria in [paragraph \(b\)\(2\)\(i\)](#), [\(ii\)](#), [\(iii\)](#), or [\(iv\)](#) of this section.

(i) A boiler or process heater with a design heat input capacity of 44 megawatts (150 million British thermal units per hour) or greater.

(ii) A boiler or process heater burning hazardous waste for which the owner or operator meets the requirements specified in [paragraph \(b\)\(2\)\(ii\)\(A\)](#) or [\(B\)](#) of this section.

(A) The boiler or process heater has been issued a final permit under [40 CFR part 270](#) and complies with the requirements of [40 CFR part 266, subpart H](#), or

(B) The boiler or process heater has certified compliance with the interim status requirements of [40 CFR part 266, subpart H](#).

(iii) A hazardous waste incinerator for which the owner or operator meets the requirements specified in [paragraph \(b\)\(2\)\(iii\)\(A\)](#) or [\(B\)](#) of this section.

(A) The incinerator has been issued a final permit under [40 CFR part 270](#) and complies with the requirements of [40 CFR part 264, subpart O](#); or

(B) The incinerator has certified compliance with the interim status requirements of [40 CFR part 265, subpart O](#); or

(iv) A boiler or process heater into which the vent stream is introduced with the primary fuel.

(3) **Prior design evaluations or performance tests.** If a design evaluation or performance test is required in the referencing subpart or was previously conducted and submitted for a storage vessel or low throughput transfer rack, then a performance test or design evaluation is not required.

(c) **Nonflare control device monitoring requirements.**

(1) The owner or operator shall submit with the Notification of Compliance Status, a monitoring plan containing the information specified in [§ 63.999\(b\)\(2\)\(i\)](#) and [\(ii\)](#) to identify the parameters that will be monitored to assure proper operation of the control device.

(2) The owner or operator shall monitor the parameters specified in the Notification of Compliance Status or in the operating permit application or amendment. Records shall be generated as specified in [§ 63.998\(d\)\(2\)\(i\)](#).

**§ 63.986 Nonflare control devices used for equipment leaks only.**

**(a) *Equipment and operating requirements.***

(1) Owners or operators using a nonflare control device to meet the applicable requirements of a referencing subpart for equipment leaks shall meet the requirements of this section.

(2) Control devices used to comply with the provisions of this subpart shall be operated at all times when emissions are vented to them.

**(b) *Performance test requirements.*** A performance test is not required for any nonflare control device used only to control emissions from equipment leaks.

**(c) *Monitoring requirements.*** Owners or operators of control devices that are used to comply only with the provisions of a referencing subpart for control of equipment leak emissions shall monitor these control devices to ensure that they are operated and maintained in conformance with their design. The owner or operator shall maintain the records as specified in [§ 63.998\(d\)\(4\)](#).

**§ 63.987 Flare requirements.**

**(a) *Flare equipment and operating requirements.*** Flares subject to this subpart shall meet the performance requirements in [40 CFR 63.11\(b\)](#) (General Provisions).

**(b) *Flare compliance assessment.***

(1) The owner or operator shall conduct an initial flare compliance assessment of any flare used to comply with the provisions of this subpart. Flare compliance assessment records shall be kept as specified in [§ 63.998\(a\)\(1\)](#) and a flare compliance assessment report shall be submitted as specified in [§ 63.999\(a\)\(2\)](#). An owner or operator is not required to conduct a performance test to determine percent emission reduction or outlet regulated material or total organic compound concentration when a flare is used.

(2) [Reserved]

(3) Flare compliance assessments shall meet the requirements specified in [paragraphs \(b\)\(3\)\(i\) through \(iv\)](#) of this section.

(i) Method 22 of appendix A of part 60 shall be used to determine the compliance of flares with the visible emission provisions of this subpart. The observation period is 2 hours, except for transfer racks as provided in [\(b\)\(3\)\(i\)\(A\)](#) or [\(B\)](#) of this section.

(A) For transfer racks, if the loading cycle is less than 2 hours, then the observation period for that run shall be for the entire loading cycle.

(B) For transfer racks, if additional loading cycles are initiated within the 2-hour period, then visible emissions observations shall be conducted for the additional cycles.

(ii) The net heating value of the gas being combusted in a flare shall be calculated using Equation 1:

$$H_T = K_1 \sum_{j=1}^n D_j H_j \quad [\text{Eq. 1}]$$

Where:

$H_T$  = Net heating value of the sample, megajoules per standard cubic meter; where the net enthalpy per mole of offgas is based on combustion at 25 °C and 760 millimeters of mercury (30 inches of mercury), but the standard temperature for determining the volume corresponding to one mole is 20 °C;

$K_1 = 1.740 \times 10^{-7}$  (parts per million by volume)<sup>-1</sup> (gram-mole per standard cubic meter) (megajoules per kilocalories), where the standard temperature for gram mole per standard cubic meter is 20 °C;

$n$  = number of sample components;

$D_j$  = Concentration of sample component  $j$ , in parts per million by volume on a wet basis, as measured for organics by Method 18 of [40 CFR part 60, appendix A](#), or by ASTM D6420-18 (incorporated by reference, see [§ 63.14](#)) under the conditions specified in [§ 63.997\(e\)\(2\)\(iii\)\(D\)\(I\)](#) through [\(3\)](#). Hydrogen and carbon monoxide are measured by ASTM D1946-90 (Reapproved 1994) (incorporated by reference, see [§ 63.14](#)); and

$H_j$  = Net heat of combustion of sample component  $j$ , kilocalories per gram mole at 25 °C and 760 millimeters of mercury (30 inches of mercury).

(iii) The actual exit velocity of a flare shall be determined by dividing the volumetric flow rate (in unit of standard temperature and pressure), as determined by Method 2, 2A, 2C, 2D, 2F, or 2G of [40 CFR part 60, appendix A](#), as appropriate, by the unobstructed (free) cross sectional area of the flare tip.

(iv) Flare flame or pilot monitors, as applicable, shall be operated during any flare compliance assessment.

(c) **Flare monitoring requirements.** Where a flare is used, the following monitoring equipment is required: a device (including but not limited to a thermocouple, ultra-violet beam sensor, or infrared sensor) capable of continuously detecting that at least one pilot flame or the flare flame

is present. Flare flame monitoring and compliance records shall be kept as specified in [§ 63.998\(a\)\(1\)](#) and reported as specified in [§ 63.999\(a\)](#).

[[64 FR 34866](#), June 29, 1999, as amended at [64 FR 63705](#), Nov. 22, 1999; [67 FR 46277](#), July 12, 2002; [85 FR 40417](#), July 6, 2020]

## **§ 63.988 Incinerators, boilers, and process heaters.**

### **(a) *Equipment and operating requirements.***

(1) Owners or operators using incinerators, boilers, or process heaters to meet a weight-percent emission reduction or parts per million by volume outlet concentration requirement specified in a referencing subpart shall meet the requirements of this section.

(2) Incinerators, boilers, or process heaters used to comply with the provisions of a referencing subpart and this subpart shall be operated at all times when emissions are vented to them.

(3) For boilers and process heaters, the vent stream shall be introduced into the flame zone of the boiler or process heater.

### **(b) *Performance test requirements.***

(1) Except as specified in [§ 63.997\(b\)](#), and [paragraph \(b\)\(2\)](#) of this section, the owner or operator shall conduct an initial performance test of any incinerator, boiler, or process heater used to comply with the provisions of a referencing subpart and this subpart according to the procedures in [§ 63.997](#). Performance test records shall be kept as specified in [§ 63.998\(a\)\(2\)](#) and a performance test report shall be submitted as specified in [§ 63.999\(a\)\(2\)](#). As provided in [§ 63.985\(b\)\(1\)](#), a design evaluation may be used as an alternative to the performance test for storage vessels and low throughput transfer rack controls. As provided in [§ 63.986\(b\)](#), no performance test is required for equipment leaks.

(2) An owner or operator is not required to conduct a performance test when any of the control devices specified in [paragraphs \(b\)\(2\)\(i\) through \(iv\)](#) of this section are used.

(i) 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](#);

(ii) A boiler or process heater with a design heat input capacity of 44 megawatts (150 million British thermal units per hour) 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; or

(iv) A boiler or process heater burning hazardous waste for which the owner or operator meets the requirements specified in [paragraph \(b\)\(2\)\(iv\)\(A\)](#) or [\(B\)](#) of this section.



(A) The boiler or process heater has been issued a final permit under [40 CFR part 270](#) and complies with the requirements of [40 CFR part 266, subpart H](#); or

(B) The boiler or process heater has certified compliance with the interim status requirements of [40 CFR part 266, subpart H](#).

(c) ***Incinerator, boiler, and process heater monitoring requirements.*** Where an incinerator, boiler, or process heater is used, a temperature monitoring device capable of providing a continuous record that meets the provisions specified in [paragraph \(c\)\(1\)](#), [\(2\)](#), or [\(3\)](#) of this section is required. Any boiler or process heater in which all vent streams are introduced with primary fuel or are used as the primary fuel is exempt from monitoring. Monitoring results shall be recorded as specified in [§ 63.998\(b\)](#) and [\(c\)](#), as applicable. General requirements for monitoring and continuous parameter monitoring systems are contained in the referencing subpart and [§ 3.996](#).

(1) Where an incinerator other than a catalytic incinerator is used, a temperature monitoring device shall be installed in the fire box or in the ductwork immediately downstream of the fire box in a position before any substantial heat exchange occurs.

(2) Where a catalytic incinerator is used, temperature monitoring devices shall be installed in the gas stream immediately before and after the catalyst bed.

(3) Where a boiler or process heater of less than 44 megawatts (150 million British thermal units per hour) design heat input capacity is used and the regulated vent stream is not introduced as or with the primary fuel, a temperature monitoring device shall be installed in the fire box.

#### **§ 63.989 [Reserved]**

#### **§ 63.990 Absorbers, condensers, and carbon adsorbers used as control devices.**

(a) ***Equipment and operating requirements.***

(1) Owners or operators using absorbers, condensers, or carbon adsorbers to meet a weight-percent emission reduction or parts per million by volume outlet concentration requirement specified in a referencing subpart shall meet the requirements of this section.

(2) Absorbers, condensers, and carbon adsorbers used to comply with the provisions of a referencing subpart and this subpart shall be operated at all times when emissions are vented to them.

(b) ***Performance test requirements.*** Except as specified in [§ 63.997\(b\)](#), the owner or operator shall conduct an initial performance test of any absorber, condenser, or carbon adsorber used as a control device to comply with the provisions of the referencing subpart and this subpart according to the procedures in [§ 63.997](#). Performance test records shall be kept as specified in [§ 63.998\(a\)\(2\)](#) and a performance test report shall be submitted as specified in [§ 63.999\(a\)\(2\)](#). As provided in [§ 63.985\(b\)\(1\)](#), a design evaluation may be used as an alternative to the performance



test for storage vessels and low throughput transfer rack controls. As provided in [§ 63.986\(b\)](#), no performance test is required to demonstrate compliance for equipment leaks.

(c) **Monitoring requirements.** Where an absorber, condenser, or carbon adsorber is used as a control device, either an organic monitoring device capable of providing a continuous record, or the monitoring devices specified in paragraphs (c)(1) through (3), as applicable, shall be used. Monitoring results shall be recorded as specified in [§ 63.998\(b\)](#) and [\(c\)](#), as applicable. General requirements for monitoring and continuous parameter monitoring systems are contained in a referencing subpart and [§ 63.996](#).

(1) Where an absorber is used, a scrubbing liquid temperature monitoring device and a specific gravity monitoring device, each capable of providing a continuous record, shall be used. If the difference between the specific gravity of the saturated scrubbing fluid and specific gravity of the fresh scrubbing fluid is less than 0.02 specific gravity units, an organic monitoring device capable of providing a continuous record shall be used.

(2) Where a condenser is used, a condenser exit (product side) temperature monitoring device capable of providing a continuous record shall be used.

(3) Where a carbon adsorber is used, an integrating regeneration stream flow monitoring device having an accuracy of  $\pm 10$  percent or better, capable of recording the total regeneration stream mass or volumetric flow for each regeneration cycle; and a carbon bed temperature monitoring device, capable of recording the carbon bed temperature after each regeneration and within 15 minutes of completing any cooling cycle, shall be used.

#### **§ 63.991 [Reserved]**

#### **§ 63.992 Implementation and enforcement.**

(a) This subpart can be implemented and enforced by the U.S. Environmental Protection Agency (EPA), or a delegated authority such as the applicable State, local, or tribal agency. If the EPA Administrator has delegated authority to a State, local, or tribal agency, then that agency has the authority to implement and enforce this subpart. Contact the applicable 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 section [40 CFR part 63, subpart E](#), the authorities contained in [paragraphs \(b\)\(1\) through \(5\)](#) of this section are retained by the EPA Administrator and are not transferred to the State, local, or tribal agency.

(1) Approval of alternatives to the nonopacity emissions standards in [§§ 63.983\(a\)](#) and [\(d\)](#), [63.984](#), [63.985\(a\)](#), [63.986\(a\)](#), [63.987\(a\)](#), [63.988\(a\)](#), [63.990\(a\)](#), [63.993\(a\)](#), [63.994\(a\)](#), and [63.995\(a\)](#) under [§ 63.6\(g\)](#). Where these standards reference another subpart, the cited provisions will be delegated according to the delegation provisions of the referenced subpart.

(2) [Reserved]

(3) Approval of major changes to test methods under [§ 63.7\(e\)\(2\)\(ii\)](#) and [\(f\)](#) and as defined in [§ 63.90](#).

(4) Approval of major changes to monitoring under [§ 63.8\(f\)](#) and as defined in [§ 63.90](#).

(5) Approval of major changes to recordkeeping and reporting under [§ 63.10\(f\)](#) and as defined in [§ 63.90](#).

[[67 FR 46277](#), July 12, 2002]

**§ 63.993 Absorbers, condensers, carbon adsorbers and other recovery devices used as final recovery devices.**

**(a) *Final recovery device equipment and operating requirements.***

(1) Owners or operators using a final recovery device to maintain a TRE above a level specified in a referencing subpart shall meet the requirements of this section.

(2) Recovery devices used to comply with the provisions of a referencing subpart and this subpart shall be operated at all times when emissions are vented to them.

**(b) *Recovery device performance test requirements.*** There are no performance test requirements for recovery devices. TRE index value determination information shall be recorded as specified in [§ 63.998\(a\)\(3\)](#).

**(c) *Recovery device monitoring requirements.***

(1) Where an absorber is the final recovery device in the recovery system and the TRE index value is between the level specified in a referencing subpart and 4.0, either an organic monitoring device capable of providing a continuous record or a scrubbing liquid temperature monitoring device and a specific gravity monitoring device, each capable of providing a continuous record, shall be used. If the difference between the specific gravity of the saturated scrubbing fluid and specific gravity of the fresh scrubbing fluid is less than 0.02 specific gravity units, an organic monitoring device capable of providing a continuous record shall be used. Monitoring results shall be recorded as specified in [§ 63.998\(b\)](#) and [\(c\)](#), as applicable. General requirements for monitoring and continuous parameter monitoring systems are contained in [§ 63.996](#).

(2) Where a condenser is the final recovery device in the recovery system and the TRE index value is between the level specified in a referencing subpart and 4.0, an organic monitoring device capable of providing a continuous record or a condenser exit (product side) temperature monitoring device capable of providing a continuous record shall be used. Monitoring results shall be recorded as specified in [§ 63.998\(b\)](#) and [\(c\)](#), as applicable. General requirements for monitoring and continuous parameter monitoring systems are contained in a referencing subpart and [§ 63.996](#).

(3) Where a carbon adsorber is the final recovery device in the recovery system and the TRE index value is between the level specified in a referencing subpart and 4.0, an organic monitoring device capable of providing a continuous record or an integrating regeneration stream flow monitoring device having an accuracy of  $\pm 10$  percent or better, capable of recording the total regeneration stream mass or volumetric flow for each regeneration cycle; and a carbon-bed temperature monitoring device, capable of recording the carbon-bed temperature after each regeneration and within 15 minutes of completing any cooling cycle shall be used. Monitoring results shall be recorded as specified in [§ 63.998\(b\)](#) and [\(c\)](#), as applicable. General requirements for monitoring and continuous parameter monitoring systems are contained in a referencing subpart and [§ 63.996](#).

(4) If an owner or operator uses a recovery device other than those listed in this subpart, the owner or operator shall submit a description of planned monitoring, reporting and recordkeeping procedures as specified in a referencing subpart. The Administrator will approve, deny, or modify based on the reasonableness of the proposed monitoring, reporting and recordkeeping requirements as part of the review of the submission or permit application or by other appropriate means.

#### **§ 63.994 Halogen scrubbers and other halogen reduction devices.**

##### ***(a) Halogen scrubber and other halogen reduction device equipment and operating requirements.***

(1) An owner or operator of a halogen scrubber or other halogen reduction device subject to this subpart shall reduce the overall emissions of hydrogen halides and halogens by the control device performance level specified in a referencing subpart.

(2) Halogen scrubbers and other halogen reduction devices used to comply with the provisions of a referencing subpart and this subpart shall be operated at all times when emissions are vented to them.

##### ***(b) Halogen scrubber and other halogen reduction device performance test requirements.***

(1) An owner or operator of a combustion device followed by a halogen scrubber or other halogen reduction device to control halogenated vent streams in accordance with a referencing subpart and this subpart shall conduct an initial performance test to determine compliance with the control efficiency or emission limits for hydrogen halides and halogens according to the procedures in [§ 63.997](#). Performance test records shall be kept as specified in [§ 63.998\(a\)\(2\)](#) and a performance test report shall be submitted as specified in [§ 63.999\(a\)\(2\)](#).

(2) An owner or operator of a halogen scrubber or other halogen reduction technique used to reduce the vent stream halogen atom mass emission rate prior to a combustion device to comply with a performance level specified in a referencing subpart shall determine the halogen atom mass emission rate prior to the combustion device according to the procedures specified in the

referencing subpart. Records of the halogen concentration in the vent stream shall be generated as specified in [§ 63.998\(a\)\(4\)](#).

**(c) *Halogen scrubber and other halogen reduction device monitoring requirements.***

(1) Where a halogen scrubber is used, the monitoring equipment specified in [paragraphs \(c\)\(1\)\(i\) and \(ii\)](#) of this section is required for the scrubber. Monitoring results shall be recorded as specified in [§ 63.998\(b\)](#) and [\(c\)](#), as applicable. General requirements for monitoring and continuous parameter monitoring systems are contained in a referencing subpart and [§ 63.996](#).

(i) A pH monitoring device capable of providing a continuous record shall be installed to monitor the pH of the scrubber effluent.

(ii) A flow meter capable of providing a continuous record shall be located at the scrubber influent for liquid flow. Gas stream flow shall be determined using one of the procedures specified in [paragraphs \(c\)\(1\)\(ii\)\(A\) through \(D\)](#) of this section.

(A) The owner or operator may determine gas stream flow using the design blower capacity, with appropriate adjustments for pressure drop.

(B) The owner or operator may measure the gas stream flow at the scrubber inlet.

(C) If the scrubber is subject to regulations in [40 CFR parts 264 through 266](#) that have required a determination of the liquid to gas (L/G) ratio prior to the applicable compliance date for the process unit of which it is part as specified in a referencing subpart, the owner or operator may determine gas stream flow by the method that had been utilized to comply with those regulations. A determination that was conducted prior to that compliance date may be utilized to comply with this subpart if it is still representative.

(D) The owner or operator may prepare and implement a gas stream flow determination plan that documents an appropriate method that will be used to determine the gas stream flow. The plan shall require determination of gas stream flow by a method that will at least provide a value for either a representative or the highest gas stream flow anticipated in the scrubber during representative operating conditions other than start-ups, shutdowns, or malfunctions. The plan shall include a description of the methodology to be followed and an explanation of how the selected methodology will reliably determine the gas stream flow, and a description of the records that will be maintained to document the determination of gas stream flow. The owner or operator shall maintain the plan as specified in a referencing subpart.

(2) Where a halogen reduction device other than a scrubber is used, the owner or operator shall follow the procedures specified in a referencing subpart in order to establish monitoring parameters.

**§ 63.995 Other control devices.**

**(a) *Other control device equipment and operating requirements.***

(1) Owners or operators using a control device other than one listed in [§§ 63.985](#) through [63.990](#) to meet a weight-percent emission reduction or parts per million by volume outlet concentration requirement specified in a referencing subpart shall meet the requirements of this section.

(2) Other control devices used to comply with the provisions of a referencing subpart and this subpart shall be operated at all times when emissions are vented to them.

(b) ***Other control device performance test requirements.*** An owner or operator using a control device other than those specified in [§§ 63.987](#) through [63.990](#) to comply with a performance level specified in a referencing subpart, shall perform an initial performance test according to the procedures in [§ 63.997](#). Performance test records shall be kept as specified in [§ 63.998\(a\)\(2\)](#) and a performance test report shall be submitted as specified in [§ 63.999\(a\)\(2\)](#).

(c) ***Other control device monitoring requirements.*** If an owner or operator uses a control device other than those listed in this subpart, the owner or operator shall submit a description of planned monitoring, recordkeeping and reporting procedures as specified in a referencing subpart. The Administrator will approve, deny, or modify based on the reasonableness of the proposed monitoring, reporting and recordkeeping requirements as part of the review of the submission or permit application or by other appropriate means.

#### **§ 63.996 General monitoring requirements for control and recovery devices.**

##### **(a) *General monitoring requirements applicability.***

(1) This section applies to the owner or operator of a regulated source required to monitor under this subpart.

(2) Flares subject to [§ 63.987\(c\)](#) are not subject to the requirements of this section.

(3) Flow indicators are not subject to the requirements of this section.

##### **(b) *Conduct of monitoring.***

(1) Monitoring shall be conducted as set forth in this section and in the relevant sections of this subpart unless the provision in either [paragraph \(b\)\(1\)\(i\)](#) or [\(ii\)](#) of this section applies.

(i) The Administrator specifies or approves the use of minor changes in methodology for the specified monitoring requirements and procedures; or

(ii) The Administrator approves the use of alternatives to any monitoring requirements or procedures as provided in the referencing subpart or [paragraph \(d\)](#) of this section.

(2) When one CPMS is used as a backup to another CPMS, the owner or operator shall report the results from the CPMS used to meet the monitoring requirements of this subpart. If both such CPMS's are used during a particular reporting period to meet the monitoring requirements of this subpart, then the owner or operator shall report the results from each CPMS for the time during the six month period that the instrument was relied upon to demonstrate compliance.

***(c) Operation and maintenance of continuous parameter monitoring systems.***

(1) All monitoring equipment shall be installed, calibrated, maintained, and operated according to manufacturer's specifications or other written procedures that provide adequate assurance that the equipment would reasonably be expected to monitor accurately.

(2) The owner or operator of a regulated source shall maintain and operate each CPMS as specified in this section, or in a relevant subpart, and in a manner consistent with good air pollution control practices.

(i) The owner or operator of a regulated source shall ensure the immediate repair or replacement of CPMS parts to correct "routine" or otherwise predictable CPMS malfunctions. The necessary parts for routine repairs of the affected equipment shall be readily available.

(ii) If under the referencing subpart, an owner or operator has developed a start-up, shutdown, and malfunction plan, the plan is followed, and the CPMS is repaired immediately, this action shall be recorded as specified in [§ 63.998\(c\)\(1\)\(ii\)\(E\)](#).

(iii) The Administrator's determination of whether acceptable operation and maintenance procedures are being used for the CPMS will be based on information that may include, but is not limited to, review of operation and maintenance procedures, operation and maintenance records as specified in [§ 63.998\(c\)\(1\)\(i\)](#) and [\(ii\)](#), manufacturer's recommendations and specifications, and inspection of the CPMS.

(3) All CPMS's shall be installed and operational, and the data verified as specified in this subpart either prior to or in conjunction with conducting performance tests. Verification of operational status shall, at a minimum, include completion of the manufacturer's written specifications or recommendations for installation, operation, and calibration of the system or other written procedures that provide adequate assurance that the equipment would reasonably be expected to monitor accurately.

(4) All CPMS's shall be installed such that representative measurements of parameters from the regulated source are obtained.

(5) In accordance with the referencing subpart, except for system breakdowns, repairs, maintenance periods, instrument adjustments, or checks to maintain precision and accuracy, calibration checks, and zero and span adjustments, all continuous parameter monitoring systems shall be in continuous operation when emissions are being routed to the monitored device.

(6) The owner or operator shall establish a range for monitored parameters that indicates proper operation of the control or recovery device. In order to establish the range, the information required in [§ 63.999\(b\)\(3\)](#) shall be submitted in the Notification of Compliance Status or the operating permit application or amendment. The range may be based upon a prior performance test meeting the specifications of [§ 63.997\(b\)\(1\)](#) or a prior TRE index value determination, as applicable, or upon existing ranges or limits established under a referencing subpart. Where the

regeneration stream flow and carbon bed temperature are monitored, the range shall be in terms of the total regeneration stream flow per regeneration cycle and the temperature of the carbon bed determined within 15 minutes of the completion of the regeneration cooling cycle.

**(d) *Alternatives to monitoring requirements* —**

**(1) *Alternatives to the continuous operating parameter monitoring and recordkeeping provisions.*** An owner or operator may request approval to use alternatives to the continuous operating parameter monitoring and recordkeeping provisions listed in [§§ 63.988\(c\)](#), [63.990\(c\)](#), [63.993\(c\)](#), [63.994\(c\)](#), [63.998\(a\)\(2\)](#) through [\(4\)](#), [63.998\(c\)\(2\)](#) and [\(3\)](#), as specified in [§ 63.999\(d\)\(1\)](#).

**(2) *Monitoring a different parameter than those listed.*** An owner or operator may request approval to monitor a different parameter than those established in [paragraph \(c\)\(6\)](#) of this section or to set unique monitoring parameters if directed by [§ 63.994\(c\)\(2\)](#) or [§ 63.995\(c\)](#), as specified in [§ 63.999\(d\)\(2\)](#).

**§ 63.997 Performance test and compliance assessment requirements for control devices.**

**(a) *Performance tests and flare compliance assessments.*** Where [§§ 63.985](#) through [63.995](#) require, or the owner or operator elects to conduct, a performance test of a control device or a halogen reduction device, or a compliance assessment for a flare, the requirements of [paragraphs \(b\)](#) through [\(d\)](#) of this section apply.

**(b) *Prior test results and waivers.*** Initial performance tests and initial flare compliance assessments are required only as specified in this subpart or a referencing subpart.

**(1)** Unless requested by the Administrator, an owner or operator is not required to conduct a performance test or flare compliance assessment under this subpart if a prior performance test or compliance assessment was conducted using the same methods specified in [§ 63.997\(e\)](#) or [§ 63.987\(b\)\(3\)](#), as applicable, 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 or compliance demonstration, with or without adjustments, reliably demonstrate compliance despite process changes. An owner or operator may request permission to substitute a prior performance test or compliance assessment by written application to the Administrator as specified in [§ 63.999\(a\)\(1\)\(iv\)](#).

**(2)** Individual performance tests and flare compliance assessments may be waived upon written application to the Administrator, per [§ 63.999\(a\)\(1\)\(iii\)](#), if, in the Administrator's judgment, the source is meeting the relevant standard(s) on a continuous basis, the source is being operated under an extension or waiver of compliance, or the owner or operator has requested an extension or waiver of compliance and the Administrator is still considering that request.

**(3)** Approval of any waiver granted under this section shall not abrogate the Administrator's authority under the Act or in any way prohibit the Administrator from later canceling the waiver.



The cancellation will be made only after notification is given to the owner or operator of the source.

***(c) Performance tests and flare compliance assessments schedule.***

(1) Unless a waiver of performance testing or flare compliance assessment is obtained under this section or the conditions of a referencing subpart, the owner or operator shall perform such tests as specified in [paragraphs \(c\)\(1\)\(i\) through \(vii\)](#) of this section.

(i) Within 180 days after the effective date of a relevant standard for a new source that has an initial start-up date before the effective date of that standard; or

(ii) Within 180 days after initial start-up for a new source that has an initial start-up date after the effective date of a relevant standard; or

(iii) Within 180 days after the compliance date specified in a referencing subpart for an existing source, or within 180 days after start-up of an existing source if the source begins operation after the effective date of the relevant emission standard; or

(iv) Within 180 days after the compliance date for an existing source subject to an emission standard established pursuant to section 112(f) of the Act; or

(v) Within 180 days after the termination date of the source's extension of compliance or a waiver of compliance for an existing source that obtains an extension of compliance under [§ 63.1112\(a\)](#), or waiver of compliance under [40 CFR 61.11](#); or

(vi) Within 180 days after the compliance date for a new source, subject to an emission standard established pursuant to section 112(f) of the Act, for which construction or reconstruction is commenced after the proposal date of a relevant standard established pursuant to section 112(d) of the Act but before the proposal date of the relevant standard established pursuant to section 112(f); or

(vii) When the promulgated emission standard in a referencing subpart is more stringent than the standard that was proposed, the owner or operator of a new or reconstructed source subject to that standard for which construction or reconstruction is commenced between the proposal and promulgation dates of the standard shall comply with performance testing requirements within 180 days after the standard's effective date, or within 180 days after start-up of the source, whichever is later. If a promulgated standard in a referencing subpart is more stringent than the proposed standard, the owner or operator may choose to demonstrate compliance initially with either the proposed or the promulgated standard. If the owner or operator chooses to comply with the proposed standard initially, the owner or operator shall conduct a second performance test within 3 years and 180 days after the effective date of the standard, or after start-up of the source, whichever is later, to demonstrate compliance with the promulgated standard.



(2) The Administrator may require an owner or operator to conduct performance tests and compliance assessments at the regulated source at any time when the action is authorized by section 114 of the Act.

(3) Unless already permitted by the applicable title V permit, if an owner or operator elects to use a recovery device to replace an existing control device at a later date, or elects to use a different flare, nonflare control device or recovery device to replace an existing flare, nonflare control device or final recovery device at a later date, the owner or operator shall notify the Administrator, either by amendment of the regulated source's title V permit or, if title V is not applicable, by submission of the notice specified in [§ 63.999\(c\)\(7\)](#) before implementing the change. Upon implementing the change, a compliance demonstration or performance test shall be performed according to the provisions of [paragraphs \(c\)\(3\)\(i\) through \(v\)](#) of this section, as applicable, within 180 days. The compliance assessment report shall be submitted to the Administrator within 60 days of completing the determination, as provided in [§ 63.999\(a\)\(1\)\(ii\)](#).

(i) For flares used to replace an existing control device, a flare compliance demonstration shall be performed using the methods specified in [§ 63.987\(b\)](#);

(ii) For flares used to replace an existing final recovery device that is used on an applicable process vent, the owner or operator shall comply with the applicable provisions in a referencing subpart and in this subpart;

(iii) For incinerators, boilers, or process heaters used to replace an existing control device, a performance test shall be performed, using the methods specified in [§ 63.997](#);

(iv) For absorbers, condensers, or carbon adsorbers used to replace an existing control device on a process vent or a transfer rack, a performance test shall be performed, using the methods specified in [§ 63.997](#);

(v) For absorbers, condensers, or carbon adsorbers used to replace an existing final recovery device on a process vent, the owner or operator shall comply with the applicable provisions of a referencing subpart and this subpart;

(d) ***Performance testing facilities.*** If required to do performance testing, the owner or operator of each new regulated source and, at the request of the Administrator, the owner or operator of each existing regulated source, shall provide performance testing facilities as specified in [paragraphs \(d\)\(1\) through \(5\)](#) of this section.

(1) Sampling ports adequate for test methods applicable to such source. This includes, as applicable, the requirements specified in [\(d\)\(1\)\(i\)](#) and [\(ii\)](#) of this section.

(i) Constructing the air pollution control system such that volumetric flow rates and pollutant emission rates can be accurately determined by applicable test methods and procedures; and

(ii) Providing a stack or duct free of cyclonic flow during performance tests, as demonstrated by applicable test methods and procedures;

(2) Safe sampling platform(s);

(3) Safe access to sampling platform(s);

(4) Utilities for sampling and testing equipment; and

(5) Any other facilities that the Administrator deems necessary for safe and adequate testing of a source.

(e) **Performance test procedures.** Where [§§ 63.985](#) through [63.995](#) require the owner or operator to conduct a performance test of a control device or a halogen reduction device, the owner or operator shall follow the requirements of [paragraphs \(e\)\(1\)\(i\)](#) through [\(v\)](#) of this section, as applicable.

(1) **General procedures.**

(i) **Continuous unit operations.** For continuous unit operations, performance tests shall be conducted at maximum representative operating conditions for the process, unless the Administrator specifies or approves alternate operating conditions. During the performance test, an owner or operator may operate the control or halogen reduction device at maximum or minimum representative operating conditions for monitored control or halogen reduction device parameters, whichever results in lower emission reduction. Operations during periods of start-up, shutdown, and malfunction shall not constitute representative conditions for the purpose of a performance test.

(ii) [Reserved]

(iii) **Combination of both continuous and batch unit operations.** For a combination of both continuous and batch unit operations, performance tests shall be conducted at maximum representative operating conditions. For the purpose of conducting a performance test on a combined vent stream, maximum representative operating conditions shall be when batch emission episodes are occurring that result in the highest organic HAP emission rate (for the combined vent stream) that is achievable during the 6-month period that begins 3 months before and ends 3 months after the compliance assessment (e.g. TRE calculation, performance test) without causing any of the situations described in [paragraphs \(e\)\(1\)\(iii\)\(A\)](#) through [\(C\)](#) of this section.

(A) Causing damage to equipment;

(B) Necessitating that the owner or operator make product that does not meet an existing specification for sale to a customer; or

(C) Necessitating that the owner or operator make product in excess of demand.

(iv) ***Alternatives to performance test requirements.*** Performance tests shall be conducted and data shall be reduced in accordance with the test methods and procedures set forth in this subpart, in each relevant standard, and, if required, in applicable appendices of [40 CFR parts 51, 60, 61, and 63](#) unless the Administrator specifies one of the provisions in [paragraphs \(e\)\(1\)\(iv\)\(A\) through \(E\)](#) of this section.

(A) Specifies or approves, in specific cases, the use of a test method with minor changes in methodology; or

(B) Approves the use of an alternative test method, the results of which the Administrator has determined to be adequate for indicating whether a specific regulated source is in compliance. The alternate method or data shall be validated using the applicable procedures of Method 301 of appendix A of [40 CFR part 63](#); or

(C) Approves shorter sampling times and smaller sample volumes when necessitated by process variables or other factors; or

(D) Waives the requirement for the performance test as specified in [paragraph \(b\)\(2\)](#) of this section because the owner or operator of a regulated source has demonstrated by other means to the Administrator's satisfaction that the regulated source is in compliance with the relevant standard; or

(E) Approves the use of an equivalent method.

(v) ***Performance test runs.*** Except as provided in [paragraphs \(e\)\(1\)\(v\)\(A\) and \(B\)](#) of this section, each performance test shall consist of three separate runs using the applicable test method. Each run shall be conducted for at least 1 hour and under the conditions specified in this section. For the purpose of determining compliance with an applicable standard, the arithmetic means of results of the three runs shall apply. In the event that a sample is accidentally lost or conditions occur in which one of the three runs must be discontinued because of forced shutdown, failure of an irreplaceable portion of the sample train, extreme meteorological conditions, or other circumstances, beyond the owner or operator's control, compliance may, upon the Administrator's approval, be determined using the arithmetic mean of the results of the two other runs.

(A) For control devices used to control emissions from transfer racks (except low throughput transfer racks that are capable of continuous vapor processing but do not handle continuous emissions or multiple loading arms of a transfer rack that load simultaneously), each run shall represent at least one complete tank truck or tank car loading period, during which regulated materials are loaded, and samples shall be collected using integrated sampling or grab samples taken at least four times per hour at approximately equal intervals of time, such as 15-minute intervals.

(B) For intermittent vapor processing systems used for controlling transfer rack emissions (except low throughput transfer racks that do not handle continuous emissions or multiple loading arms of a transfer rack that load simultaneously), each run shall represent at least one complete control device cycle, and samples shall be collected using integrated sampling or grab samples taken at least four times per hour at approximately equal intervals of time, such as 15-minute intervals.

(2) **Specific procedures.** Where [§§ 63.985](#) through [63.995](#) require the owner or operator to conduct a performance test of a control device, or a halogen reduction device, an owner or operator shall conduct that performance test using the procedures in [paragraphs \(e\)\(2\)\(i\) through \(iv\)](#) of this section, as applicable. The regulated material concentration and percent reduction may be measured as either total organic regulated material or as TOC minus methane and ethane according to the procedures specified.

(i) **Selection of sampling sites.** Method 1 or 1A of [40 CFR part 60, appendix A](#), as appropriate, shall be used for selection of the sampling sites.

(A) For determination of compliance with a percent reduction requirement of total organic regulated material or TOC, sampling sites shall be located as specified in [paragraphs \(e\)\(2\)\(i\)\(A\)\(1\)](#) and [\(e\)\(2\)\(i\)\(A\)\(2\)](#) of this section, and at the outlet of the control device.

(1) With the exceptions noted below in paragraphs (e)(2)(i)(A)(2) and (3), the control device inlet sampling site shall be located at the exit from the unit operation before any control device.

(2) For process vents from continuous unit operations at affected sources in subcategories where the applicability criteria includes a TRE index value, the control device inlet sampling site shall be located after the final recovery device.

(3) If a vent stream is introduced with the combustion air or as a secondary fuel into a boiler or process heater with a design capacity less than 44 megawatts, selection of the location of the inlet sampling sites shall ensure the measurement of total organic regulated material or TOC (minus methane and ethane) concentrations, as applicable, in all vent streams and primary and secondary fuels introduced into the boiler or process heater.

(B) For determination of compliance with a parts per million by volume total regulated material or TOC limit in a referencing subpart, the sampling site shall be located at the outlet of the control device.

(ii) **Gas volumetric flow rate.** The gas volumetric flow rate shall be determined using Method 2, 2A, 2C, 2D, 2F, or 2G of [40 CFR part 60, appendix A](#), as appropriate.

(iii) **Total organic regulated material or TOC concentration.** To determine compliance with a parts per million by volume total organic regulated material or TOC limit, the owner or operator shall use Method 18 or 25A of [40 CFR part 60, appendix A](#), as applicable. The ASTM D6420-18 (incorporated by reference, see [§ 63.14](#)) may be used in lieu of Method 18 of [40 CFR part 60](#),

[appendix A](#), under the conditions specified in [paragraphs \(e\)\(2\)\(iii\)\(D\)\(1\)](#) through [\(3\)](#) of this section. Alternatively, any other method or data that have been validated according to the applicable procedures in Method 301 of appendix A to this part may be used. The procedures specified in [paragraphs \(e\)\(2\)\(iii\)\(A\)](#), [\(B\)](#), [\(D\)](#), and [\(E\)](#) of this section shall be used to calculate parts per million by volume concentration. The calculated concentration shall be corrected to 3 percent oxygen using the procedures specified in [paragraph \(e\)\(2\)\(iii\)\(C\)](#) of this section if a combustion device is the control device and supplemental combustion air is used to combust the emissions.

(A) **Sampling time.** For continuous unit operations and for a combination of both continuous and batch unit operations, 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) **Concentration calculation.** The concentration of either TOC (minus methane or ethane) or total organic regulated material shall be calculated according to [paragraph \(e\)\(2\)\(iii\)\(B\) \(1\)](#) or [\(2\)](#) of this section.

(1) The TOC concentration ( $C_{\text{TOC}}$ ) is the sum of the concentrations of the individual components and shall be computed for each run using Equation 2.

$$C_{\text{TOC}} = \sum_{i=1}^x \frac{\left( \sum_{j=1}^n C_{ji} \right)}{x} \quad [\text{Eq. 2}]$$

Where:

$C_{\text{TOC}}$  = Concentration of TOC (minus methane and ethane), dry basis, parts per million by volume.

$x$  = Number of samples in the sample run.

$n$  = Number of components in the sample.

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

(2) The total organic regulated material ( $C_{\text{REG}}$ ) shall be computed according to Equation 2 in [paragraph \(e\)\(2\)\(iii\)\(B\)\(1\)](#) of this section except that only the regulated species shall be summed.

(C) **Concentration correction calculation.** The concentration of TOC or total organic regulated material, as applicable, shall be corrected to 3 percent oxygen if a combustion device is the control device and supplemental combustion air is used to combust the emissions.

(1) The emission rate correction factor (or excess air), integrated sampling and analysis procedures of Method 3B of [40 CFR part 60, appendix A](#), or the manual method in ANSI/ASME PTC 19.10-1981—Part 10 (incorporated by reference, see [§ 63.14](#)), shall be used to determine the oxygen concentration. The sampling site shall be the same as that of the organic regulated material or organic compound samples, and the samples shall be taken during the same time that the organic regulated material or organic compound samples are taken.

(2) The concentration corrected to 3 percent oxygen ( $C_c$ ) shall be computed using Equation 3.

$$C_c = C_m \left( \frac{17.9}{20.9 - \%O_{2d}} \right) \quad [\text{Eq. 3}]$$

Where:

$C_c$  = Concentration of TOC or organic regulated material corrected to 3 percent oxygen, dry basis, parts per million by volume.

$C_m$  = Concentration of TOC (minus methane and ethane) or organic regulated material, dry basis, parts per million by volume.

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

(D) To measure the total organic regulated material concentration at the outlet of a control device, use Method 18 of [40 CFR part 60, appendix A](#), or ASTM D6420-18 (incorporated by reference, see [§ 63.14](#)). If you have a combustion control device, you must first determine which regulated material compounds are present in the inlet gas stream using process knowledge or the screening procedure described in Method 18. In conducting the performance test, analyze samples collected at the outlet of the combustion control device as specified in Method 18 or ASTM D6420-18 for the regulated material compounds present at the inlet of the control device. The method ASTM D6420-18 may be used only under the conditions specified in [paragraphs \(e\)\(2\)\(iii\)\(D\)\(1\)](#) through [\(3\)](#) of this section.

(1) If the target compounds are all known and are all listed in [Section 1.1](#) of ASTM D6420-18 as measurable.

(2) ASTM D6420-18 may not be used for methane and ethane.

(3) ASTM D6420-18 may not be used as a total VOC method.

(E) To measure the TOC concentration, use Method 18 of [40 CFR part 60, appendix A](#), or use Method 25A of [40 CFR part 60, appendix A](#), according to the procedures in [paragraphs \(e\)\(2\)\(iii\)\(E\)\(1\)](#) through [\(4\)](#) of this section.

(1) Calibrate the instrument on the predominant regulated material compound.

(2) The test results are acceptable if the response from the high level calibration gas is at least 20 times the standard deviation for the response from the zero calibration gas when the instrument is zeroed on its most sensitive scale.

(3) The span value of the analyzer must be less than 100 parts per million by volume.

(4) Report the results as carbon, calculated according to Equation 25A-1 of Method 25A of [40 CFR part 60, appendix A](#).

(iv) **Percent reduction calculation.** To determine compliance with a percent reduction requirement, the owner or operator shall use Method 18, 25, or 25A of [40 CFR part 60, appendix A](#), as applicable. The method ASTM D6420-18 (incorporated by reference, see [§ 63.14](#)) may be used in lieu of Method 18 of [40 CFR part 60, appendix A](#), under the conditions specified in [paragraphs \(e\)\(2\)\(iii\)\(D\)\(1\)](#) through [\(3\)](#) of this section. Alternatively, any other method or data that have been validated according to the applicable procedures in Method 301 of appendix A to this part may be used. The procedures specified in [paragraphs \(e\)\(2\)\(iv\)\(A\)](#) through [\(I\)](#) of this section shall be used to calculate percent reduction efficiency.

(A) **Sampling time.** 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) **Mass rate of TOC or total organic regulated material.** The mass rate of either TOC (minus methane and ethane) or total organic regulated material ( $E_i$ ,  $E_o$ ) shall be computed as applicable.

(1) Equations 4 and 5 shall be used.

$$E_i = K_2 \left( \sum_{j=1}^n C_{ij} M_{ij} \right) Q_i \quad [\text{Eq. 4}]$$

$$E_o = K_2 \left( \sum_{j=1}^n C_{oj} M_{oj} \right) Q_o \quad [\text{Eq. 5}]$$

Where:

$E_i$ ,  $E_o$  = Emission rate of TOC (minus methane and ethane) ( $E_{\text{TOC}}$ ) or emission rate of total organic regulated material ( $E_{\text{RM}}$ ) in the sample at the inlet and outlet of the control device, respectively, dry basis, kilogram per hour.



$K_2$  = Constant,  $2.494 \times 10^{-6}$  (parts per million)<sup>-1</sup> (gram-mole per standard cubic meter) (kilogram per gram) (minute per hour), where standard temperature (gram-mole per standard cubic meter) is 20 °C.

$n$  = Number of components in the sample.

$C_{ij}$ ,  $C_{oj}$  = Concentration on a dry basis of organic compound  $j$  in parts per million by volume of the gas stream at the inlet and outlet of the control device, respectively. If the TOC emission rate is being calculated,  $C_{ij}$  and  $C_{oj}$  include all organic compounds measured minus methane and ethane; if the total organic regulated material emissions rate is being calculated, only organic regulated material are included.

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

$Q_i$ ,  $Q_o$  = Process vent flow rate, dry standard cubic meter per minute, at a temperature of 20 °C, at the inlet and outlet of the control device, respectively.

(2)-(3) [Reserved]

**(C) Percent reduction in TOC or total organic regulated material for continuous unit operations and a combination of both continuous and batch unit operations.** For continuous unit operations and for a combination of both continuous and batch unit operations, the percent reduction in TOC (minus methane and ethane) or total organic regulated material shall be calculated using Equation 6.

$$R = \frac{E_i - E_o}{E_i} (100) \quad [\text{Eq. 6}]$$

Where:

$R$  = Control efficiency of control device, percent.

$E_i$  = Mass rate of TOC (minus methane and ethane) or total organic regulated material at the inlet to the control device as calculated under [paragraph \(e\)\(2\)\(iv\)\(B\)](#) of this section, kilograms TOC per hour or kilograms organic regulated material per hour.

$E_o$  = Mass rate of TOC (minus methane and ethane) or total organic regulated material at the outlet of the control device, as calculated under [paragraph \(e\)\(2\)\(iv\)\(B\)](#) of this section, kilograms TOC per hour or kilograms total organic regulated material per hour.

**(D) Vent stream introduced with combustion air or as secondary fuel.** 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 organic regulated material or TOC (minus methane and ethane) across the device shall be determined by



comparing the TOC (minus methane and ethane) or total organic regulated material in all combusted vent streams and primary and secondary fuels with the TOC (minus methane and ethane) or total organic regulated material exiting the combustion device, respectively.

(E) **Transfer racks.** Method 25A of [40 CFR part 60, appendix A](#), may also be used for the purpose of determining compliance with the percent reduction requirement for transfer racks.

(1) If Method 25A of [40 CFR part 60, appendix A](#), is used to measure the concentration of organic compounds ( $C_{TOC}$ ), the principal organic regulated material in the vent stream shall be used as the calibration gas.

(2) An emission testing interval shall consist of each 15-minute period during the performance test. For each interval, a reading from each measurement shall be recorded.

(3) The average organic compound concentration and the volume measurement shall correspond to the same emissions testing interval.

(4) The mass at the inlet and outlet of the control device during each testing interval shall be calculated using Equation 7.

$$M_j = FKV_s C_t \quad [\text{Eq. 7}]$$

Where:

$M_j$  = Mass of organic compounds emitted during testing interval  $j$ , kilograms.

$F = 10^{-6}$  = Conversion factor, (cubic meters regulated material per cubic meters air) \* (parts per million by volume) $^{-1}$ .

$K$  = Density, kilograms per standard cubic meter organic regulated material.

= 659 kilograms per standard cubic meter organic regulated material. (Note: The density term cancels out when the percent reduction is calculated. Therefore, the density used has no effect. The density of hexane is given so that it can be used to maintain the units of  $M_j$ .)

$V_s$  = Volume of air-vapor mixture exhausted at standard conditions, 20 °C and 760 millimeters mercury, standard cubic meters.

$C_t$  = Total concentration of organic compounds (as measured) at the exhaust vent, parts per million by volume, dry basis.

(5) The organic compound mass emission rates at the inlet and outlet of the control device shall be calculated using Equations 8 and 9 as follows:

$$E_i = \frac{\sum_{j=1}^n M_{ij}}{T} \quad [\text{Eq. 8}] \quad E_o = \frac{\sum_{j=1}^n M_{oj}}{T} \quad [\text{Eq. 9}]$$

Where:

$E_i$ ,  $E_o$  = Mass flow rate of organic compounds at the inlet (i) and outlet (o) of the control device, kilograms per hour.

$n$  = Number of testing intervals.

$M_{ij}$ ,  $M_{oj}$  = Mass of organic compounds at the inlet (i) or outlet (o) during testing interval  $j$ , kilograms.

$T$  = Total time of all testing intervals, hours.

(F) To measure inlet and outlet concentrations of total organic regulated material, use Method 18 of [40 CFR part 60, appendix A](#), or ASTM D6420-18 (incorporated by reference, see [§ 63.14](#)), under the conditions specified in [paragraphs \(e\)\(2\)\(iii\)\(D\)\(I\)](#) through [\(3\)](#) of this section. In conducting the performance test, collect and analyze samples as specified in Method 18 or ASTM D6420-18. You must collect samples simultaneously at the inlet and outlet of the control device. If the performance test is for a combustion control device, you must first determine which regulated material compounds are present in the inlet gas stream (*i.e.*, uncontrolled emissions) using process knowledge or the screening procedure described in Method 18. Quantify the emissions for the regulated material compounds present in the inlet gas stream for both the inlet and outlet gas streams for the combustion device.

(G) To determine inlet and outlet concentrations of TOC, use Method 25 of [40 CFR part 60, appendix A](#). Measure the total gaseous non-methane organic (TGNMO) concentration of the inlet and outlet vent streams using the procedures of Method 25. Use the TGNMO concentration in Equations 4 and 5 of [paragraph \(e\)\(2\)\(iv\)\(B\)](#) of this section.

(H) Method 25A of [40 CFR part 60, appendix A](#), may be used instead of Method 25 to measure inlet and outlet concentrations of TOC if the condition in either [paragraph \(e\)\(2\)\(iv\)\(H\)\(I\)](#) or [\(2\)](#) of this section is met.

(I) The concentration at the inlet to the control system and the required level of control would result in exhaust TGNMO concentrations of 50 parts per million by volume or less.

(2) Because of the high efficiency of the control device, the anticipated TGNMO concentration of the control device exhaust is 50 parts per million by volume or less, regardless of the inlet concentration.

(I) If the uncontrolled or inlet gas stream to the control device contains formaldehyde, you must conduct emissions testing according to [paragraphs \(e\)\(2\)\(iv\)\(I\)\(I\)](#) through [\(3\)](#) of this section.

(I) Except as specified in [paragraph \(e\)\(2\)\(iv\)\(I\)\(3\)](#) of this section, if you elect to comply with a percent reduction requirement and formaldehyde is the principal regulated material compound (*i.e.*, greater than 50 percent of the regulated material compounds in the stream by volume), you must use Method 316 or 320 of appendix A to this part, to measure formaldehyde at the inlet and outlet of the control device. Use the percent reduction in formaldehyde as a surrogate for the percent reduction in total regulated material emissions.

(2) Except as specified in [paragraph \(e\)\(2\)\(iv\)\(I\)\(3\)](#) of this section, if you elect to comply with an outlet total organic regulated material concentration or TOC concentration limit, and the uncontrolled or inlet gas stream to the control device contains greater than 10 percent (by volume) formaldehyde, you must use Method 316 or 320 of appendix A to this part, to separately determine the formaldehyde concentration. Calculate the total organic regulated material concentration or TOC concentration by totaling the formaldehyde emissions measured using Method 316 or 320 and the other regulated material compound emissions measured using Method 18 or 25/25A of [40 CFR part 60, appendix A](#).

(3) You may elect to use ASTM D6348-12e1 (incorporated by reference, [§ 63.14](#)) in lieu of Method 316 or 320 of appendix A to this part as specified in [paragraph \(e\)\(2\)\(iv\)\(I\)\(I\)](#) or [\(2\)](#) of this section. To comply with this paragraph, the test plan preparation and implementation in the Annexes to ASTM D6348-03 (incorporated by reference, see [§ 63.14](#)) Sections A1 through A8 are mandatory; the percent (%) R must be determined for each target analyte using Equation A5.5 of ASTM D6348-03 Annex A5 (Analyte Spiking Technique); and in order for the test data to be acceptable for a compound, the %R must be  $70\% \geq R \leq 130\%$ . If the %R value does not meet this criterion for a target compound, then the test data is not acceptable for that compound and the test must be repeated for that analyte (*i.e.*, the sampling and/or analytical procedure should be adjusted before a retest). The %R value for each compound must be reported in the test report, and all field measurements must be corrected with the calculated %R value for that compound by using the following equation:

Reported Results = (Measured Concentration in the Stack  $\times$  100)/%R.

(3) An owner or operator using a halogen scrubber or other halogen reduction device to control process vent and transfer rack halogenated vent streams in compliance with a referencing subpart, who is required to conduct a performance test to determine compliance with a control efficiency or emission limit for hydrogen halides and halogens, shall follow the procedures specified in [paragraphs \(e\)\(3\) \(i\)](#) through [\(iv\)](#) of this section.

(i) For an owner or operator determining compliance with the percent reduction of total hydrogen halides and halogens, sampling sites shall be located at the inlet and outlet of the scrubber or other halogen reduction device used to reduce halogen emissions. For an owner or operator

determining compliance with a kilogram per hour outlet emission limit for total hydrogen halides and halogens, the sampling site shall be located at the outlet of the scrubber or other halogen reduction device and prior to any releases to the atmosphere.

(ii) Except as provided in [paragraph \(e\)\(1\)\(iv\)](#) of this section, Method 26 or Method 26A of [40 CFR part 60, appendix A](#), shall be used to determine the concentration, in milligrams per dry standard cubic meter, of total hydrogen halides and halogens that may be present in the vent stream. The mass emissions of each hydrogen halide and halogen compound shall be calculated from the measured concentrations and the gas stream flow rate.

(iii) To determine compliance with the percent removal efficiency, the mass emissions for any hydrogen halides and halogens present at the inlet of the halogen reduction device shall be summed together. The mass emissions of the compounds present at the outlet of the scrubber or other halogen reduction device shall be summed together. Percent reduction shall be determined by comparison of the summed inlet and outlet measurements.

(iv) To demonstrate compliance with a kilogram per hour outlet emission limit, the test results must show that the mass emission rate of total hydrogen halides and halogens measured at the outlet of the scrubber or other halogen reduction device is below the kilogram per hour outlet emission limit specified in a referencing subpart.

[[64 FR 34866](#), June 29, 1999, as amended at [67 FR 46277](#), July 12, 2002; [85 FR 40418](#), July 6, 2020]

### **§ 63.998 Recordkeeping requirements.**

#### **(a) *Compliance assessment, monitoring, and compliance records* —**

(1) ***Conditions of flare compliance assessment, monitoring, and compliance records.*** Upon request, the owner or operator shall make available to the Administrator such records as may be necessary to determine the conditions of flare compliance assessments performed pursuant to [§ 63.987\(b\)](#).

(i) ***Flare compliance assessment records.*** When using a flare to comply with this subpart, record the information specified in [paragraphs \(a\)\(1\)\(i\)\(A\)](#) through [\(C\)](#) of this section for each flare compliance assessment performed pursuant to [§ 63.987\(b\)](#). As specified in [§ 63.999\(a\)\(2\)\(iii\)\(A\)](#), the owner or operator shall include this information in the flare compliance assessment report.

(A) Flare design (i.e., steam-assisted, air-assisted, or non-assisted);

(B) All visible emission readings, heat content determinations, flow rate measurements, and exit velocity determinations made during the flare compliance assessment; and

(C) All periods during the flare compliance assessment when all pilot flames are absent or, if only the flare flame is monitored, all periods when the flare flame is absent.

(ii) **Monitoring records.** Each owner or operator shall keep up to date and readily accessible hourly records of whether the monitor is continuously operating and whether the flare flame or at least one pilot flame is continuously present. For transfer racks, hourly records are required only while the transfer rack vent stream is being vented.

(iii) **Compliance records.**

(A) Each owner or operator shall keep records of the times and duration of all periods during which the flare flame or all the pilot flames are absent. This record shall be submitted in the periodic reports as specified in [§ 63.999\(c\)\(3\)](#).

(B) Each owner or operator shall keep records of the times and durations of all periods during which the monitor is not operating.

(2) **Nonflare control device performance test records.**

(i) **Availability of performance test records.** Upon request, the owner or operator shall make available to the Administrator such records as may be necessary to determine the conditions of performance tests performed pursuant to [§ 63.988\(b\)](#), [§ 63.990\(b\)](#), [§ 63.994\(b\)](#), or [§ 63.995\(b\)](#).

(ii) **Nonflare control device and halogen reduction device performance test records.**

(A) **General requirements.** Each owner or operator subject to the provisions of this subpart shall keep up-to-date, readily accessible continuous records of the data specified in [paragraphs \(a\)\(2\)\(ii\)\(B\) through \(C\)](#) of this section, as applicable, measured during each performance test performed pursuant to [§ 63.988\(b\)](#), [§ 63.990\(b\)](#), [§ 63.994\(b\)](#), or [§ 63.995\(b\)](#), and also include that data in the Notification of Compliance Status required under [§ 63.999\(b\)](#). The same data specified in this section shall be submitted in the reports of all subsequently required performance tests where either the emission control efficiency of a combustion device, or the outlet concentration of TOC or regulated material is determined.

(B) **Nonflare combustion device.** Where an owner or operator subject to the provisions of this paragraph seeks to demonstrate compliance with a percent reduction requirement or a parts per million by volume requirement using a nonflare combustion device the information specified in [\(a\)\(2\)\(ii\)\(B\)\(1\)](#) through [\(6\)](#) of this section shall be recorded.

(1) For thermal incinerators, record the fire box temperature averaged over the full period of the performance test.

(2) For catalytic incinerators, record the upstream and downstream temperatures and the temperature difference across the catalyst bed averaged over the full period of the performance test.

(3) For a boiler or process heater with a design heat input capacity less than 44 megawatts and a vent stream that is not introduced with or as the primary fuel, record the fire box temperature averaged over the full period of the performance test.

(4) For an incinerator, record the percent reduction of organic regulated material, if applicable, or TOC achieved by the incinerator determined as specified in [§ 63.997\(e\)\(2\)\(iv\)](#), as applicable, or the concentration of organic regulated material (parts per million by volume, by compound) determined as specified in [§ 63.997\(e\)\(2\)\(iii\)](#) at the outlet of the incinerator.

(5) For a boiler or process heater, record a description of the location at which the vent stream is introduced into the boiler or process heater.

(6) For a boiler or process heater with a design heat input capacity of less than 44 megawatts and where the process vent stream is introduced with combustion air or used as a secondary fuel and is not mixed with the primary fuel, record the percent reduction of organic regulated material or TOC, or the concentration of regulated material or TOC (parts per million by volume, by compound) determined as specified in [§ 63.997\(e\)\(2\)\(iii\)](#) at the outlet of the combustion device.

(C) ***Other nonflare control devices.*** Where an owner or operator seeks to use an absorber, condenser, or carbon adsorber as a control device, the information specified in [paragraphs \(a\)\(2\)\(ii\)\(C\)\(1\) through \(5\)](#) of this section shall be recorded, as applicable.

(1) Where an absorber is used as the control device, the exit specific gravity and average exit temperature of the absorbing liquid averaged over the same time period as the performance test (both measured while the vent stream is normally routed and constituted); or

(2) Where a condenser is used as the control device, the average exit (product side) temperature averaged over the same time period as the performance test while the vent stream is routed and constituted normally; or

(3) Where a carbon adsorber is used as the control device, the total regeneration stream mass flow during each carbon-bed regeneration cycle during the period of the performance test, and temperature of the carbon-bed after each regeneration during the period of the performance test (and within 15 minutes of completion of any cooling cycle or cycles; or

(4) As an alternative to [paragraph \(a\)\(2\)\(ii\)\(C\)\(1\)](#), [\(2\)](#), or [\(3\)](#) of this section, the concentration level or reading indicated by an organics monitoring device at the outlet of the absorber, condenser, or carbon adsorber averaged over the same time period as the performance test while the vent stream is normally routed and constituted.

(5) For an absorber, condenser, or carbon adsorber used as a control device, the percent reduction of regulated material achieved by the control device or concentration of regulated material (parts per million by volume, by compound) at the outlet of the control device.

(D) ***Halogen reduction devices.*** When using a scrubber following a combustion device to control a halogenated vent stream, record the information specified in [paragraphs \(a\)\(2\)\(ii\)\(D\)\(1\) through \(3\)](#) of this section.

(1) The percent reduction or scrubber outlet mass emission rate of total hydrogen halides and halogens as specified in [§ 63.997\(e\)\(3\)](#).

(2) The pH of the scrubber effluent averaged over the time period of the performance test; and

(3) The scrubber liquid-to-gas ratio averaged over the time period of the performance test.

(3) **Recovery device monitoring records during TRE index value determination.** For process vents that require control of emissions under a referencing subpart, owners or operators using a recovery device to maintain a TRE above a level specified in the referencing subpart shall maintain the continuous records specified in [paragraph \(a\)\(3\)\(i\)](#) through [\(v\)](#) of this section, as applicable, and submit reports as specified in [§ 63.999\(a\)\(2\)\(iii\)\(C\)](#).

(i) Where an absorber is the final recovery device in the recovery system and the saturated scrubbing fluid and specific gravity of the scrubbing fluid is greater than or equal to 0.02 specific gravity units, the exit specific gravity (or alternative parameter that is a measure of the degree of absorbing liquid saturation if approved by the Administrator) and average exit temperature of the absorbing liquid averaged over the same time period as the TRE index value determination (both measured while the vent stream is normally routed and constituted); or

(ii) Where a condenser is the final recovery device in the recovery system, the average exit (product side) temperature averaged over the same time period as the TRE index value determination while the vent stream is routed and constituted normally; or

(iii) Where a carbon adsorber is the final recovery device in the recovery system, the total regeneration stream mass flow during each carbon-bed regeneration cycle during the period of the TRE index value determination, and temperature of the carbon-bed after each regeneration during the period of the TRE index value determination (and within 15 minutes of completion of any cooling cycle or cycles); or

(iv) As an alternative to [paragraph \(a\)\(3\)\(i\)](#), [\(ii\)](#), or [\(iii\)](#) of this section, the concentration level or reading indicated by an organics monitoring device at the outlet of the absorber, condenser, or carbon adsorber averaged over the same time period as the TRE index value determination while the vent stream is normally routed and constituted.

(v) All measurements and calculations performed to determine the TRE index value of the vent stream as specified in a referencing subpart.

(4) **Halogen concentration records.** Record the halogen concentration in the vent stream determined according to the procedures specified in a referencing subpart. Submit this record in the Notification of Compliance Status, as specified in [§ 63.999\(b\)\(4\)](#). If the owner or operator designates the vent stream as halogenated, then this shall be recorded and reported in the Notification of Compliance Status report.

(b) **Continuous records and monitoring system data handling** —



(1) **Continuous records.** Where this subpart requires a continuous record, the owner or operator shall maintain a record as specified in [paragraphs \(b\)\(1\)\(i\) through \(iv\)](#) of this section, as applicable:

- (i) A record of values measured at least once every 15 minutes or each measured value for systems which measure more frequently than once every 15 minutes; or
- (ii) A record of block average values for 15-minute or shorter periods calculated from all measured data values during each period or from at least one measured data value per minute if measured more frequently than once per minute.
- (iii) Where data is collected from an automated continuous parameter monitoring system, the owner or operator may calculate and retain block hourly average values from each 15-minute block average period or from at least one measured value per minute if measured more frequently than once per minute, and discard all but the most recent three valid hours of continuous (15-minute or shorter) records, if the hourly averages do not exclude periods of CPMS breakdown or malfunction. An automated CPMS records the measured data and calculates the hourly averages through the use of a computerized data acquisition system.
- (iv) A record as required by an alternative approved under a referencing subpart.

(2) **Excluded data.** Monitoring data recorded during periods identified in [paragraphs \(b\)\(2\)\(i\) through \(iii\)](#) of this section shall not be included in any average computed to determine compliance with an emission limit in a referencing subpart.

- (i) Monitoring system breakdowns, repairs, preventive maintenance, calibration checks, and zero (low-level) and high-level adjustments;
- (ii) Periods of non-operation of the process unit (or portion thereof), resulting in cessation of the emissions to which the monitoring applies; and
- (iii) Startups, shutdowns, and malfunctions, if the owner or operator operates the source during such periods in accordance with [§ 63.1111\(a\)](#) and maintains the records specified in [paragraph \(d\)\(3\)](#) of this section.

(3) **Records of daily averages.** In addition to the records specified in paragraph (a), owners or operators shall keep records as specified in [paragraphs \(b\)\(3\)\(i\) and \(ii\)](#) of this section and submit reports as specified in [§ 63.999\(c\)](#), unless an alternative recordkeeping system has been requested and approved under a referencing subpart.

- (i) Except as specified in [paragraph \(b\)\(3\)\(ii\)](#) of this section, daily average values of each continuously monitored parameter shall be calculated from data meeting the specifications of [paragraph \(b\)\(2\)](#) of this section for each operating day and retained for 5 years.

(A) The daily average shall be calculated as the average of all values for a monitored parameter recorded during the operating day. The average shall cover a 24-hour period if operation is



continuous, or the period of operation per operating day if operation is not continuous (e.g., for transfer racks the average shall cover periods of loading). If values are measured more frequently than once per minute, a single value for each minute may be used to calculate the daily average instead of all measured values.

(B) The operating day shall be the period defined in the operating permit or in the Notification of Compliance Status. It may be from midnight to midnight or another daily period.

(ii) If all recorded values for a monitored parameter during an operating day are within the range established in the Notification of Compliance Status or in the operating permit, the owner or operator may record that all values were within the range and retain this record for 5 years rather than calculating and recording a daily average for that operating day. In such cases, the owner or operator may not discard the recorded values as allowed in [paragraph \(b\)\(1\)\(iii\)](#) of this section.

(4) [Reserved]

(5) ***Alternative recordkeeping.*** For any parameter with respect to any item of equipment associated with a process vent or transfer rack (except low throughput transfer loading racks), the owner or operator may implement the recordkeeping requirements in [paragraphs \(b\)\(5\)\(i\)](#) or [\(ii\)](#) of this section as alternatives to the recordkeeping provisions listed in [paragraphs \(b\)\(1\)](#) through [\(3\)](#) of this section. The owner or operator shall retain each record required by [paragraphs \(b\)\(5\)\(i\)](#) or [\(ii\)](#) of this section as provided in a referencing subpart.

(i) The owner or operator may retain only the daily average value, and is not required to retain more frequently monitored operating parameter values, for a monitored parameter with respect to an item of equipment, if the requirements of [paragraphs \(b\)\(5\)\(i\)\(A\)](#) through [\(F\)](#) of this section are met. The owner or operator shall notify the Administrator in the Notification of Compliance Status as specified in [§ 63.999\(b\)\(5\)](#) or, if the Notification of Compliance Status has already been submitted, in the Periodic Report immediately preceding implementation of the requirements of this paragraph, as specified in [§ 63.999\(c\)\(6\)\(iv\)](#).

(A) The monitoring system is capable of detecting unrealistic or impossible data during periods of operation other than start-ups, shutdowns or malfunctions (e.g., a temperature reading of -200 °C on a boiler), and will alert the operator by alarm or other means. The owner or operator shall record the occurrence. All instances of the alarm or other alert in an operating day constitute a single occurrence.

(B) The monitoring system generates a running average of the monitoring values, updated at least hourly throughout each operating day, that have been obtained during that operating day, and the capability to observe this average is readily available to the Administrator on-site during the operating day. The owner or operator shall record the occurrence of any period meeting the criteria in [paragraphs \(b\)\(5\)\(i\)\(B\)\(I\)](#) through [\(3\)](#) of this section. All instances in an operating day constitute a single occurrence.

- (1) The running average is above the maximum or below the minimum established limits;
- (2) The running average is based on at least six one-hour average values; and
- (3) The running average reflects a period of operation other than a start-up, shutdown, or malfunction.

(C) The monitoring system is capable of detecting unchanging data during periods of operation other than start-ups, shutdowns or malfunctions, except in circumstances where the presence of unchanging data is the expected operating condition based on past experience (e.g., pH in some scrubbers), and will alert the operator by alarm or other means. The owner or operator shall record the occurrence. All instances of the alarm or other alert in an operating day constitute a single occurrence.

(D) The monitoring system will alert the owner or operator by an alarm, if the running average parameter value calculated under [paragraph \(b\)\(5\)\(i\)\(B\)](#) of this section reaches a set point that is appropriately related to the established limit for the parameter that is being monitored.

(E) The owner or operator shall verify the proper functioning of the monitoring system, including its ability to comply with the requirements of [paragraph \(b\)\(5\)\(i\)](#) of this section, at the times specified in [paragraphs \(b\)\(5\)\(i\)\(E\)\(1\)](#) through [\(3\)](#) of this section. The owner or operator shall document that the required verifications occurred.

(1) Upon initial installation.

(2) Annually after initial installation.

(3) After any change to the programming or equipment constituting the monitoring system that might reasonably be expected to alter the monitoring system's ability to comply with the requirements of this section.

(F) The owner or operator shall retain the records identified in [paragraphs \(b\)\(5\)\(i\)\(F\)\(1\)](#) through [\(4\)](#) of this section.

(1) Identification of each parameter, for each item of equipment, for which the owner or operator has elected to comply with the requirements of [paragraph \(b\)\(5\)\(i\)](#) of this section.

(2) A description of the applicable monitoring system(s), and of how compliance will be achieved with each requirement of [paragraph \(b\)\(5\)\(i\)\(A\)](#) through [\(E\)](#) of this section. The description shall identify the location and format (e.g., on-line storage; log entries) for each required record. If the description changes, the owner or operator shall retain both the current and the most recent superseded description. The description, and the most recent superseded description, shall be retained as provided in the subpart that references this subpart, except as provided in [paragraph \(b\)\(5\)\(i\)\(F\)\(1\)](#) of this section.

(3) A description, and the date, of any change to the monitoring system that would reasonably be expected to affect its ability to comply with the requirements of [paragraph \(b\)\(5\)\(i\)](#) of this section.

(4) Owners and operators subject to [paragraph \(b\)\(5\)\(i\)\(F\)\(2\)](#) of this section shall retain the current description of the monitoring system as long as the description is current, but not less than 5 years from the date of its creation. The current description shall be retained on-site at all times or be accessible from a central location by computer or other means that provides access within 2 hours after a request. The owner or operator shall retain the most recent superseded description at least until 5 years from the date of its creation. The superseded description shall be retained on-site (or accessible from a central location by computer that provides access within 2 hours after a request) at least 6 months after being superseded. Thereafter, the superseded description may be stored off-site.

(ii) If an owner or operator has elected to implement the requirements of [paragraph \(b\)\(5\)\(i\)](#) of this section, and a period of 6 consecutive months has passed without an excursion as defined in [paragraph \(b\)\(6\)\(i\)](#) of this section, the owner or operator is no longer required to record the daily average value for that parameter for that unit of equipment, for any operating day when the daily average value is less than the maximum, or greater than the minimum established limit. With approval by the Administrator, monitoring data generated prior to the compliance date of this subpart shall be credited toward the period of 6 consecutive months, if the parameter limit and the monitoring were required and/or approved by the Administrator.

(A) If the owner or operator elects not to retain the daily average values, the owner or operator shall notify the Administrator in the next Periodic Report, as specified in [§ 63.999\(c\)\(6\)\(i\)](#). The notification shall identify the parameter and unit of equipment.

(B) If there is an excursion as defined in [paragraph \(b\)\(6\)\(i\)](#) of this section on any operating day after the owner or operator has ceased recording daily averages as provided in [paragraph \(b\)\(5\)\(ii\)](#) of this section, the owner or operator shall immediately resume retaining the daily average value for each operating day, and shall notify the Administrator in the next Periodic Report, as specified in [§ 63.999\(c\)](#). The owner or operator shall continue to retain each daily average value until another period of 6 consecutive months has passed without an excursion as defined in [paragraph \(b\)\(6\)\(i\)](#) of this section.

(C) The owner or operator shall retain the records specified in [paragraphs \(b\)\(5\)\(i\)\(A\)](#) through [\(F\)](#) of this section for the duration specified in a referencing subpart. For any week, if compliance with [paragraphs \(b\)\(5\)\(i\)\(A\)](#) through [\(D\)](#) of this section does not result in retention of a record of at least one occurrence or measured parameter value, the owner or operator shall record and retain at least one parameter value during a period of operation other than a start-up, shutdown, or malfunction.

(6)

(i) For the purposes of this section, an excursion means that the daily average value of monitoring data for a parameter is greater than the maximum, or less than the minimum established value, except as provided in [paragraphs \(b\)\(6\)\(i\)\(A\)](#) and [\(B\)](#) of this section.

(A) The daily average value during any startup, shutdown, or malfunction shall not be considered an excursion if the owner or operator operates the source during such periods in accordance with [§ 63.1111\(a\)](#) and maintains the records specified in [paragraph \(d\)\(3\)](#) of this section.

(B) An excused excursion, as described in paragraph (b)(6)(ii), does not count toward the number of excursions for the purposes of this subpart.

(ii) One excused excursion for each control device or recovery device for each semiannual period is allowed. If a source has developed a startup, shutdown and malfunction plan, and a monitored parameter is outside its established range or monitoring data are not collected during periods of start-up, shutdown, or malfunction (and the source is operated during such periods in accordance with [§ 63.1111\(a\)](#)) or during periods of nonoperation of the process unit or portion thereof (resulting in cessation of the emissions to which monitoring applies), then the excursion is not a violation and, in cases where continuous monitoring is required, the excursion does not count as the excused excursion for determining compliance.

***(c) Nonflare control and recovery device regulated source monitoring records —***

(1) ***Monitoring system records.*** For process vents and high throughput transfer racks, the owner or operator subject to this subpart shall keep the records specified in this paragraph, as well as records specified elsewhere in this subpart.

(i) For a CPMS used to comply with this part, a record of the procedure used for calibrating the CPMS.

(ii) For a CPMS used to comply with this subpart, records of the information specified in [paragraphs \(c\)\(ii\)\(A\)](#) through [\(H\)](#) of this section, as indicated in a referencing subpart.

(A) The date and time of completion of calibration and preventive maintenance of the CPMS.

(B) The “as found” and “as left” CPMS readings, whenever an adjustment is made that affects the CPMS reading and a “no adjustment” statement otherwise.

(C) The start time and duration or start and stop times of any periods when the CPMS is inoperative.

(D) Records of the occurrence and duration of each start-up, shutdown, and malfunction of CPMS used to comply with this subpart during which excess emissions (as defined in a referencing subpart) occur.

(E) For each start-up, shutdown, and malfunction during which excess emissions as defined in a referencing subpart occur, records whether the procedures specified in the source's start-up,

shutdown, and malfunction plan were followed, and documentation of actions taken that are not consistent with the plan. These records may take the form of a “checklist,” or other form of recordkeeping that confirms conformance with the start-up, shutdown, and malfunction plan for the event.

(F) Records documenting each start-up, shutdown, and malfunction event.

(G) Records of CPMS start-up, shutdown, and malfunction event that specify that there were no excess emissions during the event, as applicable.

(H) Records of the total duration of operating time.

***(2) Combustion control and halogen reduction device monitoring records.***

(i) Each owner or operator using a combustion control or halogen reduction device to comply with this subpart shall keep the following records up-to-date and readily accessible, as applicable. Continuous records of the equipment operating parameters specified to be monitored under [§§ 63.988\(c\)](#) (incinerator, boiler, and process heater monitoring), 63.994(c) (halogen reduction device monitoring), and 63.995(c) (other combustion systems used as control device monitoring) or approved by the Administrator in accordance with a referencing subpart.

(ii) Each owner or operator shall keep records of the daily average value of each continuously monitored parameter for each operating day determined according to the procedures specified in [paragraph \(b\)\(3\)\(i\)](#) of this section. For catalytic incinerators, record the daily average of the temperature upstream of the catalyst bed and the daily average of the temperature differential across the bed. For halogen scrubbers record the daily average pH and the liquid-to-gas ratio.

(iii) Each owner or operator subject to the provisions of this subpart shall keep up-to-date, readily accessible records of periods of operation during which the parameter boundaries are exceeded. The parameter boundaries are established pursuant to [§ 63.996\(c\)\(6\)](#).

***(3) Monitoring records for recovery devices, absorbers, condensers, carbon adsorbers or other noncombustion systems used as control devices.***

(i) Each owner or operator using a recovery device to achieve and maintain a TRE index value greater than the control applicability level specified in the referencing subpart but less than 4.0 or using an absorber, condenser, carbon adsorber or other non-combustion system as a control device shall keep readily accessible, continuous records of the equipment operating parameters specified to be monitored under [§§ 63.990\(c\)](#) (absorber, condenser, and carbon adsorber monitoring), 63.993(c) (recovery device monitoring), or 63.995(c) (other noncombustion systems used as a control device monitoring) or as approved by the Administrator in accordance with a referencing subpart. For transfer racks, continuous records are required while the transfer vent stream is being vented.

(ii) Each owner or operator shall keep records of the daily average value of each continuously monitored parameter for each operating day determined according to the procedures specified in [paragraph \(b\)\(3\)\(i\)](#) of this section. If carbon adsorber regeneration stream flow and carbon bed regeneration temperature are monitored, the records specified in [paragraphs \(c\)\(3\)\(ii\)\(A\)](#) and [\(B\)](#) of this section shall be kept instead of the daily averages.

(A) Records of total regeneration stream mass or volumetric flow for each carbon-bed regeneration cycle.

(B) Records of the temperature of the carbon bed after each regeneration and within 15 minutes of completing any cooling cycle.

(iii) Each owner or operator subject to the provisions of this subpart shall keep up-to-date, readily accessible records of periods of operation during which the parameter boundaries are exceeded. The parameter boundaries are established pursuant to [§ 63.996\(c\)\(6\)](#).

(d) ***Other records*** —

(1) ***Closed vent system records.*** For closed vent systems the owner or operator shall record the information specified in [paragraphs \(d\)\(1\)\(i\)](#) through [\(iv\)](#) of this section, as applicable.

(i) For closed vent systems collecting regulated material from a regulated source, the owner or operator shall record the identification of all parts of the closed vent system, that are designated as unsafe or difficult to inspect, an explanation of why the equipment is unsafe or difficult to inspect, and the plan for inspecting the equipment required by [§ 63.983\(b\)\(2\)\(ii\)](#) or [\(iii\)](#) of this section.

(ii) For each closed vent system that contains bypass lines that could divert a vent stream away from the control device and to the atmosphere, the owner or operator shall keep a record of the information specified in either [paragraph \(d\)\(1\)\(ii\)\(A\)](#) or [\(B\)](#) of this section, as applicable.

(A) Hourly records of whether the flow indicator specified under [§ 63.983\(a\)\(3\)\(i\)](#) was operating and whether a diversion was detected at any time during the hour, as well as records of the times of all periods when the vent stream is diverted from the control device or the flow indicator is not operating.

(B) Where a seal mechanism is used to comply with [§ 63.983\(a\)\(3\)\(ii\)](#), 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 mechanisms has been done, and shall record the occurrence 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 been broken.

(iii) For a closed vent system collecting regulated material from a regulated source, when a leak is detected as specified in [§ 63.983\(d\)\(2\)](#), the information specified in [paragraphs \(d\)\(1\)\(iii\)\(A\)](#) through [\(F\)](#) of this section shall be recorded and kept for 5 years.

(A) The instrument and the equipment identification number and the operator name, initials, or identification number.

(B) The date the leak was detected and the date of the first attempt to repair the leak.

(C) The date of successful repair of the leak.

(D) The maximum instrument reading measured by the procedures in [§ 63.983\(c\)](#) after the leak is successfully repaired or determined to be nonrepairable.

(E) “Repair delayed” and the reason for the delay if a leak is not repaired within 15 days after discovery of the leak. The owner or operator may develop a written procedure that identifies the conditions that justify a delay of repair. In such cases, reasons for delay of repair may be documented by citing the relevant sections of the written procedure.

(F) Copies of the Periodic Reports as specified in [§ 63.999\(c\)](#), if records are not maintained on a computerized database capable of generating summary reports from the records.

(iv) For each instrumental or visual inspection conducted in accordance with [§ 63.983\(b\)\(1\)](#) for closed vent systems collecting regulated material from a regulated source during which no leaks are detected, the owner or operator shall record that the inspection was performed, the date of the inspection, and a statement that no leaks were detected.

(2) ***Storage vessel and transfer rack records.*** An owner or operator shall keep readily accessible records of the information specified in [paragraphs \(d\)\(2\)\(i\)](#) and [\(ii\)](#) of this section, as applicable.

(i) A record of the measured values of the parameters monitored in accordance with [§ 63.985\(c\)](#) or [§ 63.987\(c\)](#).

(ii) A record of the planned routine maintenance performed on the control system during which the control system does not meet the applicable specifications of [§ 63.983\(a\)](#), [§ 63.985\(a\)](#), or [§ 63.987\(a\)](#), as applicable, due to the planned routine maintenance. Such a record shall include the information specified in [paragraphs \(d\)\(2\)\(ii\)\(A\)](#) through [\(C\)](#) of this section. This information shall be submitted in the Periodic Reports as specified in [§ 63.999\(c\)\(4\)](#).

(A) The first time of day and date the requirements of [§ 63.983\(a\)](#), [§ 63.985\(a\)](#), or [§ 63.987\(a\)](#), as applicable, were not met at the beginning of the planned routine maintenance, and

(B) The first time of day and date the requirements of [§ 63.983\(a\)](#), [§ 63.985\(a\)](#), or [§ 63.987\(a\)](#), as applicable, were met at the conclusion of the planned routine maintenance.

(C) A description of the type of maintenance performed.



**(3) *Regulated source and control equipment start-up, shutdown and malfunction records.***

(i) Records of the occurrence and duration of each start-up, shutdown, and malfunction of operation of process equipment or of air pollution control equipment used to comply with this part during which excess emissions (as defined in a referencing subpart) occur.

(ii) For each start-up, shutdown, and malfunction during which excess emissions occur, records that the procedures specified in the source's start-up, shutdown, and malfunction plan were followed, and documentation of actions taken that are not consistent with the plan. For example, if a start-up, shutdown, and malfunction plan includes procedures for routing control device emissions to a backup control device (e.g., the incinerator for a halogenated stream could be routed to a flare during periods when the primary control device is out of service), records must be kept of whether the plan was followed. These records may take the form of a "checklist," or other form of recordkeeping that confirms conformance with the start-up, shutdown, and malfunction plan for the event.

**(4) *Equipment leak records.*** The owner or operator shall maintain records of the information specified in [paragraphs \(d\)\(4\)\(i\)](#) and [\(ii\)](#) of this section for closed vent systems and control devices if specified by the equipment leak provisions in a referencing subpart. The records specified in [paragraph \(d\)\(4\)\(i\)](#) of this section shall be retained for the life of the equipment. The records specified in [paragraph \(d\)\(4\)\(ii\)](#) of this section shall be retained for 5 years.

(i) The design specifications and performance demonstrations specified in [paragraphs \(d\)\(4\)\(i\)\(A\)](#) through [\(C\)](#) of this section.

(A) Detailed schematics, design specifications of the control device, and piping and instrumentation diagrams.

(B) The dates and descriptions of any changes in the design specifications.

(C) A description of the parameter or parameters monitored, as required in a referencing subpart, to ensure that control devices are operated and maintained in conformance with their design and an explanation of why that parameter (or parameters) was selected for the monitoring.

(ii) Records of operation of closed vent systems and control devices, as specified in [paragraphs \(d\)\(4\)\(ii\)\(A\)](#) through [\(C\)](#) of this section.

(A) Dates and durations when the closed vent systems and control devices required are not operated as designed as indicated by the monitored parameters.

(B) Dates and durations during which the monitoring system or monitoring device is inoperative.

(C) Dates and durations of start-ups and shutdowns of control devices required in this subpart.

**(5) *Records of monitored parameters outside of range.*** The owner or operator shall record the occurrences and the cause of periods when the monitored parameters are outside of the parameter



ranges documented in the Notification of Compliance Status report. This information shall also be reported in the Periodic Report.

[[64 FR 34866](#), June 29, 1999, as amended at [64 FR 63705](#), Nov. 22, 1999; [71 FR 20458](#), Apr. 20, 2006]

## **§ 63.999 Notifications and other reports.**

### **(a) *Performance test and flare compliance assessment notifications and reports* —**

(1) ***General requirements.*** General requirements for performance test and flare compliance assessment notifications and reports are specified in [paragraphs \(a\)\(1\)\(i\) through \(iii\)](#) of this section.

(i) The owner or operator shall notify the Administrator of the intention to conduct a performance test or flare compliance assessment at least 30 days before such a compliance demonstration is scheduled to allow the Administrator the opportunity to have an observer present. If after 30 days notice for such an initially scheduled compliance demonstration, there is a delay (due to operational problems, etc.) in conducting the scheduled compliance demonstration, the owner or operator of an affected facility shall notify the Administrator as soon as possible of any delay in the original demonstration date. The owner or operator shall provide at least 7 days prior notice of the rescheduled date of the compliance demonstration, or arrange a rescheduled date with the Administrator by mutual agreement.

(ii) Unless specified differently in this subpart or a referencing subpart, performance test and flare compliance assessment reports, not submitted as part of a Notification of Compliance Status report, shall be submitted to the Administrator within 60 days of completing the test or determination.

(iii) Any application for a waiver of an initial performance test or flare compliance assessment, as allowed by [§ 63.997\(b\)\(2\)](#), shall be submitted no later than 90 days before the performance test or compliance assessment is required. The application for a waiver shall include information justifying the owner or operator's request for a waiver, such as the technical or economic infeasibility, or the impracticality, of the source performing the test.

(iv) Any application to substitute a prior performance test or compliance assessment for an initial performance test or compliance assessment, as allowed by [§ 63.997\(b\)\(1\)](#), shall be submitted no later than 90 days before the performance test or compliance test is required. The application for substitution shall include information demonstrating that the prior performance test or compliance assessment was conducted using the same methods specified in [§ 63.997\(e\)](#) or [§ 63.987\(b\)\(3\)](#), as applicable. The application shall also include information demonstrating that no process changes have been made since the test, or that the results of the performance test or compliance assessment reliably demonstrate compliance despite process changes.

**(2) *Performance test and flare compliance assessment report submittal and content requirements.*** Performance test and flare compliance assessment reports shall be submitted as specified in [paragraphs \(a\)\(2\)\(i\)](#) through [\(iii\)](#) of this section.

(i) For performance tests or flare compliance assessments, the Notification of Compliance Status or performance test and flare compliance assessment report shall include one complete test report as specified in [paragraph \(a\)\(2\)\(ii\)](#) of this section for each test method used for a particular kind of emission point and other applicable information specified in [\(a\)\(2\)\(iii\)](#) of this section. For additional tests performed for the same kind of emission point using the same method, the results and any other information required in applicable sections of this subpart shall be submitted, but a complete test report is not required.

(ii) A complete test report shall include a brief process description, 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.

(iii) The performance test or flare compliance assessment report shall also include the information specified in [\(a\)\(2\)\(iii\)\(A\)](#) through [\(C\)](#) of this section, as applicable.

(A) For flare compliance assessments, the owner or operator shall submit the records specified in [§ 63.998\(a\)\(1\)\(i\)](#).

(B) For nonflare control device and halogen reduction device performance tests as required under [§ 63.988\(b\)](#), [§ 63.990\(b\)](#), [§ 63.994\(b\)](#), or [§ 63.995\(b\)](#), also submit the records specified in [§ 63.998\(a\)\(2\)\(ii\)](#), as applicable.

(C) For recovery devices also submit the records specified in [§ 63.998\(a\)\(3\)](#), as applicable.

**(b) *Notification of Compliance Status* —**

(1) ***Routing storage vessel or transfer rack emissions to a process or fuel gas system.*** An owner or operator who elects to comply with [§ 63.982](#) by routing emissions from a storage vessel or transfer rack to a process or to a fuel gas system, as specified in [§ 63.984](#), shall submit as part of the Notification of Compliance Status the information specified in [paragraphs \(b\)\(1\)\(i\)](#) and [\(ii\)](#), or [\(iii\)](#) of this section, as applicable.

(i) If storage vessels emissions are routed to a process, the owner or operator shall submit the information specified in [§ 63.984\(b\)\(2\)](#) and [\(3\)](#).

(ii) As specified in [§ 63.984\(c\)](#), if storage vessels emissions are routed to a fuel gas system, the owner or operator shall submit a statement that the emission stream is connected to the fuel gas system and whether the conveyance system is subject to the requirements of [§ 63.983](#).

(iii) As specified in [§ 63.984\(c\)](#), report that the transfer rack emission stream is being routed to a fuel gas system or process, when complying with a referencing subpart.

**(2) *Routing storage vessel or low throughput transfer rack emissions to a nonflare control device.*** An owner or operator who elects to comply with [§ 63.982](#) by routing emissions from a storage vessel or low throughput transfer rack to a nonflare control device, as specified in [§ 63.985](#), shall submit, with the Notification of Compliance Status required by a referencing subpart, the applicable information specified in [paragraphs \(b\)\(2\)\(i\)](#) through [\(vi\)](#) of this section. Owners and operators who elect to comply with [§ 63.985\(b\)\(1\)\(i\)](#) by submitting a design evaluation shall submit the information specified in [paragraphs \(b\)\(2\)\(i\)](#) through [\(iv\)](#) of this section. Owners and operators who elect to comply with [§ 63.985\(b\)\(1\)\(ii\)](#) by submitting performance test results from a control device for a storage vessel or low throughput transfer rack shall submit the information specified in [paragraphs \(b\)\(2\)\(i\)](#), [\(ii\)](#), [\(iv\)](#), and [\(v\)](#) of this section. Owners and operators who elect to comply with [§ 63.985\(b\)\(1\)\(ii\)](#) by submitting performance test results from a shared control device shall submit the information specified in [paragraph \(b\)\(2\)\(vi\)](#) of this section.

(i) A description of the parameter or parameters to be monitored to ensure that the control device is being properly operated and maintained, an explanation of the criteria used for selection of that parameter (or parameters), and the frequency with which monitoring will be performed (e.g., when the liquid level in the storage vessel is being raised). If continuous records are specified, indicate whether the provisions of [§ 63.999\(c\)\(6\)](#) apply.

(ii) The operating range for each monitoring parameter identified in the monitoring plan required by [§ 63.985\(c\)\(1\)](#). The specified operating range shall represent the conditions for which the control device is being properly operated and maintained.

(iii) The documentation specified in [§ 63.985\(b\)\(1\)\(i\)](#), if the owner or operator elects to prepare a design evaluation.

(iv) The provisions of [paragraph \(c\)\(6\)](#) of this section do not apply to any low throughput transfer rack for which the owner or operator has elected to comply with [§ 63.985](#) or to any storage vessel for which the owner or operator is not required, by the applicable monitoring plan established under [§ 63.985\(c\)\(1\)](#), to keep continuous records. If continuous records are required, the owner or operator shall specify in the monitoring plan whether the provisions of [paragraph \(c\)\(6\)](#) of this section apply.

(v) A summary of the results of the performance test described in [§ 63.985\(b\)\(1\)\(ii\)](#). If such a performance test is conducted, submit the results of the performance test, including the information specified in [§ 63.999\(a\)\(2\)\(ii\)](#) and [\(iii\)](#).

(vi) Identification of the storage vessel or transfer rack and control device for which the performance test will be submitted, and identification of the emission point(s), if any, that share

the control device with the storage vessel or transfer rack and for which the performance test will be conducted.

(3) ***Operating range for monitored parameters.*** The owner or operator shall submit as part of the Notification of Compliance Status, the operating range for each monitoring parameter identified for each control, recovery, or halogen reduction device as determined pursuant to [§ 63.996\(c\)\(6\)](#). The specified operating range shall represent the conditions for which the control, recovery, or halogen reduction device is being properly operated and maintained. This report shall include the information in [paragraphs \(b\)\(3\)\(i\) through \(iii\)](#) of this section, as applicable, unless the range and the operating day have been established in the operating permit.

(i) The specific range of the monitored parameter(s) for each emission point;

(ii) The rationale for the specific range for each parameter for each emission point, including any data and calculations used to develop the range and a description of why the range indicates proper operation of the control, recovery, or halogen reduction device, as specified in [paragraphs \(b\)\(3\)\(ii\)\(A\), \(B\), or \(C\)](#) of this section, as applicable.

(A) If a performance test or TRE index value determination is required by a referencing subpart for a control, recovery or halogen reduction device, the range shall be based on the parameter values measured during the TRE index value determination or performance test and may be supplemented by engineering assessments and/or manufacturer's recommendations. TRE index value determinations and performance testing are not required to be conducted over the entire range of permitted parameter values.

(B) If a performance test or TRE index value determination is not required by a referencing subpart for a control, recovery, or halogen reduction device, the range may be based solely on engineering assessments and/or manufacturer's recommendations.

(C) The range may be based on ranges or limits previously established under a referencing subpart.

(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.

(4) ***Halogen reduction device.*** The owner or operator shall submit as part of the Notification of Compliance Status the information recorded pursuant to [§ 63.998\(a\)\(4\)](#).

(5) ***Alternative recordkeeping.*** The owner or operator shall notify the Administrator in the Notification of Compliance Status if the alternative recordkeeping requirements of [§ 63.998\(b\)\(5\)](#) are being implemented. If the Notification of Compliance Status has already been submitted, the notification must be in the periodic report submitted immediately preceding implementation of the alternative, as specified in [paragraph \(c\)\(6\)\(iv\)](#) of this section.

**(c) *Periodic reports.***

(1) Periodic reports shall include the reporting period dates, the total source operating time for the reporting period, and, as applicable, all information specified in this section and in the referencing subpart, including reports of periods when monitored parameters are outside their established ranges.

(2) For closed vent systems subject to the requirements of [§ 63.983](#), the owner or operator shall submit as part of the periodic report the information specified in [paragraphs \(c\)\(2\)\(i\)](#) through [\(iii\)](#) of this section, as applicable.

(i) The information recorded in [§ 63.998\(d\)\(1\)\(iii\)\(B\)](#) through [\(E\)](#);

(ii) Reports of the times of all periods recorded under [§ 63.998\(d\)\(1\)\(ii\)\(A\)](#) when the vent stream is diverted from the control device through a bypass line; and

(iii) Reports of all times recorded under [§ 63.998\(d\)\(1\)\(ii\)\(B\)](#) when maintenance is performed in car-sealed valves, when the seal is broken, when the bypass line valve position is changed, or the key for a lock-and-key type configuration has been checked out.

(3) For flares subject to this subpart, report all periods when all pilot flames were absent or the flare flame was absent as recorded in [§ 63.998\(a\)\(1\)\(i\)\(C\)](#).

(4) For storage vessels, the owner or operator shall include in each periodic report required the information specified in [paragraphs \(c\)\(4\)\(i\)](#) through [\(iii\)](#) of this section.

(i) For the 6-month period covered by the periodic report, the information recorded in [§ 63.998\(d\)\(2\)\(ii\)\(A\)](#) through [\(C\)](#).

(ii) For the time period covered by the periodic report and the previous periodic report, the total number of hours that the control system did not meet the requirements of [§ 63.983\(a\)](#), [§ 63.985\(a\)](#), or [§ 63.987\(a\)](#) due to planned routine maintenance.

(iii) A description of the planned routine maintenance during the next 6-month periodic reporting period that is anticipated to be performed for the control system when it is not expected to meet the required control efficiency. This description shall include the type of maintenance necessary, planned frequency of maintenance, and expected lengths of maintenance periods.

(5) If a control device other than a flare is used to control emissions from storage vessels or low throughput transfer racks, the periodic report shall describe each occurrence when the monitored parameters were outside of the parameter ranges documented in the Notification of Compliance Status in accordance with [paragraph \(b\)\(3\)](#) of this section. The description shall include the information specified in [paragraphs \(c\)\(5\)\(i\)](#) and [\(ii\)](#) of this section.

(i) Identification of the control device for which the measured parameters were outside of the established ranges, and

(ii) The cause for the measured parameters to be outside of the established ranges.

(6) For process vents and transfer racks (except low throughput transfer racks), periodic reports shall include the information specified in [paragraphs \(c\)\(6\)\(i\)](#) through [\(iv\)](#) of this section.

(i) Periodic reports shall include the daily average values of monitored parameters, calculated as specified in [§ 63.998\(b\)\(3\)\(i\)](#) for any days when the daily average value is outside the bounds as defined in [§ 63.998\(c\)\(2\)\(iii\)](#) or [\(c\)\(3\)\(iii\)](#), or the data availability requirements defined in [paragraphs \(c\)\(6\)\(i\)\(A\)](#) through [\(D\)](#) of this section are not met, whether these excursions are excused or unexcused excursions. For excursions caused by lack of monitoring data, the duration of periods when monitoring data were not collected shall be specified. An excursion means any of the cases listed in [paragraphs \(c\)\(6\)\(i\)\(A\)](#) through [\(C\)](#) of this section. If the owner or operator elects not to retain the daily average values pursuant to [§ 63.998\(b\)\(5\)\(ii\)\(A\)](#), the owner or operator shall report this in the Periodic Report.

(A) When the daily average value of one or more monitored parameters is outside the permitted range.

(B) When the period of control or recovery device operation is 4 hours or greater in an operating day and monitoring data are insufficient to constitute a valid hour of data for at least 75 percent of the operating hours.

(C) When the period of control or recovery device operation is less than 4 hours in an operating day and more than one of the hours during the period of operation does not constitute a valid hour of data due to insufficient monitoring data.

(D) Monitoring data are insufficient to constitute a valid hour of data as used in [paragraphs \(c\)\(6\)\(i\)\(B\)](#) and [\(C\)](#) of this section, if measured values are unavailable for any of the 15-minute periods within the hour.

(ii) Report all carbon-bed regeneration cycles during which the parameters recorded under [§ 63.998\(a\)\(2\)\(ii\)\(C\)](#) were outside the ranges established in the Notification of Compliance Status or in the operating permit.

(iii) The provisions of [paragraph \(c\)\(6\)\(i\)](#) and [\(ii\)](#) of this section do not apply to any low throughput transfer rack for which the owner or operator has elected to comply with [§ 63.985](#) or to any storage vessel for which the owner or operator is not required, by the applicable monitoring plan established under [§ 63.985\(c\)\(1\)](#), to keep continuous records. If continuous records are required, the owner or operator shall specify in the monitoring plan whether the provisions of [paragraphs \(c\)\(6\)\(i\)](#) and [\(c\)\(6\)\(ii\)](#) of this section apply.

(iv) If the owner or operator has chosen to use the alternative recordkeeping requirements of [§ 63.998\(b\)\(5\)](#), and has not notified the Administrator in the Notification of Compliance Status that the alternative recordkeeping provisions are being implemented as specified in [paragraph \(b\)\(5\)](#) of this section, the owner or operator shall notify the Administrator in the Periodic Report

submitted immediately preceding implementation of the alternative. The notifications specified in [§ 63.998\(b\)\(5\)\(ii\)](#) shall be included in the next Periodic Report following the identified event.

(7) As specified in [§ 63.997\(c\)\(3\)](#), if an owner or operator at a facility not required to obtain a title V permit elects at a later date to replace an existing control or recovery device with a different control or recovery device, then the Administrator shall be notified by the owner or operator before implementing the change. This notification may be included in the facility's periodic reporting.

**(d) *Requests for approval of monitoring alternatives* —**

**(1) *Alternatives to the continuous operating parameter monitoring and recordkeeping provisions.*** Requests for approval to use alternatives to continuous operating parameter monitoring and recordkeeping provisions, as provided for in [§ 63.996\(d\)\(1\)](#), shall be submitted as specified in a referencing subpart, and the referencing subpart will govern the review and approval of such requests. The information specified in [paragraphs \(d\)\(1\)\(i\) and \(ii\)](#) of this section shall be included.

(i) A description of the proposed alternative system; and

(ii) Information justifying the owner or operator's request for an alternative method, such as the technical or economic infeasibility, or the impracticality, of the regulated source using the required method.

**(2) *Monitoring a different parameter than those listed.*** Requests for approval to monitor a different parameter than those established in [§ 63.996\(c\)\(6\)](#) of this section or to set unique monitoring parameters, as provided for in [§ 63.996\(d\)\(2\)](#), shall be submitted as specified as specified in a referencing subpart, and the referencing subpart will govern the review and approval of such requests. The information specified in [paragraphs \(d\)\(2\)\(i\) through \(iii\)](#) of this section shall be included in the request.

(i) A description of the parameter(s) to be monitored to ensure the control technology or pollution prevention measure is operated in conformance with its design and achieves the specified emission limit, percent reduction, or nominal efficiency, and an explanation of the criteria used to select the parameter(s);

(ii) A description of the methods and procedures that will be used to demonstrate that the parameter indicates proper operation of the control device, the schedule for this demonstration, and a statement that the owner or operator will establish a range for the monitored parameter(s) as part of the Notification of Compliance Status if required under a referencing subpart, unless this information has already been submitted; and

(iii) The frequency and content of monitoring, recording, and reporting, if monitoring and recording is not continuous, or if reports of daily average values when the monitored parameter value is outside the established range will not be included in periodic reports under [paragraph \(c\)](#)



of this section. The rationale for the proposed monitoring, recording, and reporting system shall be included.

[[64 FR 34866](#), June 29, 1999, as amended at [64 FR 63705](#), Nov. 22, 1999]

**eCFR Content**



## Appendix C

### Subpart EEEE—National Emission Standards for Hazardous Air Pollutants: Organic Liquids Distribution (Non-Gasoline)

Source: [69 FR 5063](#), Feb. 3, 2004, unless otherwise noted.

#### What This Subpart Covers

##### § 63.2330 What is the purpose of this subpart?

This subpart establishes national emission limitations, operating limits, and work practice standards for organic hazardous air pollutants (HAP) emitted from organic liquids distribution (OLD) (non-gasoline) operations at major sources of HAP emissions. This subpart also establishes requirements to demonstrate initial and continuous compliance with the emission limitations, operating limits, and work practice standards.

##### § 63.2334 Am I subject to this subpart?

(a) Except as provided for in [paragraphs \(b\)](#) and [\(c\)](#) of this section, you are subject to this subpart if you own or operate an OLD operation that is located at, or is part of, a major source of HAP emissions. An OLD operation may occupy an entire plant site or be collocated with other industrial (*e.g.*, manufacturing) operations at the same plant site.

(b) Organic liquid distribution operations located at research and development facilities, consistent with section 112(c)(7) of the Clean Air Act (CAA), are not subject to this subpart.

(c) Organic liquid distribution operations do not include the activities and equipment, including product loading racks, used to process, store, or transfer organic liquids at facilities listed in [paragraph \(c\) \(1\)](#) and [\(2\)](#) of this section.

(1) Oil and natural gas production field facilities, as the term “facility” is defined in [§ 63.761](#) of subpart HH.

(2) Natural gas transmission and storage facilities, as the term “facility” is defined in [§ 63.1271](#) of subpart HHH.

##### § 63.2338 What parts of my plant does this subpart cover?

(a) This subpart applies to each new, reconstructed, or existing OLD operation affected source.

(b) Except as provided in [paragraph \(c\)](#) of this section, the affected source is the collection of activities and equipment used to distribute organic liquids into, out of, or within a facility that is a major source of HAP. The affected source is composed of:

(1) All storage tanks storing organic liquids.

(2) All transfer racks at which organic liquids are loaded into or unloaded out of transport vehicles and/or containers.

(3) All equipment leak components in organic liquids service that are associated with:

(i) Storage tanks storing organic liquids;

(ii) Transfer racks loading or unloading organic liquids;

(iii) Pipelines that transfer organic liquids directly between two storage tanks that are subject to this subpart;

(iv) Pipelines that transfer organic liquids directly between a storage tank subject to this subpart and a transfer rack subject to this subpart; and

(v) Pipelines that transfer organic liquids directly between two transfer racks that are subject to this subpart.

(4) All transport vehicles while they are loading or unloading organic liquids at transfer racks subject to this subpart.

(5) All containers while they are loading or unloading organic liquids at transfer racks subject to this subpart.

(c) The equipment listed in [paragraphs \(c\)\(1\) through \(3\)](#) of this section and used in the identified operations is excluded from the affected source.

(1) Storage tanks, transfer racks, transport vehicles, containers, and equipment leak components that are part of an affected source under another [40 CFR part 63](#) national emission standards for hazardous air pollutants (NESHAP).

(2) Non-permanent storage tanks, transfer racks, transport vehicles, containers, and equipment leak components when used in special situation distribution loading and unloading operations (such as maintenance or upset liquids management).

(3) Storage tanks, transfer racks, transport vehicles, containers, and equipment leak components when used to conduct maintenance activities, such as stormwater management, liquid removal from tanks for inspections and maintenance, or changeovers to a different liquid stored in a storage tank.

(d) An affected source is a new affected source if you commenced construction of the affected source after April 2, 2002, and you meet the applicability criteria in [§ 63.2334](#) at the time you commenced operation.

(e) An affected source is reconstructed if you meet the criteria for reconstruction as defined in [§ 63.2](#).

(f) An affected source is existing if it is not new or reconstructed.

[[69 FR 5063](#), Feb. 3, 2004, as amended at [71 FR 42904](#), July 28, 2006; [85 FR 40761](#), July 7, 2020]

### **§ 63.2342 When do I have to comply with this subpart?**

(a) Except as specified in [paragraph \(c\)](#) of this section, if you have a new or reconstructed affected source, you must comply with this subpart according to the schedule identified in [paragraph \(a\)\(1\), \(2\), or \(3\)](#) of this section, as applicable.

(1)

(i) Except as provided in [paragraph \(a\)\(1\)\(ii\)](#) of this section, if you startup your new affected source on or before February 3, 2004 or if you reconstruct your affected source on or before February 3, 2004, you must comply with the emission limitations, operating limits, and work practice standards for new and reconstructed sources in this subpart no later than February 3, 2004.

(ii) For any emission source listed in [paragraph § 63.2338\(b\)](#) at an affected source that commenced construction or reconstruction after April 2, 2002, but before February 3, 2004, that is required to be controlled based on the applicability criteria in this subpart, but:

(A) Would not have been required to be controlled based on the applicability criteria as proposed for this subpart, you must comply with the emission limitations, operating limits, and work practice standards for each such emission source based on the schedule found in [paragraph \(b\)](#) of this section or at startup, whichever is later; or

(B) Would have been subject to a less stringent degree of control requirement as proposed for this subpart, you must comply with the emission limitations, operating limits, and work practice standards in this subpart for each such emission source based on the schedule found in [paragraph \(b\)](#) of this section or at startup, whichever is later, and if you start up your affected new or reconstructed source before February 5, 2007, you must comply with the emission limitations, operating limits, and work practice standards for each such emission source as proposed for this subpart, until you are required to comply with the emission limitations, operating limits, and work practice standards in this subpart for each such emission source based on the schedule found in [paragraph \(b\)](#) of this section.

(2) If you commence construction of or reconstruct your affected source after February 3, 2004, you must comply with the emission limitations, operating limits, and work practice standards for new and reconstructed sources in this subpart upon startup of your affected source.

(3) If, after startup of a new affected source, the total actual annual facility-level organic liquid loading volume at that source exceeds the criteria for control in Table 2 to this subpart, items 9 and 10, the owner or operator must comply with the transfer rack requirements specified in [§ 63.2346\(b\)](#) immediately; that is, be in compliance the first day of the period following the end of the 3-year period triggering the control criteria.

(b) Except as specified in [paragraph \(e\)](#) of this section, if you have an existing affected source, you must comply with this subpart according to the schedule identified in [paragraph \(b\)\(1\)](#), [\(2\)](#), or [\(3\)](#) of this section, as applicable.

(1) If you have an existing affected source, you must comply with the emission limitations, operating limits, and work practice standards for existing affected sources no later than February 5, 2007, except as provided in [paragraphs \(b\)\(2\)](#) and [\(3\)](#) of this section.

(2) Floating roof storage tanks at existing affected sources must be in compliance with the work practice standards in Table 4 to this subpart, item 1, at all times after the next degassing and cleaning activity or within 10 years after February 3, 2004, whichever occurs first. If the first degassing and cleaning activity occurs during the 3 years following February 3, 2004, the compliance date is February 5, 2007.

(3)

(i) If an addition or change other than reconstruction as defined in [§ 63.2](#) is made to an existing affected facility that causes the total actual annual facility-level organic liquid loading volume to exceed the criteria for control in Table 2 to this subpart, items 7 and 8, the owner or operator must comply with the transfer rack requirements specified in [§ 63.2346\(b\)](#) immediately; that is, be in compliance the first day of the period following the end of the 3-year period triggering the control criteria.

(ii) If the owner or operator believes that compliance with the transfer rack emission limits cannot be achieved immediately, as specified in [paragraph \(b\)\(3\)\(i\)](#) of this section, the owner or operator may submit a request for a compliance extension, as specified in [paragraphs \(b\)\(3\)\(ii\)\(A\)](#) through [\(I\)](#) of this section. Subject to [paragraph \(b\)\(3\)\(ii\)\(B\)](#) of this section, until an extension of compliance has been granted by the Administrator (or a State with an approved permit program) under this [paragraph \(b\)\(3\)\(ii\)](#), the owner or operator of the transfer rack subject to the requirements of this section shall comply with all applicable requirements of this subpart. Advice on requesting an extension of compliance may be obtained from the Administrator (or the State with an approved permit program).

(A) **Submittal.** The owner or operator shall submit a request for a compliance extension to the Administrator (or a State, when the State has an approved [40 CFR part 70](#) permit program and the source is required to obtain a [40 CFR part 70](#) permit under that program, or a State, when the State has been delegated the authority to implement and enforce the emission standard for that source) seeking an extension allowing the source up to 1 additional year to comply with the transfer rack standard, if such additional period is necessary for the installation of controls. The owner or operator of the affected source who has requested an extension of compliance under this [paragraph \(b\)\(3\)\(ii\)\(A\)](#) and who is otherwise required to obtain a title V permit shall apply for such permit, or apply to have the source's title V permit revised to incorporate the conditions of the extension of compliance. The conditions of an extension of compliance granted under this

[paragraph \(b\)\(3\)\(ii\)\(A\)](#) will be incorporated into the affected source's title V permit according to the provisions of [40 CFR part 70](#) or Federal title V regulations in this chapter ([42 U.S.C. 7661](#)), whichever are applicable.

**(B) *When to submit.***

(1) Any request submitted under [paragraph \(b\)\(3\)\(ii\)\(A\)](#) of this section must be submitted in writing to the appropriate authority no later than 120 days prior to the affected source's compliance date (as specified in [paragraph \(b\)\(3\)\(i\)](#) of this section), except as provided for in [paragraph \(b\)\(3\)\(ii\)\(B\)\(2\)](#) of this section. Nonfrivolous requests submitted under this [paragraph \(b\)\(3\)\(ii\)\(B\)\(1\)](#) will stay the applicability of the rule as to the emission points in question until such time as the request is granted or denied. A denial will be effective as of the date of denial.

(2) An owner or operator may submit a compliance extension request after the date specified in [paragraph \(b\)\(3\)\(ii\)\(B\)\(1\)](#) of this section provided the need for the compliance extension arose after that date, and before the otherwise applicable compliance date and the need arose due to circumstances beyond reasonable control of the owner or operator. This request must include, in addition to the information required in [paragraph \(b\)\(3\)\(ii\)\(C\)](#) of this section, a statement of the reasons additional time is needed and the date when the owner or operator first learned of the problems. Nonfrivolous requests submitted under this [paragraph \(b\)\(3\)\(ii\)\(B\)\(2\)](#) will stay the applicability of the rule as to the emission points in question until such time as the request is granted or denied. A denial will be effective as of the original compliance date.

**(C) *Information required.*** The request for a compliance extension under [paragraph \(b\)\(3\)\(ii\)\(A\)](#) of this section shall include the following information:

(1) The name and address of the owner or operator and the address of the existing source if it differs from the address of the owner or operator;

(2) The name, address, and telephone number of a contact person for further information;

(3) An identification of the organic liquid distribution operation and of the specific equipment for which additional compliance time is required;

(4) A description of the controls to be installed to comply with the standard;

(5) Justification for the length of time being requested; and

(6) A compliance schedule, including the date by which each step toward compliance will be reached. At a minimum, the list of dates shall include:

(i) The date by which on-site construction, installation of emission control equipment, or a process change is planned to be initiated;

(ii) The date by which on-site construction, installation of emission control equipment, or a process change is to be completed; and

(iii) The date by which final compliance is to be achieved.

(D) **Approval of request for extension of compliance.** Based on the information provided in any request made under [paragraph \(b\)\(3\)\(ii\)\(C\)](#) of this section, or other information, the Administrator (or the State with an approved permit program) may grant an extension of compliance with the transfer rack emission standard, as specified in [paragraph \(b\)\(3\)\(ii\)](#) of this section. The extension will be in writing and will—

(1) Identify each affected source covered by the extension;

(2) Specify the termination date of the extension;

(3) Specify the dates by which steps toward compliance are to be taken, if appropriate;

(4) Specify other applicable requirements to which the compliance extension applies (e.g., performance tests);

(5) Specify the contents of the progress reports to be submitted and the dates by which such reports are to be submitted, if required pursuant to [paragraph \(b\)\(3\)\(ii\)\(E\)](#) of this section.

(6) Under [paragraph \(b\)\(3\)\(ii\)](#) of this section, specify any additional conditions that the Administrator (or the State) deems necessary to assure installation of the necessary controls and protection of the health of persons during the extension period.

(E) **Progress reports.** The owner or operator of an existing source that has been granted an extension of compliance under [paragraph \(b\)\(3\)\(ii\)\(D\)](#) of this section may be required to submit to the Administrator (or the State with an approved permit program) progress reports indicating whether the steps toward compliance outlined in the compliance schedule have been reached.

(F) **Notification of approval or intention to deny.**

(1) The Administrator (or the State with an approved permit program) will notify the owner or operator in writing of approval or intention to deny approval of a request for an extension of compliance within 30 calendar days after receipt of sufficient information to evaluate a request submitted under [paragraph \(b\)\(3\)\(ii\)](#) of this section. The Administrator (or the State) will notify the owner or operator in writing of the status of his/her application; that is, whether the application contains sufficient information to make a determination, within 30 calendar days after receipt of the original application and within 30 calendar days after receipt of any supplementary information that is submitted. The 30-day approval or denial period will begin after the owner or operator has been notified in writing that his/her application is complete. Failure by the Administrator to act within 30 calendar days to approve or disapprove a request submitted under [paragraph \(b\)\(3\)\(ii\)](#) of this section does not constitute automatic approval of the request.

(2) When notifying the owner or operator that his/her application is not complete, the Administrator will specify the information needed to complete the application and provide notice

of opportunity for the applicant to present, in writing, within 30 calendar days after he/she is notified of the incomplete application, additional information or arguments to the Administrator to enable further action on the application.

(3) Before denying any request for an extension of compliance, the Administrator (or the State with an approved permit program) will notify the owner or operator in writing of the Administrator's (or the State's) intention to issue the denial, together with:

(i) Notice of the information and findings on which the intended denial is based; and

(ii) Notice of opportunity for the owner or operator to present in writing, within 15 calendar days after he/she is notified of the intended denial, additional information or arguments to the Administrator (or the State) before further action on the request.

(4) The Administrator's final determination to deny any request for an extension will be in writing and will set forth the specific grounds on which the denial is based. The final determination will be made within 30 calendar days after presentation of additional information or argument (if the application is complete), or within 30 calendar days after the final date specified for the presentation if no presentation is made.

(G) ***Termination of extension of compliance.*** The Administrator (or the State with an approved permit program) may terminate an extension of compliance at an earlier date than specified if any specification under paragraph (b)(3)(ii)(D)(3) or [paragraph \(b\)\(3\)\(ii\)\(D\)\(4\)](#) of this section is not met. Upon a determination to terminate, the Administrator will notify, in writing, the owner or operator of the Administrator's determination to terminate, together with:

(1) Notice of the reason for termination; and

(2) Notice of opportunity for the owner or operator to present in writing, within 15 calendar days after he/she is notified of the determination to terminate, additional information or arguments to the Administrator before further action on the termination.

(3) A final determination to terminate an extension of compliance will be in writing and will set forth the specific grounds on which the termination is based. The final determination will be made within 30 calendar days after presentation of additional information or arguments, or within 30 calendar days after the final date specified for the presentation if no presentation is made.

(H) The granting of an extension under this section shall not abrogate the Administrator's authority under section 114 of the CAA.

(I) ***Limitation on use of compliance extension.*** The owner or operator may request an extension of compliance under the provisions specified in [paragraph \(b\)\(3\)\(ii\)](#) of this section only once for each facility.



(c) If you have an area source that does not commence reconstruction but increases its emissions or its potential to emit such that it becomes a major source of HAP emissions and an existing affected source subject to this subpart, you must be in compliance by 3 years after the area source becomes a major source.

(d) You must meet the notification requirements in [§§ 63.2343](#) and [63.2382\(a\)](#), as applicable, according to the schedules in [§ 63.2382\(a\)](#) and [\(b\)\(1\)](#) through [\(2\)](#) and in [subpart A of this part](#). Some of these notifications must be submitted before the compliance dates for the emission limitations, operating limits, and work practice standards in this subpart.

(e) An affected source that commenced construction or reconstruction on or before October 21, 2019, must be in compliance with the requirements listed in [paragraphs \(e\)\(1\)](#) through [\(5\)](#) of this section upon initial startup or July 7, 2023, whichever is later. An affected source that commenced construction or reconstruction after October 21, 2019, must be in compliance with the requirements listed in [paragraphs \(e\)\(1\)](#) through [\(5\)](#) of this section upon initial startup or July 7, 2020, whichever is later.

(1) The requirements for storage tanks not requiring control specified in [§ 63.2343\(b\)\(4\)](#).

(2) The requirements for storage tanks at an existing affected source specified in [§§ 63.2346\(a\)\(5\)](#) and [\(6\)](#), [63.2386\(d\)\(3\)\(iii\)](#), [63.2396\(a\)\(4\)](#), footnote (2) to Table 2 to this subpart, and Table 2b to this subpart.

(3) The flare requirements specified in [§§ 63.2346\(k\)](#), [63.2382\(d\)\(2\)\(ix\)](#), [63.2386\(d\)\(5\)](#), [63.2390\(h\)](#), footnote (1) to Table 2 to this subpart, item 7.d, to Table 3 to this subpart, items 1.a.iii and 2.a.iii of Table 8 to this subpart, and item 7.e of Table 9 to this subpart.

(4) The requirements specified in [§§ 63.2346\(l\)](#), [63.2350\(d\)](#), [63.2366\(c\)](#), [63.2390\(f\)](#) and [\(g\)](#), [63.2386\(c\)\(11\)](#) and [\(12\)](#), [63.2386\(d\)\(1\)\(xiii\)](#) and [\(f\)](#) through [\(j\)](#), [63.2378\(e\)](#), footnote (1) to Table 9 to this subpart, and items 1.a.i and 2.a.ii of Table 10 to this subpart.

(5) The performance testing requirements specified in [§ 63.2354\(b\)\(6\)](#).

[[69 FR 5063](#), Feb. 3, 2004, as amended at [71 FR 42905](#), July 28, 2006; [85 FR 40761](#), July 7, 2020]

### **§ 63.2343 What are my requirements for emission sources not requiring control?**

This section establishes the notification, recordkeeping, and reporting requirements for emission sources identified in [§ 63.2338](#) that do not require control under this subpart (*i.e.*, under [§ 63.2346\(a\)](#) through [\(e\)](#)). Such emission sources are not subject to any other notification, recordkeeping, or reporting sections in this subpart, including [§ 63.2350\(c\)](#), except as indicated in [paragraphs \(a\)](#) through [\(d\)](#) of this section.

(a) For each storage tank subject to this subpart having a capacity of less than 18.9 cubic meters (5,000 gallons) and for each transfer rack subject to this subpart that only unloads organic liquids



(i.e., no organic liquids are loaded at any of the transfer racks), you must keep documentation that verifies that each storage tank and transfer rack identified in this [paragraph \(a\)](#) is not required to be controlled. The documentation must be kept up-to-date (i.e., all such emission sources at a facility are identified in the documentation regardless of when the documentation was last compiled) and must be in a form suitable and readily available for expeditious inspection and review according to [§ 63.10\(b\)\(1\)](#), including records stored in electronic form in a separate location. The documentation may consist of identification of the tanks and transfer racks identified in this [paragraph \(a\)](#) on a plant site plan or process and instrumentation diagram (P&ID).

(b) Except as specified in [paragraph \(b\)\(4\)](#) of this section, for each storage tank subject to this subpart having a capacity of 18.9 cubic meters (5,000 gallons) or more that is not subject to control based on the criteria specified in Table 2 to this subpart, items 1 through 6, you must comply with the requirements specified in [paragraphs \(b\)\(1\)](#) through [\(3\)](#) of this section.

(1)

(i) You must submit the information in [§ 63.2386\(c\)\(1\)](#), [\(2\)](#), [\(3\)](#), and [\(10\)\(i\)](#) in either the Notification of Compliance Status, according to the schedule specified in Table 12 to this subpart, or in your first Compliance report, according to the schedule specified in [§ 63.2386\(b\)](#), whichever occurs first.

(ii)

(A) If you submit your first Compliance report before your Notification of Compliance Status, the Notification of Compliance Status must contain the information specified in [§ 63.2386\(d\)\(3\)](#) and [\(4\)](#) if any of the changes identified in [paragraph \(d\)](#) of this section have occurred since the filing of the first Compliance report. If none of the changes identified in [paragraph \(d\)](#) of this section have occurred since the filing of the first Compliance report, you do not need to report the information specified in [§ 63.2386\(c\)\(10\)\(i\)](#) when you submit your Notification of Compliance Status.

(B) If you submit your Notification of Compliance Status before your first Compliance report, your first Compliance report must contain the information specified in [§ 63.2386\(d\)\(3\)](#) and [\(4\)](#) if any of the changes specified in [paragraph \(d\)](#) of this section have occurred since the filing of the Notification of Compliance Status.

(iii) If you are already submitting a Notification of Compliance Status or a first Compliance report under [§ 63.2386\(c\)](#), you do not need to submit a separate Notification of Compliance Status or first Compliance report for each storage tank that meets the conditions identified in [paragraph \(b\)](#) of this section (i.e., a single Notification of Compliance Status or first Compliance report should be submitted).

(2)

- (i) You must submit a subsequent Compliance report according to the schedule in [§ 63.2386\(b\)](#) whenever any of the events in [paragraph \(d\)](#) of this section occur, as applicable.
- (ii) Your subsequent Compliance reports must contain the information in [§ 63.2386\(c\)\(1\)](#), [\(2\)](#), [\(3\)](#) and, as applicable, in [§ 63.2386\(d\)\(3\)](#) and [\(4\)](#). If you are already submitting a subsequent Compliance report under [§ 63.2386\(d\)](#), you do not need to submit a separate subsequent Compliance report for each storage tank that meets the conditions identified in [paragraph \(b\)](#) of this section (i.e., a single subsequent Compliance report should be submitted).
- (3) For each storage tank that meets the conditions identified in [paragraph \(b\)](#) of this section, you must keep documentation, including a record of the annual average true vapor pressure of the total Table 1 organic HAP in the stored organic liquid, that verifies the storage tank is not required to be controlled under this subpart. The documentation must be kept up-to-date and must be in a form suitable and readily available for expeditious inspection and review according to [§ 63.10\(b\)\(1\)](#), including records stored in electronic form in a separate location.
- (4) Beginning no later than the compliance dates specified in [§ 63.2342\(e\)](#), the requirements specified in [paragraphs \(b\)\(1\)](#) through [\(3\)](#) of this section apply to the following storage tanks:
- (i) Storage tanks at an existing affected source subject to this subpart having a capacity of 18.9 cubic meters (5,000 gallons) or more that are not subject to control based on the criteria specified in Table 2b to this subpart, items 1 through 3.
- (ii) Storage tanks at a reconstructed or new affected source subject to this subpart having a capacity of 18.9 cubic meters (5,000 gallons) or more that are not subject to control based on the criteria specified in Table 2 to this subpart, items 3 through 6.
- (c) For each transfer rack subject to this subpart that loads organic liquids but is not subject to control based on the criteria specified in Table 2 to this subpart, items 7 through 10, you must comply with the requirements specified in [paragraphs \(c\)\(1\)](#) through [\(3\)](#) of this section.
- (1)
- (i) You must submit the information in [§ 63.2386\(c\)\(1\)](#), [\(2\)](#), [\(3\)](#), and [\(10\)\(i\)](#) in either the Notification of Compliance Status, according to the schedule specified in Table 12 to this subpart, or a first Compliance report, according to the schedule specified in [§ 63.2386\(b\)](#), whichever occurs first.
- (ii)
- (A) If you submit your first Compliance report before your Notification of Compliance Status, the Notification of Compliance Status must contain the information specified in [§ 63.2386\(d\)\(3\)](#) and [\(4\)](#) if any of the changes identified in [paragraph \(d\)](#) of this section have occurred since the filing of the first Compliance report. If none of the changes identified in [paragraph \(d\)](#) of this section have occurred since the filing of the first Compliance report, you do not need to report

the information specified in [§ 63.2386\(c\)\(10\)\(i\)](#) when you submit your Notification of Compliance Status.

(B) If you submit your Notification of Compliance Status before your first Compliance report, your first Compliance report must contain the information specified in [§ 63.2386\(d\)\(3\)](#) and [\(4\)](#) if any of the changes specified in [paragraph \(d\)](#) of this section have occurred since the filing of the Notification of Compliance Status.

(iii) If you are already submitting a Notification of Compliance Status or a first Compliance report under [§ 63.2386\(c\)](#), you do not need to submit a separate Notification of Compliance Status or first Compliance report for each transfer rack that meets the conditions identified in this [paragraph \(c\)](#) (i.e., a single Notification of Compliance Status or first Compliance report should be submitted).

(2)

(i) You must submit a subsequent Compliance report according to the schedule in [§ 63.2386\(b\)](#) whenever any of the events in [paragraph \(d\)](#) of this section occur, as applicable.

(ii) Your subsequent Compliance reports must contain the information in [§ 63.2386\(c\)\(1\)](#), [\(2\)](#), [\(3\)](#) and, as applicable, in [§ 63.2386\(d\)\(3\)](#) and [\(4\)](#). If you are already submitting a subsequent Compliance report under [§ 63.2386\(d\)](#), you do not need to submit a separate subsequent Compliance report for each transfer rack that meets the conditions identified in [paragraph \(c\)](#) of this section (i.e., a single subsequent Compliance report should be submitted).

(3) For each transfer rack that meets the conditions identified in [paragraph \(c\)](#) of this section, you must keep documentation, including the records specified in [§ 63.2390\(d\)](#), that verifies the transfer rack is not required to be controlled under this subpart. The documentation must be kept up-to-date and must be in a form suitable and readily available for expeditious inspection and review according to [§ 63.10\(b\)\(1\)](#), including records stored in electronic form in a separate location.

(d) If one or more of the events identified in [paragraphs \(d\)\(1\)](#) through [\(4\)](#) of this section occur since the filing of the Notification of Compliance Status or the last Compliance report, you must submit a subsequent Compliance report as specified in [paragraphs \(b\)\(2\)](#) and [\(c\)\(2\)](#) of this section.

(1) Any storage tank or transfer rack became subject to control under this subpart EEEE; or

(2) Any storage tank equal to or greater than 18.9 cubic meters (5,000 gallons) became part of the affected source but is not subject to any of the emission limitations, operating limits, or work practice standards of this subpart; or

(3) Any transfer rack (except those racks at which only unloading of organic liquids occurs) became part of the affected source; or

(4) Any of the information required in [§ 63.2386\(c\)\(1\)](#), [§ 63.2386\(c\)\(2\)](#), or [§ 63.2386\(c\)\(3\)](#) has changed.

[[71 FR 42906](#), July 28, 2006, as amended at [73 FR 21830](#), Apr. 23, 2008; [85 FR 40761](#), July 7, 2020]

## **Emission Limitations, Operating Limits, and Work Practice Standards**

### **§ 63.2346 What emission limitations, operating limits, and work practice standards must I meet?**

(a) *Storage tanks.* Except as specified in [paragraphs \(a\)\(5\)](#) and [\(6\)](#) and [\(l\)](#) of this section, for each storage tank storing organic liquids that meets the tank capacity and liquid vapor pressure criteria for control in Table 2 to this subpart, items 1 through 5, you must comply with [paragraph \(a\)\(1\)](#), [\(2\)](#), [\(3\)](#), or [\(4\)](#) of this section. For each storage tank storing organic liquids that meets the tank capacity and liquid vapor pressure criteria for control in Table 2 to this subpart, item 6, you must comply with [paragraph \(a\)\(1\)](#), [\(2\)](#), or [\(4\)](#) of this section.

(1) Meet the emission limits specified in Table 2 or 2b to this subpart and comply with [paragraph \(l\)](#) of this section and the applicable requirements specified in [subpart SS of this part](#), for meeting emission limits, except substitute the term “storage tank” at each occurrence of the term “storage vessel” in subpart SS.

(2) Route emissions to fuel gas systems or back into a process as specified in [subpart SS of this part](#). If you comply with this paragraph, then you must also comply with the requirements specified in [paragraph \(l\)](#) of this section.

(3) Comply with [40 CFR part 63, subpart WW](#) (control level 2).

(4) Use a vapor balancing system that complies with the requirements specified in [paragraphs \(a\)\(4\)\(i\)](#) through [\(vii\)](#) of this section and with the recordkeeping requirements specified in [§ 63.2390\(e\)](#).

(i) The vapor balancing system must be designed and operated to route organic HAP vapors displaced from loading of the storage tank to the transport vehicle from which the storage tank is filled.

(ii) Transport vehicles must have a current certification in accordance with the United States Department of Transportation (U.S. DOT) qualification and maintenance requirements of [49 CFR part 180, subparts E](#) (for cargo tanks) and F (for tank cars).

(iii) Organic liquids must only be unloaded from cargo tanks or tank cars when vapor collection systems are connected to the storage tank's vapor collection system.

(iv) No pressure relief device on the storage tank, on the vapor return line, or on the cargo tank or tank car, shall open during loading or as a result of diurnal temperature changes (breathing losses).

(v) Pressure relief devices must be set to no less than 2.5 pounds per square inch gauge (psig) at all times to prevent breathing losses. Pressure relief devices may be set at values less than 2.5 psig if the owner or operator provides rationale in the notification of compliance status report explaining why the alternative value is sufficient to prevent breathing losses at all times. The owner or operator shall comply with [paragraphs \(a\)\(4\)\(v\)\(A\) through \(C\)](#) of this section for each relief valve.

(A) The relief valve shall be monitored quarterly using the method described in [§ 63.180\(b\)](#).

(B) An instrument reading of 500 parts per million by volume (ppmv) or greater defines a leak.

(C) When a leak is detected, it shall be repaired as soon as practicable, but no later than 5 days after it is detected, and the owner or operator shall comply with the recordkeeping requirements of [§ 63.181\(d\)\(1\)](#) through [\(4\)](#).

(vi) Cargo tanks and tank cars that deliver organic liquids to a storage tank must be reloaded or cleaned at a facility that utilizes the control techniques specified in [paragraph \(a\)\(4\)\(vi\)\(A\)](#) or [\(a\)\(4\)\(vi\)\(B\)](#) of this section.

(A) The cargo tank or tank car must be connected to a closed-vent system with a control device that reduces inlet emissions of total organic HAP by 95 percent by weight or greater or to an exhaust concentration less than or equal to 20 ppmv, on a dry basis corrected to 3 percent oxygen for combustion devices using supplemental combustion air.

(B) A vapor balancing system designed and operated to collect organic HAP vapor displaced from the cargo tank or tank car during reloading must be used to route the collected vapor to the storage tank from which the liquid being transferred originated or to another storage tank connected to a common header.

(vii) The owner or operator of the facility where the cargo tank or tank car is reloaded or cleaned must comply with [paragraphs \(a\)\(4\)\(vii\)\(A\) through \(D\)](#) of this section.

(A) Submit to the owner or operator of the storage tank and to the Administrator a written certification that the reloading or cleaning facility will meet the requirements of [paragraph \(a\)\(4\)\(vii\)\(A\) through \(C\)](#) of this section. The certifying entity may revoke the written certification by sending a written statement to the owner or operator of the storage tank giving at least 90 days notice that the certifying entity is rescinding acceptance of responsibility for compliance with the requirements of this [paragraph \(a\)\(4\)\(vii\)](#) of this section.

(B) If complying with [paragraph \(a\)\(4\)\(vi\)\(A\)](#) of this section, comply with the requirements for a closed vent system and control device as specified in this subpart EEEE. The notification

requirements in [§ 63.2382](#) and the reporting requirements in [§ 63.2386](#) do not apply to the owner or operator of the offsite cleaning or reloading facility.

(C) If complying with [paragraph \(a\)\(4\)\(vi\)\(B\)](#) of this section, keep the records specified in [§ 63.2390\(e\)\(3\)](#) or equivalent recordkeeping approved by the Administrator.

(D) After the compliance dates specified in [§ 63.2342](#), at an offsite reloading or cleaning facility subject to [§ 63.2346\(a\)\(4\)](#), compliance with the monitoring, recordkeeping, and reporting provisions of any other subpart of this part 63 that has monitoring, recordkeeping, and reporting provisions constitutes compliance with the monitoring, recordkeeping and reporting provisions of [§ 63.2346\(a\)\(4\)\(vii\)\(B\)](#) or [§ 63.2346\(a\)\(4\)\(vii\)\(C\)](#). You must identify in your notification of compliance status report required by [§ 63.2382\(d\)](#) the subpart of this part 63 with which the owner or operator of the offsite reloading or cleaning facility complies.

(5) Beginning no later than the compliance dates specified in [§ 63.2342\(e\)](#), the tank capacity criteria, liquid vapor pressure criteria, and emission limits specified for storage tanks at an existing affected source in Table 2 of this subpart, item 1 no longer apply. Instead, for each storage tank at an existing affected source storing organic liquids that meets the tank capacity and liquid vapor pressure criteria for control in Table 2b to this subpart, items 1 through 3, you must comply with paragraph (a)(1), (2), (3), or (4) and [paragraph \(a\)\(6\)](#) of this section.

(6) Beginning no later than the compliance dates specified in [§ 63.2342\(e\)](#), tank emissions during storage tank shutdown operations (*i.e.*, emptying and degassing of a storage tank) for each storage tank at an affected source storing organic liquids that meets the tank capacity and liquid vapor pressure criteria for control in items 2 through 6 of Table 2 to this subpart, or items 1 through 3 of Table 2b to this subpart, you must comply with [paragraphs \(a\)\(6\)\(i\)](#) through [\(iv\)](#) of this section during tank emptying and degassing until the vapor space concentration in the tank is less than 10 percent of the lower explosive limit (LEL). The owner or operator must determine the concentration using process instrumentation or portable measurement devices and follow procedures for calibration and maintenance according to manufacturer's specifications.

(i) Remove organic liquids from the storage tank as much as practicable;

(ii) Comply with either of the following:

(A) The requirements of Table 2 or 2b to this subpart, item 1.a.i. as applicable; OR,

(B) The requirements of Table 4 to this subpart, item 1.b.

(iii) Comply with the requirements in [§ 63.2350\(d\)](#) for each storage tank shutdown event and maintain records necessary to demonstrate compliance with the requirements in [§ 63.2350\(d\)](#) including, if appropriate, records of existing standard site procedures used to empty and degas (deinventory) equipment for safety purposes.

(iv) For floating roof storage tanks, the storage tank may be opened to set up equipment (e.g., making connections to a temporary control device) for the shutdown operations but must not be actively degassed during this time period.

(b) **Transfer racks.** For each transfer rack that is part of the collection of transfer racks that meets the total actual annual facility-level organic liquid loading volume criterion for control in Table 2 to this subpart, items 7 through 10, you must comply with [paragraph \(b\)\(1\)](#), [\(b\)\(2\)](#), or [\(b\)\(3\)](#) of this section for each arm in the transfer rack loading an organic liquid whose organic HAP content meets the organic HAP criterion for control in Table 2 to this subpart, items 7 through 10. For existing affected sources, you must comply with [paragraph \(b\)\(1\)](#), [\(b\)\(2\)](#), or [\(b\)\(3\)\(i\)](#) of this section during the loading of organic liquids into transport vehicles. For new affected sources, you must comply with [paragraph \(b\)\(1\)](#), [\(b\)\(2\)](#), or [\(b\)\(3\)\(i\)](#) and [\(ii\)](#) of this section during the loading of organic liquids into transport vehicles and containers. If the total actual annual facility-level organic liquid loading volume at any affected source is equal to or greater than the loading volume criteria for control in Table 2 to this subpart, but at a later date is less than the loading volume criteria for control, compliance with [paragraph \(b\)\(1\)](#), [\(b\)\(2\)](#), or [\(b\)\(3\)](#) of this section is no longer required. For new sources and reconstructed sources, as defined in [§ 63.2338\(d\)](#) and [\(e\)](#), if at a later date, the total actual annual facility-level organic liquid loading volume again becomes equal to or greater than the loading volume criteria for control in Table 2 to this subpart, the owner or operator must comply with [paragraph \(b\)\(1\)](#), [\(b\)\(2\)](#), or [\(b\)\(3\)\(i\)](#) and [\(ii\)](#) of this section immediately, as specified in [§ 63.2342\(a\)\(3\)](#). For existing sources, as defined in [§ 63.2338\(f\)](#), if at a later date, the total actual annual facility-level organic liquid loading volume again becomes equal to or greater than the loading volume criteria for control in Table 2 to this subpart, the owner or operator must comply with [paragraph \(b\)\(1\)](#), [\(b\)\(2\)](#), or [\(b\)\(3\)\(i\)](#) of this section immediately, as specified in [§ 63.2342\(b\)\(3\)\(i\)](#), unless an alternative compliance schedule has been approved under [§ 63.2342\(b\)\(3\)\(ii\)](#) and subject to the use limitation specified in [§ 63.2342\(b\)\(3\)\(ii\)\(I\)](#).

(1) Meet the emission limits specified in Table 2 to this subpart and comply with [paragraph \(l\)](#) of this section and the applicable requirements for transfer racks specified in [subpart SS of this part](#), for meeting emission limits.

(2) Route emissions to fuel gas systems or back into a process as specified in [subpart SS of this part](#). If you comply with this paragraph, then you must also comply with the requirements specified in [paragraph \(l\)](#) of this section.

(3)

(i) Use a vapor balancing system that routes organic HAP vapors displaced from the loading of organic liquids into transport vehicles to the storage tank from which the liquid being loaded originated or to another storage tank connected to a common header.



(ii) Use a vapor balancing system that routes the organic HAP vapors displaced from the loading of organic liquids into containers directly (e.g., no intervening tank or containment area such as a room) to the storage tank from which the liquid being loaded originated or to another storage tank connected to a common header.

(c) **Equipment leak components.** For each pump, valve, and sampling connection that operates in organic liquids service for at least 300 hours per year, you must comply with [paragraph \(l\)](#) of this section and the applicable requirements under [subpart TT of this part](#) (control level 1), [subpart UU of this part](#) (control level 2), or [subpart H of this part](#). Pumps, valves, and sampling connectors that are insulated to provide protection against persistent sub-freezing temperatures are subject to the “difficult to monitor” provisions in the applicable subpart selected by the owner or operator. This paragraph only applies if the affected source has at least one storage tank or transfer rack that meets the applicability criteria for control in Table 2 or 2b to this subpart.

(d) **Transport vehicles.** For each transport vehicle equipped with vapor collection equipment that is loaded at a transfer rack that is subject to control based on the criteria specified in Table 2 to this subpart, items 7 through 10, you must comply with [paragraph \(d\)\(1\)](#) of this section. For each transport vehicle without vapor collection equipment that is loaded at a transfer rack that is subject to control based on the criteria specified in Table 2 to this subpart, items 7 through 10, you must comply with [paragraph \(d\)\(2\)](#) of this section.

(1) Follow the steps in [40 CFR 60.502\(e\)](#) to ensure that organic liquids are loaded only into vapor-tight transport vehicles and comply with the provisions in [40 CFR 60.502\(f\)](#) through [\(i\)](#), except substitute the term “transport vehicle” at each occurrence of the term “tank truck” or “gasoline tank truck” in those paragraphs.

(2) Ensure that organic liquids are loaded only into transport vehicles that have a current certification in accordance with the U.S. DOT qualification and maintenance requirements in [49 CFR part 180, subpart E](#) for cargo tanks and subpart F for tank cars.

(e) **Operating limits.** For each high throughput transfer rack, you must meet each operating limit in Table 3 to this subpart for each control device used to comply with the provisions of this subpart whenever emissions from the loading of organic liquids are routed to the control device. Except as specified in [paragraph \(k\)](#) of this section, for each storage tank and low throughput transfer rack, you must comply with [paragraph \(l\)](#) of this section and the requirements for monitored parameters as specified in [subpart SS of this part](#), for storage tanks and, during the loading of organic liquids, for low throughput transfer racks, respectively. Alternatively, you may comply with the operating limits in table 3 to this subpart.

(f) **Surrogate for organic HAP.** For noncombustion devices, if you elect to demonstrate compliance with a percent reduction requirement in Table 2 or 2b to this subpart using total organic compounds (TOC) rather than organic HAP, you must first demonstrate, subject to the approval of the Administrator, that TOC is an appropriate surrogate for organic HAP in your



case; that is, for your storage tank(s) and/or transfer rack(s), the percent destruction of organic HAP is equal to or higher than the percent destruction of TOC. This demonstration must be conducted prior to or during the initial compliance test.

(g) As provided in [§ 63.6\(g\)](#), you may request approval from the Administrator to use an alternative to the emission limitations, operating limits, and work practice standards in this section. You must follow the procedures in [§ 63.177\(b\)](#) through [\(e\)](#) in applying for permission to use such an alternative. If you apply for permission to use an alternative to the emission limitations, operating limits, and work practice standards in this section, you must submit the information described in [§ 63.6\(g\)\(2\)](#).

(h) [Reserved]

(i) **Safety device.** Opening of a safety device is allowed at any time that it is required to avoid unsafe operating conditions. Beginning no later than July 7, 2023, this paragraph no longer applies.

(j) If you elect to comply with this subpart by combining emissions from different emission sources subject to this subpart in a single control device, then you must comply with the provisions specified in [§ 63.982\(f\)](#).

(k) **Flares.** Beginning no later than the compliance dates specified in [§ 63.2342\(e\)](#), for each storage tank and low throughput transfer rack that is subject to control based on the criteria specified in Tables 2 or 2b to this subpart, if you vent emissions through a closed vent system to a flare then you must comply with the requirements specified in [§ 63.2380](#) instead of the requirements in [§ 63.987](#) and the provisions regarding flare compliance assessments at [§ 63.997\(a\)](#), [\(b\)](#), and [\(c\)](#).

(l) **Startup, shutdown, and malfunction.** Beginning no later than the compliance dates specified in [§ 63.2342\(e\)](#), the referenced provisions specified in [paragraphs \(l\)\(1\)](#) through [\(20\)](#) of this section do not apply when demonstrating compliance with [subpart H of this part](#), [subpart SS of this part](#), [subpart TT of this part](#), and [subpart UU of this part](#).

(1) The second sentence of [§ 63.181\(d\)\(5\)\(i\)](#).

(2) The second sentence of [§ 63.983\(a\)\(5\)](#).

(3) The phrase “except during periods of start-up, shutdown, and malfunction as specified in the referencing subpart” in [§ 63.984\(a\)](#).

(4) The phrase “except during periods of start-up, shutdown and malfunction as specified in the referencing subpart” in [§ 63.985\(a\)](#).

(5) The phrase “other than start-ups, shutdowns, or malfunctions” in [§ 63.994\(c\)\(1\)\(ii\)\(D\)](#).

(6) [§ 63.996\(c\)\(2\)\(ii\)](#).

- (7) The last sentence of [§ 63.997\(e\)\(1\)\(i\)](#).
- (8) § 63.998(b)(2)(iii).
- (9) The phrase “other than periods of start-ups, shutdowns or malfunctions” from [§ 63.998\(b\)\(5\)\(i\)\(A\)](#).
- (10) The phrase “other than a start-up, shutdown or malfunction” from [§ 63.998\(b\)\(5\)\(i\)\(B\)\(3\)](#).
- (11) The phrase “other than periods of start-ups, shutdowns or malfunctions” from [§ 63.998\(b\)\(5\)\(i\)\(C\)](#).
- (12) The phrase “other than a start-up, shutdown or malfunction” from [§ 63.998\(b\)\(5\)\(ii\)\(C\)](#).
- (13) The phrase “, except as provided in [paragraphs \(b\)\(6\)\(i\)\(A\)](#) and [\(B\)](#) of this section” from [§ 63.998\(b\)\(6\)\(i\)](#).
- (14) The second sentence of [§ 63.998\(b\)\(6\)\(ii\)](#).
- (15) § 63.998(c)(1)(ii)(D), (E), (F), and (G).
- (16) § 63.998(d)(3).
- (17) The phrase “may be included as part of the startup, shutdown, and malfunction plan, as required by the referencing subpart for the source, or” from [§ 63.1005\(e\)\(4\)\(i\)](#).
- (18) The phrase “may be included as part of the startup, shutdown, and malfunction plan, as required by the referencing subpart for the source, or” from [§ 63.1024\(f\)\(4\)\(i\)](#).
- (19) The phrase “(except periods of startup, shutdown, or malfunction)” from [§ 63.1007\(e\)\(1\)\(ii\)\(A\)](#).
- (20) The phrase “(except periods of startup, shutdown, or malfunction)” from [§ 63.1026\(e\)\(1\)\(ii\)\(A\)](#).

[[69 FR 5063](#), Feb. 3, 2004, as amended at [71 FR 42908](#), July 28, 2006; [73 FR 40981](#), July 17, 2008; [73 FR 21830](#), Apr. 23, 2008; [85 FR 40761](#), July 7, 2020; [89 FR 23866](#), Apr. 4, 2024]

## **General Compliance Requirements**

### **§ 63.2350 What are my general requirements for complying with this subpart?**

- (a) You must be in compliance with the emission limitations, operating limits, and work practice standards in this subpart at all times when the equipment identified in [§ 63.2338\(b\)\(1\)](#) through [\(5\)](#) is in OLD operation.
- (b) Except as specified in [paragraph \(d\)](#) of this section, you must always operate and maintain your affected source, including air pollution control and monitoring equipment, according to the provisions in [§ 63.6\(e\)\(1\)\(i\)](#).

(c) Except for emission sources not required to be controlled as specified in [§ 63.2343](#), you must develop a written startup, shutdown, and malfunction (SSM) plan according to the provisions in [§ 63.6\(e\)\(3\)](#). Beginning no later than July 7, 2023, this paragraph no longer applies; however, for historical compliance purposes, a copy of the plan must be retained and available according to the requirements in [§ 63.2394\(c\)](#) for five years after July 7, 2023.

(d) Beginning no later than the compliance dates specified in [§ 63.2342\(e\)](#), [paragraph \(b\)](#) of this section no longer applies. Instead, at all times, you must operate and maintain any affected source, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. The general duty to minimize emissions does not require you to make any further efforts to reduce emissions if levels required by the applicable standard have been achieved. Determination of whether a source is operating in compliance with operation and maintenance requirements will be based on information available to the Administrator which may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source.

[[85 FR 40763](#), July 7, 2020]

## Testing and Initial Compliance Requirements

### **§ 63.2354 What performance tests, design evaluations, and performance evaluations must I conduct?**

(a)

(1) For each performance test that you conduct, you must use the procedures specified in [subpart SS of this part](#) and the provisions specified in [paragraph \(b\)](#) of this section.

(2) For each design evaluation you conduct, you must use the procedures specified in [subpart SS of this part](#). You must also comply with the requirements specified in [§ 63.2346\(l\)](#).

(3) For each performance evaluation of a continuous emission monitoring system (CEMS) you conduct, you must follow the requirements in [§ 63.8\(e\)](#) and [paragraph \(d\)](#) of this section. For CEMS installed after the compliance date specified in [§ 63.2342\(e\)](#), conduct a performance evaluation of each CEMS within 180 days of installation of the monitoring system.

(b)

(1) Except as specified in [paragraph \(b\)\(6\)](#) of this section, for nonflare control devices, you must conduct each performance test according to the requirements in [§ 63.7\(e\)\(1\)](#), and either [§ 63.988\(b\)](#), [§ 63.990\(b\)](#), or [§ 63.995\(b\)](#), using the procedures specified in [§ 63.997\(e\)](#).

(2) You must conduct three separate test runs for each performance test on a nonflare control device as specified in [§§ 63.7\(e\)\(3\)](#) and [63.997\(e\)\(1\)\(v\)](#). Each test run must last at least 1 hour, except as provided in [§ 63.997\(e\)\(1\)\(v\)\(A\)](#) and [\(B\)](#).

(3)

(i) In addition to Method 25 or 25A ([40 CFR part 60, appendix A-7](#)), to determine compliance with the TOC emission limit, you may use Method 18 ([40 CFR part 60, appendix A-6](#)) or Method 320 of appendix A to this part to determine compliance with the total organic HAP emission limit. You may not use Method 18 or Method 320 of appendix A to this part if the control device is a combustion device, and you must not use Method 320 of appendix A to this part if the gas stream contains entrained water droplets. All compounds quantified by Method 320 of appendix A to this part must be validated according to [Section 13.0](#) of Method 320 of appendix A to this part. As an alternative to Method 18, for determining compliance with the total organic HAP emission limit, you may use ASTM D6420-18 (incorporated by reference, see [§ 63.14](#)), under the conditions specified in [paragraph \(b\)\(3\)\(ii\)](#) of this section.

(A) If you use Method 18 ([40 CFR 60, appendix A-6](#)) or Method 320 of appendix A to this part to measure compliance with the percentage efficiency limit, you must first determine which organic HAP are present in the inlet gas stream (*i.e.*, uncontrolled emissions) using knowledge of the organic liquids or the screening procedure described in Method 18. In conducting the performance test, you must analyze samples collected simultaneously at the inlet and outlet of the control device. Quantify the emissions for the same organic HAP identified as present in the inlet gas stream for both the inlet and outlet gas streams of the control device.

(B) If you use Method 18 ([40 CFR part 60, appendix A-6](#)) or Method 320 of appendix A to this part, to measure compliance with the emission concentration limit, you must first determine which organic HAP are present in the inlet gas stream using knowledge of the organic liquids or the screening procedure described in Method 18. In conducting the performance test, analyze samples collected as specified in Method 18 at the outlet of the control device. Quantify the control device outlet emission concentration for the same organic HAP identified as present in the inlet or uncontrolled gas stream.

(ii) You may use ASTM D6420-18 (incorporated by reference, see [§ 63.14](#)), to determine compliance with the total organic HAP emission limit if the target concentration for each HAP is between 150 parts per billion by volume and 100 ppmv and either of the conditions specified in [paragraph \(b\)\(2\)\(ii\)\(A\)](#) or [\(B\)](#) of this section exists. For target compounds not listed in [Section 1.1](#) of ASTM D6420-18 and not amenable to detection by mass spectrometry, you may not use ASTM D6420-18.

(A) The target compounds are those listed in [Section 1.1](#) of ASTM D6420-18 (incorporated by reference, see [§ 63.14](#)); or

(B) For target compounds not listed in [Section 1.1](#) of ASTM D6420-18 (incorporated by reference, see [§ 63.14](#)), but potentially detected by mass spectrometry, you must demonstrate recovery of the compound and the additional system continuing calibration check after each run, as detailed in ASTM D6420-18, [Section 10.5.3](#), must be followed, met, documented, and

submitted with the data report, even if there is no moisture condenser used or the compound is not considered water-soluble.

(iii) You may use ASTM D6348-12e1 (incorporated by reference, see [§ 63.14](#)) instead of Method 320 of appendix A to this part under the conditions specified in footnote 4 of Table 5 to this subpart.

(4) If a principal component of the uncontrolled or inlet gas stream to the control device is formaldehyde, you must use Method 316 of appendix A to this part, Method 320 of appendix A to this part, or Method 323 of appendix A to this part for measuring the formaldehyde, except you must not use Method 320 or Method 323 of appendix A to this part if the gas stream contains entrained water droplets. If you use Method 320 of appendix A to this part, formaldehyde must be validated according to [Section 13.0](#) of Method 320 of appendix A to this part. You must measure formaldehyde either at the inlet and outlet of the control device to determine control efficiency or at the outlet of a combustion device for determining compliance with the emission concentration limit. You may use ASTM D6348-12e1 (incorporated by reference, see [§ 63.14](#)) instead of Method 320 of appendix A to this part under the conditions specified in footnote 4 of Table 5 to this subpart.

(5) Except as specified in [paragraph \(b\)\(6\)](#) of this section, you may not conduct performance tests during periods of SSM, as specified in [§ 63.7\(e\)\(1\)](#).

(6) Beginning no later than the compliance dates specified in [§ 63.2342\(e\)](#), [paragraphs \(b\)\(1\)](#) and [\(5\)](#) of this section no longer apply. Instead, you must conduct each performance test according to the requirements in [paragraphs \(b\)\(6\)\(i\)](#) and [\(ii\)](#) of this section.

(i) In lieu of the requirements specified in [§ 63.7\(e\)\(1\)](#), you must conduct performance tests under such conditions as the Administrator specifies based on representative performance of the affected source for the period being tested. Representative conditions exclude periods of startup and shutdown. You may not conduct performance tests during periods of malfunction. You must record the process information that is necessary to document operating conditions during the test and include in such record an explanation to support that such conditions represent normal operation. Upon request, you must make available to the Administrator such records as may be necessary to determine the conditions of performance tests.

(ii) Pursuant to [paragraph \(b\)\(6\)\(i\)](#) of this section, you must conduct each performance test according to the requirements in either [§ 63.988\(b\)](#), [§ 63.990\(b\)](#), or [§ 63.995\(b\)](#), using the procedures specified in [§ 63.997\(e\)](#). You must also comply with the requirements specified in [§ 63.2346\(l\)](#).

(c) To determine the HAP content of the organic liquid, you may use Method 311 of appendix A to this part, ASTM D6886-18 (incorporated by reference, see [§ 63.14](#)), or other method approved by the Administrator. If you use ASTM D6886-18 to determine the HAP content, you must use either Method B or Method B in conjunction with Method C, as described in [section 4.3](#) of

ASTM D6886-18. In addition, you may use other means, such as voluntary consensus standards, safety data sheets (SDS), or certified product data sheets, to determine the HAP content of the organic liquid. If the method you select to determine the HAP content provides HAP content ranges, you must use the upper end of each HAP content range in determining the total HAP content of the organic liquid. The EPA may require you to test the HAP content of an organic liquid using Method 311 of appendix A to this part or other method approved by the Administrator. For liquids that contain any amount of formaldehyde or carbon tetrachloride, you may not use Method 311 of appendix A to this part. If the results of the Method 311 of appendix A to this part (or any other approved method) are different from the HAP content determined by another means, the Method 311 of appendix A to this part (or approved method) results will govern. For liquids that contain any amount of formaldehyde or carbon tetrachloride, if the results of ASTM D6886-18 using method B or C in [section 4.3](#) (or any other approved method) are different from the HAP content determined by another means, ASTM D6886-18 using method B or C in section 4 (or approved method) results will govern.

(d) Each VOC CEMS must be installed, operated, and maintained according to the requirements of one of the following performance specifications in appendix B to [part 60 of this chapter](#): Performance Specification 8, Performance Specification 8A, Performance Specification 9, or Performance Specification 15. You must also comply with the requirements of procedure 1 of appendix F to [part 60 of this chapter](#), for CEMS using Performance Specification 8 or 8A.

(1) For CEMS using Performance Specification 9 or 15 ([40 CFR part 60, appendix B](#)), determine the target analyte(s) for calibration using either process knowledge or the screening procedures of Method 18 ([40 CFR part 60, appendix A-6](#)).

(2) For CEMS using Performance Specification 8A ([40 CFR part 60, appendix B](#)), conduct the relative accuracy test audits required under Procedure 1 ([40 CFR part 60, appendix F](#)) in accordance with Sections 8 and 11 of Performance Specification 8 ([40 CFR part 60, appendix B](#)). The relative accuracy must meet the criteria of [Section 13.2](#) of Performance Specification 8 ([40 CFR part 60, appendix B](#)).

(3) For CEMS using Performance Specification 8 or 8A of [40 CFR part 60, appendix B](#), calibrate the instrument on methane and report the results as carbon (C1). Use Method 25A of [40 CFR part 60, appendix A-7](#) as the reference method for the relative accuracy tests.

(4) If you are required to monitor oxygen in order to conduct concentration corrections, you must use Performance Specification 3 ([40 CFR part 60, appendix B](#)), to certify your oxygen CEMS, and you must comply with procedure 1 ([40 CFR part 60, appendix F](#)). Use Method 3A ([40 CFR part 60, appendix A-2](#)), as the reference method when conducting a relative accuracy test audit.

[[69 FR 5063](#), Feb. 3, 2004, as amended at [85 FR 40763](#), July 7, 2020]

**§ 63.2358 By what date must I conduct performance tests and other initial compliance demonstrations?**

(a) You must conduct initial performance tests and design evaluations according to the schedule in [§ 63.7\(a\)\(2\)](#), or by the compliance date specified in any applicable State or Federal new source review construction permit to which the affected source is already subject, whichever is earlier.

(b)

(1) For storage tanks and transfer racks at existing affected sources complying with the emission limitations listed in Table 2 to this subpart, you must demonstrate initial compliance with the emission limitations within 180 days after February 5, 2007, except as provided in [paragraphs \(b\)\(1\)\(i\) and \(b\)\(1\)\(ii\)](#) of this section.

(i) For storage tanks with an existing internal or external floating roof, complying with item 1.a.ii. in Table 2 to this subpart and item 1.a. in Table 4 to this subpart, you must conduct your initial compliance demonstration the next time the storage tank is emptied and degassed, but not later than February 3, 2014.

(ii) For storage tanks complying with item 1.a.ii. or 6.a.ii in Table 2 of this subpart and item 1.b., 1.c., or 2. in Table 4 of this subpart, you must comply within 180 days after April 25, 2011.

(2) For storage tanks and transfer racks at reconstructed or new affected sources complying with the emission limitations listed in Table 2 to this subpart, you must conduct your initial compliance demonstration with the emission limitations within 180 days after the initial startup date for the affected source or February 3, 2004, whichever is later.

(3) For storage tanks at existing affected sources that commenced construction or reconstruction on or before October 21, 2019, you must demonstrate initial compliance with the emission limitations listed in Table 2b to this subpart within 180 days of either the initial startup or July 7, 2023, whichever is later, except as provided in [paragraphs \(b\)\(3\)\(i\) and \(ii\)](#) of this section.

(i) For storage tanks with an existing internal or external floating roof, complying with item 1.a.ii. in Table 2b to this subpart and item 1.a. in Table 4 to this subpart, you must conduct your initial compliance demonstration the next time the storage tank is emptied and degassed, but not later than July 7, 2030.

(ii) For storage tanks complying with item 1.a.ii. in Table 2b to this subpart and item 1.b. or 1.c. in Table 4 to this subpart, you must comply within 180 days after July 7, 2023.

(c)

(1) For storage tanks at existing affected sources complying with the work practice standard in Table 4 to this subpart, you must conduct your initial compliance demonstration as specified in [paragraphs \(c\)\(1\)\(i\) and \(c\)\(1\)\(ii\)](#) of this section.

(i) For storage tanks with an existing internal or external floating roof, complying with item 1.a. in Table 4 of this subpart, you must conduct your initial compliance demonstration the next time the storage tank is emptied and degassed, but not later than February 3, 2014.



(ii) For other storage tanks not specified in [paragraph \(c\)\(1\)\(i\)](#) of this section, you must comply within 180 days after April 25, 2011.

(2) For transfer racks and equipment leak components at existing affected sources complying with the work practice standards in Table 4 to this subpart, you must conduct your initial compliance demonstration within 180 days after February 5, 2007.

(d) For storage tanks, transfer racks, and equipment leak components at reconstructed or new affected sources complying with the work practice standards in Table 4 to this subpart, you must conduct your initial compliance demonstration within 180 days after the initial startup date for the affected source.

[[69 FR 5063](#), Feb. 3, 2004, as amended at [73 FR 40981](#), July 17, 2008; [85 FR 40765](#), July 7, 2020]

#### **§ 63.2362 When must I conduct subsequent performance tests?**

(a) For nonflare control devices, you must conduct subsequent performance testing required in Table 5 to this subpart, item 1, at any time the EPA requests you to in accordance with section 114 of the CAA.

(b)

(1) For each transport vehicle that you own that is equipped with vapor collection equipment and that is loaded with organic liquids at a transfer rack that is subject to control based on the criteria specified in Table 2 to this subpart, items 7 through 10, you must perform the vapor tightness testing required in Table 5 to this subpart, item 2, on that transport vehicle at least once per year.

(2) For transport vehicles that you own that do not have vapor collection equipment, you must maintain current certification in accordance with the U.S. DOT qualification and maintenance requirements in [49 CFR part 180, subparts E](#) (cargo tanks) and F (tank cars).

[[69 FR 5063](#), Feb. 3, 2004, as amended at [71 FR 42910](#), July 28, 2006; [85 FR 40765](#), July 7, 2020]

#### **§ 63.2366 What are my monitoring installation, operation, and maintenance requirements?**

(a) You must install, operate, and maintain a continuous monitoring system (CMS) on each control device required in order to comply with this subpart. If you use a continuous parameter monitoring system (CPMS) (as defined in [§ 63.981](#)), you must comply with [§ 63.2346\(l\)](#) and the applicable requirements for CPMS in [subpart SS of this part](#) and [§ 63.671](#), for the control device being used. If you use a CEMS, you must install, operate, and maintain the CEMS according to the requirements in [§ 63.8](#) and [paragraph \(d\)](#) of this section, except as specified in [paragraph \(c\)](#) of this section.



(b) For nonflare control devices controlling storage tanks and low throughput transfer racks, you must submit a monitoring plan according to the requirements in [subpart SS of this part](#), for monitoring plans. You must also comply with the requirements specified in [§ 63.2346\(l\)](#).

(c) Beginning no later than the compliance dates specified in [§ 63.2342\(e\)](#), you must keep the written procedures required by [§ 63.8\(d\)\(2\)](#) on record for the life of the affected source or until the affected source is no longer subject to the provisions of this part, to be made available for inspection, upon request, by the Administrator. If the performance evaluation plan is revised, you must keep previous (*i.e.*, superseded) versions of the performance evaluation plan on record to be made available for inspection, upon request, by the Administrator, for a period of 5 years after each revision to the plan. The program of corrective action should be included in the plan required under [§ 63.8\(d\)\(2\)](#). In addition to the information required in [§ 63.8\(d\)\(2\)](#), your written procedures for CEMS must include the information in [paragraphs \(c\)\(1\) through \(6\)](#) of this section:

(1) Description of CEMS installation location.

(2) Description of the monitoring equipment, including the manufacturer and model number for all monitoring equipment components and the span of the analyzer.

(3) Routine quality control and assurance procedures.

(4) Conditions that would trigger a CEMS performance evaluation, which must include, at a minimum, a newly installed CEMS; a process change that is expected to affect the performance of the CEMS; and the Administrator's request for a performance evaluation under section 114 of the Clean Air Act.

(5) Ongoing operation and maintenance procedures in accordance with the general requirements of [§ 63.8\(c\)\(1\)](#) and [\(3\)](#), [\(c\)\(4\)\(ii\)](#), and [\(c\)\(7\)](#) and [\(8\)](#);

(6) Ongoing recordkeeping and reporting procedures in accordance with the general requirements of [§ 63.10\(c\)](#) and [\(e\)\(1\)](#).

(d) For each CEMS, you must locate the sampling probe or other interface at a measurement location such that you obtain representative measurements of emissions from the regulated source and comply with the applicable requirements specified in [§ 63.2354\(d\)](#).

[\[85 FR 40765\]](#), July 7, 2020]

### **§ 63.2370 How do I demonstrate initial compliance with the emission limitations, operating limits, and work practice standards?**

(a) You must demonstrate initial compliance with each emission limitation and work practice standard that applies to you as specified in Tables 6 and 7 to this subpart.

(b) You demonstrate initial compliance with the operating limits requirements specified in [§ 63.2346\(e\)](#) by establishing the operating limits during the initial performance test or design evaluation.

(c) You must submit the results of the initial compliance determination in the Notification of Compliance Status according to the requirements in [§ 63.2382\(d\)](#). If the initial compliance determination includes a performance test and the results are submitted electronically via the Compliance and Emissions Data Reporting Interface (CEDRI) in accordance with [§ 63.2386\(g\)](#), the unit(s) tested, the pollutant(s) tested, and the date that such performance test was conducted may be submitted in the Notification of Compliance Status in lieu of the performance test results. The performance test results must be submitted to CEDRI by the date the Notification of Compliance Status is submitted.

[[69 FR 5063](#), Feb. 3, 2004, as amended at [85 FR 40765](#), July 7, 2020]

### **Continuous Compliance Requirements**

#### **§ 63.2374 When do I monitor and collect data to demonstrate continuous compliance and how do I use the collected data?**

(a) You must monitor and collect data according to [subpart SS of this part](#), and [paragraphs \(b\) and \(c\)](#) of this section. You must also comply with the requirements specified in [§ 63.2346\(l\)](#).

(b) When using a control device to comply with this subpart, you must monitor continuously or collect data at all required intervals at all times that the emission source and control device are in OLD operation, except for CMS malfunctions (including any malfunction preventing the CMS from operating properly), associated repairs, and required quality assurance or control activities (including, as applicable, calibration checks and required zero and span adjustments).

(c) Do not use data recorded during CMS malfunctions, associated repairs, required quality assurance or control activities, or periods when emissions from organic liquids are not routed to the control device in data averages and calculations used to report emission or operating levels. Do not use such data in fulfilling a minimum data availability requirement, if applicable. You must use all of the data collected during all other periods, including periods of SSM, in assessing the operation of the control device.

[[69 FR 5063](#), Feb. 3, 2004, as amended at [85 FR 40765](#), July 7, 2020]

#### **§ 63.2378 How do I demonstrate continuous compliance with the emission limitations, operating limits, and work practice standards?**

(a) You must demonstrate continuous compliance with each emission limitation, operating limit, and work practice standard in Tables 2 through 4 to this subpart that applies to you according to the methods specified in [subpart SS of this part](#), and in Tables 8 through 10 to this subpart, as applicable. You must also comply with the requirements specified in [§ 63.2346\(l\)](#).

(b) Except as specified in [paragraph \(e\)](#) of this section, you must follow the requirements in [§ 63.6\(e\)\(1\)](#) and [\(3\)](#) during periods of startup, shutdown, malfunction, or nonoperation of the affected source or any part thereof. In addition, the provisions of [paragraphs \(b\)\(1\)](#) through [\(3\)](#) of this section apply.

(1) The emission limitations in this subpart apply at all times except during periods of nonoperation of the affected source (or specific portion thereof) resulting in cessation of the emissions to which this subpart applies. The emission limitations of this subpart apply during periods of SSM, except as provided in [paragraphs \(b\)\(2\)](#) and [\(3\)](#) of this section. However, if a SSM, or period of nonoperation of one portion of the affected source does not affect the ability of a particular emission source to comply with the emission limitations to which it is subject, then that emission source is still required to comply with the applicable emission limitations of this subpart during the startup, shutdown, malfunction, or period of nonoperation.

(2) The owner or operator must not shut down control devices or monitoring systems that are required or utilized for achieving compliance with this subpart during periods of SSM while 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 \(b\)\(2\)](#) does not apply if the item of equipment is malfunctioning. This [paragraph \(b\)\(2\)](#) also does not apply if the owner or operator shuts down the compliance equipment (other than monitoring systems) to avoid damage due to a contemporaneous SSM of the affected source or portion thereof. If the owner or operator has reason to believe that monitoring equipment would be damaged due to a contemporaneous SSM of the affected source or portion thereof, the owner or operator must provide documentation supporting such a claim in the next Compliance report required in Table 11 to this subpart, item 1. Once approved by the Administrator, the provision for ceasing to collect, during a SSM, monitoring data that would otherwise be required by the provisions of this subpart must be incorporated into the SSM plan.

(3) During SSM, you must implement, to the extent reasonably available, measures to prevent or minimize excess emissions. For purposes of this [paragraph \(b\)\(3\)](#), the term “excess emissions” means emissions greater than those allowed by the emission limits that apply during normal operational periods. The measures to be taken must be identified in the SSM 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 affected source. Back-up control devices are not required, but may be used if available.

(c) Except as specified in [paragraph \(e\)](#) of this section, periods of planned routine maintenance of a control device used to control storage tanks or transfer racks, during which the control device does not meet the emission limits in Table 2 to this subpart, must not exceed 240 hours per year.

(d) Except as specified in [paragraph \(e\)](#) of this section, if you elect to route emissions from storage tanks or transfer racks to a fuel gas system or to a process, as allowed by [§ 63.982\(d\)](#), to comply with the emission limits in Table 2 to this subpart, the total aggregate amount of time

during which the emissions bypass the fuel gas system or process during the calendar year without being routed to a control device, for all reasons (except SSM or product changeovers of flexible operation units and periods when a storage tank has been emptied and degassed), must not exceed 240 hours.

(e) Beginning no later than the compliance dates specified in [§ 63.2342\(e\)](#), [paragraphs \(b\) through \(d\)](#) of this section no longer apply. Instead, you must be in compliance with each emission limitation, operating limit, and work practice standard specified in [paragraph \(a\)](#) of this section at all times, except during periods of nonoperation of the affected source (or specific portion thereof) resulting in cessation of the emissions to which this subpart applies and must comply with the requirements specified in [paragraphs \(e\)\(1\) through \(4\)](#) of this section, as applicable. Equipment subject to the work practice standards for equipment leak components in Table 4 to this subpart, item 4 are not subject to this [paragraph \(e\)](#).

(1) Except as specified in [paragraphs \(e\)\(3\) and \(4\)](#) of this section, the use of a bypass line at any time on a closed vent system to divert a vent stream to the atmosphere or to a control device not meeting the requirements specified in [paragraph \(a\)](#) of this section is an emissions standards deviation.

(2) If you are subject to the bypass monitoring requirements of [§ 63.983\(a\)\(3\)](#), then you must continue to comply with the requirements in [§ 63.983\(a\)\(3\)](#) and the recordkeeping and reporting requirements in [§§ 63.998\(d\)\(1\)\(ii\) and 63.999\(c\)\(2\)](#), in addition to [§ 63.2346\(l\)](#), the recordkeeping requirements specified in [§ 63.2390\(g\)](#), and the reporting requirements specified in [§ 63.2386\(c\)\(12\)](#).

(3) Periods of planned routine maintenance of a control device used to control storage tank breathing loss emissions, during which the control device does not meet the emission limits in Table 2 or 2b to this subpart, must not exceed 240 hours per year. The level of material in the storage tank shall not be increased during periods that the closed-vent system or control device is bypassed to perform planned routine maintenance.

(4) If you elect to route emissions from storage tanks to a fuel gas system or to a process, as allowed by [§ 63.982\(d\)](#), to comply with the emission limits in Table 2 or 2b to this subpart, the total aggregate amount of time during which the breathing loss emissions bypass the fuel gas system or process during the calendar year without being routed to a control device, for all reasons (except product changeovers of flexible operation units and periods when a storage tank has been emptied and degassed), must not exceed 240 hours. The level of material in the storage tank shall not be increased during periods that the fuel gas system or process is bypassed.

(f) The CEMS data must be reduced to daily averages computed using valid data consistent with the data availability requirements specified in [§ 63.999\(c\)\(6\)\(i\)\(B\)](#) through [\(D\)](#), except monitoring data also are sufficient to constitute a valid hour of data if measured values are available for at least two of the 15-minute periods during an hour when calibration, quality

assurance, or maintenance activities are being performed. In computing daily averages to determine compliance with this subpart, you must exclude monitoring data recorded during CEMS breakdowns, out of control periods, repairs, maintenance periods, calibration checks, or other quality assurance activities.

[[69 FR 5063](#), Feb. 3, 2004, as amended at [71 FR 20463](#), Apr. 20, 2006; [85 FR 40766](#), July 7, 2020; [89 FR 23866](#), Apr. 4, 2024]

### **§ 63.2380 What are my requirements for certain flares?**

(a) Beginning no later than the compliance dates specified in [§ 63.2342\(e\)](#), if you reduce organic HAP emissions by venting emissions through a closed vent system to a steam-assisted, air-assisted, or non-assisted flare to control emissions from a storage tank, low throughput transfer rack, or high throughput transfer rack that is subject to control based on the criteria specified in Tables 2 or 2b to this subpart, then the flare requirements specified in [§ 63.11\(b\)](#); [subpart SS of this part](#); the provisions specified in items 7.a through 7.d of Table 3 to this subpart; Table 8 to this subpart; and the provisions specified in items 1.a.iii and 2.a.iii, and items 7.a through 7.d.2 of Table 9 to this subpart no longer apply. Instead, you must meet the applicable requirements for flares as specified in [§§ 63.670](#) and [63.671](#), including the provisions in Tables 12 and 13 to [subpart CC of this part](#), except as specified in [paragraphs \(b\)](#) through [\(m\)](#) of this section. For purposes of compliance with this paragraph, the following terms are defined in [§ 63.641](#): Assist air, assist steam, center steam, combustion zone, combustion zone gas, flare, flare purge gas, flare supplemental gas, flare sweep gas, flare vent gas, lower steam, net heating value, perimeter assist air, pilot gas, premix assist air, total steam, and upper steam.

(b) The following phrases in [§ 63.670\(c\)](#) do not apply:

(1) “Specify the smokeless design capacity of each flare and”; and

(2) “And the flare vent gas flow rate is less than the smokeless design capacity of the flare.”

(c) The phrase “and the flare vent gas flow rate is less than the smokeless design capacity of the flare” in [§ 63.670\(d\)](#) does not apply.

(d) Section 63.670(j)(6)(ii) does not apply. Instead submit the information required by [§ 63.670\(j\)\(6\)\(ii\)](#) with the Notification of Compliance Status according to [§ 63.2382\(d\)\(2\)\(ix\)](#).

(e) Section 63.670(o) does not apply.

(f) Substitute “pilot flame or flare flame” for each occurrence of “pilot flame.”

(g) Substitute “affected source” for each occurrence of “petroleum refinery.”

(h) Each occurrence of “refinery” does not apply.

(i) You may elect to comply with the alternative means of emissions limitation requirements specified in [§ 63.670\(r\)](#) in lieu of the requirements in [§ 63.670\(d\)](#) through [\(f\)](#), as applicable.

However, instead of complying with [§ 63.670\(r\)\(3\)\(iii\)](#), you must also submit the alternative means of emissions limitation request to the following address: U.S. Environmental Protection Agency, Office of Air Quality Planning and Standards, Sector Policies and Programs Division, U.S. EPA Mailroom (E143-01), Attention: Organic Liquids Distribution Sector Lead, 109 T.W. Alexander Drive, Research Triangle Park, NC 27711. Electronic copies in lieu of hard copies may also be submitted to [oldtrtr@epa.gov](mailto:oldtrtr@epa.gov).

(j) If you choose to determine compositional analysis for net heating value with a continuous process mass spectrometer, then you must comply with the requirements specified in [paragraphs \(j\)\(1\) through \(7\)](#) of this section.

(1) You must meet the requirements in [§ 63.671\(e\)\(2\)](#). You may augment the minimum list of calibration gas components found in [§ 63.671\(e\)\(2\)](#) with compounds found during a pre-survey or known to be in the gas through process knowledge.

(2) Calibration gas cylinders must be certified to an accuracy of 2 percent and traceable to National Institute of Standards and Technology (NIST) standards.

(3) For unknown gas components that have similar analytical mass fragments to calibration compounds, you may report the unknowns as an increase in the overlapped calibration gas compound. For unknown compounds that produce mass fragments that do not overlap calibration compounds, you may use the response factor for the nearest molecular weight hydrocarbon in the calibration mix to quantify the unknown component's NHV<sub>vg</sub>.

(4) You may use the response factor for n-pentane to quantify any unknown components detected with a higher molecular weight than n-pentane.

(5) You must perform an initial calibration to identify mass fragment overlap and response factors for the target compounds.

(6) You must meet applicable requirements in Performance Specification (PS) 9 ([40 CFR part 60, appendix B](#)) for continuous monitoring system acceptance including, but not limited to, performing an initial multi-point calibration check at three concentrations following the procedure in [Section 10.1](#) of PS 9 and performing the periodic calibration requirements listed for gas chromatographs in Table 13 to [subpart CC of this part](#), for the process mass spectrometer. You may use the alternative sampling line temperature allowed under Net Heating Value by Gas Chromatograph in Table 13 to [subpart CC of this part](#).

(7) The average instrument calibration error (CE) for each calibration compound at any calibration concentration must not differ by more than 10 percent from the certified cylinder gas value. The CE for each component in the calibration blend must be calculated using the following equation:

$$CE = \frac{C_m - C_a}{C_a} \times 100$$

Where:

C<sub>m</sub> = Average instrument response (ppm)

C<sub>a</sub> = Certified cylinder gas value (ppm)

(k) If you use a gas chromatograph or mass spectrometer for compositional analysis for net heating value, then you may choose to use the CE of NHV measured versus the cylinder tag value NHV as the measure of agreement for daily calibration and quarterly audits in lieu of determining the compound-specific CE. The CE for NHV at any calibration level must not differ by more than 10 percent from the certified cylinder gas value. The CE for must be calculated using the following equation:

$$CE = \frac{NHV_{measured} - NHV_a}{NHV_a} \times 100$$

Where:

NHV<sub>measured</sub> = Average instrument response (Btu/scf)

NHV<sub>a</sub> = Certified cylinder gas value (Btu/scf)

(l) Instead of complying with [§ 63.670\(p\)](#), you must keep the flare monitoring records specified in [§ 63.2390\(h\)](#).

(m) Instead of complying with [§ 63.670\(q\)](#), you must comply with the reporting requirements specified in [§ 63.2382\(d\)\(2\)\(ix\)](#) and [§ 63.2386\(d\)\(5\)](#).

[[85 FR 40766](#), July 7, 2020]

## Notifications, Reports, and Records

### **§ 63.2382 What notifications must I submit and when and what information should be submitted?**

(a) You must submit each notification in [subpart SS of this part](#), Table 12 to this subpart, and [paragraphs \(b\)](#) through [\(d\)](#) of this section that applies to you. You must submit these notifications according to the schedule in Table 12 to this subpart and as specified in [paragraphs \(b\)](#) through [\(d\)](#) of this section. You must also comply with the requirements specified in [§ 63.2346\(l\)](#).

(b) ***Initial Notification.***



(1) If you startup your affected source before February 3, 2004, you must submit the Initial Notification no later than 120 calendar days after February 3, 2004, or no later than 120 days after the source becomes subject to this subpart, whichever is later.

(2) If you startup your new or reconstructed affected source on or after February 3, 2004, you must submit the Initial Notification no later than 120 days after initial startup, or no later than 120 days after the source becomes subject to this subpart, whichever is later.

(c) If you are required to conduct a performance test, you must submit the Notification of Intent to conduct the test at least 60 calendar days before it is initially scheduled to begin as required in [§ 63.7\(b\)\(1\)](#).

(d)

(1) ***Notification of Compliance Status.*** If you are required to conduct a performance test, design evaluation, or other initial compliance demonstration as specified in Table 5, 6, or 7 to this subpart, you must submit a Notification of Compliance Status.

(2) ***Notification of Compliance Status requirements.*** The Notification of Compliance Status must include the information required in [§ 63.999\(b\)](#) and in [paragraphs \(d\)\(2\)\(i\)](#) through [\(ix\)](#) of this section.

(i) The results of any applicability determinations, emission calculations, or analyses used to identify and quantify organic HAP emissions from the affected source.

(ii) The results of emissions profiles, performance tests, engineering analyses, design evaluations, flare compliance assessments, inspections and repairs, and calculations used to demonstrate initial compliance according to Tables 6 and 7 to this subpart. For performance tests, results must include descriptions of sampling and analysis procedures and quality assurance procedures. If performance test results are submitted electronically via CEDRI in accordance with [§ 63.2386\(g\)](#), the unit(s) tested, the pollutant(s) tested, and the date that such performance test was conducted may be submitted in the Notification of Compliance Status in lieu of the performance test results. The performance test results must be submitted to CEDRI by the date the Notification of Compliance Status is submitted.

(iii) Descriptions of monitoring devices, monitoring frequencies, and the operating limits established during the initial compliance demonstrations, including data and calculations to support the levels you establish.

(iv) Descriptions of worst-case operating and/or testing conditions for the control device(s).

(v) Identification of emission sources subject to overlapping requirements described in [§ 63.2396](#) and the authority under which you will comply.



(vi) The applicable information specified in [§ 63.1039\(a\)\(1\)](#) through [\(3\)](#) for all pumps and valves subject to the work practice standards for equipment leak components in Table 4 to this subpart, item 4.

(vii) If you are complying with the vapor balancing work practice standard for transfer racks according to Table 4 to this subpart, item 3.a, include a statement to that effect and a statement that the pressure vent settings on the affected storage tanks are greater than or equal to 2.5 psig.

(viii) The information specified in [§ 63.2386\(c\)\(10\)\(i\)](#), unless the information has already been submitted with the first Compliance report. If the information specified in [§ 63.2386\(c\)\(10\)\(i\)](#) has already been submitted with the first Compliance report, the information specified in [§ 63.2386\(d\)\(3\)](#) and [\(4\)](#), as applicable, shall be submitted instead.

(ix) For flares subject to the requirements of [§ 63.2380](#), you must also submit the information in this paragraph in a supplement to the Notification of Compliance Status within 150 days after the first applicable compliance date for flare monitoring. In lieu of the information required in [§ 63.987\(b\)](#), the Notification of Compliance Status must include flare design (*e.g.*, steam-assisted, air-assisted, or non-assisted); all visible emission readings, heat content determinations (including information required by [§ 63.670\(j\)\(6\)\(i\)](#), as applicable), flow rate measurements, and exit velocity determinations made during the initial visible emissions demonstration required by [§ 63.670\(h\)](#), as applicable; and all periods during the compliance determination when the pilot flame or flare flame is absent.

(3) ***Submitting Notification of Compliance Status.*** Beginning no later than the compliance dates specified in [§ 63.2342\(e\)](#), you must submit all subsequent Notification of Compliance Status reports in portable document format (PDF) format to the EPA following the procedure specified in [§ 63.9\(k\)](#), except any medium submitted through mail must be sent to the attention of the Organic Liquids Distribution Sector Lead.

[[69 FR 5063](#), Feb. 3, 2004, as amended at [71 FR 42910](#), July 28, 2006; [85 FR 40767](#), July 7, 2020; [85 FR 73903](#), Nov. 19, 2020; [89 FR 23867](#), Apr. 4, 2024]

**§ 63.2386 What reports must I submit and when and what information is to be submitted in each?**

(a) You must submit each report in [subpart SS of this part](#), Table 11 to this subpart, Table 12 to this subpart, and in [paragraphs \(c\)](#) through [\(j\)](#) of this section that applies to you. You must also comply with the requirements specified in [§ 63.2346\(l\)](#).

(b) Unless the Administrator has approved a different schedule for submission of reports under [§ 63.10\(a\)](#), you must submit each report according to Table 11 to this subpart and by the dates shown in [paragraphs \(b\)\(1\)](#) through [\(3\)](#) of this section, by the dates shown in [subpart SS of this part](#), and by the dates shown in Table 12 to this subpart, whichever are applicable.

(1)

(i) The first Compliance report must cover the period beginning on the compliance date that is specified for your affected source in [§ 63.2342](#) 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 affected source in [§ 63.2342](#).

(ii) The first Compliance report must be postmarked 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 [§ 63.2342](#).

(2)

(i) 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.

(ii) Each subsequent Compliance report must be postmarked no later than July 31 or January 31, whichever date is the first date following the end of the semiannual reporting period.

(3) For each affected source that is subject to permitting regulations pursuant to [40 CFR part 70](#) or [40 CFR part 71](#), 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 \(b\)\(1\) and \(2\)](#) of this section.

(c) **First Compliance report.** The first Compliance report must contain the information specified in [paragraphs \(c\)\(1\) through \(12\)](#) of this section, as well as the information specified in [paragraph \(d\)](#) of this section.

(1) Company name and address.

(2) Statement by a responsible official, including the official's name, title, and signature, certifying that, based on information and belief formed after reasonable inquiry, the statements and information in the report are true, accurate, and complete. If your report is submitted via CEDRI, the certifier's electronic signature during the submission process replaces this requirement.

(3) Date of report and beginning and ending dates of the reporting period. You are no longer required to provide the date of report when the report is submitted via CEDRI.

(4) Any changes to the information listed in [§ 63.2382\(d\)\(2\)](#) that have occurred since the submittal of the Notification of Compliance Status.

(5) Except as specified in [paragraph \(c\)\(11\)](#) of this section, if you had a SSM during the reporting period and you took actions consistent with your SSM plan, the Compliance report must include the information described in [§ 63.10\(d\)\(5\)\(i\)](#).

(6) If there are no deviations from any emission limitation or operating limit that applies to you and there are no deviations from the requirements for work practice standards, a statement that there were no deviations from the emission limitations, operating limits, or work practice standards during the reporting period.

(7) If there were no periods during which the CMS 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.

(8) For closed vent systems and control devices used to control emissions, the information specified in [paragraphs \(c\)\(8\)\(i\) and \(ii\)](#) of this section for those planned routine maintenance activities that would require the control device to not meet the applicable emission limit.

(i) A description of the planned routine maintenance that is anticipated to be performed for the control device during the next 6 months. This description must include the type of maintenance necessary, planned frequency of maintenance, and lengths of maintenance periods.

(ii) A description of the planned routine maintenance that was performed for the control device during the previous 6 months. This description must include the type of maintenance performed and the total number of hours during those 6 months that the control device did not meet the applicable emission limit due to planned routine maintenance.

(9) A listing of all transport vehicles into which organic liquids were loaded at transfer racks that are subject to control based on the criteria specified in Table 2 to this subpart, items 7 through 10, during the previous 6 months for which vapor tightness documentation as required in [§ 63.2390\(c\)](#) was not on file at the facility.

(10)

(i) A listing of all transfer racks (except those racks at which only unloading of organic liquids occurs) and of tanks greater than or equal to 18.9 cubic meters (5,000 gallons) that are part of the affected source but are not subject to any of the emission limitations, operating limits, or work practice standards of this subpart.

(ii) If the information specified in [paragraph \(c\)\(10\)\(i\)](#) of this section has already been submitted with the Notification of Compliance Status, the information specified in [paragraphs \(d\)\(3\) and \(4\)](#) of this section, as applicable, shall be submitted instead.

(11) Beginning no later than the compliance dates specified in [§ 63.2342\(e\)](#), [paragraph \(c\)\(5\)](#) of this section no longer applies.

(12) Beginning no later than the compliance dates specified in [§ 63.2342\(e\)](#), for bypass lines subject to the requirements [§ 63.2378\(e\)\(1\)](#) and [\(2\)](#), the compliance report must include the start date, start time, duration in hours, estimate of the volume of gas in standard cubic feet (scf), the concentration of organic HAP in the gas in ppmv and the resulting mass emissions of organic

HAP in pounds that bypass a control device. For periods when the flow indicator is not operating, report the start date, start time, and duration in hours.

(d) ***Subsequent Compliance reports.*** Subsequent Compliance reports must contain the information in paragraphs (c)(1) through (9) and [paragraph \(c\)\(12\)](#) of this section and, where applicable, the information in [paragraphs \(d\)\(1\)](#) through [\(5\)](#) of this section.

(1) For each deviation from an emission limitation occurring at an affected source where you are using a CMS to comply with an emission limitation in this subpart, or for each CMS that was inoperative or out of control during the reporting period, you must include in the Compliance report the applicable information in [paragraphs \(d\)\(1\)\(i\)](#) through [\(xv\)](#) of this section. This includes periods of SSM.

(i) The date and time that each malfunction started and stopped, and the nature and cause of the malfunction (if known).

(ii) The start date, start time, and duration in hours for each period that each CMS was inoperative, except for zero (low-level) and high-level checks.

(iii) The start date, start time, and duration in hours for each period that the CMS that was out of control.

(iv) Except as specified in [paragraph \(d\)\(1\)\(xiii\)](#) of this section, the date and time that each deviation started and stopped, and whether each deviation occurred during a period of SSM, or during another period.

(v) The total duration in hours of all deviations for each CMS during the reporting period, and the total duration as a percentage of the total emission source operating time during that reporting period.

(vi) Except as specified in [paragraph \(d\)\(1\)\(xiii\)](#) of this section, a breakdown of the total duration of the deviations during the reporting period into those that are due to startup, shutdown, control equipment problems, process problems, other known causes, and other unknown causes.

(vii) The total duration in hours of CMS downtime for each CMS during the reporting period, and the total duration of CMS downtime as a percentage of the total emission source operating time during that reporting period.

(viii) An identification of each organic HAP that was potentially emitted during each deviation based on the known organic HAP contained in the liquid(s).

(ix) A brief description of the emission source(s) at which the CMS deviation(s) occurred or at which the CMS was inoperative or out of control.

(x) The equipment manufacturer(s) and model number(s) of the CMS and the pollutant or parameter monitored.

- (xi) The date of the latest certification or audit for each CMS.
  - (xii) A brief description of any changes in CMS, processes, or controls since the last reporting period.
  - (xiii) Beginning no later than the compliance dates specified in [§ 63.2342\(e\)](#), [paragraphs \(d\)\(1\)\(iv\)](#) and [\(vi\)](#) of this section no longer apply. For each instance, report the start date, start time, and duration in hours of each failure. For each failure, the report must include a list of the affected sources or equipment, an estimate of the quantity in pounds of each regulated pollutant emitted over any emission limit, a description of the method used to estimate the emissions, and the cause of the deviation (including unknown cause, if applicable), as applicable, and the corrective action taken.
  - (xiv) Corrective actions taken for a CMS that was inoperative or out of control.
  - (xv) Total process operating time during the reporting period.
- (2) Include in the Compliance report the information in [paragraphs \(d\)\(2\)\(i\)](#) through [\(iii\)](#) of this section, as applicable.
- (i) Except as specified in [paragraph \(d\)\(2\)\(iv\)](#) of this section, for each storage tank and transfer rack subject to control requirements, include periods of planned routine maintenance during which the control device did not comply with the applicable emission limits in Table 2 to this subpart.
  - (ii) For each storage tank controlled with a floating roof, include a copy of the inspection record (required in [§ 63.1065\(b\)](#)) when inspection failures occur.
  - (iii) If you elect to use an extension for a floating roof inspection in accordance with [§ 63.1063\(c\)\(2\)\(iv\)\(B\)](#) or [\(e\)\(2\)](#), include the documentation required by those paragraphs.
  - (iv) Beginning no later than the compliance dates specified in [§ 63.2342\(e\)](#), [paragraph \(d\)\(2\)\(i\)](#) of this section no longer applies. Instead for each storage tank subject to control requirements, include the start date, start time, end date and end time of any planned routine maintenance during which the control device used to control storage tank breathing losses did not comply with the applicable emission limits in Table 2 or 2b to this subpart.
- (3)
- (i) Except as specified in [paragraph \(d\)\(3\)\(iii\)](#) of this section, a listing of any storage tank that became subject to controls based on the criteria for control specified in Table 2 to this subpart, items 1 through 6, since the filing of the last Compliance report.
  - (ii) A listing of any transfer rack that became subject to controls based on the criteria for control specified in Table 2 to this subpart, items 7 through 10, since the filing of the last Compliance report.

(iii) Beginning no later than the compliance dates specified in [§ 63.2342\(e\)](#), the emission limits specified in Table 2 to this subpart for storage tanks at an existing affected source no longer apply as specified in [§ 63.2346\(a\)\(5\)](#). Instead, beginning no later than the compliance dates specified in [§ 63.2342\(e\)](#), you must include a listing of any storage tanks at an existing affected source that became subject to controls based on the criteria for control specified in Table 2b to this subpart, items 1 through 3, since the filing of the last Compliance report.

(4)

(i) A listing of tanks greater than or equal to 18.9 cubic meters (5,000 gallons) that became part of the affected source but are not subject to any of the emission limitations, operating limits, or work practice standards of this subpart, since the last Compliance report.

(ii) A listing of all transfer racks (except those racks at which only the unloading of organic liquids occurs) that became part of the affected source but are not subject to any of the emission limitations, operating limits, or work practice standards of this subpart, since the last Compliance report.

(5) Beginning no later than the compliance dates specified in [§ 63.2342\(e\)](#), for each flare subject to the requirements in [§ 63.2380](#), the compliance report must include the items specified in [paragraphs \(d\)\(5\)\(i\) through \(iii\)](#) of this section in lieu of the information required in [§ 63.999\(c\)\(3\)](#).

(i) Records as specified in [§ 63.2390\(h\)\(1\)](#) for each 15-minute block during which there was at least one minute when regulated material is routed to a flare and no pilot flame or flare flame is present. Include the start and stop time and date of each 15-minute block.

(ii) Visible emission records as specified in [§ 63.2390\(h\)\(2\)\(iv\)](#) for each period of 2 consecutive hours during which visible emissions exceeded a total of 5 minutes.

(iii) The periods specified in [§ 63.2390\(h\)\(6\)](#). Indicate the date and start and end time for the period, and the net heating value operating parameter(s) determined following the methods in [§ 63.670\(k\)](#) through [\(n\)](#) as applicable.

(e) Each affected source that has obtained a title V operating permit pursuant to [40 CFR part 70](#) or [40 CFR part 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 [71.6\(a\)\(3\)\(iii\)\(A\)](#). If an affected source submits a Compliance report pursuant to Table 11 to this subpart along with, or as part of, the semiannual monitoring report required by [40 CFR 70.6\(a\)\(3\)\(iii\)\(A\)](#) or [71.6\(a\)\(3\)\(iii\)\(A\)](#), and the Compliance report includes all required information concerning deviations from any emission limitation in this subpart, we will consider submission of the Compliance report as satisfying any obligation to report the same deviations in the semiannual monitoring report. However, submission of a Compliance report will not otherwise affect any obligation the

affected source may have to report deviations from permit requirements to the applicable title V permitting authority.

(f) Beginning no later than the compliance dates specified in [§ 63.2342\(e\)](#), you must submit all Compliance reports to the EPA following the procedure specified in [§ 63.9\(k\)](#), except any medium submitted through U.S. mail must be sent to the attention of the Organic Liquids Distribution Sector Lead. You must use the appropriate electronic report template on the CEDRI website (<https://www.epa.gov/electronic-reporting-air-emissions/cedri>) for this subpart. The date report templates become available will be listed on the CEDRI website. Unless the Administrator or delegated state agency or other authority has approved a different schedule for submission of reports under [§§ 63.9\(i\)](#) and [63.10\(a\)](#), the report must be submitted by the deadline specified in this subpart, regardless of the method in which the report is submitted.

(g) Beginning no later than the compliance dates specified in [§ 63.2342\(e\)](#), you must start submitting performance test reports in accordance with this paragraph. Unless otherwise specified in this subpart, within 60 days after the date of completing each performance test required by this subpart, you must submit the results of the performance test following the procedures specified in [§ 63.9\(k\)](#). Data collected using test methods supported by the EPA's Electronic Reporting Tool (ERT) as listed on the EPA's ERT website (<https://www.epa.gov/electronic-reporting-air-emissions/electronic-reporting-tool-ert>) at the time of the test must be submitted in a file format generated through the use of the EPA's ERT. Alternatively, you may submit an electronic file consistent with the XML schema listed on the EPA's ERT website. Data collected using test methods that are not supported by the EPA's ERT as listed on the EPA's ERT website at the time of the test must be included as an attachment in the ERT or alternate electronic file.

(h) Beginning no later than the compliance dates specified in [§ 63.2342\(e\)](#), you must start submitting performance evaluation reports in accordance with this paragraph. Unless otherwise specified in this subpart, within 60 days after the date of completing each CEMS performance evaluation (as defined in [§ 63.2](#)) that includes a relative accuracy test audit (RATA), you must submit the results of the performance evaluation following the procedures specified in [§ 63.9\(k\)](#). The results of performance evaluations of CEMS measuring RATA pollutants that are supported by the EPA's ERT as listed on the EPA's ERT website at the time of the evaluation must be submitted in a file format generated through the use of the EPA's ERT. Alternatively, you may submit an electronic file consistent with the XML schema listed on the EPA's ERT website. The results of performance evaluations of CEMS measuring RATA pollutants that are not supported by the EPA's ERT as listed on the EPA's ERT website at the time of the evaluation must be included as an attachment in the ERT or alternate electronic file.

[[69 FR 5063](#), Feb. 3, 2004, as amended at [71 FR 42910](#), July 28, 2006; [85 FR 40768](#), July 7, 2020; [89 FR 23867](#), Apr. 4, 2024]

### **§ 63.2390 What records must I keep?**



- (a) For each emission source identified in [§ 63.2338](#) that does not require control under this subpart, you must keep all records identified in [§ 63.2343](#).
- (b) For each emission source identified in [§ 63.2338](#) that does require control under this subpart:
- (1) Except as specified in [paragraph \(h\)](#) of this section for flares, you must keep all records identified in [subpart SS of this part](#) and in Table 12 to this subpart that are applicable, including records related to notifications and reports, SSM, performance tests, CMS, and performance evaluation plans. You must also comply with the requirements specified in [§ 63.2346\(l\)](#).
  - (2) Except as specified in [paragraph \(h\)](#) of this section for flares, you must keep the records required to show continuous compliance, as required in [subpart SS of this part](#) and in Tables 8 through 10 to this subpart, with each emission limitation, operating limit, and work practice standard that applies to you. You must also comply with the requirements specified in [§ 63.2346\(l\)](#).
  - (3) In addition to the information required in [§ 63.998\(c\)](#), the manufacturer's specifications or your written procedures must include a schedule for calibrations, preventative maintenance procedures, a schedule for preventative maintenance, and corrective actions to be taken if a calibration fails.
- (c) For each transport vehicle into which organic liquids are loaded at a transfer rack that is subject to control based on the criteria specified in Table 2 to this subpart, items 7 through 10, you must keep the applicable records in [paragraphs \(c\)\(1\)](#) and [\(2\)](#) of this section or alternatively the verification records in [paragraph \(c\)\(3\)](#) of this section.
- (1) For transport vehicles equipped with vapor collection equipment, the documentation described in [40 CFR 60.505\(b\)](#), except that the test title is: Transport Vehicle Pressure Test-EPA Reference Method 27.
  - (2) For transport vehicles without vapor collection equipment, current certification in accordance with the U.S. DOT qualification and maintenance requirements in [49 CFR part 180, subpart E](#) for cargo tanks and subpart F for tank cars.
  - (3) In lieu of keeping the records specified in [paragraph \(c\)\(1\)](#) or [\(2\)](#) of this section, as applicable, the owner or operator shall record that the verification of U.S. DOT tank certification or Method 27 of [40 CFR part 60, appendix A-8](#) testing, required in Table 5 to this subpart, item 2, has been performed. Various methods for the record of verification can be used, such as: A check-off on a log sheet, a list of U.S. DOT serial numbers or Method 27 data, or a position description for gate security showing that the security guard will not allow any trucks on site that do not have the appropriate documentation.
- (d) You must keep records of the total actual annual facility-level organic liquid loading volume as defined in [§ 63.2406](#) through transfer racks to document the applicability, or lack thereof, of the emission limitations in Table 2 to this subpart, items 7 through 10.



(e) An owner or operator who elects to comply with [§ 63.2346\(a\)\(4\)](#) shall keep the records specified in [paragraphs \(e\)\(1\)](#) through [\(3\)](#) of this section.

(1) A record of the U.S. DOT certification required by [§ 63.2346\(a\)\(4\)\(ii\)](#).

(2) A record of the pressure relief vent setting specified in [§ 63.2346\(a\)\(4\)\(v\)](#).

(3) If complying with [§ 63.2346\(a\)\(4\)\(vi\)\(B\)](#), keep the records specified in [paragraphs \(e\)\(3\)\(i\)](#) and [\(ii\)](#) of this section.

(i) A record of the equipment to be used and the procedures to be followed when reloading the cargo tank or tank car and displacing vapors to the storage tank from which the liquid originates.

(ii) A record of each time the vapor balancing system is used to comply with [§ 63.2346\(a\)\(4\)\(vi\)\(B\)](#).

(f) Beginning no later than the compliance dates specified in [§ 63.2342\(e\)](#), for each deviation from an emission limitation, operating limit, and work practice standard specified in [paragraph \(a\)](#) of this section, you must keep a record of the information specified in [paragraph \(f\)\(1\)](#) through [\(3\)](#) of this section.

(1) In the event that an affected unit fails to meet an applicable standard, record the number of failures. For each failure record the date, time and duration of each failure.

(2) For each failure to meet an applicable standard, record and retain a list of the affected sources or equipment, an estimate of the quantity of each regulated pollutant emitted over any emission limit and a description of the method used to estimate the emissions.

(3) Record actions taken to minimize emissions in accordance with [§ 63.2350\(d\)](#) and any corrective actions taken to return the affected unit to its normal or usual manner of operation.

(g) Beginning no later than the compliance dates specified in [§ 63.2342\(e\)](#), for each flow event from a bypass line subject to the requirements in [§ 63.2378\(e\)\(1\)](#) and [\(2\)](#), you must maintain records sufficient to determine whether or not the detected flow included flow requiring control. For each flow event from a bypass line requiring control that is released either directly to the atmosphere or to a control device not meeting the requirements specified in [§ 63.2378\(a\)](#), you must include an estimate of the volume of gas, the concentration of organic HAP in the gas and the resulting emissions of organic HAP that bypassed the control device using process knowledge and engineering estimates.

(h) Beginning no later than the compliance dates specified in [§ 63.2342\(e\)](#), for each flare subject to the requirements in [§ 63.2380](#), you must keep records specified in [paragraphs \(h\)\(1\)](#) through [\(10\)](#) of this section in lieu of the information required in [§ 63.998\(a\)\(1\)](#).

(1) Retain records of the output of the monitoring device used to detect the presence of a pilot flame or flare flame as required in [§ 63.670\(b\)](#) for a minimum of 2 years. Retain records of each

15-minute block during which there was at least one minute that no pilot flame or flare flame is present when regulated material is routed to a flare for a minimum of 5 years. You may reduce the collected minute-by-minute data to a 15-minute block basis with an indication of whether there was at least one minute where no pilot flame or flare flame was present.

(2) Retain records of daily visible emissions observations or video surveillance images required in [§ 63.670\(h\)](#) as specified in [paragraphs \(h\)\(2\)\(i\)](#) through [\(iv\)](#) of this section, as applicable, for a minimum of 3 years.

(i) To determine when visible emissions observations are required, the record must identify all periods when regulated material is vented to the flare.

(ii) If visible emissions observations are performed using Method 22 of [40 CFR part 60, appendix A-7](#), then the record must identify whether the visible emissions observation was performed, the results of each observation, total duration of observed visible emissions, and whether it was a 5-minute or 2-hour observation. Record the date and start and end time of each visible emissions observation.

(iii) If a video surveillance camera is used, then the record must include all video surveillance images recorded, with time and date stamps.

(iv) For each 2-hour period for which visible emissions are observed for more than 5 minutes in 2 consecutive hours, then the record must include the date and start and end time of the 2-hour period and an estimate of the cumulative number of minutes in the 2-hour period for which emissions were visible.

(3) The 15-minute block average cumulative flows for flare vent gas and, if applicable, total steam, perimeter assist air, and premix assist air specified to be monitored under [§ 63.670\(i\)](#), along with the date and time interval for the 15-minute block. If multiple monitoring locations are used to determine cumulative vent gas flow, total steam, perimeter assist air, and premix assist air, then retain records of the 15-minute block average flows for each monitoring location for a minimum of 2 years, and retain the 15-minute block average cumulative flows that are used in subsequent calculations for a minimum of 5 years. If pressure and temperature monitoring is used, then retain records of the 15-minute block average temperature, pressure, and molecular weight of the flare vent gas or assist gas stream for each measurement location used to determine the 15-minute block average cumulative flows for a minimum of 2 years, and retain the 15-minute block average cumulative flows that are used in subsequent calculations for a minimum of 5 years.

(4) The flare vent gas compositions specified to be monitored under [§ 63.670\(j\)](#). Retain records of individual component concentrations from each compositional analysis for a minimum of 2 years. If an NHVg analyzer is used, retain records of the 15-minute block average values for a minimum of 5 years.

- (5) Each 15-minute block average operating parameter calculated following the methods specified in [§ 63.670\(k\)](#) through [\(n\)](#), as applicable.
- (6) All periods during which operating values are outside of the applicable operating limits specified in [§ 63.670\(d\)](#) through [\(f\)](#) when regulated material is being routed to the flare.
- (7) All periods during which you do not perform flare monitoring according to the procedures in [§ 63.670\(g\)](#).
- (8) Records of periods when there is flow of vent gas to the flare, but when there is no flow of regulated material to the flare, including the start and stop time and dates of periods of no regulated material flow.
- (9) The monitoring plan required in [§ 63.671\(b\)](#).
- (10) Records described in [§ 63.10\(b\)\(2\)\(vi\)](#).

[[69 FR 5063](#), Feb. 3, 2004, as amended at [71 FR 42910](#), July 28, 2006; [73 FR 40982](#), July 17, 2008; [85 FR 40771](#), July 7, 2020]

#### **§ 63.2394 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 inspection and review according to [§ 63.10\(b\)\(1\)](#), including records stored in electronic form at a separate location.
- (b) As specified in [§ 63.10\(b\)\(1\)](#), you must keep your files of all information (including all reports and notifications) for at least 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record.
- (c) You must keep each record 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 may keep the records off site for the remaining 3 years.

[[69 FR 5063](#), Feb. 3, 2004, as amended at [71 FR 42911](#), July 28, 2006]

#### **Other Requirements and Information**

#### **§ 63.2396 What compliance options do I have if part of my plant is subject to both this subpart and another subpart?**

##### **(a) *Compliance with other regulations for storage tanks.***

- (1) After the compliance dates specified in [§ 63.2342](#), you are in compliance with the provisions of this subpart for any storage tank that is assigned to the OLD affected source and that is both controlled with a floating roof and is in compliance with the provisions of either [40 CFR part 60, subpart Kb](#), or [40 CFR part 61, subpart Y](#), except that records shall be kept for 5 years rather than 2 years for storage tanks that are assigned to the OLD affected source.

(2) After the compliance dates specified in [§ 63.2342](#), you are in compliance with the provisions of this subpart for any storage tank with a fixed roof that is assigned to the OLD affected source and that is both controlled with a closed vent system and control device and is in compliance with either [40 CFR part 60, subpart Kb](#), or [40 CFR part 61, subpart Y](#), except that you must comply with the monitoring, recordkeeping, and reporting requirements in this subpart.

(3) Except as specified in [paragraph \(a\)\(4\)](#) of this section, as an alternative to [paragraphs \(a\)\(1\) and \(2\)](#) of this section, if a storage tank assigned to the OLD affected source is subject to control under [40 CFR part 60, subpart Kb](#), or [40 CFR part 61, subpart Y](#), you may elect to comply only with the requirements of this subpart for storage tanks meeting the applicability criteria for control in Table 2 to this subpart.

(4) Beginning no later than the compliance dates specified in [§ 63.2342\(e\)](#), the applicability criteria for control specified in Table 2 to this subpart for storage tanks at an existing affected source no longer apply as specified in [§ 63.2346\(a\)\(5\)](#). Instead, beginning no later than the compliance dates specified in [§ 63.2342\(e\)](#), as an alternative to [paragraphs \(a\)\(1\) and \(2\)](#) of this section, if a storage tank assigned to an existing OLD affected source is subject to control under [40 CFR part 60, subpart Kb](#), or [40 CFR part 61, subpart Y](#), you may elect to comply only with the requirements of this subpart for storage tanks at an existing affected source meeting the applicability criteria for control in Table 2b to this subpart.

**(b) *Compliance with other regulations for transfer racks.*** After the compliance dates specified in [§ 63.2342](#), if you have a transfer rack that is subject to [40 CFR part 61, subpart BB](#), and that transfer rack is in OLD operation, you must meet all of the requirements of this subpart for that transfer rack when the transfer rack is in OLD operation during the loading of organic liquids.

**(c) *Compliance with other regulations for equipment leak components.***

(1) After the compliance dates specified in [§ 63.2342](#), if you have pumps, valves, or sampling connections that are subject to a 40 CFR part 60 subpart, and those pumps, valves, and sampling connections are in OLD operation and in organic liquids service, as defined in this subpart, you must comply with the provisions of each subpart for those equipment leak components.

(2) After the compliance dates specified in [§ 63.2342](#), if you have pumps, valves, or sampling connections subject to [subpart GGG of this part](#), and those pumps, valves, and sampling connections are in OLD operation and in organic liquids service, as defined in this subpart, you may elect to comply with the provisions of this subpart for all such equipment leak components. You must identify in the Notification of Compliance Status required by [§ 63.2382\(b\)](#) the provisions with which you will comply.

**(d) *Overlap of subpart EEEE with other regulations for flares for the OLD source category.***

(1) Beginning no later than the compliance dates specified in [§ 63.2342\(e\)](#), flares that are subject to [§ 60.18 of this chapter](#) or [§ 63.11](#) and used as a control device for an emission point subject to

the requirements in Tables 2 or 2b to of this subpart are required to comply only with [§ 63.2380](#). At any time before the compliance dates specified in [§ 63.2342\(e\)](#), flares that are subject to [§ 60.18](#) or [§ 63.11](#) and elect to comply with [§ 63.2380](#) are required to comply only with [§ 63.2380](#).

(2) Beginning no later than the compliance dates specified in [§ 63.2342\(e\)](#), flares that are subject to [§ 63.987](#) and used as a control device for an emission point subject to the requirements in Tables 2 or 2b to this subpart are required to comply only with [§ 63.2380](#). At any time before the compliance dates specified in [§ 63.2342\(e\)](#), flares that are subject to [§§ 63.987](#) and elect to comply with [§ 63.2380](#) are required to comply only with [§ 63.2380](#).

(3) Beginning no later than the compliance dates specified in [§ 63.2342\(e\)](#), flares that are subject to the requirements of [subpart CC of this part](#) and used as a control device for an emission point subject to the requirements in Tables 2 or 2b to this subpart are required to comply only with the flare requirements in [subpart CC of this part](#).

**(e) *Overlap with other regulations for monitoring, recordkeeping, and reporting* —**

(1) **Control devices.** After the compliance dates specified in [§ 63.2342](#), if any control device subject to this subpart is also subject to monitoring, recordkeeping, and reporting requirements of another 40 CFR part 63 subpart, the owner or operator must be in compliance with the monitoring, recordkeeping, and reporting requirements of this subpart EEEE. If complying with the monitoring, recordkeeping, and reporting requirements of the other subpart satisfies the monitoring, recordkeeping, and reporting requirements of this subpart, the owner or operator may elect to continue to comply with the monitoring, recordkeeping, and reporting requirements of the other subpart. In such instances, the owner or operator will be deemed to be in compliance with the monitoring, recordkeeping, and reporting requirements of this subpart. The owner or operator must identify the other subpart being complied with in the Notification of Compliance Status required by [§ 63.2382\(b\)](#).

(2) **Equipment leak components.** After the compliance dates specified in [§ 63.2342](#), if you are applying the applicable recordkeeping and reporting requirements of another subpart of this part to the valves, pumps, and sampling connection systems associated with a transfer rack subject to this subpart that only unloads organic liquids directly to or via pipeline to a non-tank process unit component or to a storage tank subject to the other subpart of this part, the owner or operator must be in compliance with the recordkeeping and reporting requirements of this subpart EEEE. If complying with the recordkeeping and reporting requirements of the other subpart satisfies the recordkeeping and reporting requirements of this subpart, the owner or operator may elect to continue to comply with the recordkeeping and reporting requirements of the other subpart. In such instances, the owner or operator will be deemed to be in compliance with the recordkeeping and reporting requirements of this subpart. The owner or operator must identify the other subpart being complied with in the Notification of Compliance Status required by [§ 63.2382\(d\)](#).

[[69 FR 5063](#), Feb. 3, 2004, as amended at [71 FR 42911](#), July 28, 2006; [85 FR 40772](#), July 7, 2020]

### **§ 63.2398 What parts of the General Provisions apply to me?**

Table 12 to this subpart shows which parts of the General Provisions in [§§ 63.1](#) through [63.15](#) apply to you.

### **§ 63.2402 Who implements and enforces this subpart?**

(a) This subpart can be implemented and enforced by the U.S. Environmental Protection Agency (U.S. EPA) or a delegated authority such as your State, local, or eligible tribal agency. If the EPA Administrator has delegated authority to your State, local, or eligible tribal agency, then that agency, as well as the EPA, has the authority to implement and enforce this subpart. You should contact your EPA Regional Office (see list in [§ 63.13](#)) to find out if this subpart is delegated to your State, local, or eligible tribal agency.

(b) In delegating implementation and enforcement authority for this subpart to a State, local, or eligible tribal agency under [subpart E of this part](#), the authorities contained in [paragraphs \(b\)\(1\) through \(5\)](#) of this section are retained by the EPA Administrator and are not delegated to the State, local, or eligible tribal agency.

(1) Approval of alternatives to the nonopacity emission limitations, operating limits, and work practice standards in [§ 63.2346\(a\)](#) through [\(c\)](#) under [§ 63.6\(g\)](#).

(2) Approval of major changes to test methods under [§ 63.7\(e\)\(2\)\(ii\)](#) and [\(f\)](#) and as defined in [§ 63.90](#).

(3) Approval of major changes to monitoring under [§ 63.8\(f\)](#) and as defined in [§ 63.90](#).

(4) Approval of major changes to recordkeeping and reporting under [§ 63.10\(f\)](#) and as defined in [§ 63.90](#).

(5) Approval of an alternative to any electronic reporting to the EPA required by this subpart.

[[69 FR 5063](#), Feb. 3, 2004, as amended at [71 FR 42911](#), July 28, 2006; [85 FR 40773](#), July 7, 2020]

### **§ 63.2406 What definitions apply to this subpart?**

Terms used in this subpart are defined in the CAA, in [§ 63.2](#), [40 CFR part 63, subparts H, PP, SS, TT, UU](#), and [WW](#), and in this section. If the same term is defined in another subpart and in this section, it will have the meaning given in this section for purposes of this subpart.

Notwithstanding the introductory language in [§ 63.921](#), the terms “container” and “safety device” shall have the meaning found in this subpart and not in [§ 63.921](#).

*Actual annual average temperature*, for organic liquids, means the temperature determined using the following methods:

- (1) For heated or cooled storage tanks, use the calculated annual average temperature of the stored organic liquid as determined from a design analysis of the storage tank.
- (2) For ambient temperature storage tanks:
  - (i) Use the annual average of the local (nearest) normal daily mean temperatures reported by the National Climatic Data Center; or
  - (ii) Use any other method that the EPA approves.

*Annual average true vapor pressure* means the equilibrium partial pressure exerted by the total organic HAP in Table 1 to this subpart in the stored or transferred organic liquid. For the purpose of determining if a liquid meets the definition of an organic liquid, the vapor pressure is determined using conditions of 77 degrees Fahrenheit and 29.92 inches of mercury. For the purpose of determining whether an organic liquid meets the applicability criteria in Table 2 to this subpart, items 1 through 6, or Table 2b to this subpart, items 1 through 3, use the actual annual average temperature as defined in this subpart. The vapor pressure value in either of these cases is determined:

- (1) Using standard reference texts; or
- (2) [Reserved]
- (3) Using any other method that the EPA approves.

*Bottoms receiver* means a tank that collects distillation bottoms before the stream is sent for storage or for further processing downstream.

*Cargo tank* means a liquid-carrying tank permanently attached and forming an integral part of a motor vehicle or truck trailer. This term also refers to the entire cargo tank motor vehicle or trailer. For the purpose of this subpart, vacuum trucks used exclusively for maintenance or spill response are not considered cargo tanks.

*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 vapors from an emission point to a control device. This system does not include the vapor collection system that is part of some transport vehicles or the loading arm or hose that is used for vapor return. For transfer racks, the closed vent system begins at, and includes, the first block valve on the downstream side of the loading arm or hose used to convey displaced vapors.

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



*Condensate* means hydrocarbon liquid separated from natural gas that condenses due to changes in the temperature or pressure, or both, and remains liquid at standard conditions as specified in [§ 63.2](#). Only those condensates downstream of the first point of custody transfer after the production field are considered condensates in this subpart.

*Container* means a portable unit in which a material can be stored, transported, treated, disposed of, or otherwise handled. Examples of containers include, but are not limited to, drums and portable cargo containers known as “portable tanks” or “totes.”

*Control device* means any combustion device, recovery device, recapture device, or any combination of these devices used to comply with this subpart. Such equipment or devices include, but are not limited to, absorbers, adsorbers, condensers, and combustion devices. Primary condensers, steam strippers, and fuel gas systems are not considered control devices.

*Crude oil* means any of the naturally occurring liquids commonly referred to as crude oil, regardless of specific physical properties. Only those crude oils downstream of the first point of custody transfer after the production field are considered crude oils in this subpart.

*Custody transfer* means the transfer of hydrocarbon liquids after processing and/or treatment in the producing operations, or from storage tanks or automatic transfer facilities to pipelines or any other forms of transportation.

*Design evaluation* means a procedure for evaluating control devices that complies with the requirements in [§ 63.985\(b\)\(1\)\(i\)](#).

*Deviation* means any instance in which an affected source subject to this subpart, or portion thereof, or an owner or operator of such a source:

- (1) Fails to meet any requirement or obligation established by this subpart including, but not limited to, any emission limitation (including any operating limit) or work practice standard;
- (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) Before July 7, 2023, fails to meet any emission limitation (including any operating limit) or work practice standard in this subpart during SSM. On and after July 7, 2023, this paragraph no longer applies.

*Emission limitation* means an emission limit, opacity limit, operating limit, or visible emission limit.

*Equipment leak component* means each pump, valve, and sampling connection system used in organic liquids service at an OLD operation. Valve types include control, globe, gate, plug, and ball. Relief and check valves are excluded.



*Gasoline* means any petroleum distillate or petroleum distillate/alcohol blend having a Reid vapor pressure of 27.6 kilopascals (4.0 pounds per square inch absolute (psia)) or greater which is used as a fuel for internal combustion engines. Aviation gasoline is included in this definition.

*High throughput transfer rack* means those transfer racks that transfer into transport vehicles (for existing affected sources) or into transport vehicles and containers (for new affected sources) a total of 11.8 million liters per year or greater of organic liquids.

*In organic liquids service* means that an equipment leak component contains or contacts organic liquids having 5 percent by weight or greater of the organic HAP listed in Table 1 to this subpart.

*Low throughput transfer rack* means those transfer racks that transfer into transport vehicles (for existing affected sources) or into transport vehicles and containers (for new affected sources) less than 11.8 million liters per year of organic liquids.

*On-site* or *on site* means, with respect to records required to be maintained by this subpart or required by another subpart referenced by this subpart, that records are stored at a location within a major source which encompasses the affected source. On-site includes, but is not limited to, storage at the affected source to which the records pertain, storage in central files elsewhere at the major source, or electronically available at the site.

*Organic liquid* means:

(1) Any non-crude oil liquid, non-condensate liquid, or liquid mixture that contains 5 percent by weight or greater of the organic HAP listed in Table 1 to this subpart, as determined using the procedures specified in [§ 63.2354\(c\)](#).

(2) Any crude oils or condensates downstream of the first point of custody transfer.

(3) Organic liquids for purposes of this subpart do not include the following liquids:

(i) Gasoline (including aviation gasoline), kerosene (No. 1 distillate oil), diesel (No. 2 distillate oil), asphalt, and heavier distillate oils and fuel oils;

(ii) Any fuel consumed or dispensed on the plant site directly to users (such as fuels for fleet refueling or for refueling marine vessels that support the operation of the plant);

(iii) Hazardous waste;

(iv) Wastewater;

(v) Ballast water; or

(vi) Any non-crude oil or non-condensate liquid with an annual average true vapor pressure less than 0.7 kilopascals (0.1 psia).

*Organic liquids distribution (OLD) operation* means the combination of activities and equipment used to store or transfer organic liquids into, out of, or within a plant site regardless of the

specific activity being performed. Activities include, but are not limited to, storage, transfer, blending, compounding, and packaging.

*Permitting authority* means one of the following:

- (1) The State Air Pollution Control Agency, local agency, or other agency authorized by the EPA Administrator to carry out a permit program under [40 CFR part 70](#); or
- (2) The EPA Administrator, in the case of EPA-implemented permit programs under title V of the CAA ([42 U.S.C. 7661](#)) and [40 CFR part 71](#).

*Plant site* means all contiguous or adjoining surface property that is under common control, including surface properties that are separated only by a road or other public right-of-way. Common control includes surface properties that are owned, leased, or operated by the same entity, parent entity, subsidiary, or any combination.

*Pressure relief device* means a valve, rupture disk, or similar device used only to release an unplanned, nonroutine discharge of gas from process equipment in order to avoid safety hazards or equipment damage. A pressure relief device discharge can result from an operator error, a malfunction such as a power failure or equipment failure, or other unexpected cause. Such devices include conventional, spring-actuated relief valves, balanced bellows relief valves, pilot-operated relief valves, rupture disks, and breaking, buckling, or shearing pin devices.

*Relief valve* means a type of pressure relief device that is designed to re-close after the pressure relief.

*Research and development facility* means laboratory and pilot plant operations whose primary purpose is to conduct research and development into new processes and products, where the operations are under the close supervision of technically trained personnel, and which are not engaged in the manufacture of products for commercial sale, except in a *de minimis* manner.

*Responsible official* means responsible official as defined in [40 CFR 70.2](#) and [40 CFR 71.2](#), as applicable.

*Safety device* means a closure device such as a pressure relief valve, frangible disc, fusible plug, or any other type of device that functions exclusively to prevent physical damage or permanent deformation to a unit or its air emission control equipment by venting gases or vapors directly to the atmosphere during unsafe conditions resulting from an unplanned, accidental, or emergency event.

*Shutdown* means the cessation of operation of an OLD affected source, or portion thereof (other than as part of normal operation of a batch-type operation), including equipment required or used to comply with this subpart, or the emptying and degassing of a storage tank. Shutdown as defined here includes, but is not limited to, events that result from periodic maintenance, replacement of equipment, or repair.

*Startup* means the setting in operation of an OLD affected source, or portion thereof (other than as part of normal operation of a batch-type operation), for any purpose. Startup also includes the placing in operation of any individual piece of equipment required or used to comply with this subpart including, but not limited to, control devices and monitors.

*Storage tank* means a stationary unit that is constructed primarily of nonearthen materials (such as wood, concrete, steel, or reinforced plastic) that provide structural support and is designed to hold a bulk quantity of liquid. Storage tanks do not include:

- (1) Units permanently attached to conveyances such as trucks, trailers, rail cars, barges, or ships;
- (2) Pressure vessels designed to operate in excess of 204.9 kilopascals and without emissions to the atmosphere;
- (3) Bottoms receivers;
- (4) Surge control vessels;
- (5) Vessels storing wastewater; or
- (6) Reactor vessels associated with a manufacturing process unit.

*Surge control vessel* means feed drums, recycle drums, and intermediate vessels. Surge control vessels are used within chemical manufacturing processes when in-process storage, mixing, or management of flow rates or volumes is needed to assist in production of a product.

*Tank car* means a car designed to carry liquid freight by rail, and including a permanently attached tank.

*Total actual annual facility-level organic liquid loading volume* means the total facility-level actual volume of organic liquid loaded for transport within or out of the facility through transfer racks that are part of the affected source into transport vehicles (for existing affected sources) or into transport vehicles and containers (for new affected sources) based on a 3-year rolling average, calculated annually.

- (1) For existing affected sources, each 3-year rolling average is based on actual facility-level loading volume during each calendar year (January 1 through December 31) in the 3-year period. For calendar year 2004 only (the first year of the initial 3-year rolling average), if an owner or operator of an affected source does not have actual loading volume data for the time period from January 1, 2004, through February 2, 2004 (the time period prior to the effective date of the OLD NESHAP), the owner or operator shall compute a facility-level loading volume for this time period as follows: At the end of the 2004 calendar year, the owner or operator shall calculate a daily average facility-level loading volume (based on the actual loading volume for February 3, 2004, through December 31, 2004) and use that daily average to estimate the facility-level loading volume for the period of time from January 1, 2004, through February 2, 2004. The owner or operator shall then sum the estimated facility-level loading volume from January 1,

2004, through February 2, 2004, and the actual facility-level loading volume from February 3, 2004, through December 31, 2004, to calculate the annual facility-level loading volume for calendar year 2004.

(2)

(i) For new affected sources, the 3-year rolling average is calculated as an average of three 12-month periods. An owner or operator must select as the beginning calculation date with which to start the calculations as either the initial startup date of the new affected source or the first day of the calendar month following the month in which startup occurs. Once selected, the date with which the calculations begin cannot be changed.

(ii) The initial 3-year rolling average is based on the projected maximum facility-level annual loading volume for each of the 3 years following the selected beginning calculation date. The second 3-year rolling average is based on actual facility-level loading volume for the first year of operation plus a new projected maximum facility-level annual loading volume for second and third years following the selected beginning calculation date. The third 3-year rolling average is based on actual facility-level loading volume for the first 2 years of operation plus a new projected maximum annual facility-level loading volume for the third year following the beginning calculation date. Subsequent 3-year rolling averages are based on actual facility-level loading volume for each year in the 3-year rolling average.

*Transfer rack* means a single system used to load organic liquids into, or unload organic liquids out of, transport vehicles or containers. It includes all loading and unloading arms, pumps, meters, shutoff valves, relief valves, and other piping and equipment necessary for the transfer operation. Transfer equipment and operations that are physically separate (i.e., do not share common piping, valves, and other equipment) are considered to be separate transfer racks.

*Transport vehicle* means a cargo tank or tank car.

*Vapor balancing system* means:

(1) A piping system that collects organic HAP vapors displaced from transport vehicles or containers during loading and routes the collected vapors to the storage tank from which the liquid being loaded originated or to another storage tank connected to a common header. For containers, the piping system must route the displaced vapors directly to the appropriate storage tank or to another storage tank connected to a common header in order to qualify as a vapor balancing system; or

(2) A piping system that collects organic HAP vapors displaced from the loading of a storage tank and routes the collected vapors to the transport vehicle from which the storage tank is filled.

*Vapor collection system* means any equipment located at the source (i.e., at the OLD operation) that is not open to the atmosphere; that is composed of piping, connections, and, if necessary, flow-inducing devices; and that is used for:

- (1) Containing and conveying vapors displaced during the loading of transport vehicles to a control device;
- (2) Containing and directly conveying vapors displaced during the loading of containers; or
- (3) Vapor balancing. This does not include any of the vapor collection equipment that is installed on the transport vehicle.

*Vapor-tight transport vehicle* means a transport vehicle that has been demonstrated to be vapor-tight. To be considered vapor-tight, a transport vehicle equipped with vapor collection equipment must undergo a pressure change of no more than 250 pascals (1 inch of water) within 5 minutes after it is pressurized to 4,500 pascals (18 inches of water). This capability must be demonstrated annually using the procedures specified in Method 27 of [40 CFR part 60, appendix A-8](#). For all other transport vehicles, vapor tightness is demonstrated by performing the U.S. DOT pressure test procedures for tank cars and cargo tanks.

*Work practice standard* means any design, equipment, work practice, or operational standard, or combination thereof, that is promulgated pursuant to section 112(h) of the CAA.

[[69 FR 5063](#), Feb. 3, 2004, as amended at [71 FR 42911](#), July 28, 2006; [85 FR 40773](#), July 7, 2020; [85 FR 44217](#), July 22, 2020; [89 FR 23867](#), Apr. 4, 2024]

#### **Table 1 to Subpart EEEE of Part 63—Organic Hazardous Air Pollutants**

You must use the organic HAP information listed in the following table to determine which of the liquids handled at your facility meet the HAP content criteria in the definition of Organic Liquid in [§ 63.2406](#).

Compound name	CAS No. <sup>1</sup>
2,4-D salts and esters	94-75-7
Acetaldehyde	75-07-0
Acetonitrile	75-05-8
Acetophenone	98-86-2
Acrolein	107-02-8
Acrylamide	79-06-1
Acrylic acid	79-10-7
Acrylonitrile	107-13-1

Compound name	CAS No. <sup>1</sup>
Allyl chloride	107-05-1
Aniline	62-53-3
Benzene	71-43-2
Biphenyl	92-52-4
Butadiene (1,3-)	106-99-0
Carbon tetrachloride	56-23-5
Chloroacetic acid	79-11-8
Chlorobenzene	108-90-7
2-Chloro-1,3-butadiene (Chloroprene)	126-99-8
Chloroform	67-66-3
m-Cresol	108-39-4
o-Cresol	95-48-7
p-Cresol	106-44-5
Cresols/cresylic acid	1319-77-3
Cumene	98-82-8
Dibenzofurans	132-64-9
Dibutylphthalate	84-74-2
Dichloroethane (1,2-) (Ethylene dichloride) (EDC)	107-06-2
Dichloropropene (1,3-)	542-75-6
Diethanolamine	111-42-2
Diethyl aniline (N,N-)	121-69-7
Diethylene glycol monobutyl ether	112-34-5

Compound name	CAS No. <sup>1</sup>
Diethylene glycol monomethyl ether	111-77-3
Diethyl sulfate	64-67-5
Dimethyl formamide	68-12-2
Dimethylhydrazine (1,1-)	57-14-7
Dioxane (1,4-) (1,4-Diethyleneoxide)	123-91-1
Epichlorohydrin (1-Chloro-2,3-epoxypropane)	106-89-8
Epoxybutane (1,2-)	106-88-7
Ethyl acrylate	140-88-5
Ethylbenzene	100-41-4
Ethyl chloride (Chloroethane)	75-00-3
Ethylene dibromide (Dibromomethane)	106-93-4
Ethylene glycol	107-21-1
Ethylene glycol dimethyl ether	110-71-4
Ethylene glycol monomethyl ether	109-86-4
Ethylene glycol monomethyl ether acetate	110-49-6
Ethylene glycol monophenyl ether	122-99-6
Ethylene oxide	75-21-8
Ethylidene dichloride (1,1-Dichloroethane)	75-34-3
Formaldehyde	50-00-0
Hexachloroethane	67-72-1
Hexane	110-54-3
Hydroquinone	123-31-9

Compound name	CAS No. <sup>1</sup>
Isophorone	78-59-1
Maleic anhydride	108-31-6
Methanol	67-56-1
Methyl chloride (Chloromethane)	74-87-3
Methylene chloride (Dichloromethane)	75-09-2
Methylenedianiline (4,4'-)	101-77-9
Methylene diphenyl diisocyanate	101-68-8
Methyl hydrazine	60-34-4
Methyl isobutyl ketone (Hexone) (MIBK)	108-10-1
Methyl methacrylate	80-62-6
Methyl tert-butyl ether (MTBE)	1634-04-4
Naphthalene	91-20-3
Nitrobenzene	98-95-3
Phenol	108-9-52
Phthalic anhydride	85-44-9
Polycyclic organic matter	50-32-8
Propionaldehyde	123-38-6
Propylene dichloride (1,2-Dichloropropane)	78-87-5
Propylene oxide	75-56-9
Quinoline	91-22-5
Styrene	100-42-5
Styrene oxide	96-09-3



Compound name	CAS No. <sup>1</sup>
Tetrachloroethane (1,1,2,2-)	79-34-5
Tetrachloroethylene (Perchloroethylene)	127-18-4
Toluene	108-88-3
Toluene diisocyanate (2,4-)	584-84-9
o-Toluidine	95-53-4
Trichlorobenzene (1,2,4-)	120-82-1
Trichloroethane (1,1,1-) (Methyl chloroform)	71-55-6
Trichloroethane (1,1,2-) (Vinyl trichloride)	79-00-5
Trichloroethylene	79-01-6
Triethylamine	121-44-8
Trimethylpentane (2,2,4-)	540-84-1
Vinyl acetate	108-05-4
Vinyl chloride (Chloroethylene)	75-01-4
Vinylidene chloride (1,1-Dichloroethylene)	75-35-4
Xylene (m-)	108-38-3
Xylene (o-)	95-47-6
Xylene (p-)	106-42-3
Xylenes (isomers and mixtures)	1330-20-7
<sup>1</sup> CAS numbers refer to the Chemical Abstracts Services registry number assigned to specific compounds, isomers, or mixtures of compounds.	

[[69 FR 5063](#), Feb. 3, 2004, as amended at [71 FR 42913](#), July 28, 2006]

**Table 2 to Subpart EEEE of Part 63—Emission Limits**

If you own or operate . . .	And if . . .	Then you must . . . <sup>1</sup>
1. A storage tank at an existing affected source with a capacity $\geq$ 18.9 cubic meters (5,000 gallons) and <189.3 cubic meters (50,000 gallons) <sup>2</sup>	a. The stored organic liquid is not crude oil or condensate and if the annual average true vapor pressure of the total Table 1 organic HAP in the stored organic liquid is $\geq$ 27.6 kilopascals (4.0 psia) and <76.6 kilopascals (11.1 psia)	i. Reduce emissions of total organic HAP (or, upon approval, TOC) by at least 95 weight-percent or, as an option, to an exhaust concentration less than or equal to 20 ppmv, on a dry basis corrected to 3-percent oxygen for combustion devices using supplemental combustion air, by venting emissions through a closed vent system to any combination of control devices meeting the applicable requirements of <a href="#">subpart SS of this part</a> and <a href="#">§ 63.2346(l)</a> ; OR
		ii. Comply with the work practice standards specified in Table 4 to this subpart, items 1.a, 1.b, or 1.c for tanks storing liquids described in that table.
	b. The stored organic liquid is crude oil or condensate	i. See the requirement in item 1.a.i or 1.a.ii of this table.
2. A storage tank at an existing affected source with a capacity $\geq$ 189.3 cubic meters (50,000 gallons)	a. The stored organic liquid is not crude oil or condensate and if the annual average true vapor pressure of the total Table 1 organic HAP in the stored organic liquid is <76.6 kilopascals (11.1 psia)	i. See the requirement in item 1.a.i or 1.a.ii of this table.
	b. The stored organic liquid is crude oil or condensate	i. See the requirement in item 1.a.i or 1.a.ii of this table.
3. A storage tank at a reconstructed or new affected source with a capacity $\geq$ 18.9 cubic meters (5,000 gallons) and <37.9	a. The stored organic liquid is not crude oil or condensate and if the annual average true vapor pressure of the total Table 1	i. See the requirement in item 1.a.i or 1.a.ii of this table.

If you own or operate . . .	And if . . .	Then you must . . . <sup>1</sup>
cubic meters (10,000 gallons)	organic HAP in the stored organic liquid is $\geq 27.6$ kilopascals (4.0 psia) and $< 76.6$ kilopascals (11.1 psia)	
	b. The stored organic liquid is crude oil or condensate	i. See the requirement in item 1.a.i or 1.a.ii of this table.
4. A storage tank at a reconstructed or new affected source with a capacity $\geq 37.9$ cubic meters (10,000 gallons) and $< 189.3$ cubic meters (50,000 gallons)	a. The stored organic liquid is not crude oil or condensate and if the annual average true vapor pressure of the total Table 1 organic HAP in the stored organic liquid is $\geq 0.7$ kilopascals (0.1 psia) and $< 76.6$ kilopascals (11.1 psia)	i. See the requirement in item 1.a.i or 1.a.ii of this table.
	b. The stored organic liquid is crude oil or condensate	i. See the requirement in item 1.a.i or 1.a.ii of this table.
5. A storage tank at a reconstructed or new affected source with a capacity $\geq 189.3$ cubic meters (50,000 gallons)	a. The stored organic liquid is not crude oil or condensate and if the annual average true vapor pressure of the total Table 1 organic HAP in the stored organic liquid is $< 76.6$ kilopascals (11.1 psia)	i. See the requirement in item 1.a.i or 1.a.ii of this table.
	b. The stored organic liquid is crude oil or condensate	i. See the requirement in item 1.a.i or 1.a.ii of this table.
6. A storage tank at an existing, reconstructed, or new affected source meeting the capacity criteria	a. The stored organic liquid is not crude oil or condensate and if the annual average true vapor pressure of the total Table 1	i. Reduce emissions of total organic HAP (or, upon approval, TOC) by at least 95 weight-percent or, as an option, to an exhaust concentration less than or equal to 20 ppmv, on a

If you own or operate . . .	And if . . .	Then you must . . . <sup>1</sup>
specified in Table 2 to this subpart, items 1 through 5	organic HAP in the stored organic liquid is $\geq 76.6$ kilopascals (11.1 psia)	dry basis corrected to 3-percent oxygen for combustion devices using supplemental combustion air, by venting emissions through a closed vent system to any combination of control devices meeting the applicable requirements of <a href="#">subpart SS of this part</a> and <a href="#">§ 63.2346(l)</a> ; OR
		ii. Comply with the work practice standards specified in Table 4 to this subpart, item 2.a or 2.b, for tanks storing the liquids described in that table.
7. A transfer rack at an existing facility where the total actual annual facility-level organic liquid loading volume through transfer racks is equal to or greater than 800,000 gallons and less than 10 million gallons	a. The total Table 1 organic HAP content of the organic liquid being loaded through one or more of the transfer rack's arms is at least 98 percent by weight and is being loaded into a transport vehicle	i. For all such loading arms at the rack, reduce emissions of total organic HAP (or, upon approval, TOC) from the loading of organic liquids either by venting the emissions that occur during loading through a closed vent system to any combination of control devices meeting the applicable requirements of <a href="#">subpart SS of this part</a> and <a href="#">§ 63.2346(l)</a> , achieving at least 98 weight-percent HAP reduction, OR, as an option, to an exhaust concentration less than or equal to 20 ppmv, on a dry basis corrected to 3-percent oxygen for combustion devices using supplemental combustion air; OR
		ii. During the loading of organic liquids, comply with the work practice standards specified in item 3 of Table 4 to this subpart.

If you own or operate . . .	And if . . .	Then you must . . . <sup>1</sup>
8. A transfer rack at an existing facility where the total actual annual facility-level organic liquid loading volume through transfer racks is $\geq 10$ million gallons	a. One or more of the transfer rack's arms is loading an organic liquid into a transport vehicle	i. See the requirements in items 7.a.i and 7.a.ii of this table.
9. A transfer rack at a new facility where the total actual annual facility-level organic liquid loading volume through transfer racks is less than 800,000 gallons	a. The total Table 1 organic HAP content of the organic liquid being loaded through one or more of the transfer rack's arms is at least 25 percent by weight and is being loaded into a transport vehicle	i. See the requirements in items 7.a.i and 7.a.ii of this table.
	b. One or more of the transfer rack's arms is filling a container with a capacity equal to or greater than 55 gallons	i. For all such loading arms at the rack during the loading of organic liquids, comply with the provisions of <a href="#">§§ 63.924 through 63.927</a> ; OR ii. During the loading of organic liquids, comply with the work practice standards specified in item 3.a of Table 4 to this subpart.
10. A transfer rack at a new facility where the total actual annual facility-level organic liquid loading volume through transfer racks is equal to or greater than 800,000 gallons	a. One or more of the transfer rack's arms is loading an organic liquid into a transport vehicle	i. See the requirements in items 7.a.i and 7.a.ii of this table.
	b. One or more of the transfer rack's arms is filling a container with a capacity equal to or greater than 55 gallons	i. For all such loading arms at the rack during the loading of organic liquids, comply with the provisions of <a href="#">§§ 63.924 through 63.927</a> ; OR

If you own or operate . . .	And if . . .	Then you must . . . <sup>1</sup>
		ii. During the loading of organic liquids, comply with the work practice standards specified in item 3.a of Table 4 to this subpart.
<sup>1</sup> Beginning no later than the compliance dates specified in <a href="#">§ 63.2342(e)</a> , for each storage tank and low throughput transfer rack, if you vent emissions through a closed vent system to a flare then you must comply with the requirements specified in <a href="#">§ 63.2346(k)</a> .		
<sup>2</sup> Beginning no later than the compliance dates specified in <a href="#">§ 63.2342(e)</a> , the tank capacity criteria, liquid vapor pressure criteria, and emission limits specified for storage tanks at an existing affected source in Table 2 to this subpart, item 1 no longer apply. Instead, you must comply with the requirements as specified in <a href="#">§ 63.2346(a)(5)</a> and Table 2b to this subpart.		

[[85 FR 40774](#), July 7, 2020]

**Table 2b to Subpart EEEE of Part 63—Emission Limits For Storage Tanks At Certain Existing Affected Sources**

As stated in [§ 63.2346\(a\)\(5\)](#), beginning no later than the compliance dates specified in [§ 63.2342\(e\)](#), the requirements in this Table 2b to this subpart apply to storage tanks at an existing affected source in lieu of the requirements in Table 2 to this subpart, item 1 for storage tanks at an existing affected source.

If you own or operate . . .	And if . . .	Then you must . . .
1. A storage tank at an existing affected source with a capacity $\geq$ 18.9 cubic meters (5,000 gallons) and $<$ 75.7 cubic meters (20,000 gallons)	a. The stored organic liquid is not crude oil or condensate and if the annual average true vapor pressure of the total Table 1 organic HAP in the stored organic liquid is $\geq$ 27.6 kilopascals (4.0 psia)	i. Reduce emissions of total organic HAP (or, upon approval, TOC) by at least 95 weight-percent or, as an option, to an exhaust concentration less than or equal to 20 ppmv, on a dry basis corrected to 3-percent oxygen for combustion devices using supplemental combustion air, by venting emissions through a closed vent system to a flare meeting the requirements of <a href="#">§§ 63.983</a> and <a href="#">63.2380</a> , or by venting emissions through a closed vent system to any combination of nonflare control devices meeting the applicable requirements of

If you own or operate . . .	And if . . .	Then you must . . .
		<a href="#">subpart SS of this part</a> and <a href="#">§ 63.2346(l)</a> ; OR.
		ii. Comply with the work practice standards specified in Table 4 to this subpart, items 1.a, 1.b, or 1.c for tanks storing liquids described in that table.
	b. The stored organic liquid is crude oil or condensate	i. See the requirement in item 1.a.i or ii of this table.
2. A storage tank at an existing affected source with a capacity $\geq 75.7$ cubic meters (20,000 gallons) and $< 151.4$ cubic meters (40,000 gallons)	a. The stored organic liquid is not crude oil or condensate and if the annual average true vapor pressure of the total Table 1 organic HAP in the stored organic liquid is $\geq 13.1$ kilopascals (1.9 psia)	i. See the requirement in item 1.a.i or ii of this table.
	b. The stored organic liquid is crude oil or condensate	i. See the requirement in item 1.a.i or ii of this table.
3. A storage tank at an existing affected source with a capacity $\geq 151.4$ cubic meters (40,000 gallons) and $< 189.3$ cubic meters (50,000 gallons)	a. The stored organic liquid is not crude oil or condensate and if the annual average true vapor pressure of the total Table 1 organic HAP in the stored organic liquid is $\geq 5.2$ kilopascals (0.75 psia)	i. See the requirement in item 1.a.i or ii of this table.
	b. The stored organic liquid is crude oil or condensate	i. See the requirement in item 1.a.i or ii of this table.

[[85 FR 40775](#), July 7, 2020]

**Table 3 to Subpart EEEE of Part 63—Operating Limits—High Throughput Transfer Racks**

As stated in [§ 63.2346\(e\)](#), you must comply with the operating limits for existing, reconstructed, or new affected sources as follows:

<b>For each existing, each reconstructed, and each new affected source using . . .</b>	<b>You must . . .</b>
1. A thermal oxidizer to comply with an emission limit in Table 2 to this subpart	Maintain the daily average fire box or combustion zone temperature greater than or equal to the reference temperature established during the design evaluation or performance test that demonstrated compliance with the emission limit.
2. A catalytic oxidizer to comply with an emission limit in Table 2 to this subpart	a. Replace the existing catalyst bed before the age of the bed exceeds the maximum allowable age established during the design evaluation or performance test that demonstrated compliance with the emission limit; AND
	b. Maintain the daily average temperature at the inlet of the catalyst bed greater than or equal to the reference temperature established during the design evaluation or performance test that demonstrated compliance with the emission limit; AND
	c. Maintain the daily average temperature difference across the catalyst bed greater than or equal to the minimum temperature difference established during the design evaluation or performance test that demonstrated compliance with the emission limit.
3. An absorber to comply with an emission limit in Table 2 to this subpart	a. Maintain the daily average concentration level of organic compounds in the absorber exhaust less than or equal to the reference concentration established during the design evaluation or performance test that demonstrated compliance with the emission limit; OR
	b. Maintain the daily average scrubbing liquid temperature less than or equal to the reference temperature established during the design evaluation or performance test that demonstrated compliance with the emission limit; AND
	Maintain the difference between the specific gravities of the saturated and fresh scrubbing fluids greater than or equal to the difference established during the design evaluation or



For each existing, each reconstructed, and each new affected source using . . .	You must . . .
	performance test that demonstrated compliance with the emission limit.
4. A condenser to comply with an emission limit in Table 2 to this subpart	a. Maintain the daily average concentration level of organic compounds at the condenser exit less than or equal to the reference concentration established during the design evaluation or performance test that demonstrated compliance with the emission limit; OR
	b. Maintain the daily average condenser exit temperature less than or equal to the reference temperature established during the design evaluation or performance test that demonstrated compliance with the emission limit.
5. An adsorption system with adsorbent regeneration to comply with an emission limit in Table 2 to this subpart	a. Maintain the daily average concentration level of organic compounds in the adsorber exhaust less than or equal to the reference concentration established during the design evaluation or performance test that demonstrated compliance with the emission limit; OR
	b. Maintain the total regeneration stream mass flow during the adsorption bed regeneration cycle greater than or equal to the reference stream mass flow established during the design evaluation or performance test that demonstrated compliance with the emission limit; AND
	Before the adsorption cycle commences, achieve and maintain the temperature of the adsorption bed after regeneration less than or equal to the reference temperature established during the design evaluation or performance test that demonstrated compliance with the emission limit; AND
	Achieve a pressure reduction during each adsorption bed regeneration cycle greater than or equal to the pressure reduction established during the design evaluation or performance test that demonstrated compliance with the emission limit.

For each existing, each reconstructed, and each new affected source using . . .	You must . . .
6. An adsorption system without adsorbent regeneration to comply with an emission limit in Table 2 to this subpart	a. Maintain the daily average concentration level of organic compounds in the adsorber exhaust less than or equal to the reference concentration established during the design evaluation or performance test that demonstrated compliance with the emission limit; OR
	b. Replace the existing adsorbent in each segment of the bed with an adsorbent that meets the replacement specifications established during the design evaluation or performance test before the age of the adsorbent exceeds the maximum allowable age established during the design evaluation or performance test that demonstrated compliance with the emission limit; AND
	Maintain the temperature of the adsorption bed less than or equal to the reference temperature established during the design evaluation or performance test that demonstrated compliance with the emission limit.
7. A flare to comply with an emission limit in Table 2 to this subpart	a. Except as specified in item 7.d of this table, comply with the equipment and operating requirements in <a href="#">§ 63.987(a)</a> ; AND b. Except as specified in item 7.d of this table, conduct an initial flare compliance assessment in accordance with <a href="#">§ 63.987(b)</a> ; AND
	c. Except as specified in item 7.d of this table, install and operate monitoring equipment as specified in <a href="#">§ 63.987(c)</a> .
	d. Beginning no later than the compliance dates specified in <a href="#">§ 63.2342(e)</a> , comply with the requirements in <a href="#">§ 63.2380</a> instead of the requirements in <a href="#">§ 63.987</a> and the provisions regarding flare compliance assessments at <a href="#">§ 63.997(a)</a> , <a href="#">(b)</a> , and <a href="#">(c)</a> .
8. Another type of control device to comply with an emission limit in Table 2 to this subpart	Submit a monitoring plan as specified in <a href="#">§§ 63.995(c)</a> and <a href="#">63.2366(b)</a> , and monitor the control device in accordance with that plan.

[[85 FR 40776](#), July 7, 2020]

**Table 4 to Subpart EEEE of Part 63—Work Practice Standards**

As stated in [§ 63.2346](#), you may elect to comply with one of the work practice standards for existing, reconstructed, or new affected sources in the following table. If you elect to do so, . . .

For each . . .	You must . . .
1. Storage tank at an existing, reconstructed, or new affected source meeting any set of tank capacity and organic HAP vapor pressure criteria specified in Table 2 to this subpart, items 1 through 5 or Table 2b to this subpart, items 1 through 3	a. Comply with the requirements of <a href="#">40 CFR part 63, subpart WW</a> (control level 2), if you elect to meet <a href="#">40 CFR part 63, subpart WW</a> (control level 2) requirements as an alternative to the emission limit in Table 2 to this subpart, items 1 through 5 or the emission limit in Table 2b to this subpart, items 1 through 3; OR.
	b. Comply with the requirements in <a href="#">§§ 63.2346(l)</a> and <a href="#">63.984</a> for routing emissions to a fuel gas system or back to a process; OR.
	c. Comply with the requirements of <a href="#">§ 63.2346(a)(4)</a> for vapor balancing emissions to the transport vehicle from which the storage tank is filled.
2. Storage tank at an existing, reconstructed, or new affected source meeting any set of tank capacity and organic HAP vapor pressure criteria specified in Table 2 to this subpart, item 6	a. Comply with the requirements in <a href="#">§§ 63.2346(l)</a> and <a href="#">63.984</a> for routing emissions to a fuel gas system or back to a process; OR b. Comply with the requirements of <a href="#">§ 63.2346(a)(4)</a> for vapor balancing emissions to the transport vehicle from which the storage tank is filled.
3. Transfer rack subject to control based on the criteria specified in Table 2 to this subpart, items 7 through 10, at an existing, reconstructed, or new affected source	a. If the option of a vapor balancing system is selected, install and, during the loading of organic liquids, operate a system that meets the requirements in Table 7 to this subpart, item 3.b.i and item 3.b.ii, as applicable; OR
	b. Comply with the requirements in <a href="#">§§ 63.2346(l)</a> and <a href="#">63.984</a> during the loading of organic liquids, for routing emissions to a fuel gas system or back to a process.
4. Pump, valve, and sampling connection that operates in organic liquids service at	Comply with <a href="#">§ 63.2346(l)</a> and the requirements for pumps, valves, and sampling connections in <a href="#">40 CFR</a>

For each . . .	You must . . .
least 300 hours per year at an existing, reconstructed, or new affected source	<a href="#">part 63, subpart TT</a> (control level 1), subpart UU (control level 2), or subpart H.
5. Transport vehicles equipped with vapor collection equipment that are loaded at transfer racks that are subject to control based on the criteria specified in Table 2 to this subpart, items 7 through 10	Follow the steps in <a href="#">40 CFR 60.502(e)</a> to ensure that organic liquids are loaded only into vapor-tight transport vehicles, and comply with the provisions in <a href="#">40 CFR 60.502(f)</a> , <a href="#">(g)</a> , <a href="#">(h)</a> , and <a href="#">(i)</a> , except substitute the term transport vehicle at each occurrence of tank truck or gasoline tank truck in those paragraphs.
6. Transport vehicles equipped without vapor collection equipment that are loaded at transfer racks that are subject to control based on the criteria specified in Table 2 to this subpart, items 7 through 10	Ensure that organic liquids are loaded only into transport vehicles that have a current certification in accordance with the U.S. DOT qualification and maintenance requirements in <a href="#">49 CFR part 180, subpart E</a> for cargo tanks and subpart F for tank cars.

[[85 FR 40777](#), July 7, 2020]

### Table 5 to Subpart EEEE of Part 63—Requirements for Performance Tests and Design Evaluations

As stated in [§§ 63.2354\(a\)](#) and [63.2362](#), you must comply with the requirements for performance tests and design evaluations for existing, reconstructed, or new affected sources as follows:

For . . .	You must conduct . . .	According to . . .	Using . . .	To determine . . .	According to the following requirements . . .
1. Each existing, each reconstructed, and each new affected source using a nonflare control device to comply with	a. A performance test to determine the organic HAP (or, upon a pproval, TOC) control efficiency of	i. <a href="#">§ 63.985(b)(1)(ii)</a> , <a href="#">§ 63.988(b)</a> , <a href="#">§ 63.990(b)</a> , or <a href="#">§ 63.995(b)</a>	(1) Method 1 or 1A in appendix A-1 of <a href="#">40 CFR part 60</a> , as appropriate	(A) Sampling port locations and the required number of traverse points	(i) Sampling sites must be located at the inlet and outlet of each control device if complying with the control efficiency

For ...	You must conduct ...	According to ...	Using ...	To determine ...	According to the following requirements . .
an emission limit in Table 2 to this subpart, items 1 through 10, and each existing affected source using a nonflare control device to comply with an emission limit in Table 2b to this subpart, items 1 through 3	each nonflare control device, OR the exhaust concentration of each combustion device; OR				requirement or at the outlet of the control device if complying with the exhaust concentration requirement; AND (ii) the outlet sampling site must be located at each control device prior to any releases to the atmosphere.
			(2) Method 2, 2A, 2C, 2D, or 2F in appendix A-1 of <a href="#">40 CFR part 60</a> , or Method 2G in appendix A-2 of <a href="#">40 CFR part 60</a> , as appropriate	(A) Stack gas velocity and volumetric flow rate	See the requirements in items 1.a.i.(1)(A)(i) and (ii) of this table.
			(3) Method 3A or 3B in appendix A-2 of <a href="#">40 CFR part 60</a> , as appropriate <sup>1</sup>	(A) Concentration of CO <sub>2</sub> and O <sub>2</sub> and dry molecular	See the requirements in items 1.a.i.(1)(A)(i) and (ii) of this table.

For ...	You must conduct ...	According to ...	Using ...	To determine ...	According to the following requirements . .
				weight of the stack gas	
			(4) Method 4 in appendix A-3 of <a href="#">40 CFR part 60</a>	(A) Moisture content of the stack gas	See the requirements in items 1.a.i.(1)(A)(i) and (ii) of this table.
			(5) Method 25 or 25A in appendix A-7 of <a href="#">40 CFR part 60</a> , as appropriate. Method 316, Method 320 <sup>4</sup> , or Method 323 in <a href="#">appendix A of this part</a> if you must measure formaldehyde. You may not use Methods 320 <sup>2 4</sup> or 323 for formaldehyde if the gas stream contains entrained water droplets	(A) TOC and formaldehyde emissions, from any control device	(i) The organic HAP used for the calibration gas for Method 25A in appendix A-7 of <a href="#">40 CFR part 60</a> must be the single organic HAP representing the largest percent by volume of emissions; AND (ii) During the performance test, you must establish the operating parameter limits within which TOC emissions are

For ...	You must conduct ...	According to ...	Using ...	To determine ...	According to the following requirements . .
					reduced by the required weight-percent or, as an option for nonflare combustion devices, to 20-ppmv exhaust concentration.
			(6) Method 18 <sup>3</sup> in appendix A-6 of <a href="#">40 CFR part 60</a> or Method 320 <sup>2,4</sup> of appendix A to this part, as appropriate. Method 316, Method 320 <sup>2,4</sup> , or Method 323 in <a href="#">appendix A of this part</a> for measuring formaldehyde. You may not use Methods 320 or 323 if the gas stream contains entrained water droplets	(A) Total organic HAP and formaldehyde emissions, from non-combustion control devices	(i) During the performance test, you must establish the operating parameter limits within which total organic HAP emissions are reduced by the required weight-percent.

For ...	You must conduct ...	According to ...	Using ...	To determine ...	According to the following requirements . .
	b. A design evaluation (for nonflare control devices) to determine the organic HAP (or, upon approval, TOC) control efficiency of each nonflare control device, or the exhaust concentration of each combustion control device	§ 63.985(b)(1)(i)			During a design evaluation, you must establish the operating parameter limits within which total organic HAP, (or, upon approval, TOC) emissions are reduced by at least 95 weight-percent for storage tanks or 98 weight-percent for transfer racks, or, as an option for nonflare combustion devices, to 20-ppmv exhaust concentration.
2. Each transport vehicle that you own that is equipped with vapor collection	A performance test to determine the vapor tightness of the tank and		Method 27 of appendix A of <a href="#">40 CFR part 60</a>	Vapor tightness	The pressure change in the tank must be no more than 250 pascals (1 inch of water) in 5 minutes



For ...	You must conduct ...	According to ...	Using ...	To determine ...	According to the following requirements . .
equipment and is loaded with organic liquids at a transfer rack that is subject to control based on the criteria specified in Table 2 to this subpart, items 7 through 10, at an existing, reconstructed, or new affected source	then repair as needed until it passes the test				after it is pressurized to 4,500 pascals (18 inches of water).

<sup>1</sup> The manual method in American Society of Mechanical Engineers (ASME) PTC 19.10-1981-Part 10 (2010) (incorporated by reference, see [§ 63.14](#)) may be used instead of Method 3B in appendix A-2 of [40 CFR part 60](#) to determine oxygen concentration.

<sup>2</sup> All compounds quantified by Method 320 of appendix A to this part must be validated according to Section 13.0 of Method 320.

<sup>3</sup> ASTM D6420-18 (incorporated by reference, see [§ 63.14](#)) may be used instead of Method 18 of [40 CFR part 60, appendix A](#)-6 to determine total HAP emissions, but if you use ASTM D6420-18, you must use it under the conditions specified in [§ 63.2354\(b\)\(3\)\(ii\)](#).

<sup>4</sup> ASTM D6348-12e1 (incorporated by reference, see [§ 63.14](#)) may be used instead of Method 320 of appendix A to this part under the following conditions: the test plan preparation and implementation in the Annexes to ASTM D6348-12e1, Sections A1 through A8 are mandatory; the percent (%) R must be determined for each target analyte (Equation A5.5); %R must be 70%  $\geq R \leq 130\%$ ; if the %R value does not meet this criterion for a target compound, then the test data is not acceptable for that compound and the test must be repeated for that analyte (*i.e.*, the sampling and/or analytical procedure should be adjusted before a retest); and the %R value for

<b>For ...</b>	<b>You must conduct ...</b>	<b>According to ...</b>	<b>Using ...</b>	<b>To determine ...</b>	<b>According to the following requirements . .</b>
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each compound must be reported in the test report and all field measurements must be corrected with the calculated %R value for that compound by using the following equation: Reported Results = ((Measured Concentration in Stack))/(%R) × 100.

[[85 FR 40778](#), July 7, 2020]

#### **Table 6 to Subpart EEEE of Part 63—Initial Compliance with Emission Limits**

As stated in [§§ 63.2370\(a\)](#) and [63.2382\(b\)](#), you must show initial compliance with the emission limits for existing, reconstructed, or new affected sources as follows:

<b>For each ...</b>	<b>For the following emission limit ...</b>	<b>You have demonstrated initial compliance if ...</b>
1. Storage tank at an existing, reconstructed, or new affected source meeting any set of tank capacity and liquid organic HAP vapor pressure criteria specified in Table 2 to this subpart, items 1 through 6, or Table 2b to this subpart, items 1 through 3	Reduce total organic HAP (or, upon approval, TOC) emissions by at least 95 weight-percent, or as an option for nonflare combustion devices to an exhaust concentration of ≤20 ppmv	Total organic HAP (or, upon approval, TOC) emissions, based on the results of the performance testing or design evaluation specified in Table 5 to this subpart, item 1.a or 1.b, respectively, are reduced by at least 95 weight-percent or as an option for nonflare combustion devices to an exhaust concentration ≤20 ppmv.
2. Transfer rack that is subject to control based on the criteria specified in Table 2 to this subpart, items 7 through 10, at an existing, reconstructed, or new affected source	Reduce total organic HAP (or, upon approval, TOC) emissions from the loading of organic liquids by at least 98 weight-percent, or as an option for nonflare combustion devices to an exhaust concentration of ≤20 ppmv	Total organic HAP (or, upon approval, TOC) emissions from the loading of organic liquids, based on the results of the performance testing or design evaluation specified in Table 5 to this subpart, item 1.a or 1.b, respectively, are reduced by at least 98 weight-percent or as an option for nonflare

For each . . .	For the following emission limit . . .	You have demonstrated initial compliance if . . .
		combustion devices to an exhaust concentration of $\leq 20$ ppmv.

[[85 FR 40780](#), July 7, 2020]

**Table 7 to Subpart EEEE of Part 63—Initial Compliance with Work Practice Standards**

For each . . .	If you . . .	You have demonstrated initial compliance if . . .
1. Storage tank at an existing affected source meeting either set of tank capacity and liquid organic HAP vapor pressure criteria specified in Table 2 to this subpart, items 1 or 2, or Table 2b to this subpart, items 1 through 3	a. Install a floating roof or equivalent control that meets the requirements in Table 4 to this subpart, item 1.a	i. After emptying and degassing, you visually inspect each internal floating roof before the refilling of the storage tank and perform seal gap inspections of the primary and secondary rim seals of each external floating roof within 90 days after the refilling of the storage tank.
	b. Route emissions to a fuel gas system or back to a process	i. You meet the requirements in <a href="#">§ 63.984(b)</a> and submit the statement of connection required by <a href="#">§ 63.984(c)</a> .
	c. Install and, during the filling of the storage tank with organic liquids, operate a vapor balancing system	i. You meet the requirements in <a href="#">§ 63.2346(a)(4)</a> .
2. Storage tank at a reconstructed or new affected source meeting any set of tank capacity and liquid organic HAP vapor pressure criteria specified in Table 2 to this subpart, items 3 through 5	a. Install a floating roof or equivalent control that meets the requirements in Table 4 to this subpart, item 1.a	i. You visually inspect each internal floating roof before the initial filling of the storage tank and perform seal gap inspections of the primary and secondary rim seals of each external floating roof within 90 days after the initial filling of the storage tank.

For each . . .	If you . . .	You have demonstrated initial compliance if . . .
	b. Route emissions to a fuel gas system or back to a process	i. See item 1.b.i of this table.
	c. Install and, during the filling of the storage tank with organic liquids, operate a vapor balancing system	i. See item 1.c.i of this table.
3. Transfer rack that is subject to control based on the criteria specified in Table 2 to this subpart, items 7 through 10, at an existing, reconstructed, or new affected source	a. Load organic liquids only into transport vehicles having current vapor tightness certification as described in Table 4 to this subpart, item 5 and item 6	i. You comply with the provisions specified in Table 4 to this subpart, item 5 or item 6, as applicable.
	b. Install and, during the loading of organic liquids, operate a vapor balancing system	i. You design and operate the vapor balancing system to route organic HAP vapors displaced from loading of organic liquids into transport vehicles to the storage tank from which the liquid being loaded originated or to another storage tank connected to a common header. ii. You design and operate the vapor balancing system to route organic HAP vapors displaced from loading of organic liquids into containers directly (e.g., no intervening tank or containment area such as a room) to the storage tank from which the liquid being loaded originated or to another

For each . . .	If you . . .	You have demonstrated initial compliance if . . .
		storage tank connected to a common header.
	c. Route emissions to a fuel gas system or back to a process	i. See item 1.b.i of this table.
4. Equipment leak component, as defined in <a href="#">§ 63.2406</a> , that operates in organic liquids service $\geq 300$ hours per year at an existing, reconstructed, or new affected source	a. Carry out a leak detection and repair program or equivalent control according to one of the subparts listed in Table 4 to this subpart, item 4	i. You specify which one of the control programs listed in Table 4 to this subpart you have selected, OR ii. Provide written specifications for your equivalent control approach.

[[85 FR 40780](#), July 7, 2020]

#### Table 8 to Subpart EEEE of Part 63—Continuous Compliance with Emission Limits

As stated in [§§ 63.2378\(a\)](#) and [\(b\)](#) and [63.2390\(b\)](#), you must show continuous compliance with the emission limits for existing, reconstructed, or new affected sources according to the following table:

For each . . .	For the following emission limit . . .	You must demonstrate continuous compliance by . . .
1. Storage tank at an existing, reconstructed, or new affected source meeting any set of tank capacity and liquid organic HAP vapor pressure criteria specified in Table 2 to this subpart, items 1 through 6 or Table 2b to this subpart, items 1 through 3	a. Reduce total organic HAP (or, upon approval, TOC) emissions from the closed vent system and control device by 95 weight-percent or greater, or as an option to 20 ppmv or less of total organic HAP (or, upon approval, TOC) in the exhaust of combustion devices	i. Performing CMS monitoring and collecting data according to <a href="#">§§ 63.2366</a> , <a href="#">63.2374</a> , and <a href="#">63.2378</a> , except as specified in item 1.a.iii of this table; AND ii. Maintaining the operating limits established during the design evaluation or performance test that demonstrated compliance with the emission limit.

For each . . .	For the following emission limit . . .	You must demonstrate continuous compliance by . . .
		iii. Beginning no later than the compliance dates specified in <a href="#">§ 63.2342(e)</a> , if you use a flare, you must demonstrate continuous compliance by performing CMS monitoring and collecting data according to requirements in <a href="#">§ 63.2380</a> .
2. Transfer rack that is subject to control based on the criteria specified in Table 2 to this subpart, items 7 through 10, at an existing, reconstructed, or new affected source	a. Reduce total organic HAP (or, upon approval, TOC) emissions during the loading of organic liquids from the closed vent system and control device by 98 weight-percent or greater, or as an option to 20 ppmv or less of total organic HAP (or, upon approval, TOC) in the exhaust of combustion devices	i. Performing CMS monitoring and collecting data according to <a href="#">§§ 63.2366</a> , <a href="#">63.2374</a> , and <a href="#">63.2378</a> during the loading of organic liquids, except as specified in item 2.a.iii of this table; AND ii. Maintaining the operating limits established during the design evaluation or performance test that demonstrated compliance with the emission limit during the loading of organic liquids. iii. Beginning no later than the compliance dates specified in <a href="#">§ 63.2342(e)</a> , if you use a flare, you must demonstrate continuous compliance by performing CMS monitoring and collecting data according to requirements in <a href="#">§ 63.2380</a> .

**Table 9 to Subpart EEEE of Part 63—Continuous Compliance with Operating Limits—High Throughput Transfer Racks**

As stated in §§ 63.2378(a) and (b) and 63.2390(b), you must show continuous compliance with the operating limits for existing, reconstructed, or new affected sources according to the following table:

For each existing, reconstructed, and each new affected source using . . .	For the following operating limit . . .	You must demonstrate continuous compliance by . . .
1. A thermal oxidizer to comply with an emission limit in Table 2 to this subpart	a. Maintain the daily average fire box or combustion zone, as applicable, temperature greater than or equal to the reference temperature established during the design evaluation or performance test that demonstrated compliance with the emission limit	i. Continuously monitoring and recording fire box or combustion zone, as applicable, temperature every 15 minutes and maintaining the daily average fire box temperature greater than or equal to the reference temperature established during the design evaluation or performance test that demonstrated compliance with the emission limit; AND ii. Keeping the applicable records required in § 63.998. <sup>1</sup>
2. A catalytic oxidizer to comply with an emission limit in Table 2 to this subpart	a. Replace the existing catalyst bed before the age of the bed exceeds the maximum allowable age established during the design evaluation or performance test that demonstrated compliance with the emission limit; AND	i. Replacing the existing catalyst bed before the age of the bed exceeds the maximum allowable age established during the design evaluation or performance test that demonstrated compliance with the emission limit; AND ii. Keeping the applicable records required in § 63.998. <sup>1</sup>
	b. Maintain the daily average temperature at the inlet of the catalyst bed greater than or equal to the reference temperature established during the design evaluation or performance test	i. Continuously monitoring and recording the temperature at the inlet of the catalyst bed at least every 15 minutes and maintaining the daily average temperature at the inlet of the catalyst bed greater than or equal to the reference temperature established

For each existing, reconstructed, and each new affected source using . . .	For the following operating limit . . .	You must demonstrate continuous compliance by . . .
	that demonstrated compliance with the emission limit; AND	during the design evaluation or performance test that demonstrated compliance with the emission limit; AND ii. Keeping the applicable records required in <a href="#">§ 63.998</a> . <sup>1</sup>
	c. Maintain the daily average temperature difference across the catalyst bed greater than or equal to the minimum temperature difference established during the design evaluation or performance test that demonstrated compliance with the emission limit	i. Continuously monitoring and recording the temperature at the outlet of the catalyst bed every 15 minutes and maintaining the daily average temperature difference across the catalyst bed greater than or equal to the minimum temperature difference established during the design evaluation or performance test that demonstrated compliance with the emission limit; AND ii. Keeping the applicable records required in <a href="#">§ 63.998</a> . <sup>1</sup>
3. An absorber to comply with an emission limit in Table 2 to this subpart	a. Maintain the daily average concentration level of organic compounds in the absorber exhaust less than or equal to the reference concentration established during the design evaluation or performance test that demonstrated compliance with the emission limit; OR	i. Continuously monitoring the organic concentration in the absorber exhaust and maintaining the daily average concentration less than or equal to the reference concentration established during the design evaluation or performance test that demonstrated compliance with the emission limit; AND ii. Keeping the applicable records required in <a href="#">§ 63.998</a> . <sup>1</sup>
	b. Maintain the daily average scrubbing liquid temperature less than or equal to the reference	i. Continuously monitoring the scrubbing liquid temperature and maintaining the daily average



For each existing, reconstructed, and each new affected source using . . .	For the following operating limit . . .	You must demonstrate continuous compliance by . . .
	<p>temperature established during the design evaluation or performance test that demonstrated compliance with the emission limit; AND</p> <p>Maintain the difference between the specific gravities of the saturated and fresh scrubbing fluids greater than or equal to the difference established during the design evaluation or performance test that demonstrated compliance with the emission limit</p>	<p>temperature less than or equal to the reference temperature established during the design evaluation or performance test that demonstrated compliance with the emission limit; AND</p> <p>ii. Maintaining the difference between the specific gravities greater than or equal to the difference established during the design evaluation or performance test that demonstrated compliance with the emission limit; AND</p> <p>iii. Keeping the applicable records required in <a href="#">§ 63.998</a>.<sup>1</sup></p>
4. A condenser to comply with an emission limit in Table 2 to this subpart	<p>a. Maintain the daily average concentration level of organic compounds at the exit of the condenser less than or equal to the reference concentration established during the design evaluation or performance test that demonstrated compliance with the emission limit; OR</p>	<p>i. Continuously monitoring the organic concentration at the condenser exit and maintaining the daily average concentration less than or equal to the reference concentration established during the design evaluation or performance test that demonstrated compliance with the emission limit; AND</p> <p>ii. Keeping the applicable records required in <a href="#">§ 63.998</a>.<sup>1</sup></p>
	<p>b. Maintain the daily average condenser exit temperature less than or equal to the reference temperature established during the design evaluation or performance test that demonstrated compliance with the emission limit</p>	<p>i. Continuously monitoring and recording the temperature at the exit of the condenser at least every 15 minutes and maintaining the daily average temperature less than or equal to the reference temperature established during the design evaluation or performance test that</p>

For each existing, reconstructed, and each new affected source using . . .	For the following operating limit . . .	You must demonstrate continuous compliance by . . .
		demonstrated compliance with the emission limit; AND ii. Keeping the applicable records required in <a href="#">§ 63.998</a> . <sup>1</sup>
5. An adsorption system with adsorbent regeneration to comply with an emission limit in Table 2 to this subpart	a. Maintain the daily average concentration level of organic compounds in the adsorber exhaust less than or equal to the reference concentration established during the design evaluation or performance test that demonstrated compliance with the emission limit; OR	i. Continuously monitoring the daily average organic concentration in the adsorber exhaust and maintaining the concentration less than or equal to the reference concentration established during the design evaluation or performance test that demonstrated compliance with the emission limit; AND ii. Keeping the applicable records required in <a href="#">§ 63.998</a> . <sup>1</sup>
	b. Maintain the total regeneration stream mass flow during the adsorption bed regeneration cycle greater than or equal to the reference stream mass flow established during the design evaluation or performance test that demonstrated compliance with the emission limit; AND Before the adsorption cycle commences, achieve and maintain the temperature of the adsorption bed after regeneration less than or equal to the reference temperature established during the design evaluation or performance test; AND Achieve greater than or equal to the pressure reduction during the	i. Maintaining the total regeneration stream mass flow during the adsorption bed regeneration cycle greater than or equal to the reference stream mass flow established during the design evaluation or performance test that demonstrated compliance with the emission limit; AND ii. Maintaining the temperature of the adsorption bed after regeneration less than or equal to the reference temperature established during the design evaluation or performance test that demonstrated compliance with the emission limit; AND iii. Achieving greater than or equal to the pressure reduction during the regeneration cycle established during the design evaluation or performance

For each existing, reconstructed, and each new affected source using . . .	For the following operating limit . . .	You must demonstrate continuous compliance by . . .
	adsorption bed regeneration cycle established during the design evaluation or performance test that demonstrated compliance with the emission limit	test that demonstrated compliance with the emission limit; AND iv. Keeping the applicable records required in <a href="#">§ 63.998</a> . <sup>1</sup>
6. An adsorption system without adsorbent regeneration to comply with an emission limit in Table 2 to this subpart	a. Maintain the daily average concentration level of organic compounds in the adsorber exhaust less than or equal to the reference concentration established during the design evaluation or performance test that demonstrated compliance with the emission limit; OR	i. Continuously monitoring the organic concentration in the adsorber exhaust and maintaining the concentration less than or equal to the reference concentration established during the design evaluation or performance test that demonstrated compliance with the emission limit; AND ii. Keeping the applicable records required in <a href="#">§ 63.998</a> . <sup>1</sup>
	b. Replace the existing adsorbent in each segment of the bed before the age of the adsorbent exceeds the maximum allowable age established during the design evaluation or performance test that demonstrated compliance with the emission limit; AND Maintain the temperature of the adsorption bed less than or equal to the reference temperature established during the design evaluation or performance test that demonstrated compliance with the emission limit	i. Replacing the existing adsorbent in each segment of the bed with an adsorbent that meets the replacement specifications established during the design evaluation or performance test before the age of the adsorbent exceeds the maximum allowable age established during the design evaluation or performance test that demonstrated compliance with the emission limit; AND ii. Maintaining the temperature of the adsorption bed less than or equal to the reference temperature established during the design evaluation or performance test that demonstrated compliance with the emission limit; AND

For each existing, reconstructed, and each new affected source using . . .	For the following operating limit . . .	You must demonstrate continuous compliance by . . .
		iii. Keeping the applicable records required in <a href="#">§ 63.998</a> . <sup>1</sup>
7. A flare to comply with an emission limit in Table 2 to this subpart	a. Except as specified in item 7.e of this table, maintain a pilot flame or flare flame in the flare at all times that vapors may be vented to the flare ( <a href="#">§ 63.11(b)(5)</a> ); AND	i. Continuously operating a device that detects the presence of the pilot flame or flare flame; AND ii. Keeping the applicable records required in <a href="#">§ 63.998</a> . <sup>1</sup>
	b. Except as specified in item 7.e of this table, maintain a flare flame at all times that vapors are being vented to the flare ( <a href="#">§ 63.11(b)(5)</a> ); AND	i. Maintaining a flare flame at all times that vapors are being vented to the flare; AND ii. Keeping the applicable records required in <a href="#">§ 63.998</a> . <sup>1</sup>
	c. Except as specified in item 7.e of this table, operate the flare with no visible emissions, except for up to 5 minutes in any 2 consecutive hours ( <a href="#">§ 63.11(b)(4)</a> ); AND EITHER	i. Operating the flare with no visible emissions exceeding the amount allowed; AND ii. Keeping the applicable records required in <a href="#">§ 63.998</a> . <sup>1</sup>
	d.1. Except as specified in item 7.e of this table, operate the flare with an exit velocity that is within the applicable limits in <a href="#">§ 63.11(b)(7)</a> and <a href="#">(8)</a> and with a net heating value of the gas being combusted greater than the applicable minimum value in <a href="#">§ 63.11(b)(6)(ii)</a> ; OR	i. Operating the flare within the applicable exit velocity limits; AND ii. Operating the flare with the gas heating value greater than the applicable minimum value; AND iii. Keeping the applicable records required in <a href="#">§ 63.998</a> . <sup>1</sup>
	d.2. Except as specified in item 7.e of this table, adhere to the requirements in <a href="#">§ 63.11(b)(6)(i)</a>	i. Operating the flare within the applicable limits in <a href="#">63.11(b)(6)(i)</a> ; AND

<b>For each existing, reconstructed, and each new affected source using . . .</b>	<b>For the following operating limit . . .</b>	<b>You must demonstrate continuous compliance by . . .</b>
		ii. Keeping the applicable records required in <a href="#">§ 63.998</a> . <sup>1</sup>
	e. Beginning no later than the compliance dates specified in <a href="#">§ 63.2342(e)</a> , comply with the requirements in <a href="#">§ 63.2380</a> instead of the requirements in <a href="#">§ 63.11(b)</a>	i. Operating the flare with the applicable limits in <a href="#">§ 63.2380</a> ; AND ii. Keeping the applicable records required in <a href="#">§ 63.2390(h)</a> .
8. Another type of control device to comply with an emission limit in Table 2 to this subpart	Submit a monitoring plan as specified in <a href="#">§§ 63.995(c)</a> and <a href="#">63.2366(b)</a> and monitor the control device in accordance with that plan	Submitting a monitoring plan and monitoring the control device according to that plan.
<sup>1</sup> Beginning no later than the compliance dates specified in <a href="#">§ 63.2342(e)</a> , the referenced provisions specified in <a href="#">§ 63.2346(l)</a> do not apply.		

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#### **Table 10 to Subpart EEEE of Part 63—Continuous Compliance with Work Practice Standards**

As stated in [§§ 63.2378\(a\)](#) and [\(b\)](#) and [63.2386\(c\)\(6\)](#), you must show continuous compliance with the work practice standards for existing, reconstructed, or new affected sources according to the following table:

<b>For each . . .</b>	<b>For the following standard . . .</b>	<b>You must demonstrate continuous compliance by . . .</b>
1. Internal floating roof (IFR) storage tank at an existing, reconstructed, or new affected source meeting any set of tank capacity, and vapor pressure criteria specified in Table 2 to this subpart, items 1 through 5,	a. Install a floating roof designed and operated according to the applicable specifications in <a href="#">§ 63.1063(a)</a> and <a href="#">(b)</a>	i. Visually inspecting the floating roof deck, deck fittings, and rim seals of each IFR once per year ( <a href="#">§ 63.1063(d)(2)</a> ); AND ii. Visually inspecting the floating roof deck, deck fittings, and rim seals of each IFR either each time the storage tank is completely emptied and

For each . . .	For the following standard . . .	You must demonstrate continuous compliance by . . .
or Table 2b to this subpart, items 1 through 3		degassed or every 10 years, whichever occurs first ( <a href="#">§ 63.1063(c)(1)</a> , <a href="#">(d)(1)</a> , and <a href="#">(e)</a> ); AND iii. Keeping the tank records required in <a href="#">§ 63.1065</a> .
2. External floating roof (EFR) storage tank at an existing, reconstructed, or new affected source meeting any set of tank capacity and vapor pressure criteria specified in Table 2 to this subpart, items 1 through 5, or Table 2b to this subpart, items 1 through 3	a. Install a floating roof designed and operated according to the applicable specifications in <a href="#">§ 63.1063(a)</a> and <a href="#">(b)</a>	i. Visually inspecting the floating roof deck, deck fittings, and rim seals of each EFR either each time the storage tank is completely emptied and degassed or every 10 years, whichever occurs first ( <a href="#">§ 63.1063(c)(2)</a> , <a href="#">(d)</a> , and <a href="#">(e)</a> ); AND ii. Performing seal gap measurements on the secondary seal of each EFR at least once every year, and on the primary seal of each EFR at least every 5 years ( <a href="#">§ 63.1063(c)(2)</a> , <a href="#">(d)</a> , and <a href="#">(e)</a> ); AND iii. Keeping the tank records required in <a href="#">§ 63.1065</a> .
3. IFR or EFR tank at an existing, reconstructed, or new affected source meeting any set of tank capacity and vapor pressure criteria specified in Table 2 to this subpart, items 1 through 5, or Table 2b to this subpart, items 1 through 3	a. Repair the conditions causing storage tank inspection failures ( <a href="#">§ 63.1063(e)</a> )	i. Repairing conditions causing inspection failures: Before refilling the storage tank with organic liquid, or within 45 days (or up to 105 days with extensions) for a tank containing organic liquid; AND ii. Keeping the tank records required in <a href="#">§ 63.1065(b)</a> .
4. Transfer rack that is subject to control based on the criteria specified in Table 2 to this subpart, items 7 through 10, at an existing, reconstructed, or new affected source	a. Ensure that organic liquids are loaded into transport vehicles in accordance with the requirements in Table 4	i. Ensuring that organic liquids are loaded into transport vehicles in accordance with the requirements in Table 4 to this subpart, items 5 or 6, as applicable.

For each . . .	For the following standard . . .	You must demonstrate continuous compliance by . . .
	to this subpart, items 5 or 6, as applicable	
	b. Install and, during the loading of organic liquids, operate a vapor balancing system	i. Monitoring each potential source of vapor leakage in the system quarterly during the loading of a transport vehicle or the filling of a container using the methods and procedures described in the rule requirements selected for the work practice standard for equipment leak components as specified in Table 4 to this subpart, item 4. An instrument reading of 500 ppmv defines a leak. Repair of leaks is performed according to the repair requirements specified in your selected equipment leak standards
	c. Route emissions to a fuel gas system or back to a process	i. Continuing to meet the requirements specified in <a href="#">§ 63.984(b)</a>
5. Equipment leak component, as defined in <a href="#">§ 63.2406</a> , that operates in organic liquids service at least 300 hours per year	a. Comply with <a href="#">§ 63.2346(l)</a> and the requirements of <a href="#">40 CFR part 63, subpart TT</a> , <a href="#">UU</a> , or H	i. Carrying out a leak detection and repair program in accordance with the subpart selected from the list in item 5.a of this table
6. Storage tank at an existing, reconstructed, or new affected source meeting any of the tank capacity and vapor pressure criteria specified in Table 2 to this subpart, items 1 through 6, or Table 2b to this subpart, items 1 through 3	a. Route emissions to a fuel gas system or back to the process	i. Continuing to meet the requirements specified in <a href="#">§ 63.984(b)</a>
	b. Install and, during the filling of the	i. Except for pressure relief devices, monitoring each potential source of

For each . . .	For the following standard . . .	You must demonstrate continuous compliance by . . .
	storage tank with organic liquids, operate a vapor balancing system	vapor leakage in the system, including, but not limited to pumps, valves, and sampling connections, quarterly during the loading of a storage tank using the methods and procedures described in the rule requirements selected for the work practice standard for equipment leak components as specified in Table 4 to this subpart, item 4. An instrument reading of 500 ppmv defines a leak. Repair of leaks is performed according to the repair requirements specified in your selected equipment leak standards. For pressure relief devices, comply with <a href="#">§ 63.2346(a)(4)(v)</a> . If no loading of a storage tank occurs during a quarter, then monitoring of the vapor balancing system is not required

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#### Table 11 to Subpart EEEE of Part 63—Requirements for Reports

As stated in [§ 63.2386\(a\)](#), [\(b\)](#), and [\(f\)](#), you must submit compliance reports and startup, shutdown, and malfunction reports according to the following table:

You must submit a(n) . . .	The report must contain . . .	You must submit the report . . .
1. Compliance report or Periodic Report	a. The information specified in <a href="#">§ 63.2386(c)</a> , <a href="#">(d)</a> , <a href="#">(e)</a> . If you had a SSM during the reporting period and you took actions consistent with your SSM plan, the report must also include the information in <a href="#">§ 63.10(d)(5)(i)</a> except as specified in item 1.e of this table; AND	Semiannually, and it must be postmarked or electronically submitted by January 31 or July 31, in accordance with <a href="#">§ 63.2386(b)</a> .



You must submit a(n) . . .	The report must contain . . .	You must submit the report . . .
	b. The information required by <a href="#">40 CFR part 63, subpart TT, UU</a> , or H, as applicable, for pumps, valves, and sampling connections; AND	See the submission requirement in item 1.a of this table.
	c. The information required by <a href="#">§ 63.999(c)</a> ; AND	See the submission requirement in item 1.a of this table.
	d. The information specified in <a href="#">§ 63.1066(b)</a> including: Notification of inspection, inspection results, requests for alternate devices, and requests for extensions, as applicable	See the submission requirement in item 1.a of this table.
	e. Beginning no later than the compliance dates specified in <a href="#">§ 63.2342(e)</a> , the requirement to include the information in <a href="#">§ 63.10(d)(5)(i)</a> no longer applies.	
2. Immediate SSM report if you had a SSM that resulted in an applicable emission standard in the relevant standard being exceeded, and you took an action that was not consistent with your SSM plan	a. The information required in <a href="#">§ 63.10(d)(5)(ii)</a>	<p>i. Except as specified in item 2.a.ii of this table, by letter within 7 working days after the end of the event unless you have made alternative arrangements with the permitting authority (<a href="#">§ 63.10(d)(5)(ii)</a>).</p> <p>ii. Beginning no later than the compliance dates specified in <a href="#">§ 63.2342(e)</a>, item 2.a.i of this table no longer applies.</p>

[[85 FR 40786](#), July 7, 2020]

**Table 12 to Subpart EEEE of Part 63—Applicability of General Provisions to Subpart EEEE**

As stated in §§ 63.2382 and 63.2398, you must comply with the applicable General Provisions requirements as follows:

Citation	Subject	Brief description	Applies to subpart EEEE
§ 63.1	Applicability	Initial applicability determination; Applicability after standard established; Permit requirements; Extensions, Notifications	Yes.
§ 63.2	Definitions	Definitions for part 63 standards	Yes.
§ 63.3	Units and Abbreviations	Units and abbreviations for part 63 standards	Yes.
§ 63.4	Prohibited Activities and Circumvention	Prohibited activities; Circumvention, Severability	Yes.
§ 63.5	Construction/Reconstruction	Applicability; Applications; Approvals	Yes.
§ 63.6(a)	Compliance with Standards/O&M Applicability	GP apply unless compliance extension; GP apply to area sources that become major	Yes.
§ 63.6(b)(1)-(4)	Compliance Dates for New and Reconstructed Sources	Standards apply at effective date; 3 years after effective date; upon startup; 10 years after construction or reconstruction commences for CAA section 112(f)	Yes.
§ 63.6(b)(5)	Notification	Must notify if commenced construction or reconstruction after proposal	Yes.
§ 63.6(b)(6)	[Reserved]		

Citation	Subject	Brief description	Applies to subpart EEEE
§ 63.6(b)(7)	Compliance Dates for New and Reconstructed Area Sources That Become Major	Area sources that become major must comply with major source standards immediately upon becoming major, regardless of whether required to comply when they were an area source	Yes.
§ 63.6(c)(1)-(2)	Compliance Dates for Existing Sources	Comply according to date in this subpart, which must be no later than 3 years after effective date; for section 112(f) standards, comply within 90 days of effective date unless compliance extension	Yes.
§ 63.6(c)(3)-(4)	[Reserved]		
§ 63.6(c)(5)	Compliance Dates for Existing Area Sources That Become Major	Area sources that become major must comply with major source standards by date indicated in this subpart or by equivalent time period ( <i>e.g.</i> , 3 years)	Yes.
§ 63.6(d)	[Reserved]		
§ 63.6(e)(1)(i)	Operation and Maintenance	Operate to minimize emissions at all times	Yes, before July 7, 2023. No, beginning on and after July 7, 2023. See <a href="#">§ 63.2350(d)</a> for general duty requirement.

Citation	Subject	Brief description	Applies to subpart EEEE
§ 63.6(e)(1)(ii)	Operation and Maintenance	Correct malfunctions as soon as practicable	Yes, before July 7, 2023. No, beginning on and after July 7, 2023.
§ 63.6(e)(1)(iii)	Operation and Maintenance	Operation and maintenance requirements independently enforceable; information Administrator will use to determine if operation and maintenance requirements were met	Yes.
§ 63.6(e)(2)	[Reserved]		
§ 63.6(e)(3)	SSM Plan	Requirement for SSM plan; content of SSM plan; actions during SSM	Yes, before July 7, 2023; however, (1) the 2-day reporting requirement in paragraph <a href="#">§ 63.6(e)(3)(iv)</a> does not apply and (2) <a href="#">§ 63.6(e)(3)</a> does not apply to emissions sources not requiring control. No, beginning on and after July 7, 2023.
§ 63.6(f)(1)	Compliance Except During SSM	You must comply with emission standards at all times except during SSM	Yes, before July 7, 2023. No, beginning on and after July 7, 2023.

<b>Citation</b>	<b>Subject</b>	<b>Brief description</b>	<b>Applies to subpart EEEE</b>
§ 63.6(f)(2)-(3)	Methods for Determining Compliance	Compliance based on performance test, operation and maintenance plans, records, inspection	Yes.
§ 63.6(g)(1)-(3)	Alternative Standard	Procedures for getting an alternative standard	Yes.
§ 63.6(h)(1)	Opacity/Visible Emission Standards	You must comply with opacity and visible emission standards at all times except during SSM	Yes, before July 7, 2023. No, beginning on and after July 7, 2023.
§ 63.6(h)(2)-(9)	Opacity/Visible Emission Standards	Requirements for compliance with opacity and visible emission standards	No; except as it applies to flares for which Method 22 observations are required as part of a flare compliance assessment.
§ 63.6(i)(1)-(14)	Compliance Extension	Procedures and criteria for Administrator to grant compliance extension	Yes.
§ 63.6(j)	Presidential Compliance Exemption	President may exempt any source from requirement to comply with this subpart	Yes.
§ 63.7(a)(2)	Performance Test Dates	Dates for conducting initial performance testing; must conduct 180 days after compliance date	Yes.
§ 63.7(a)(3)	Section 114 Authority	Administrator may require a performance test under CAA section 114 at any time	Yes.

Citation	Subject	Brief description	Applies to subpart EEEE
§ 63.7(a)(4)	Force Majeure— Performance Testing Delay	Requirements to claim a delay in conducting a performance test due to force majeure	Yes.
§ 63.7(b)(1)	Notification of Performance Test	Must notify Administrator 60 days before the test	Yes.
§ 63.7(b)(2)	Notification of Rescheduling	If you have to reschedule performance test, must notify Administrator of rescheduled date as soon as practicable and without delay	Yes.
§ 63.7(c)	Quality Assurance (QA)/Test Plan	Requirement to submit site-specific test plan 60 days before the test or on date Administrator agrees with; test plan approval procedures; performance audit requirements; internal and external QA procedures for testing	Yes.
§ 63.7(d)	Testing Facilities	Requirements for testing facilities	Yes.
§ 63.7(e)(1)	Conditions for Conducting Performance Tests	Performance tests must be conducted under representative conditions; cannot conduct performance tests during SSM	Yes, before July 7, 2023. No, beginning on and after July 7, 2023. See <a href="#">§ 63.2354(b)(6)</a> .
§ 63.7(e)(2)	Conditions for Conducting Performance Tests	Must conduct according to this subpart and EPA test methods unless	Yes.

Citation	Subject	Brief description	Applies to subpart EEEE
		Administrator approves alternative	
§ 63.7(e)(3)	Test Run Duration	Must have three test runs of at least 1 hour each; compliance is based on arithmetic mean of three runs; conditions when data from an additional test run can be used	Yes; however, for transfer racks per <a href="#">§§ 63.987(b)(3)(i)(A)-(B)</a> and <a href="#">63.997(e)(1)(v)(A)-(B)</a> provide exceptions to the requirement for test runs to be at least 1 hour each.
§ 63.7(e)(4)	Authority to Require Testing	Administrator has authority to require testing under CAA section 114 regardless of <a href="#">§ 63.7 (e)(1)-(3)</a>	Yes.
§ 63.7(f)	Alternative Test Method	Procedures by which Administrator can grant approval to use an intermediate or major change, or alternative to a test method	Yes.
§ 63.7(g)	Performance Test Data Analysis	Must include raw data in performance test report; must submit performance test data 60 days after end of test with the Notification of Compliance Status; keep data for 5 years	Yes, except this subpart specifies how and when the performance test and performance evaluation results are reported.
§ 63.7(h)	Waiver of Tests	Procedures for Administrator to waive performance test	Yes.

Citation	Subject	Brief description	Applies to subpart EEEE
§ 63.8(a)(1)	Applicability of Monitoring Requirements	Subject to all monitoring requirements in standard	Yes.
§ 63.8(a)(2)	Performance Specifications	Performance Specifications in appendix B of <a href="#">40 CFR part 60</a> apply	Yes.
§ 63.8(a)(3)	[Reserved]		
§ 63.8(a)(4)	Monitoring of Flares	Monitoring requirements for flares in <a href="#">§ 63.11</a>	Yes, before July 7, 2023; however, flare monitoring requirements in <a href="#">§ 63.987(c)</a> also apply before July 7, 2023. No, beginning on and after July 7, 2023. See <a href="#">§ 63.2380</a> .
§ 63.8(b)(1)	Monitoring	Must conduct monitoring according to standard unless Administrator approves alternative	Yes.
§ 63.8(b)(2)-(3)	Multiple Effluents and Multiple Monitoring Systems	Specific requirements for installing monitoring systems; must install on each affected source or after combined with another affected source before it is released to the atmosphere provided the monitoring is sufficient to demonstrate compliance with the standard; if more than one monitoring system on an emission point, must report all monitoring system	Yes.



Citation	Subject	Brief description	Applies to subpart EEEE
		results, unless one monitoring system is a backup	
§ 63.8(c)(1)	Monitoring System Operation and Maintenance	Maintain monitoring system in a manner consistent with good air pollution control practices	Yes.
§ 63.8(c)(1)(i)	Routine and Predictable SSM	Keep parts for routine repairs readily available; reporting requirements for SSM when action is described in SSM plan	Yes, before July 7, 2023. No, beginning on and after July 7, 2023.
§ 63.8(c)(1)(ii)	CMS malfunction not in SSM plan	Keep the necessary parts for routine repairs if CMS malfunctions	Yes.
§ 63.8(c)(1)(iii)	Compliance with Operation and Maintenance Requirements	Develop a written SSM plan for CMS	Yes, before July 7, 2023. No, beginning on and after July 7, 2023.
§ 63.8(c)(2)-(3)	Monitoring System Installation	Must install to get representative emission or parameter measurements; must verify operational status before or at performance test	Yes.
§ 63.8(c)(4)	CMS Requirements	CMS must be operating except during breakdown, out-of-control, repair, maintenance, and high-level calibration drifts; COMS must have a minimum of one cycle of sampling and	Yes; however, COMS are not applicable.

Citation	Subject	Brief description	Applies to subpart EEEE
		analysis for each successive 10-second period and one cycle of data recording for each successive 6-minute period; CEMS must have a minimum of one cycle of operation for each successive 15-minute period	
§ 63.8(c)(5)	COMS Minimum Procedures	COMS minimum procedures	No.
§ 63.8(c)(6)-(8)	CMS Requirements	Zero and high level calibration check requirements. Out-of-control periods	Yes, but only applies for CEMS. <a href="#">Subpart SS of this part</a> provides requirements for CPMS.
§ 63.8(d)(1)-(2)	CMS Quality Control	Requirements for CMS quality control	Yes, but only applies for CEMS. <a href="#">Subpart SS of this part</a> provides requirements for CPMS.
§ 63.8(d)(3)	CMS Quality Control	Must keep quality control plan on record for 5 years; keep old versions	Yes, before July 7, 2023, but only applies for CEMS. <a href="#">Subpart SS of this part</a> provides requirements for CPMS. No, beginning on and after July 7, 2023. See <a href="#">§ 63.2366(c)</a> .

Citation	Subject	Brief description	Applies to subpart EEEE
§ 63.8(e)	CMS Performance Evaluation	Notification, performance evaluation test plan, reports	Yes, but only applies for CEMS, except this subpart specifies how and when the performance evaluation results are reported.
§ 63.8(f)(1)-(5)	Alternative Monitoring Method	Procedures for Administrator to approve alternative monitoring	Yes, but <a href="#">subpart SS of this part</a> also provides procedures for approval of CPMS.
§ 63.8(f)(6)	Alternative to Relative Accuracy Test	Procedures for Administrator to approve alternative relative accuracy tests for CEMS	Yes.
§ 63.8(g)	Data Reduction	COMS 6-minute averages calculated over at least 36 evenly spaced data points; CEMS 1 hour averages computed over at least four equally spaced data points; data that cannot be used in average	Yes; however, COMS are not applicable.
§ 63.9(a)	Notification Requirements	Applicability and State delegation	Yes.
§ 63.9(b)(1)-(2), (4)-(5)	Initial Notifications	Submit notification within 120 days after effective date; notification of intent to construct/reconstruct, notification of commencement of construction/reconstruction,	Yes.

Citation	Subject	Brief description	Applies to subpart EEEE
		notification of startup; contents of each	
§ 63.9(c)	Request for Compliance Extension	Can request if cannot comply by date or if installed best available control technology or lowest achievable emission rate (BACT/LAER)	Yes.
§ 63.9(d)	Notification of Special Compliance Requirements for New Sources	For sources that commence construction between proposal and promulgation and want to comply 3 years after effective date	Yes.
§ 63.9(e)	Notification of Performance Test	Notify Administrator 60 days prior	Yes.
§ 63.9(f)	Notification of VE/Opacity Test	Notify Administrator 30 days prior	No.
§ 63.9(g)	Additional Notifications When Using CMS	Notification of performance evaluation; notification about use of COMS data; notification that exceeded criterion for relative accuracy alternative	Yes; however, there are no opacity standards.
§ 63.9(h)(1)-(6)	Notification of Compliance Status	Contents due 60 days after end of performance test or other compliance demonstration, except for opacity/visible emissions, which are due 30 days after; when to submit to federal vs. state authority	Yes; however, (1) there are no opacity standards and (2) all initial Notification of Compliance Status, including all performance test data, are to be submitted at the same time, either

Citation	Subject	Brief description	Applies to subpart EEEE
			within 240 days after the compliance date or within 60 days after the last performance test demonstrating compliance has been completed, whichever occurs first.
§ 63.9(i)	Adjustment of Submittal Deadlines	Procedures for Administrator to approve change in when notifications must be submitted	Yes.
§ 63.9(j)	Change in Previous Information	Must submit within 15 days after the change	Yes for change to major source status, other changes are reported in the first and subsequent compliance reports.
§ 63.9(k)	Electronic reporting procedures	Procedure to report electronically for notifications and reports	Yes.
§ 63.10(a)	Recordkeeping/Reporting	Applies to all, unless compliance extension; when to submit to federal vs. state authority; procedures for owners of more than one source	Yes.
§ 63.10(b)(1)	Recordkeeping/Reporting	General requirements; keep all records readily available; keep for 5 years	Yes.

Citation	Subject	Brief description	Applies to subpart EEEE
§ 63.10(b)(2)(i)	Records Related to Startup and Shutdown	Occurrence of each for operations (process equipment)	Yes, July 7, 2023. No, beginning on and after July 7, 2023.
§ 63.10(b)(2)(ii)	Recordkeeping Relevant to Malfunction Periods and CMS	Occurrence of each malfunction of air pollution equipment	Yes, before July 7, 2023. No, beginning on and after July 7, 2023. See <a href="#">§ 63.2390(f)</a> .
§ 63.10(b)(2)(iii)	Recordkeeping Relevant to Maintenance of Air Pollution Control and Monitoring Equipment	Maintenance on air pollution control equipment	Yes.
§ 63.10(b)(2)(iv)	Recordkeeping Relevant to SSM Periods and CMS	Actions during SSM	Yes, before July 7, 2023. No, beginning on and after July 7, 2023.
§ 63.10(b)(2)(v)	Recordkeeping Relevant to SSM Periods and CMS	Actions during SSM	No.
§ 63.10(b)(2)(vi)-(xi)	CMS Records	Malfunctions, inoperative, out-of-control periods	Yes.
§ 63.10(b)(2)(xii)	Records	Records when under waiver	Yes.
§ 63.10(b)(2)(xiii)	Records	Records when using alternative to relative accuracy test	Yes.
§ 63.10(b)(2)(xiv)	Records	All documentation supporting initial	Yes.

Citation	Subject	Brief description	Applies to subpart EEEE
		notification and notification of compliance status	
§ 63.10(b)(3)	Records	Applicability determinations	Yes.
§ 63.10(c)(1)-(14)	Records	Additional records for CMS	Yes.
§ 63.10(c)(15)	Records	Additional records for CMS	Yes, before July 7, 2023. No, beginning on and after July 7, 2023.
§ 63.10(d)(1)	General Reporting Requirements	Requirement to report	Yes.
§ 63.10(d)(2)	Report of Performance Test Results	When to submit to federal or state authority	No. This subpart specifies how and when the performance test results are reported.
§ 63.10(d)(3)	Reporting Opacity or Visible Emissions Observations	What to report and when	Yes.
§ 63.10(d)(4)	Progress Reports	Must submit progress reports on schedule if under compliance extension	Yes.
§ 63.10(d)(5)	SSM Reports	Contents and submission	Yes, before July 7, 2023. No, beginning on and after July 7, 2023. See <a href="#">§ 63.2386(d)(1)(xiii)</a> .
§ 63.10(e)(1)-(2)	Additional CMS Reports	Must report results for each CEMS on a unit; written copy of CMS performance	Yes, except this subpart specifies how and when the

Citation	Subject	Brief description	Applies to subpart EEEE
		evaluation; two-three copies of COMS performance evaluation	performance evaluation results are reported; however, COMS are not applicable.
§ 63.10(e)(3)(i)-(iii)	Reports	Schedule for reporting excess emissions and parameter monitor exceedance (now defined as deviations)	Yes; however, note that the title of the report is the compliance report; deviations include excess emissions and parameter exceedances.
§ 63.10(e)(3)(iv)-(v)	Excess Emissions Reports	Requirement to revert to quarterly submission if there is an excess emissions or parameter monitoring exceedance (now defined as deviations); provision to request semiannual reporting after compliance for 1 year; submit report by 30th day following end of quarter or calendar half; if there has not been an exceedance or excess emissions (now defined as deviations), report contents in a statement that there have been no deviations; must submit report containing all of the information in <a href="#">§§ 63.8(c)(7)-(8)</a> and <a href="#">63.10(c)(5)-(13)</a>	Yes.



Citation	Subject	Brief description	Applies to subpart EEEE
§ 63.10(e)(3)(vi)-(viii)	Excess Emissions Report and Summary Report	Requirements for reporting excess emissions for CMS (now called deviations); requires all of the information in <a href="#">§§ 63.10(c)(5)-(13)</a> and <a href="#">63.8(c)(7)-(8)</a>	No. This subpart specifies the reported information for deviations within the compliance reports.
§ 63.10(e)(4)	Reporting COMS Data	Must submit COMS data with performance test data	No.
§ 63.10(f)	Waiver for Recordkeeping/Reporting	Procedures for Administrator to waive	Yes.
§ 63.11(b)	Flares	Requirements for flares	Yes, before July 7, 2023; <a href="#">§ 63.987</a> requirements apply, and the section references <a href="#">§ 63.11(b)</a> . No, beginning on and after July 7, 2023. See <a href="#">§ 63.2380</a> .
§ 63.11(c), (d), and (e)	Control and work practice requirements	Alternative work practice for equipment leaks	Yes.
§ 63.12	Delegation	State authority to enforce standards	Yes.
§ 63.13	Addresses	Addresses where reports, notifications, and requests are sent	Yes.
§ 63.14	Incorporation by Reference	Test methods incorporated by reference	Yes.

Citation	Subject	Brief description	Applies to subpart EEEE
§ 63.15	Availability of Information	Public and confidential information	Yes.

[[85 FR 40786](#), July 7, 2020, as amended at [85 FR 73903](#), Nov. 19, 2020; [89 FR 23867](#), Apr. 4, 2024]

## eCFR Content

## Appendix D

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

Source: [69 FR 33506](#), June 15, 2004, unless otherwise noted.

#### What This Subpart Covers

#### § 63.6580 What is the purpose of subpart ZZZZ?

Subpart ZZZZ establishes national emission limitations and operating limitations for hazardous air pollutants (HAP) emitted from stationary reciprocating internal combustion engines (RICE) located at major and area sources of HAP emissions. This subpart also establishes requirements to demonstrate initial and continuous compliance with the emission limitations and operating limitations.

[[73 FR 3603](#), Jan. 18, 2008]

#### § 63.6585 Am I subject to this subpart?

You are subject to this subpart if you own or operate a stationary RICE at a major or area source of HAP emissions, except if the stationary RICE is being tested at a stationary RICE test cell/stand.

(a) A stationary RICE is any internal combustion engine which uses reciprocating motion to convert heat energy into mechanical work and which is not mobile. Stationary RICE differ from mobile RICE in that a stationary RICE is not a non-road engine as defined at [40 CFR 1068.30](#), and is not used to propel a motor vehicle or a vehicle used solely for competition.

(b) A major source of HAP emissions is a plant site that emits or has the potential to emit any single HAP at a rate of 10 tons (9.07 megagrams) or more per year or any combination of HAP at a rate of 25 tons (22.68 megagrams) or more per year, except that for oil and gas production facilities, a major source of HAP emissions is determined for each surface site.

(c) An area source of HAP emissions is a source that is not a major source.

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

(e) If you are an owner or operator of a stationary RICE used for national security purposes, you may be eligible to request an exemption from the requirements of this subpart as described in [40 CFR part 1068, subpart C](#).

(f) The emergency stationary RICE listed in [paragraphs \(f\)\(1\) through \(3\)](#) of this section are not subject to this subpart. The stationary RICE must meet the definition of an emergency stationary RICE in [§ 63.6675](#), which includes operating according to the provisions specified in [§ 63.6640\(f\)](#).

(1) Existing residential emergency stationary RICE located at an area source of HAP emissions that do not operate for the purpose specified in [§ 63.6640\(f\)\(4\)\(ii\)](#).

(2) Existing commercial emergency stationary RICE located at an area source of HAP emissions that do not operate for the purpose specified in [§ 63.6640\(f\)\(4\)\(ii\)](#).

(3) Existing institutional emergency stationary RICE located at an area source of HAP emissions that do not operate for the purpose specified in [§ 63.6640\(f\)\(4\)\(ii\)](#).

[[69 FR 33506](#), June 15, 2004, as amended at [73 FR 3603](#), Jan. 18, 2008; [78 FR 6700](#), Jan. 30, 2013; [87 FR 48607](#), Aug. 10, 2022]

### **§ 63.6590 What parts of my plant does this subpart cover?**

This subpart applies to each affected source.

(a) ***Affected source.*** An affected source is any existing, new, or reconstructed stationary RICE located at a major or area source of HAP emissions, excluding stationary RICE being tested at a stationary RICE test cell/stand.

#### **(1) *Existing stationary RICE.***

(i) For stationary RICE with a site rating of more than 500 brake horsepower (HP) located at a major source of HAP emissions, a stationary RICE is existing if you commenced construction or reconstruction of the stationary RICE before December 19, 2002.

(ii) For stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions, a stationary RICE is existing if you commenced construction or reconstruction of the stationary RICE before June 12, 2006.

(iii) For stationary RICE located at an area source of HAP emissions, a stationary RICE is existing if you commenced construction or reconstruction of the stationary RICE before June 12, 2006.

(iv) A change in ownership of an existing stationary RICE does not make that stationary RICE a new or reconstructed stationary RICE.

#### **(2) *New stationary RICE.***

(i) A stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions is new if you commenced construction of the stationary RICE on or after December 19, 2002.

(ii) A stationary RICE with a site rating of equal to or less than 500 brake HP located at a major source of HAP emissions is new if you commenced construction of the stationary RICE on or after June 12, 2006.

(iii) A stationary RICE located at an area source of HAP emissions is new if you commenced construction of the stationary RICE on or after June 12, 2006.

**(3) *Reconstructed stationary RICE.***

(i) A stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions is reconstructed if you meet the definition of reconstruction in [§ 63.2](#) and reconstruction is commenced on or after December 19, 2002.

(ii) A stationary RICE with a site rating of equal to or less than 500 brake HP located at a major source of HAP emissions is reconstructed if you meet the definition of reconstruction in [§ 63.2](#) and reconstruction is commenced on or after June 12, 2006.

(iii) A stationary RICE located at an area source of HAP emissions is reconstructed if you meet the definition of reconstruction in [§ 63.2](#) and reconstruction is commenced on or after June 12, 2006.

**(b) *Stationary RICE subject to limited requirements.***

(1) An affected source which meets either of the criteria in [paragraphs \(b\)\(1\)\(i\)](#) through [\(ii\)](#) of this section does not have to meet the requirements of this subpart and of [subpart A of this part](#) except for the initial notification requirements of [§ 63.6645\(f\)](#).

(i) The stationary RICE is a new or reconstructed emergency stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions.

(ii) The stationary RICE is a new or reconstructed limited use stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions.

(2) A new or reconstructed stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions which combusts landfill or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis must meet the initial notification requirements of [§ 63.6645\(f\)](#) and the requirements of [§§ 63.6625\(c\)](#), [63.6650\(g\)](#), and [63.6655\(c\)](#). These stationary RICE do not have to meet the emission limitations and operating limitations of this subpart.

(3) The following stationary RICE do not have to meet the requirements of this subpart and of [subpart A of this part](#), including initial notification requirements:

(i) Existing spark ignition 2 stroke lean burn (2SLB) stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions;

(ii) Existing spark ignition 4 stroke lean burn (4SLB) stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions;

(iii) Existing emergency stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions.

(iv) Existing limited use stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions;

(v) Existing stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions that combusts landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis;

(c) *Stationary RICE subject to Regulations under [40 CFR Part 60](#)*. An affected source that meets any of the criteria in [paragraphs \(c\)\(1\) through \(7\)](#) of this section must meet the requirements of this part by meeting the requirements of [40 CFR part 60 subpart IIII](#), for compression ignition engines or [40 CFR part 60 subpart JJJJ](#), for spark ignition engines. No further requirements apply for such engines under this part.

(1) A new or reconstructed stationary RICE located at an area source;

(2) A new or reconstructed 2SLB stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions;

(3) A new or reconstructed 4SLB stationary RICE with a site rating of less than 250 brake HP located at a major source of HAP emissions;

(4) A new or reconstructed spark ignition 4 stroke rich burn (4SRB) stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions;

(5) A new or reconstructed stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions which combusts landfill or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis;

(6) A new or reconstructed emergency or limited use stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions;

(7) A new or reconstructed compression ignition (CI) stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions.

[[69 FR 33506](#), June 15, 2004, as amended at [73 FR 3604](#), Jan. 18, 2008; [75 FR 9674](#), Mar. 3, 2010; [75 FR 37733](#), June 30, 2010; [75 FR 51588](#), Aug. 20, 2010; [78 FR 6700](#), Jan. 30, 2013; [87 FR 48607](#), Aug. 10, 2022]

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

(a) *Affected sources.*

(1) If you have an existing stationary RICE, excluding existing non-emergency CI stationary RICE, with a site rating of more than 500 brake HP located at a major source of HAP emissions, you must comply with the applicable emission limitations, operating limitations and other requirements no later than June 15, 2007. If you have an existing non-emergency CI stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, an existing stationary CI RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions, or an existing stationary CI RICE located at an area source of HAP emissions, you must comply with the applicable emission limitations, operating limitations, and other requirements no later than May 3, 2013. If you have an existing stationary SI RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions, or an existing stationary SI RICE located at an area source of HAP emissions, you must comply with the applicable emission limitations, operating limitations, and other requirements no later than October 19, 2013.

(2) If you start up your new or reconstructed stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions before August 16, 2004, you must comply with the applicable emission limitations and operating limitations in this subpart no later than August 16, 2004.

(3) If you start up your new or reconstructed stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions after August 16, 2004, you must comply with the applicable emission limitations and operating limitations in this subpart upon startup of your affected source.

(4) If you start up your new or reconstructed stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions before January 18, 2008, you must comply with the applicable emission limitations and operating limitations in this subpart no later than January 18, 2008.

(5) If you start up your new or reconstructed stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions after January 18, 2008, you must comply with the applicable emission limitations and operating limitations in this subpart upon startup of your affected source.

(6) If you start up your new or reconstructed stationary RICE located at an area source of HAP emissions before January 18, 2008, you must comply with the applicable emission limitations and operating limitations in this subpart no later than January 18, 2008.

(7) If you start up your new or reconstructed stationary RICE located at an area source of HAP emissions after January 18, 2008, you must comply with the applicable emission limitations and operating limitations in this subpart upon startup of your affected source.

(b) *Area sources that become major sources.* If you have an area source that increases its emissions or its potential to emit such that it becomes a major source of HAP, the compliance dates in [paragraphs \(b\)\(1\)](#) and [\(2\)](#) of this section apply to you.

(1) Any stationary RICE for which construction or reconstruction is commenced after the date when your area source becomes a major source of HAP must be in compliance with this subpart upon startup of your affected source.

(2) Any stationary RICE for which construction or reconstruction is commenced before your area source becomes a major source of HAP must be in compliance with the provisions of this subpart that are applicable to RICE located at major sources within 3 years after your area source becomes a major source of HAP.

(c) If you own or operate an affected source, you must meet the applicable notification requirements in [§ 63.6645](#) and in [40 CFR part 63, subpart A](#).

[[69 FR 33506](#), June 15, 2004, as amended at [73 FR 3604](#), Jan. 18, 2008; [75 FR 9675](#), Mar. 3, 2010; [75 FR 51589](#), Aug. 20, 2010; [78 FR 6701](#), Jan. 30, 2013]

## **Emission and Operating Limitations**

### **§ 63.6600 What emission limitations and operating limitations must I meet if I own or operate a stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions?**

Compliance with the numerical emission limitations established in this subpart is based on the results of testing the average of three 1-hour runs using the testing requirements and procedures in [§ 63.6620](#) and Table 4 to this subpart.

(a) If you own or operate an existing, new, or reconstructed spark ignition 4SRB stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, you must comply with the emission limitations in Table 1a to this subpart and the operating limitations in Table 1b to this subpart which apply to you.

(b) If you own or operate a new or reconstructed 2SLB stationary RICE with a site rating of more than 500 brake HP located at major source of HAP emissions, a new or reconstructed 4SLB stationary RICE with a site rating of more than 500 brake HP located at major source of HAP emissions, or a new or reconstructed CI stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, you must comply with the emission limitations in Table 2a to this subpart and the operating limitations in Table 2b to this subpart which apply to you.

(c) If you own or operate any of the following stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, you do not need to comply with the emission limitations in Tables 1a, 2a, 2c, and 2d to this subpart or operating limitations in Tables



1b and 2b to this subpart: an existing 2SLB stationary RICE; an existing 4SLB stationary RICE; a stationary RICE that combusts landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis; an emergency stationary RICE; or a limited use stationary RICE.

(d) If you own or operate an existing non-emergency stationary CI RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, you must comply with the emission limitations in Table 2c to this subpart and the operating limitations in Table 2b to this subpart which apply to you.

[[73 FR 3605](#), Jan. 18, 2008, as amended at [75 FR 9675](#), Mar. 3, 2010]

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

Compliance with the numerical emission limitations established in this subpart is based on the results of testing the average of three 1-hour runs using the testing requirements and procedures in [§ 63.6620](#) and Table 4 to this subpart. If you own or operate a new or reconstructed 4SLB stationary RICE with a site rating of greater than or equal to 250 and less than or equal to 500 brake HP located at major source of HAP emissions manufactured on or after January 1, 2008, you must comply with the emission limitations in Table 2a to this subpart and the operating limitations in Table 2b to this subpart which apply to you.

[[73 FR 3605](#), Jan. 18, 2008, as amended at [75 FR 9675](#), Mar. 3, 2010; [75 FR 51589](#), Aug. 20, 2010]

**§ 63.6602 What emission limitations and other requirements must I meet if I own or operate an existing stationary RICE with a site rating of equal to or less than 500 brake HP located at a major source of HAP emissions?**

If you own or operate an existing stationary RICE with a site rating of equal to or less than 500 brake HP located at a major source of HAP emissions, you must comply with the emission limitations and other requirements in Table 2c to this subpart which apply to you. Compliance with the numerical emission limitations established in this subpart is based on the results of testing the average of three 1-hour runs using the testing requirements and procedures in [§ 63.6620](#) and Table 4 to this subpart.

[[78 FR 6701](#), Jan. 30, 2013]

**§ 63.6603 What emission limitations, operating limitations, and other requirements must I meet if I own or operate an existing stationary RICE located at an area source of HAP emissions?**

Compliance with the numerical emission limitations established in this subpart is based on the results of testing the average of three 1-hour runs using the testing requirements and procedures in [§ 63.6620](#) and Table 4 to this subpart.

(a) If you own or operate an existing stationary RICE located at an area source of HAP emissions, you must comply with the requirements in Table 2d to this subpart and the operating limitations in Table 2b to this subpart that apply to you.

(b) If you own or operate an existing stationary non-emergency CI RICE with a site rating of more than 300 HP located at an area source of HAP that meets either [paragraph \(b\)\(1\)](#) or [\(2\)](#) of this section, you do not have to meet the numerical CO emission limitations specified in Table 2d of this subpart. Existing stationary non-emergency CI RICE with a site rating of more than 300 HP located at an area source of HAP that meet either [paragraph \(b\)\(1\)](#) or [\(2\)](#) of this section must meet the management practices that are shown for stationary non-emergency CI RICE with a site rating of less than or equal to 300 HP in Table 2d of this subpart.

(1) The area source is located in an area of Alaska that is not accessible by the Federal Aid Highway System (FAHS).

(2) The stationary RICE is located at an area source that meets [paragraphs \(b\)\(2\)\(i\), \(ii\), and \(iii\)](#) of this section.

(i) The only connection to the FAHS is through the Alaska Marine Highway System (AMHS), or the stationary RICE operation is within an isolated grid in Alaska that is not connected to the statewide electrical grid referred to as the Alaska Railbelt Grid.

(ii) At least 10 percent of the power generated by the stationary RICE on an annual basis is used for residential purposes.

(iii) The generating capacity of the area source is less than 12 megawatts, or the stationary RICE is used exclusively for backup power for renewable energy.

(c) If you own or operate an existing stationary non-emergency CI RICE with a site rating of more than 300 HP located on an offshore vessel that is an area source of HAP and is a nonroad vehicle that is an Outer Continental Shelf (OCS) source as defined in [40 CFR 55.2](#), you do not have to meet the numerical CO emission limitations specified in Table 2d of this subpart. You must meet all of the following management practices:

(1) Change oil every 1,000 hours of operation or within 1 year + 30 days of the previous change, whichever comes first. Sources have the option to utilize an oil analysis program as described in [§ 63.6625\(i\)](#) in order to extend the specified oil change requirement.

(2) Inspect and clean air filters every 750 hours of operation or within 1 year + 30 days of the previous inspection, whichever comes first, and replace as necessary.

(3) Inspect fuel filters and belts, if installed, every 750 hours of operation or within 1 year + 30 days of the previous inspection, whichever comes first, and replace as necessary.

(4) Inspect all flexible hoses every 1,000 hours of operation or within 1 year + 30 days of the previous inspection, whichever comes first, and replace as necessary.

(d) If you own or operate an existing non-emergency CI RICE with a site rating of more than 300 HP located at an area source of HAP emissions that is certified to the Tier 1 or Tier 2 emission standards in Table 1 of [40 CFR 89.112](#) and that is subject to an enforceable state or local standard that requires the engine to be replaced no later than June 1, 2018, you may until January 1, 2015, or 12 years after the installation date of the engine (whichever is later), but not later than June 1, 2018, choose to comply with the management practices that are shown for stationary non-emergency CI RICE with a site rating of less than or equal to 300 HP in Table 2d of this subpart instead of the applicable emission limitations in Table 2d, operating limitations in Table 2b, and crankcase ventilation system requirements in [§ 63.6625\(g\)](#). You must comply with the emission limitations in Table 2d and operating limitations in Table 2b that apply for non-emergency CI RICE with a site rating of more than 300 HP located at an area source of HAP emissions by January 1, 2015, or 12 years after the installation date of the engine (whichever is later), but not later than June 1, 2018. You must also comply with the crankcase ventilation system requirements in [§ 63.6625\(g\)](#) by January 1, 2015, or 12 years after the installation date of the engine (whichever is later), but not later than June 1, 2018.

(e) If you own or operate an existing non-emergency CI RICE with a site rating of more than 300 HP located at an area source of HAP emissions that is certified to the Tier 3 (Tier 2 for engines above 560 kilowatt (kW)) emission standards in Table 1 of [40 CFR 89.112](#), you may comply with the requirements under this part by meeting the requirements for Tier 3 engines (Tier 2 for engines above 560 kW) in [40 CFR part 60 subpart IIII](#) instead of the emission limitations and other requirements that would otherwise apply under this part for existing non-emergency CI RICE with a site rating of more than 300 HP located at an area source of HAP emissions.

(f) An existing non-emergency SI 4SLB and 4SRB stationary RICE with a site rating of more than 500 HP located at area sources of HAP must meet the definition of remote stationary RICE in [§ 63.6675](#) on the initial compliance date for the engine, October 19, 2013, in order to be considered a remote stationary RICE under this subpart. Owners and operators of existing non-emergency SI 4SLB and 4SRB stationary RICE with a site rating of more than 500 HP located at area sources of HAP that meet the definition of remote stationary RICE in [§ 63.6675 of this subpart](#) as of October 19, 2013 must evaluate the status of their stationary RICE every 12 months. Owners and operators must keep records of the initial and annual evaluation of the status of the engine. If the evaluation indicates that the stationary RICE no longer meets the definition of remote stationary RICE in [§ 63.6675 of this subpart](#), the owner or operator must comply with all of the requirements for existing non-emergency SI 4SLB and 4SRB stationary RICE with a

site rating of more than 500 HP located at area sources of HAP that are not remote stationary RICE within 1 year of the evaluation.

[[75 FR 9675](#), Mar. 3, 2010, as amended at [75 FR 51589](#), Aug. 20, 2010; [76 FR 12866](#), Mar. 9, 2011; [78 FR 6701](#), Jan. 30, 2013; [89 FR 70515](#), Aug. 30, 2024]

#### **§ 63.6604 What fuel requirements must I meet if I own or operate a stationary CI RICE?**

(a) If you own or operate an existing non-emergency, non-black start CI stationary RICE with a site rating of more than 300 brake HP with a displacement of less than 30 liters per cylinder that uses diesel fuel, you must use diesel fuel that meets the requirements in [40 CFR 1090.305](#) for nonroad diesel fuel.

(b) Beginning January 1, 2015, if you own or operate an existing emergency CI stationary RICE with a site rating of more than 100 brake HP and a displacement of less than 30 liters per cylinder that uses diesel fuel and operates for the purpose specified in [§ 63.6640\(f\)\(4\)\(ii\)](#), you must use diesel fuel that meets the requirements in [40 CFR 1090.305](#) for nonroad diesel fuel, except that any existing diesel fuel purchased (or otherwise obtained) prior to January 1, 2015, may be used until depleted.

(c) [Reserved]

(d) Existing CI stationary RICE located in Guam, American Samoa, the Commonwealth of the Northern Mariana Islands, at area sources in areas of Alaska that meet either [§ 63.6603\(b\)\(1\)](#) or [§ 63.6603\(b\)\(2\)](#), or are on offshore vessels that meet [§ 63.6603\(c\)](#) are exempt from the requirements of this section.

[[78 FR 6702](#), Jan. 30, 2013, as amended at [85 FR 78463](#), Dec. 4, 2020; [87 FR 48607](#), Aug. 10, 2022]

### **General Compliance Requirements**

#### **§ 63.6605 What are my general requirements for complying with this subpart?**

(a) You must be in compliance with the emission limitations, operating limitations, and other requirements in this subpart that apply to you at all times.

(b) At all times you must operate and maintain any affected source, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. The general duty to minimize emissions does not require you to make any further efforts to reduce emissions if levels required by this standard have been achieved. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Administrator which may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source.

[[75 FR 9675](#), Mar. 3, 2010, as amended at [78 FR 6702](#), Jan. 30, 2013]

## Testing and Initial Compliance Requirements

### **§ 63.6610 By what date must I conduct the initial performance tests or other initial compliance demonstrations if I own or operate a stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions?**

If you own or operate a stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions you are subject to the requirements of this section.

- (a) You must conduct the initial performance test or other initial compliance demonstrations in Table 4 to this subpart that apply to you within 180 days after the compliance date that is specified for your stationary RICE in [§ 63.6595](#) and according to the provisions in [§ 63.7\(a\)\(2\)](#).
- (b) If you commenced construction or reconstruction between December 19, 2002 and June 15, 2004 and own or operate stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, you must demonstrate initial compliance with either the proposed emission limitations or the promulgated emission limitations no later than February 10, 2005 or no later than 180 days after startup of the source, whichever is later, according to [§ 63.7\(a\)\(2\)\(ix\)](#).
- (c) If you commenced construction or reconstruction between December 19, 2002 and June 15, 2004 and own or operate stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, and you chose to comply with the proposed emission limitations when demonstrating initial compliance, you must conduct a second performance test to demonstrate compliance with the promulgated emission limitations by December 13, 2007 or after startup of the source, whichever is later, according to [§ 63.7\(a\)\(2\)\(ix\)](#).
- (d) An owner or operator is not required to conduct an initial performance test on units for which a performance test has been previously conducted, but the test must meet all of the conditions described in [paragraphs \(d\)\(1\)](#) through [\(5\)](#) of this section.
  - (1) The test must have been conducted using the same methods specified in this subpart, and these methods must have been followed correctly.
  - (2) The test must not be older than 2 years.
  - (3) The test must be reviewed and accepted by the Administrator.
  - (4) Either no process or equipment changes must have been made since the test was performed, or the owner or operator must be able to demonstrate that the results of the performance test, with or without adjustments, reliably demonstrate compliance despite process or equipment changes.

(5) The test must be conducted at any load condition within plus or minus 10 percent of 100 percent load.

[[69 FR 33506](#), June 15, 2004, as amended at [73 FR 3605](#), Jan. 18, 2008]

**§ 63.6611 By what date must I conduct the initial performance tests or other initial compliance demonstrations if I own or operate a new or reconstructed 4SLB SI stationary RICE with a site rating of greater than or equal to 250 and less than or equal to 500 brake HP located at a major source of HAP emissions?**

If you own or operate a new or reconstructed 4SLB stationary RICE with a site rating of greater than or equal to 250 and less than or equal to 500 brake HP located at a major source of HAP emissions, you must conduct an initial performance test within 240 days after the compliance date that is specified for your stationary RICE in [§ 63.6595](#) and according to the provisions specified in Table 4 to this subpart, as appropriate.

[[73 FR 3605](#), Jan. 18, 2008, as amended at [75 FR 51589](#), Aug. 20, 2010]

**§ 63.6612 By what date must I conduct the initial performance tests or other initial compliance demonstrations if I own or operate an existing stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions or an existing stationary RICE located at an area source of HAP emissions?**

If you own or operate an existing stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions or an existing stationary RICE located at an area source of HAP emissions you are subject to the requirements of this section.

(a) You must conduct any initial performance test or other initial compliance demonstration according to Tables 4 and 5 to this subpart that apply to you within 180 days after the compliance date that is specified for your stationary RICE in [§ 63.6595](#) and according to the provisions in [§ 63.7\(a\)\(2\)](#).

(b) An owner or operator is not required to conduct an initial performance test on a unit for which a performance test has been previously conducted, but the test must meet all of the conditions described in [paragraphs \(b\)\(1\) through \(4\)](#) of this section.

(1) The test must have been conducted using the same methods specified in this subpart, and these methods must have been followed correctly.

(2) The test must not be older than 2 years.

(3) The test must be reviewed and accepted by the Administrator.

(4) Either no process or equipment changes must have been made since the test was performed, or the owner or operator must be able to demonstrate that the results of the performance test,

with or without adjustments, reliably demonstrate compliance despite process or equipment changes.

[[75 FR 9676](#), Mar. 3, 2010, as amended at [75 FR 51589](#), Aug. 20, 2010]

### **§ 63.6615 When must I conduct subsequent performance tests?**

If you must comply with the emission limitations and operating limitations, you must conduct subsequent performance tests as specified in Table 3 of this subpart.

### **§ 63.6620 What performance tests and other procedures must I use?**

(a) You must conduct each performance test in Tables 3 and 4 of this subpart that applies to you.

(b) Each performance test must be conducted according to the requirements that this subpart specifies in Table 4 to this subpart. If you own or operate a non-operational stationary RICE that is subject to performance testing, you do not need to start up the engine solely to conduct the performance test. Owners and operators of a non-operational engine can conduct the performance test when the engine is started up again. The test must be conducted at any load condition within plus or minus 10 percent of 100 percent load for the stationary RICE listed in [paragraphs \(b\)\(1\) through \(4\)](#) of this section.

(1) Non-emergency 4SRB stationary RICE with a site rating of greater than 500 brake HP located at a major source of HAP emissions.

(2) New non-emergency 4SLB stationary RICE with a site rating of greater than or equal to 250 brake HP located at a major source of HAP emissions.

(3) New non-emergency 2SLB stationary RICE with a site rating of greater than 500 brake HP located at a major source of HAP emissions.

(4) New non-emergency CI stationary RICE with a site rating of greater than 500 brake HP located at a major source of HAP emissions.

(c) [Reserved]

(d) You must conduct three separate test runs for each performance test required in this section, as specified in [§ 63.7\(e\)\(3\)](#). Each test run must last at least 1 hour, unless otherwise specified in this subpart.

(e)

(1) You must use Equation 1 of this section to determine compliance with the percent reduction requirement:



$$\frac{C_i - C_o}{C_i} \times 100 = R \quad (\text{Eq. 1})$$

Where:

$C_i$  = concentration of carbon monoxide (CO), total hydrocarbons (THC), or formaldehyde at the control device inlet,

$C_o$  = concentration of CO, THC, or formaldehyde at the control device outlet, and

$R$  = percent reduction of CO, THC, or formaldehyde emissions.

(2) You must normalize the CO, THC, or formaldehyde concentrations at the inlet and outlet of the control device to a dry basis and to 15 percent oxygen, or an equivalent percent carbon dioxide (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 CO<sub>2</sub> 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, dsm<sup>3</sup>/J (dscf/10<sup>6</sup> Btu).

$F_c$  = Ratio of the volume of CO<sub>2</sub> produced to the gross calorific value of the fuel from Method 19, dsm<sup>3</sup>/J (dscf/10<sup>6</sup> Btu)

(ii) Calculate the CO<sub>2</sub> correction factor for correcting measurement data to 15 percent O<sub>2</sub>, as follows:

$$X_{CO_2} = \frac{5.9}{F_o} \quad (\text{Eq. 3})$$



Where:

$X_{CO_2}$  = CO<sub>2</sub> correction factor, percent.

5.9 = 20.9 percent O<sub>2</sub>—15 percent O<sub>2</sub>, the defined O<sub>2</sub> correction value, percent.

(iii) Calculate the CO, THC, and formaldehyde gas concentrations adjusted to 15 percent O<sub>2</sub> using CO<sub>2</sub> as follows:

$$C_{adj} = C_d \frac{X_{CO_2}}{\%CO_2} \quad (Eq. 4)$$

Where:

$C_{adj}$  = Calculated concentration of CO, THC, or formaldehyde adjusted to 15 percent O<sub>2</sub>.

$C_d$  = Measured concentration of CO, THC, or formaldehyde, uncorrected.

$X_{CO_2}$  = CO<sub>2</sub> correction factor, percent.

%CO<sub>2</sub> = Measured CO<sub>2</sub> concentration measured, dry basis, percent.

(f) If you comply with the emission limitation to reduce CO and you are not using an oxidation catalyst, if you comply with the emission limitation to reduce formaldehyde and you are not using NSCR, or if you comply with the emission limitation to limit the concentration of formaldehyde in the stationary RICE exhaust and you are not using an oxidation catalyst or NSCR, you must petition the Administrator for operating limitations to be established during the initial performance test and continuously monitored thereafter; or for approval of no operating limitations. You must not conduct the initial performance test until after the petition has been approved by the Administrator.

(g) If you petition the Administrator for approval of operating limitations, your petition must include the information described in [paragraphs \(g\)\(1\) through \(5\)](#) of this section.

(1) Identification of the specific parameters you propose to use as operating limitations;

(2) A discussion of the relationship between these parameters and HAP emissions, identifying how HAP emissions change with changes in these parameters, and how limitations on these parameters will serve to limit HAP emissions;

(3) A discussion of how you will establish the upper and/or lower values for these parameters which will establish the limits on these parameters in the operating limitations;

(4) A discussion identifying the methods you will use to measure and the instruments you will use to monitor these parameters, as well as the relative accuracy and precision of these methods and instruments; and

(5) A discussion identifying the frequency and methods for recalibrating the instruments you will use for monitoring these parameters.

(h) If you petition the Administrator for approval of no operating limitations, your petition must include the information described in [paragraphs \(h\)\(1\) through \(7\)](#) of this section.

(1) Identification of the parameters associated with operation of the stationary RICE and any emission control device which could change intentionally (*e.g.*, operator adjustment, automatic controller adjustment, etc.) or unintentionally (*e.g.*, wear and tear, error, etc.) on a routine basis or over time;

(2) A discussion of the relationship, if any, between changes in the parameters and changes in HAP emissions;

(3) For the parameters which could change in such a way as to increase HAP emissions, a discussion of whether establishing limitations on the parameters would serve to limit HAP emissions;

(4) For the parameters which could change in such a way as to increase HAP emissions, a discussion of how you could establish upper and/or lower values for the parameters which would establish limits on the parameters in operating limitations;

(5) For the parameters, a discussion identifying the methods you could use to measure them and the instruments you could use to monitor them, as well as the relative accuracy and precision of the methods and instruments;

(6) For the parameters, a discussion identifying the frequency and methods for recalibrating the instruments you could use to monitor them; and

(7) A discussion of why, from your point of view, it is infeasible or unreasonable to adopt the parameters as operating limitations.

(i) The engine percent load during a performance test must be determined by documenting the calculations, assumptions, and measurement devices used to measure or estimate the percent load in a specific application. A written report of the average percent load determination must be included in the notification of compliance status. The following information must be included in the written report: the engine model number, the engine manufacturer, the year of purchase, the manufacturer's site-rated brake horsepower, the ambient temperature, pressure, and humidity during the performance test, and all assumptions that were made to estimate or calculate percent load during the performance test must be clearly explained. If measurement devices such as flow meters, kilowatt meters, beta analyzers, stain gauges, etc. are used, the model number of the measurement device, and an estimate of its accurate in percentage of true value must be provided.

(j) Beginning on February 26, 2025, within 60 days after the date of completing each performance test required by this subpart, you must submit the results of the performance test following the procedure specified in [§ 63.9\(k\)](#). Data collected using test methods supported by the EPA's Electronic Reporting Tool (ERT) as listed on the EPA's ERT website (<https://www.epa.gov/electronic-reporting-air-emissions/electronic-reporting-tool-ert>) at the time of the test must be submitted in a file format generated using the EPA's ERT. Alternatively, you may submit an electronic file consistent with the extensible markup language (XML) schema listed on the EPA's ERT website. Data collected using test methods that are not supported by the EPA's ERT as listed on the EPA's ERT website at the time of the test must be included as an attachment in the ERT or alternate electronic file.

[[69 FR 33506](#), June 15, 2004, as amended at [75 FR 9676](#), Mar. 3, 2010; [78 FR 6702](#), Jan. 30, 2013; [89 FR 70516](#), Aug. 30, 2024]

### **§ 63.6625 What are my monitoring, installation, collection, operation, and maintenance requirements?**

(a) If you elect to install a CEMS as specified in Table 5 of this subpart, you must install, operate, and maintain a CEMS to monitor CO and either O<sub>2</sub> or CO<sub>2</sub> according to the requirements in [paragraphs \(a\)\(1\) through \(4\)](#) of this section. If you are meeting a requirement to reduce CO emissions, the CEMS must be installed at both the inlet and outlet of the control device. If you are meeting a requirement to limit the concentration of CO, the CEMS must be installed at the outlet of the control device.

(1) Each CEMS must be installed, operated, and maintained according to the applicable performance specifications of [40 CFR part 60, appendix B](#).

(2) You must conduct an initial performance evaluation and an annual relative accuracy test audit (RATA) of each CEMS according to the requirements in [§ 63.8](#) and according to the applicable performance specifications of [40 CFR part 60, appendix B](#) as well as daily and periodic data quality checks in accordance with [40 CFR part 60, appendix F](#), procedure 1.

(3) As specified in [§ 63.8\(c\)\(4\)\(ii\)](#), each CEMS must complete a minimum of one cycle of operation (sampling, analyzing, and data recording) for each successive 15-minute period. You must have at least two data points, with each representing a different 15-minute period, to have a valid hour of data.

(4) The CEMS data must be reduced as specified in [§ 63.8\(g\)\(2\)](#) and recorded in parts per million or parts per billion (as appropriate for the applicable limitation) at 15 percent oxygen or the equivalent CO<sub>2</sub> concentration.

(5) Beginning on February 26, 2025, within 60 days after the date of completing each continuous emissions monitoring system (CEMS) performance evaluation (as defined in [§ 63.2](#)) that includes a relative accuracy test audit (RATA), you must submit the results of the performance

evaluation following the procedures specified in [§ 63.9\(k\)](#). The results of performance evaluations of CEMS measuring RATA pollutants that are supported by the EPA's ERT as listed on the EPA's ERT website at the time of the evaluation must be submitted in a file format generated using the EPA's ERT. Alternatively, you may submit an electronic file consistent with the XML schema listed on the EPA's ERT website. The results of performance evaluations of CEMS measuring RATA pollutants that are not supported by the EPA's ERT as listed on the EPA's ERT website at the time of the evaluation must be included as an attachment in the ERT or alternate electronic file.

(b) If you are required to install a continuous parameter monitoring system (CPMS) as specified in Table 5 of this subpart, you must install, operate, and maintain each CPMS according to the requirements in [paragraphs \(b\)\(1\) through \(6\)](#) of this section. For an affected source that is complying with the emission limitations and operating limitations on March 9, 2011, the requirements in [paragraph \(b\)](#) of this section are applicable September 6, 2011.

(1) You must prepare a site-specific monitoring plan that addresses the monitoring system design, data collection, and the quality assurance and quality control elements outlined in [paragraphs \(b\)\(1\)\(i\) through \(v\)](#) of this section and in [§ 63.8\(d\)](#). As specified in [§ 63.8\(f\)\(4\)](#), you may request approval of monitoring system quality assurance and quality control procedures alternative to those specified in [paragraphs \(b\)\(1\) through \(5\)](#) of this section in your site-specific monitoring plan.

(i) The performance criteria and design specifications for the monitoring system equipment, including the sample interface, detector signal analyzer, and data acquisition and calculations;

(ii) Sampling interface (*e.g.*, thermocouple) location such that the monitoring system will provide representative measurements;

(iii) Equipment performance evaluations, system accuracy audits, or other audit procedures;

(iv) Ongoing operation and maintenance procedures in accordance with provisions in [§ 63.8\(c\)\(1\)\(ii\)](#) and [\(c\)\(3\)](#); and

(v) Ongoing reporting and recordkeeping procedures in accordance with provisions in [§ 63.10\(c\), \(e\)\(1\), and \(e\)\(2\)\(i\)](#).

(2) You must install, operate, and maintain each CPMS in continuous operation according to the procedures in your site-specific monitoring plan.

(3) The CPMS must collect data at least once every 15 minutes (see also [§ 63.6635](#)).

(4) For a CPMS for measuring temperature range, the temperature sensor must have a minimum tolerance of 2.8 degrees Celsius (5 degrees Fahrenheit) or 1 percent of the measurement range, whichever is larger.

(5) You must conduct the CPMS equipment performance evaluation, system accuracy audits, or other audit procedures specified in your site-specific monitoring plan at least annually.

(6) You must conduct a performance evaluation of each CPMS in accordance with your site-specific monitoring plan.

(c) If you are operating a new or reconstructed stationary RICE which fires landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis, you must monitor and record your fuel usage daily with separate fuel meters to measure the volumetric flow rate of each fuel. In addition, you must operate your stationary RICE in a manner which reasonably minimizes HAP emissions.

(d) If you are operating a new or reconstructed emergency 4SLB stationary RICE with a site rating of greater than or equal to 250 and less than or equal to 500 brake HP located at a major source of HAP emissions, you must install a non-resettable hour meter prior to the startup of the engine.

(e) If you own or operate any of the following stationary RICE, you must operate and maintain the stationary RICE and after-treatment control device (if any) according to the manufacturer's emission-related written instructions or develop your own maintenance plan which must provide to the extent practicable for the maintenance and operation of the engine in a manner consistent with good air pollution control practice for minimizing emissions:

(1) An existing stationary RICE with a site rating of less than 100 HP located at a major source of HAP emissions;

(2) An existing emergency or black start stationary RICE with a site rating of less than or equal to 500 HP located at a major source of HAP emissions;

(3) An existing emergency or black start stationary RICE located at an area source of HAP emissions;

(4) An existing non-emergency, non-black start stationary CI RICE with a site rating less than or equal to 300 HP located at an area source of HAP emissions;

(5) An existing non-emergency, non-black start 2SLB stationary RICE located at an area source of HAP emissions;

(6) An existing non-emergency, non-black start stationary RICE located at an area source of HAP emissions which combusts landfill or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis.

(7) An existing non-emergency, non-black start 4SLB stationary RICE with a site rating less than or equal to 500 HP located at an area source of HAP emissions;

(8) An existing non-emergency, non-black start 4SRB stationary RICE with a site rating less than or equal to 500 HP located at an area source of HAP emissions;

(9) An existing, non-emergency, non-black start 4SLB stationary RICE with a site rating greater than 500 HP located at an area source of HAP emissions that is operated 24 hours or less per calendar year; and

(10) An existing, non-emergency, non-black start 4SRB stationary RICE with a site rating greater than 500 HP located at an area source of HAP emissions that is operated 24 hours or less per calendar year.

(f) If you own or operate an existing emergency stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions or an existing emergency stationary RICE located at an area source of HAP emissions, you must install a non-resettable hour meter if one is not already installed.

(g) If you own or operate an existing non-emergency, non-black start CI engine greater than or equal to 300 HP that is not equipped with a closed crankcase ventilation system, you must comply with either paragraph (g)(1) or [paragraph \(2\)](#) of this section. Owners and operators must follow the manufacturer's specified maintenance requirements for operating and maintaining the open or closed crankcase ventilation systems and replacing the crankcase filters, or can request the Administrator to approve different maintenance requirements that are as protective as manufacturer requirements. Existing CI engines located at area sources in areas of Alaska that meet either [§ 63.6603\(b\)\(1\)](#) or [§ 63.6603\(b\)\(2\)](#) do not have to meet the requirements of this [paragraph \(g\)](#). Existing CI engines located on offshore vessels that meet [§ 63.6603\(c\)](#) do not have to meet the requirements of this [paragraph \(g\)](#).

(1) Install a closed crankcase ventilation system that prevents crankcase emissions from being emitted to the atmosphere, or

(2) Install an open crankcase filtration emission control system that reduces emissions from the crankcase by filtering the exhaust stream to remove oil mist, particulates and metals.

(h) If you operate a new, reconstructed, or existing stationary engine, you must minimize the engine's time spent at idle during startup and minimize the engine's startup time to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the emission standards applicable to all times other than startup in Tables 1a, 2a, 2c, and 2d to this subpart apply.

(i) If you own or operate a stationary CI engine that is subject to the work, operation or management practices in items 1 or 2 of table 2c to this subpart or in items 1 or 4 of table 2d to this subpart, you have the option of utilizing an oil analysis program in order to extend the specified oil and filter change requirement in tables 2c and 2d to this subpart. The oil analysis must be performed at the same frequency specified for changing the oil and filter in table 2c or

2d to this subpart. The analysis program must at a minimum analyze the following three parameters: Total Base Number, viscosity, and percent water content. The condemning limits for these parameters are as follows: Total Base Number is less than 30 percent of the Total Base Number of the oil when new; viscosity of the oil has changed by more than 20 percent from the viscosity of the oil when new; or percent water content (by volume) is greater than 0.5. If all of these condemning limits are not exceeded, the engine owner or operator is not required to change the oil and filter. If any of the limits are exceeded, the engine owner or operator must change the oil and filter within 2 business days of receiving the results of the analysis; if the engine is not in operation when the results of the analysis are received, the engine owner or operator must change the oil and filter within 2 business days or before commencing operation, whichever is later. The owner or operator must keep records of the parameters that are analyzed as part of the program, the results of the analysis, and the oil and filter changes for the engine. The analysis program must be part of the maintenance plan for the engine.

(j) If you own or operate a stationary SI engine that is subject to the work, operation or management practices in items 6, 7, or 8 of table 2c to this subpart or in items 5, 6, 7, 8, 10, 11, or 13 of table 2d to this subpart, you have the option of utilizing an oil analysis program in order to extend the specified oil and filter change requirement in tables 2c and 2d to this subpart. The oil analysis must be performed at the same frequency specified for changing the oil and filter in table 2c or 2d to this subpart. The analysis program must at a minimum analyze the following three parameters: Total Acid Number, viscosity, and percent water content. The condemning limits for these parameters are as follows: Total Acid Number increases by more than 3.0 milligrams of potassium hydroxide (KOH) per gram from Total Acid Number of the oil when new; viscosity of the oil has changed by more than 20 percent from the viscosity of the oil when new; or percent water content (by volume) is greater than 0.5. If all of these condemning limits are not exceeded, the engine owner or operator is not required to change the oil and filter. If any of the limits are exceeded, the engine owner or operator must change the oil and filter within 2 business days of receiving the results of the analysis; if the engine is not in operation when the results of the analysis are received, the engine owner or operator must change the oil and filter within 2 business days or before commencing operation, whichever is later. The owner or operator must keep records of the parameters that are analyzed as part of the program, the results of the analysis, and the oil and filter changes for the engine. The analysis program must be part of the maintenance plan for the engine.

[[69 FR 33506](#), June 15, 2004, as amended at [73 FR 3606](#), Jan. 18, 2008; [75 FR 9676](#), Mar. 3, 2010; [75 FR 51589](#), Aug. 20, 2010; [76 FR 12866](#), Mar. 9, 2011; [78 FR 6703](#), Jan. 30, 2013; [89 FR 70516](#), Aug. 30, 2024]

**§ 63.6630 How do I demonstrate initial compliance with the emission limitations, operating limitations, and other requirements?**

- (a) You must demonstrate initial compliance with each emission limitation, operating limitation, and other requirement that applies to you according to Table 5 of this subpart.
- (b) During the initial performance test, you must establish each operating limitation in Tables 1b and 2b of this subpart that applies to you.
- (c) You must submit the Notification of Compliance Status containing the results of the initial compliance demonstration according to the requirements in [§ 63.6645](#).
- (d) Non-emergency 4SRB stationary RICE complying with the requirement to reduce formaldehyde emissions by 76 percent or more can demonstrate initial compliance with the formaldehyde emission limit by testing for THC instead of formaldehyde. The testing must be conducted according to the requirements in Table 4 of this subpart. The average reduction of emissions of THC determined from the performance test must be equal to or greater than 30 percent.
- (e) The initial compliance demonstration required for existing non-emergency 4SLB and 4SRB stationary RICE with a site rating of more than 500 HP located at an area source of HAP that are not remote stationary RICE and that are operated more than 24 hours per calendar year must be conducted according to the following requirements:
- (1) The compliance demonstration must consist of at least three test runs.
  - (2) Each test run must be of at least 15 minute duration, except that each test conducted using the method in appendix A to this subpart must consist of at least one measurement cycle and include at least 2 minutes of test data phase measurement.
  - (3) If you are demonstrating compliance with the CO concentration or CO percent reduction requirement, you must measure CO emissions using one of the CO measurement methods specified in Table 4 of this subpart, or using appendix A to this subpart.
  - (4) If you are demonstrating compliance with the THC percent reduction requirement, you must measure THC emissions using Method 25A, reported as propane, of [40 CFR part 60, appendix A](#).
  - (5) You must measure O<sub>2</sub> using one of the O<sub>2</sub> measurement methods specified in Table 4 of this subpart. Measurements to determine O<sub>2</sub> concentration must be made at the same time as the measurements for CO or THC concentration.
  - (6) If you are demonstrating compliance with the CO or THC percent reduction requirement, you must measure CO or THC emissions and O<sub>2</sub> emissions simultaneously at the inlet and outlet of the control device.

[[69 FR 33506](#), June 15, 2004, as amended at [78 FR 6704](#), Jan. 30, 2013]

### **Continuous Compliance Requirements**



**§ 63.6635 How do I monitor and collect data to demonstrate continuous compliance?**

(a) If you must comply with emission and operating limitations, you must monitor and collect data according to this section.

(b) Except for monitor malfunctions, associated repairs, required performance evaluations, and required quality assurance or control activities, you must monitor continuously at all times that the stationary RICE is operating. A monitoring malfunction is any sudden, infrequent, not reasonably preventable failure of the monitoring to provide valid data. Monitoring failures that are caused in part by poor maintenance or careless operation are not malfunctions.

(c) You may not use data recorded during monitoring malfunctions, associated repairs, and required quality assurance or control activities in data averages and calculations used to report emission or operating levels. You must, however, use all the valid data collected during all other periods.

[[69 FR 33506](#), June 15, 2004, as amended at [76 FR 12867](#), Mar. 9, 2011]

**§ 63.6640 How do I demonstrate continuous compliance with the emission limitations, operating limitations, and other requirements?**

(a) You must demonstrate continuous compliance with each emission limitation, operating limitation, and other requirements in Tables 1a and 1b, Tables 2a and 2b, Table 2c, and Table 2d to this subpart that apply to you according to methods specified in Table 6 to this subpart.

(b) You must report each instance in which you did not meet each emission limitation or operating limitation in Tables 1a and 1b, Tables 2a and 2b, Table 2c, and Table 2d to this subpart that apply to you. These instances are deviations from the emission and operating limitations in this subpart. These deviations must be reported according to the requirements in [§ 63.6650](#). If you change your catalyst, you must reestablish the values of the operating parameters measured during the initial performance test. When you reestablish the values of your operating parameters, you must also conduct a performance test to demonstrate that you are meeting the required emission limitation applicable to your stationary RICE.

(c) The annual compliance demonstration required for existing non-emergency 4SLB and 4SRB stationary RICE with a site rating of more than 500 HP located at an area source of HAP that are not remote stationary RICE and that are operated more than 24 hours per calendar year must be conducted according to the following requirements:

(1) The compliance demonstration must consist of at least one test run.

(2) Each test run must be of at least 15 minute duration, except that each test conducted using the method in appendix A to this subpart must consist of at least one measurement cycle and include at least 2 minutes of test data phase measurement.

- (3) If you are demonstrating compliance with the CO concentration or CO percent reduction requirement, you must measure CO emissions using one of the CO measurement methods specified in Table 4 of this subpart, or using appendix A to this subpart.
- (4) If you are demonstrating compliance with the THC percent reduction requirement, you must measure THC emissions using Method 25A, reported as propane, of [40 CFR part 60, appendix A](#).
- (5) You must measure O<sub>2</sub> using one of the O<sub>2</sub> measurement methods specified in Table 4 of this subpart. Measurements to determine O<sub>2</sub> concentration must be made at the same time as the measurements for CO or THC concentration.
- (6) If you are demonstrating compliance with the CO or THC percent reduction requirement, you must measure CO or THC emissions and O<sub>2</sub> emissions simultaneously at the inlet and outlet of the control device.
- (7) If the results of the annual compliance demonstration show that the emissions exceed the levels specified in Table 6 of this subpart, the stationary RICE must be shut down as soon as safely possible, and appropriate corrective action must be taken (e.g., repairs, catalyst cleaning, catalyst replacement). The stationary RICE must be retested within 7 days of being restarted and the emissions must meet the levels specified in Table 6 of this subpart. If the retest shows that the emissions continue to exceed the specified levels, the stationary RICE must again be shut down as soon as safely possible, and the stationary RICE may not operate, except for purposes of startup and testing, until the owner/operator demonstrates through testing that the emissions do not exceed the levels specified in Table 6 of this subpart.
- (d) For new, reconstructed, and rebuilt stationary RICE, deviations from the emission or operating limitations that occur during the first 200 hours of operation from engine startup (engine burn-in period) are not violations. Rebuilt stationary RICE means a stationary RICE that has been rebuilt as that term is defined in [40 CFR 94.11\(a\)](#).
- (e) You must also report each instance in which you did not meet the requirements in Table 8 to this subpart that apply to you. If you own or operate a new or reconstructed stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions (except new or reconstructed 4SLB engines greater than or equal to 250 and less than or equal to 500 brake HP), a new or reconstructed stationary RICE located at an area source of HAP emissions, or any of the following RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, you do not need to comply with the requirements in Table 8 to this subpart: An existing 2SLB stationary RICE, an existing 4SLB stationary RICE, an existing emergency stationary RICE, an existing limited use stationary RICE, or an existing stationary RICE which fires landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis. If you own or operate any of the following RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, you do not need to comply

with the requirements in Table 8 to this subpart, except for the initial notification requirements: a new or reconstructed stationary RICE that combusts landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis, a new or reconstructed emergency stationary RICE, or a new or reconstructed limited use stationary RICE.

(f) If you own or operate an emergency stationary RICE, you must operate the emergency stationary RICE according to the requirements in [paragraphs \(f\)\(1\) through \(4\)](#) of this section. In order for the engine to be considered an emergency stationary RICE under this subpart, any operation other than emergency operation, maintenance and testing, and operation in non-emergency situations for 50 hours per year, as described in paragraphs (f)(1) through (4), is prohibited. If you do not operate the engine according to the requirements in paragraphs (f)(1) through (4), the engine will not be considered an emergency engine under this subpart and must meet all requirements for non-emergency engines.

(1) There is no time limit on the use of emergency stationary RICE in emergency situations.

(2) You may operate your emergency stationary RICE for the purpose specified in [paragraph \(f\)\(2\)\(i\)](#) of this section for a maximum of 100 hours per calendar year. Any operation for non-emergency situations as allowed by [paragraphs \(f\)\(3\) and \(4\)](#) of this section counts as part of the 100 hours per calendar year allowed by this [paragraph \(f\)\(2\)](#).

(i) Emergency stationary RICE may be operated for maintenance checks and readiness testing, provided that the tests are recommended by federal, state or local government, the manufacturer, the vendor, the regional transmission organization or equivalent balancing authority and transmission operator, or the insurance company associated with the engine. The owner or operator may petition the Administrator for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the owner or operator maintains records indicating that federal, state, or local standards require maintenance and testing of emergency RICE beyond 100 hours per calendar year.

(ii)-(iii) [Reserved]

(3) Emergency stationary RICE located at major sources of HAP may be operated for up to 50 hours per calendar year in non-emergency situations. The 50 hours of operation in non-emergency situations are counted as part of the 100 hours per calendar year for maintenance and testing provided in [paragraph \(f\)\(2\)](#) of this section. The 50 hours per year for non-emergency situations cannot be used for peak shaving or non-emergency demand response, or to generate income for a facility to supply power to an electric grid or otherwise supply power as part of a financial arrangement with another entity.

(4) Emergency stationary RICE located at area sources of HAP may be operated for up to 50 hours per calendar year in non-emergency situations. The 50 hours of operation in non-emergency situations are counted as part of the 100 hours per calendar year for maintenance and testing provided in [paragraph \(f\)\(2\)](#) of this section. Except as provided in [paragraphs \(f\)\(4\)\(i\)](#) and

[\(ii\)](#) of this section, the 50 hours per year for non-emergency situations cannot be used for peak shaving or non-emergency demand response, or to generate income for a facility to an electric grid or otherwise supply power as part of a financial arrangement with another entity.

(i) Prior to May 3, 2014, the 50 hours per year for non-emergency situations can be used for peak shaving or non-emergency demand response to generate income for a facility, or to otherwise supply power as part of a financial arrangement with another entity if the engine is operated as part of a peak shaving (load management program) with the local distribution system operator and the power is provided only to the facility itself or to support the local distribution system.

(ii) The 50 hours per year for non-emergency situations can be used to supply power as part of a financial arrangement with another entity if all of the following conditions are met:

(A) The engine is dispatched by the local balancing authority or local transmission and distribution system operator.

(B) The dispatch is intended to mitigate local transmission and/or distribution limitations so as to avert potential voltage collapse or line overloads that could lead to the interruption of power supply in a local area or region.

(C) The dispatch follows reliability, emergency operation or similar protocols that follow specific NERC, regional, state, public utility commission or local standards or guidelines.

(D) The power is provided only to the facility itself or to support the local transmission and distribution system.

(E) The owner or operator identifies and records the entity that dispatches the engine and the specific NERC, regional, state, public utility commission or local standards or guidelines that are being followed for dispatching the engine. The local balancing authority or local transmission and distribution system operator may keep these records on behalf of the engine owner or operator.

[[69 FR 33506](#), June 15, 2004, as amended at [71 FR 20467](#), Apr. 20, 2006; [73 FR 3606](#), Jan. 18, 2008; [75 FR 9676](#), Mar. 3, 2010; [75 FR 51591](#), Aug. 20, 2010; [78 FR 6704](#), Jan. 30, 2013; [87 FR 48607](#), Aug. 10, 2022]

## **Notifications, Reports, and Records**

### **§ 63.6645 What notifications must I submit and when?**

(a) You must submit all of the notifications in [§§ 63.7\(b\)](#) and [\(c\)](#), [63.8\(e\)](#), [\(f\)\(4\)](#) and [\(f\)\(6\)](#), [63.9\(b\)](#) through [\(e\)](#), and [\(g\)](#) and [\(h\)](#) that apply to you by the dates specified if you own or operate any of the following;

(1) An existing stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions.

- (2) An existing stationary RICE located at an area source of HAP emissions.
- (3) A stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions.
- (4) A new or reconstructed 4SLB stationary RICE with a site rating of greater than or equal to 250 HP located at a major source of HAP emissions.
- (5) This requirement does not apply if you own or operate an existing stationary RICE less than 100 HP, an existing stationary emergency RICE, or an existing stationary RICE that is not subject to any numerical emission standards.
- (b) As specified in [§ 63.9\(b\)\(2\)](#), if you start up your stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions before the effective date of this subpart, you must submit an initial notification not later than December 13, 2004, or no later than 120 days after the source becomes subject to this subpart, whichever is later. Beginning on February 26, 2025, submit the notification electronically in portable document format (PDF) consistent with [§ 63.9\(k\)](#).
- (c) If you start up your new or reconstructed stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions on or after August 16, 2004, you must submit an initial notification not later than 120 days after you become subject to this subpart. Beginning on February 26, 2025, submit the notification electronically in PDF consistent with [§ 63.9\(k\)](#).
- (d) As specified in [§ 63.9\(b\)\(2\)](#), if you start up your stationary RICE with a site rating of equal to or less than 500 brake HP located at a major source of HAP emissions before the effective date of this subpart and you are required to submit an initial notification, you must submit an initial notification not later than July 16, 2008, or no later than 120 days after the source becomes subject to this subpart, whichever is later. Beginning on February 26, 2025, submit the notification electronically in PDF consistent with [§ 63.9\(k\)](#).
- (e) If you start up your new or reconstructed stationary RICE with a site rating of equal to or less than 500 brake HP located at a major source of HAP emissions on or after March 18, 2008, and you are required to submit an initial notification, you must submit an initial notification not later than 120 days after you become subject to this subpart. Beginning on February 26, 2025, submit the notification electronically in PDF consistent with [§ 63.9\(k\)](#).
- (f) If you are required to submit an Initial Notification but are otherwise not affected by the requirements of this subpart, in accordance with [§ 63.6590\(b\)](#), your notification should include the information in [§ 63.9\(b\)\(2\)\(i\)](#) through [\(v\)](#), and a statement that your stationary RICE has no additional requirements and explain the basis of the exclusion (for example, that it operates exclusively as an emergency stationary RICE if it has a site rating of more than 500 brake HP located at a major source of HAP emissions).

(g) If you are required to conduct a performance test, you must submit a Notification of Intent to conduct a performance test at least 60 days before the performance test is scheduled to begin as required in [§ 63.7\(b\)\(1\)](#).

(h) If you are required to conduct a performance test or other initial compliance demonstration as specified in Tables 4 and 5 to this subpart, you must submit a Notification of Compliance Status according to [§ 63.9\(h\)\(2\)\(ii\)](#).

(1) For each initial compliance demonstration required in Table 5 to this subpart that does not include a performance test, you must submit the Notification of Compliance Status before the close of business on the 30th day following the completion of the initial compliance demonstration.

(2) Before February 26, 2025, for each initial compliance demonstration required in table 5 to this subpart that includes a performance test conducted according to the requirements in table 3 to this subpart, you must submit the Notification of Compliance Status, including the performance test results, before the close of business on the 60th day following the completion of the performance test according to [§ 63.10\(d\)\(2\)](#). Beginning on February 26, 2025, for each initial compliance demonstration required in table 5 to this subpart that includes a performance test conducted according to the requirements in table 3 to this subpart, you must submit the Notification of Compliance Status, including a summary of the performance test results, in PDF to the EPA via the Compliance and Emissions Data Reporting Interface (CEDRI), before the close of business on the 60th day following the completion of the performance test following the procedure specified in [§ 63.9\(k\)](#), except any Confidential Business Information (CBI) is to be submitted according to [paragraphs \(h\)\(2\)\(i\) and \(ii\)](#) of this section. Do not use CEDRI to submit information you claim as CBI. Although we do not expect persons to assert a claim of CBI, if you wish to assert a CBI claim for some of the information in the report, you must submit a complete file, including information claimed to be CBI, to the EPA following the procedures in [paragraphs \(h\)\(2\)\(i\) and \(ii\)](#) of this section. Clearly mark the part or all of the information that you claim to be CBI. Information not marked as CBI may be authorized for public release without prior notice. Information marked as CBI will not be disclosed except in accordance with procedures set forth in [40 CFR part 2](#). All CBI claims must be asserted at the time of submission. Anything submitted using CEDRI cannot later be claimed CBI. Furthermore, under CAA section 114(c), emissions data is not entitled to confidential treatment, and the EPA is required to make emissions data available to the public. Thus, emissions data will not be protected as CBI and will be made publicly available. You must submit the same file submitted to the CBI office with the CBI omitted to the EPA via the EPA's CDX as described earlier in this [paragraph \(h\)\(2\)](#).

(i) The preferred method to receive CBI is for it to be transmitted electronically using email attachments, File Transfer Protocol, or other online file sharing services. Electronic submissions must be transmitted directly to the OAQPS CBI Office at the email address [oaqpscbi@epa.gov](mailto:oaqpscbi@epa.gov), and as described in [paragraph \(h\)\(2\)](#) of this section, should include clear CBI markings and be



flagged to the attention of the Reciprocating Internal Combustion Engine Sector Lead. If assistance is needed with submitting large electronic files that exceed the file size limit for email attachments, and if you do not have your own file sharing service, please email [oaqpschi@epa.gov](mailto:oaqpschi@epa.gov) to request a file transfer link.

(ii) If you cannot transmit the file electronically, you may send CBI information through the postal service to the following address: OAQPS Document Control Officer (C404-02), OAQPS, U.S. Environmental Protection Agency, 109 T.W. Alexander Drive, P.O. Box 12055, Research Triangle Park, North Carolina 27711, Attention Reciprocating Internal Combustion Engine Sector Lead. The mailed CBI material should be double wrapped and clearly marked. Any CBI markings should not show through the outer envelope.

(i) If you own or operate an existing non-emergency CI RICE with a site rating of more than 300 HP located at an area source of HAP emissions that is certified to the Tier 1 or Tier 2 emission standards in Table 1 of [40 CFR 89.112](#) and subject to an enforceable state or local standard requiring engine replacement and you intend to meet management practices rather than emission limits, as specified in [§ 63.6603\(d\)](#), you must submit a notification by March 3, 2013, stating that you intend to use the provision in [§ 63.6603\(d\)](#) and identifying the state or local regulation that the engine is subject to.

[[73 FR 3606](#), Jan. 18, 2008, as amended at [75 FR 9677](#), Mar. 3, 2010; [75 FR 51591](#), Aug. 20, 2010; [78 FR 6705](#), Jan. 30, 2013; [85 FR 73912](#), Nov. 19, 2020; [89 FR 70516](#), Aug. 30, 2024]

### **§ 63.6650 What reports must I submit and when?**

(a) You must submit each report in Table 7 of this subpart that applies to you.

(b) Unless the Administrator has approved a different schedule for submission of reports under [§ 63.10\(a\)](#), you must submit each report by the date in Table 7 of this subpart and according to the requirements in [paragraphs \(b\)\(1\)](#) through [\(b\)\(9\)](#) of this section.

(1) For semiannual Compliance reports, the first Compliance report must cover the period beginning on the compliance date that is specified for your affected source in [§ 63.6595](#) and ending on June 30 or December 31, whichever date is the first date following the end of the first calendar half after the compliance date that is specified for your source in [§ 63.6595](#).

(2) For semiannual Compliance reports, the first Compliance report must be postmarked or delivered no later than July 31 or January 31, whichever date follows the end of the first calendar half after the compliance date that is specified for your affected source in [§ 63.6595](#).

(3) For semiannual Compliance reports, each subsequent Compliance report must cover the semiannual reporting period from January 1 through June 30 or the semiannual reporting period from July 1 through December 31.

(4) For semiannual Compliance reports, each subsequent Compliance report must be postmarked or delivered no later than July 31 or January 31, whichever date is the first date following the end of the semiannual reporting period.

(5) For each stationary RICE that is subject to permitting regulations pursuant to [40 CFR part 70 or 71](#), and if the permitting authority has established dates for submitting semiannual reports pursuant to [40 CFR 70.6\(a\)\(3\)\(iii\)\(A\)](#) or [40 CFR 71.6 \(a\)\(3\)\(iii\)\(A\)](#), you may submit the first and subsequent Compliance reports according to the dates the permitting authority has established instead of according to the dates in [paragraphs \(b\)\(1\) through \(b\)\(4\)](#) of this section.

(6) For annual Compliance reports, the first Compliance report must cover the period beginning on the compliance date that is specified for your affected source in [§ 63.6595](#) and ending on December 31.

(7) For annual Compliance reports, the first Compliance report must be postmarked or delivered no later than January 31 following the end of the first calendar year after the compliance date that is specified for your affected source in [§ 63.6595](#).

(8) For annual Compliance reports, each subsequent Compliance report must cover the annual reporting period from January 1 through December 31.

(9) For annual Compliance reports, each subsequent Compliance report must be postmarked or delivered no later than January 31.

(c) The Compliance report must contain the information in [paragraphs \(c\)\(1\) through \(8\)](#) of this section.

(1) Company name and address.

(2) Statement by a responsible official, with that official's name, title, and signature, certifying the accuracy of the content of the report.

(3) Date of report and beginning and ending dates of the reporting period.

(4) If you had a malfunction during the reporting period, the compliance report must include the starting and ending date and time, the duration (in hours), and a brief description for each malfunction which occurred during the reporting period and which caused or may have caused any applicable emission limitation to be exceeded. The report must also include a description of actions taken by an owner or operator during a malfunction of an affected source to minimize emissions in accordance with [§ 63.6605\(b\)](#), including actions taken to correct a malfunction.

(5) If there are no deviations from any emission or operating limitations that apply to you, a statement that there were no deviations from the emission or operating limitations during the reporting period.



(6) If there were no periods during which the continuous monitoring system (CMS), including CEMS and CPMS, was out-of-control, as specified in [§ 63.8\(c\)\(7\)](#), a statement that there were no periods during which the CMS was out-of-control during the reporting period.

(7) Engine site rating in brake HP, year construction of the engine commenced (as defined in [§ 63.2](#), where the exact year is not known, provide the best estimate), and type of engine (CI, SI 2SLB, SI 4SLB, or SI 4SRB).

(8) Latitude and longitude of the engine in decimal degrees reported to the fifth decimal place.

(9) An engine can be claimed as exempt from reporting coordinates (latitude/longitude) via CEDRI if:

(i) During the reporting period, the engine will be owned by, or operated by or for, an agency of the Federal Government responsible for national defense; and

(ii) The agency determines that disclosing the coordinates to the general public would be a threat to national security.

(d) For each deviation from an emission or operating limitation that occurs for a stationary RICE where you are not using a CMS to comply with the emission or operating limitations in this subpart, the Compliance report must contain the information in [paragraphs \(c\)\(1\) through \(8\)](#) of this section and the information in [paragraphs \(d\)\(1\) and \(2\)](#) of this section.

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

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

(3) A description of any changes in processes, or controls since the last reporting period.

(e) For each deviation from an emission or operating limitation occurring for a stationary RICE where you are using a CMS to comply with the emission and operating limitations in this subpart, you must include information in [paragraphs \(c\)\(1\) through \(8\)](#) and [\(e\)\(1\) through \(13\)](#) of this section.

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

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

(3) The start and end date and time and the duration (in hours) that each CMS was out-of-control, including the information in [§ 63.8\(c\)\(8\)](#).

(4) The date and time that each deviation started and stopped, and whether each deviation occurred during a period of malfunction or during another period.

(5) A summary of the total duration (in hours) of the deviation during the reporting period, and the total duration as a percent of the total source operating time during that reporting period.

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

(7) A summary of the total duration (in hours) of CMS downtime during the reporting period, and the total duration of CMS downtime as a percent of the total operating time of the stationary RICE at which the CMS downtime occurred during that reporting period.

(8) An identification of each parameter and pollutant (CO or formaldehyde) that was monitored at the stationary RICE.

(9) [Reserved]

(10) A brief description of the CMS.

(11) The date of the latest CMS certification or audit.

(12) A description of any changes in CMS, processes, or controls since the last reporting period.

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

(f) Each affected source that has obtained a title V operating permit pursuant to [40 CFR part 70](#) or [71](#) must report all deviations as defined in this subpart in the semiannual monitoring report required by [40 CFR 70.6 \(a\)\(3\)\(iii\)\(A\)](#) or [40 CFR 71.6\(a\)\(3\)\(iii\)\(A\)](#). If an affected source submits a Compliance report pursuant to table 7 of this subpart along with, or as part of, the semiannual monitoring report required by [40 CFR 70.6\(a\)\(3\)\(iii\)\(A\)](#) or [40 CFR 71.6\(a\)\(3\)\(iii\)\(A\)](#), and the Compliance report includes all required information concerning deviations from any emission or operating limitation in this subpart, submission of the Compliance report shall be deemed to satisfy any obligation to report the same deviations in the semiannual monitoring report. However, submission of a Compliance report shall not otherwise affect any obligation the affected source may have to report deviations from permit requirements to the permit authority. Beginning on February 26, 2025, the semiannual and annual compliance report required in table 7 of this subpart must be submitted according to [paragraph \(i\)](#) of this section. Only those elements required under this subpart are required to be submitted according to [paragraph \(i\)](#) of this section.

(g) If you are operating as a new or reconstructed stationary RICE which fires landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis, you must submit an annual report according to Table 7 of this subpart by the date specified unless the Administrator has approved a different schedule, according to the information described in

[paragraphs \(b\)\(1\)](#) through [\(b\)\(5\)](#) of this section. You must report the data specified in [\(g\)\(1\)](#) through [\(g\)\(3\)](#) of this section.

(1) Fuel flow rate of each fuel and the heating values that were used in your calculations. You must also demonstrate that the percentage of heat input provided by landfill gas or digester gas is equivalent to 10 percent or more of the total fuel consumption on an annual basis.

(2) The operating limits provided in your federally enforceable permit, and any deviations from these limits.

(3) Any problems or errors suspected with the meters.

(h) If you own or operate an emergency stationary RICE with a site rating of more than 100 brake HP that operates for the purpose specified in [§ 63.6640\(f\)\(4\)\(ii\)](#), you must submit an annual report according to the requirements in [paragraphs \(h\)\(1\)](#) through [\(3\)](#) of this section.

(1) The report must contain the following information:

(i) Company name and address where the engine is located.

(ii) Date of the report and beginning and ending dates of the reporting period.

(iii) Engine site rating in brake HP, year construction of the engine commenced (as defined in [§ 63.2](#), where the exact year is not known, provide the best estimate), and type of engine (CI, SI 2SLB, SI 4SLB, or SI 4SRB).

(iv) Latitude and longitude of the engine in decimal degrees reported to the fifth decimal place.

(v)-(vi) [Reserved]

(vii) Hours spent for operation for the purpose specified in [§ 63.6640\(f\)\(4\)\(ii\)](#), including the date, start time, and end time for engine operation for the purposes specified in [§ 63.6640\(f\)\(4\)\(ii\)](#). The report must also identify the entity that dispatched the engine and the situation that necessitated the dispatch of the engine.

(viii) If there were no deviations from the fuel requirements in [§ 63.6604](#) that apply to the engine (if any), a statement that there were no deviations from the fuel requirements during the reporting period.

(ix) If there were deviations from the fuel requirements in [§ 63.6604](#) that apply to the engine (if any), information on the number, duration (in hours), and cause of deviations, and the corrective action taken.

(2) The first annual report must cover the calendar year 2015 and must be submitted no later than March 31, 2016. Subsequent annual reports for each calendar year must be submitted no later than March 31 of the following calendar year.

(3) Before February 26, 2025, the annual report must be submitted electronically using the subpart specific reporting form in the Compliance and Emissions Data Reporting Interface (CEDRI) that is accessed through EPA's Central Data Exchange (CDX) (<https://cdx.epa.gov/>). However, if the reporting form specific to this subpart is not available in CEDRI at the time that the report is due, the written report must be submitted to the Administrator at the appropriate address listed in [§ 63.13](#). Beginning on February 26, 2025, the annual report must be submitted according to [paragraph \(i\)](#) of this section.

(i) Beginning on February 26, 2025 for the annual report specified in [§ 63.6650\(h\)](#) and February 26, 2025 or one year after the report becomes available in CEDRI, whichever is later for all other semiannual or annual reports, submit all semiannual and annual subsequent compliance reports using the appropriate electronic report template on the CEDRI website (<https://www.epa.gov/electronic-reporting-air-emissions/cedri>) for this subpart and following the procedure specified in [§ 63.9\(k\)](#), except any CBI must be submitted according to the procedures in [§ 63.6645\(h\)](#). The date report templates become available will be listed on the CEDRI website. Unless the Administrator or delegated state agency or other authority has approved a different schedule for submission of reports, the report must be submitted by the deadline specified in this subpart, regardless of the method in which the report is submitted.

[[69 FR 33506](#), June 15, 2004, as amended at [75 FR 9677](#), Mar. 3, 2010; [78 FR 6705](#), Jan. 30, 2013; [87 FR 48607](#), Aug. 10, 2022; [89 FR 70517](#), Aug. 30, 2024]

### **§ 63.6655 What records must I keep?**

(a) If you must comply with the emission and operating limitations, you must keep the records described in [paragraphs \(a\)\(1\)](#) through [\(a\)\(5\)](#), [\(b\)\(1\)](#) through [\(b\)\(3\)](#) and [\(c\)](#) of this section.

(1) A copy of each notification and report that you submitted to comply with this subpart, including all documentation supporting any Initial Notification or Notification of Compliance Status that you submitted, according to the requirement in [§ 63.10\(b\)\(2\)\(xiv\)](#).

(2) Records of the occurrence and duration (in hours) of each malfunction of operation (*i.e.*, process equipment) or the air pollution control and monitoring equipment.

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

(4) Records of all required maintenance performed on the air pollution control and monitoring equipment.

(5) Records of actions taken during periods of malfunction to minimize emissions in accordance with [§ 63.6605\(b\)](#), including corrective actions to restore malfunctioning process and air pollution control and monitoring equipment to its normal or usual manner of operation.

(b) For each CEMS or CPMS, you must keep the records listed in [paragraphs \(b\)\(1\)](#) through [\(3\)](#) of this section.

- (1) Records described in [§ 63.10\(b\)\(2\)\(vi\)](#) through [\(xi\)](#).
- (2) Previous (*i.e.*, superseded) versions of the performance evaluation plan as required in [§ 63.8\(d\)\(3\)](#).
- (3) Requests for alternatives to the relative accuracy test for CEMS or CPMS as required in [§ 63.8\(f\)\(6\)\(i\)](#), if applicable.
- (c) If you are operating a new or reconstructed stationary RICE which fires landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis, you must keep the records of your daily fuel usage monitors.
- (d) You must keep the records required in Table 6 of this subpart to show continuous compliance with each emission or operating limitation that applies to you.
- (e) You must keep records of the maintenance conducted on the stationary RICE in order to demonstrate that you operated and maintained the stationary RICE and after-treatment control device (if any) according to your own maintenance plan if you own or operate any of the following stationary RICE;
  - (1) An existing stationary RICE with a site rating of less than 100 brake HP located at a major source of HAP emissions.
  - (2) An existing stationary emergency RICE.
  - (3) An existing stationary RICE located at an area source of HAP emissions subject to management practices as shown in Table 2d to this subpart.
- (f) If you own or operate any of the stationary RICE in [paragraphs \(f\)\(1\)](#) through [\(2\)](#) of this section, you must keep records of the hours of operation of the engine that is recorded through the non-resettable hour meter. The owner or operator must document how many hours are spent for emergency operation, including what classified the operation as emergency and how many hours are spent for non-emergency operation. If the engine is used for the purpose specified in [§ 63.6640\(f\)\(4\)\(ii\)](#), the owner or operator must keep records of the notification of the emergency situation, and the date, start time, and end time of engine operation for these purposes.
  - (1) An existing emergency stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions that does not meet the standards applicable to non-emergency engines.
  - (2) An existing emergency stationary RICE located at an area source of HAP emissions that does not meet the standards applicable to non-emergency engines.

[[69 FR 33506](#), June 15, 2004, as amended at [75 FR 9678](#), Mar. 3, 2010; [75 FR 51592](#), Aug. 20, 2010; [78 FR 6706](#), Jan. 30, 2013; [87 FR 48607](#), Aug. 10, 2022; [89 FR 70518](#), Aug. 30, 2024]

**§ 63.6660 In what form and how long must I keep my records?**

- (a) Your records must be in a form suitable and readily available for expeditious review according to [§ 63.10\(b\)\(1\)](#).
- (b) As specified in [§ 63.10\(b\)\(1\)](#), you must keep each record for 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record.
- (c) You must keep each record readily accessible in hard copy or electronic form for at least 5 years after the date of each occurrence, measurement, maintenance, corrective action, report, or record, according to [§ 63.10\(b\)\(1\)](#).

[[69 FR 33506](#), June 15, 2004, as amended at [75 FR 9678](#), Mar. 3, 2010]

## **Other Requirements and Information**

### **§ 63.6665 What parts of the General Provisions apply to me?**

Table 8 to this subpart shows which parts of the General Provisions in [§§ 63.1](#) through [63.15](#) apply to you. If you own or operate a new or reconstructed stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions (except new or reconstructed 4SLB engines greater than or equal to 250 and less than or equal to 500 brake HP), a new or reconstructed stationary RICE located at an area source of HAP emissions, or any of the following RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, you do not need to comply with any of the requirements of the General Provisions specified in Table 8: An existing 2SLB stationary RICE, an existing 4SLB stationary RICE, an existing stationary RICE that combusts landfill or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis, an existing emergency stationary RICE, or an existing limited use stationary RICE. If you own or operate any of the following RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, you do not need to comply with the requirements in the General Provisions specified in Table 8 except for the initial notification requirements: A new stationary RICE that combusts landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis, a new emergency stationary RICE, or a new limited use stationary RICE.

[[75 FR 9678](#), Mar. 3, 2010]

### **§ 63.6670 Who implements and enforces this subpart?**

- (a) This subpart is implemented and enforced by the U.S. EPA, or a delegated authority such as your State, local, or tribal agency. If the U.S. EPA Administrator has delegated authority to your State, local, or tribal agency, then that agency (as well as the U.S. EPA) has the authority to implement and enforce this subpart. You should contact your U.S. EPA Regional Office to find out whether this subpart is delegated to your State, local, or tribal agency.
- (b) In delegating implementation and enforcement authority of this subpart to a State, local, or tribal agency under [40 CFR part 63, subpart E](#), [the](#) authorities contained in [paragraph \(c\)](#) of this

section are retained by the Administrator of the U.S. EPA and are not transferred to the State, local, or tribal agency.

(c) The authorities that will not be delegated to State, local, or tribal agencies are:

(1) Approval of alternatives to the non-opacity emission limitations and operating limitations in [§ 63.6600](#) under [§ 63.6\(g\)](#).

(2) Approval of major alternatives to test methods under [§ 63.7\(e\)\(2\)\(ii\)](#) and [\(f\)](#) and as defined in [§ 63.90](#).

(3) Approval of major alternatives to monitoring under [§ 63.8\(f\)](#) and as defined in [§ 63.90](#).

(4) Approval of major alternatives to recordkeeping and reporting under [§ 63.10\(f\)](#) and as defined in [§ 63.90](#).

(5) Approval of a performance test which was conducted prior to the effective date of the rule, as specified in [§ 63.6610\(b\)](#).

(6) Approval of an alternative to any electronic reporting to the EPA required by this subpart.

[[69 FR 33506](#), June 15, 2004, as amended at [89 FR 70518](#), Aug. 30, 2024]

#### **§ 63.6675 What definitions apply to this subpart?**

Terms used in this subpart are defined in the Clean Air Act (CAA); in [40 CFR 63.2](#), the General Provisions of this part; and in this section as follows:

*Alaska Railbelt Grid* means the service areas of the six regulated public utilities that extend from Fairbanks to Anchorage and the Kenai Peninsula. These utilities are Golden Valley Electric Association; Chugach Electric Association; Matanuska Electric Association; Homer Electric Association; Anchorage Municipal Light & Power; and the City of Seward Electric System.

*Area source* means any stationary source of HAP that is not a major source as defined in part 63.

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

*Backup power for renewable energy* means an engine that provides backup power to a facility that generates electricity from renewable energy resources, as that term is defined in Alaska Statute 42.45.045(l)(5) (incorporated by reference, see [§ 63.14](#)).

*Black start engine* means an engine whose only purpose is to start up a combustion turbine.



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

*Commercial emergency stationary RICE* means an emergency stationary RICE used in commercial establishments such as office buildings, hotels, stores, telecommunications facilities, restaurants, financial institutions such as banks, doctor's offices, and sports and performing arts facilities.

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

*Custody transfer* means the transfer of hydrocarbon liquids or natural gas: After processing and/or treatment in the producing operations, or from storage vessels or automatic transfer facilities or other such equipment, including product loading racks, to pipelines or any other forms of transportation. For the purposes of this subpart, the point at which such liquids or natural gas enters a natural gas processing plant is a point of custody transfer.

*Deviation* means any instance in which an affected source subject to this subpart, or an owner or operator of such a source:

- (1) Fails to meet any requirement or obligation established by this subpart, including but not limited to any emission limitation or operating limitation;
- (2) Fails to meet any term or condition that is adopted to implement an applicable requirement in this subpart and that is included in the operating permit for any affected source required to obtain such a permit; or
- (3) Fails to meet any emission limitation or operating limitation in this subpart during malfunction, regardless of whether or not such failure is permitted by this subpart.
- (4) Fails to satisfy the general duty to minimize emissions established by [§ 63.6\(e\)\(1\)\(i\)](#).

*Diesel engine* means any stationary RICE in which a high boiling point liquid fuel injected into the combustion chamber ignites when the air charge has been compressed to a temperature sufficiently high for auto-ignition. This process is also known as compression ignition.

*Diesel fuel* means any liquid obtained from the distillation of petroleum with a boiling point of approximately 150 to 360 degrees Celsius. One commonly used form is fuel oil number 2. Diesel fuel also includes any non-distillate fuel with comparable physical and chemical properties (*e.g.* biodiesel) that is suitable for use in compression ignition engines.

*Digester gas* means any gaseous by-product of wastewater treatment typically formed through the anaerobic decomposition of organic waste materials and composed principally of methane and 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 reciprocating internal combustion engine that meets all of the criteria in paragraphs (1) through (3) of this definition. All emergency stationary RICE must comply with the requirements specified in [§ 63.6640\(f\)](#) in order to be considered emergency stationary RICE. If the engine does not comply with the requirements specified in [§ 63.6640\(f\)](#), then it is not considered to be an emergency stationary RICE under this subpart.

(1) The stationary RICE is operated to provide electrical power or mechanical work during an emergency situation. Examples include stationary RICE used to produce power for critical networks or equipment (including power supplied to portions of a facility) when electric power from the local utility (or the normal power source, if the facility runs on its own power production) is interrupted, or stationary RICE used to pump water in the case of fire or flood, etc.

(2) The stationary RICE is operated under limited circumstances for situations not included in paragraph (1) of this definition, as specified in [§ 63.6640\(f\)](#).

(3) The stationary RICE operates as part of a financial arrangement with another entity in situations not included in paragraph (1) of this definition only as allowed in [§ 63.6640\(f\)\(4\)\(i\)](#) or [\(ii\)](#).

*Engine startup* means the time from initial start until applied load and engine and associated equipment reaches steady state or normal operation. For stationary engine with catalytic controls, engine startup means the time from initial start until applied load and engine and associated equipment, including the catalyst, reaches steady state or normal operation.

*Four-stroke engine* means any type of engine which completes the power cycle in two crankshaft revolutions, with intake and compression strokes in the first revolution and power and exhaust strokes in the second revolution.

*Gaseous fuel* means a material used for combustion which is in the gaseous state at standard atmospheric temperature and pressure conditions.

*Gasoline* means any fuel sold in any State for use in motor vehicles and motor vehicle engines, or nonroad or stationary engines, and commonly or commercially known or sold as gasoline.

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

*Hazardous air pollutants (HAP)* means any air pollutants listed in or pursuant to section 112(b) of the CAA.

*Institutional emergency stationary RICE* means an emergency stationary RICE used in institutional establishments such as medical centers, nursing homes, research centers, institutions of higher education, correctional facilities, elementary and secondary schools, libraries, religious establishments, police stations, and fire stations.

*ISO standard day conditions* means 288 degrees Kelvin (15 degrees Celsius), 60 percent relative humidity and 101.3 kilopascals pressure.

*Landfill gas* means a gaseous by-product of the land application of municipal refuse typically formed through the anaerobic decomposition of waste materials and composed principally of methane and 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<sub>3</sub>H<sub>8</sub>.

*Remote stationary RICE* means stationary RICE meeting any of the following criteria:

(1) Stationary RICE located in an offshore area that is beyond the line of ordinary low water along that portion of the coast of the United States that is in direct contact with the open seas and beyond the line marking the seaward limit of inland waters.

(2) Stationary RICE located on a pipeline segment that meets both of the criteria in paragraphs (2)(i) and (ii) of this definition.

(i) A pipeline segment with 10 or fewer buildings intended for human occupancy and no buildings with four or more stories within 220 yards (200 meters) on either side of the centerline of any continuous 1-mile (1.6 kilometers) length of pipeline. Each separate dwelling unit in a multiple dwelling unit building is counted as a separate building intended for human occupancy.

(ii) The pipeline segment does not lie within 100 yards (91 meters) of either a building or a small, well-defined outside area (such as a playground, recreation area, outdoor theater, or other place of public assembly) that is occupied by 20 or more persons on at least 5 days a week for 10 weeks in any 12-month period. The days and weeks need not be consecutive. The building or area is considered occupied for a full day if it is occupied for any portion of the day.

(iii) For purposes of this [paragraph \(2\)](#), the term pipeline segment means all parts of those physical facilities through which gas moves in transportation, including but not limited to pipe, valves, and other appurtenance attached to pipe, compressor units, metering stations, regulator stations, delivery stations, holders, and fabricated assemblies. Stationary RICE located within 50 yards (46 meters) of the pipeline segment providing power for equipment on a pipeline segment are part of the pipeline segment. Transportation of gas means the gathering, transmission, or distribution of gas by pipeline, or the storage of gas. A building is intended for human occupancy if its primary use is for a purpose involving the presence of humans.

(3) Stationary RICE that are not located on gas pipelines and that have 5 or fewer buildings intended for human occupancy and no buildings with four or more stories within a 0.25 mile radius around the engine. A building is intended for human occupancy if its primary use is for a purpose involving the presence of humans.

*Residential emergency stationary RICE* means an emergency stationary RICE used in residential establishments such as homes or apartment buildings.

*Responsible official* means responsible official as defined in [40 CFR 70.2](#).

*Rich burn engine* means any four-stroke spark ignited engine where the manufacturer's recommended operating air/fuel ratio divided by the stoichiometric air/fuel ratio at full load conditions is less than or equal to 1.1. Engines originally manufactured as rich burn engines, but modified prior to December 19, 2002 with passive emission control technology for NO<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.

*Site-rated HP* means the maximum manufacturer's design capacity at engine site conditions.

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

*Stationary reciprocating internal combustion engine (RICE)* means any reciprocating internal combustion engine which uses reciprocating motion to convert heat energy into mechanical work and which is not mobile. Stationary RICE differ from mobile RICE in that a stationary RICE is not a non-road engine as defined at [40 CFR 1068.30](#), and is not used to propel a motor vehicle or a vehicle used solely for competition.

*Stationary RICE test cell/stand* means an engine test cell/stand, as defined in [subpart P of this part](#), that tests stationary RICE.

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

*Storage vessel with the potential for flash emissions* means any storage vessel that contains a hydrocarbon liquid with a stock tank gas-to-oil ratio equal to or greater than 0.31 cubic meters per liter and an American Petroleum Institute gravity equal to or greater than 40 degrees and an actual annual average hydrocarbon liquid throughput equal to or greater than 79,500 liters per

day. Flash emissions occur when dissolved hydrocarbons in the fluid evolve from solution when the fluid pressure is reduced.

*Subpart* means [40 CFR part 63, subpart ZZZZ](#).

*Surface site* means any combination of one or more graded pad sites, gravel pad sites, foundations, platforms, or the immediate physical location upon which equipment is physically affixed.

*Two-stroke engine* means a type of engine which completes the power cycle in single crankshaft revolution by combining the intake and compression operations into one stroke and the power and exhaust operations into a second stroke. This system requires auxiliary scavenging and inherently runs lean of stoichiometric.

[[69 FR 33506](#), June 15, 2004, as amended at [71 FR 20467](#), Apr. 20, 2006; [73 FR 3607](#), Jan. 18, 2008; [75 FR 9679](#), Mar. 3, 2010; [75 FR 51592](#), Aug. 20, 2010; [76 FR 12867](#), Mar. 9, 2011; [78 FR 6706](#), Jan. 30, 2013; [87 FR 48608](#), Aug. 10, 2022]

**Table 1a to Subpart ZZZZ of Part 63—Emission Limitations for Existing, New, and Reconstructed Spark Ignition, 4SRB Stationary RICE >500 HP Located at a Major Source of HAP Emissions**

As stated in [§§ 63.6600](#) and [63.6640](#), you must comply with the following emission limitations at 100 percent load plus or minus 10 percent for existing, new and reconstructed 4SRB stationary RICE >500 HP located at a major source of HAP emissions:

For each . . .	You must meet the following emission limitation, except during periods of startup . . .	During periods of startup you must . . .
1. 4SRB stationary RICE	a. Reduce formaldehyde emissions by 76 percent or more. If you commenced construction or reconstruction between December 19, 2002 and June 15, 2004, you may reduce formaldehyde emissions by 75 percent or more until June 15, 2007 or	Minimize the engine's time spent at idle and minimize the engine's startup time at startup to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the non-startup emission limitations apply. <sup>1</sup>
	b. Limit the concentration of formaldehyde in the stationary RICE exhaust to 350 ppbvd or less at 15 percent O <sub>2</sub>	

<b>For each . . .</b>	<b>You must meet the following emission limitation, except during periods of startup . . .</b>	<b>During periods of startup you must . . .</b>
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<sup>1</sup> Sources can petition the Administrator pursuant to the requirements of [40 CFR 63.6\(g\)](#) for alternative work practices.

[[75 FR 9679](#), Mar. 3, 2010, as amended at [75 FR 51592](#), Aug. 20, 2010]

**Table 1b to Subpart ZZZZ of Part 63—Operating Limitations for Existing, New, and Reconstructed SI 4SRB Stationary RICE >500 HP Located at a Major Source of HAP Emissions**

As stated in [§§ 63.6600](#), [63.6603](#), [63.6630](#) and [63.6640](#), you must comply with the following operating limitations for existing, new and reconstructed 4SRB stationary RICE >500 HP located at a major source of HAP emissions:

<b>For each . . .</b>	<b>You must meet the following operating limitation, except during periods of startup . . .</b>
1. existing, new and reconstructed 4SRB stationary RICE >500 HP located at a major source of HAP emissions complying with the requirement to reduce formaldehyde emissions by 76 percent or more (or by 75 percent or more, if applicable) and using NSCR; or existing, new and reconstructed 4SRB stationary RICE >500 HP located at a major source of HAP emissions complying with the requirement to limit the concentration of formaldehyde in the stationary RICE exhaust to 350 ppbvd or less at 15 percent O <sub>2</sub> and using NSCR;	a. maintain your catalyst so that the pressure drop across the catalyst does not change by more than 2 inches of water at 100 percent load plus or minus 10 percent from the pressure drop across the catalyst measured during the initial performance test; and b. maintain the temperature of your stationary RICE exhaust so that the catalyst inlet temperature is greater than or equal to 750 °F and less than or equal to 1250 °F. <sup>1</sup>
2. existing, new and reconstructed 4SRB stationary RICE >500 HP located at a major source of HAP emissions complying with the requirement to reduce formaldehyde emissions by 76 percent or more (or by 75 percent or more, if applicable) and not using NSCR; or	Comply with any operating limitations approved by the Administrator.
existing, new and reconstructed 4SRB stationary RICE >500 HP located at a major source of HAP	

<b>For each . . .</b>	<b>You must meet the following operating limitation, except during periods of startup . . .</b>
emissions 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.	
<sup>1</sup> Sources can petition the Administrator pursuant to the requirements of <a href="#">40 CFR 63.8(f)</a> for a different temperature range.	

[[78 FR 6706](#), Jan. 30, 2013]

**Table 2a to Subpart ZZZZ of Part 63—Emission Limitations for New and Reconstructed 2SLB and Compression Ignition Stationary RICE >500 HP and New and Reconstructed 4SLB Stationary RICE ≥250 HP Located at a Major Source of HAP Emissions**

As stated in [§§ 63.6600](#) and [63.6640](#), you must comply with the following emission limitations for new and reconstructed lean burn and new and reconstructed compression ignition stationary RICE at 100 percent load plus or minus 10 percent:

<b>For each . . .</b>	<b>You must meet the following emission limitation, except during periods of startup . . .</b>	<b>During periods of startup you must . . .</b>
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	Minimize the engine's time spent at idle and minimize the engine's startup time at startup to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the non-startup emission limitations apply. <sup>1</sup>
2. 4SLB stationary RICE	a. Reduce CO emissions by 93 percent or more; or	



For each . . .	You must meet the following emission limitation, except during periods of startup . . .	During periods of startup you must . . .
	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>	
<sup>1</sup> Sources can petition the Administrator pursuant to the requirements of <a href="#">40 CFR 63.6(g)</a> for alternative work practices.		

[[75 FR 9680](#), Mar. 3, 2010]

**Table 2b to Subpart ZZZZ of Part 63—Operating Limitations for New and Reconstructed 2SLB and CI Stationary RICE >500 HP Located at a Major Source of HAP Emissions, New and Reconstructed 4SLB Stationary RICE ≥250 HP Located at a Major Source of HAP Emissions, Existing CI Stationary RICE >500 HP**

As stated in §§ [63.6600](#), [63.6601](#), [63.6603](#), [63.6630](#), and [63.6640](#), you must comply with the following operating limitations for new and reconstructed 2SLB and CI stationary RICE >500 HP located at a major source of HAP emissions; new and reconstructed 4SLB stationary RICE ≥250 HP located at a major source of HAP emissions; and existing CI stationary RICE >500 HP:

For each . . .	You must meet the following operating limitation, except during periods of startup . . .
1. New and reconstructed 2SLB and CI stationary RICE >500 HP located at a major source of HAP emissions and new and reconstructed 4SLB stationary RICE ≥250 HP located at a major source of HAP emissions complying with the requirement to reduce CO emissions and using an oxidation catalyst; and New and reconstructed 2SLB and CI stationary	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

For each . . .	You must meet the following operating limitation, except during periods of startup . . .
RICE >500 HP located at a major source of HAP emissions and new and reconstructed 4SLB stationary RICE $\geq$ 250 HP located at a major source of HAP emissions complying with the requirement to limit the concentration of formaldehyde in the stationary RICE exhaust and using an oxidation catalyst.	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. <sup>1</sup>
2. Existing CI stationary RICE >500 HP complying with the requirement to limit or reduce the concentration of CO in the stationary RICE exhaust and using an oxidation catalyst	a. maintain your catalyst so that the pressure drop across the catalyst does not change by more than 2 inches of water from the pressure drop across the catalyst that was measured during the initial performance test; and
	b. maintain the temperature of your stationary RICE exhaust so that the catalyst inlet temperature is greater than or equal to 450 °F and less than or equal to 1350 °F. <sup>1</sup>
3. New and reconstructed 2SLB and CI stationary RICE >500 HP located at a major source of HAP emissions and new and reconstructed 4SLB stationary RICE $\geq$ 250 HP located at a major source of HAP emissions complying with the requirement to reduce CO emissions and not using an oxidation catalyst; and	Comply with any operating limitations approved by the Administrator.
New and reconstructed 2SLB and CI stationary RICE >500 HP located at a major source of HAP emissions and new and reconstructed 4SLB stationary RICE $\geq$ 250 HP located at a major source of HAP emissions complying with the requirement to limit the concentration of formaldehyde in the stationary RICE exhaust and not using an oxidation catalyst; and	

<b>For each . . .</b>	<b>You must meet the following operating limitation, except during periods of startup . . .</b>
existing CI stationary RICE >500 HP complying with the requirement to limit or reduce the concentration of CO in the stationary RICE exhaust and not using an oxidation catalyst.	
<sup>1</sup> Sources can petition the Administrator pursuant to the requirements of <a href="#">40 CFR 63.8(f)</a> for a different temperature range.	

[[78 FR 6707](#), Jan. 30, 2013]

**Table 2c to Subpart ZZZZ of Part 63—Requirements for Existing Compression Ignition Stationary RICE Located at a Major Source of HAP Emissions and Existing Spark Ignition Stationary RICE ≤500 HP Located at a Major Source of HAP Emissions**

As stated in [§§ 63.6600](#), [63.6602](#), and [63.6640](#), you must comply with the following requirements for existing compression ignition stationary RICE located at a major source of HAP emissions and existing spark ignition stationary RICE ≤500 HP located at a major source of HAP emissions

<b>For each . . .</b>	<b>You must meet the following requirement, except during periods of startup . . .</b>	<b>During periods of startup you must . . .</b>
1. Emergency stationary CI RICE and black start stationary CI RICE <sup>1</sup>	a. Change oil and filter every 500 hours of operation or within 1 year + 30 days of the previous change, whichever comes first <sup>2</sup> . b. Inspect air cleaner every 1,000 hours of operation or within 1 year + 30 days of the previous inspection, whichever comes first, and replace as necessary;	Minimize the engine's time spent at idle and minimize the engine's startup time at startup to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the non-startup emission limitations apply. <sup>3</sup>
	c. Inspect all hoses and belts every 500 hours of operation or within 1 year + 30 days of	

For each . . .	You must meet the following requirement, except during periods of startup . . .	During periods of startup you must . . .
	the previous inspection, whichever comes first, and replace as necessary <sup>3</sup>	
2. Non-Emergency, non-black start stationary CI RICE <100 HP	a. Change oil and filter every 1,000 hours of operation or within 1 year + 30 days of the previous change, whichever comes first <sup>2</sup> .	
	b. Inspect air cleaner every 1,000 hours of operation or within 1 year + 30 days of the previous inspection, whichever comes first, and replace as necessary;	
	c. Inspect all hoses and belts every 500 hours of operation or within 1 year + 30 days of the previous inspection, whichever comes first, and replace as necessary <sup>3</sup>	
3. Non-Emergency, non-black start CI stationary RICE 100≤HP≤300 HP	Limit concentration of CO in the stationary RICE exhaust to 230 ppmvd or less at 15 percent O <sub>2</sub>	
4. Non-Emergency, non-black start CI stationary RICE 300<HP≤500	a. Limit concentration of CO in the stationary RICE exhaust to 49 ppmvd or less at 15 percent O <sub>2</sub> ; or	
	b. Reduce CO emissions by 70 percent or more	

<b>For each . . .</b>	<b>You must meet the following requirement, except during periods of startup . . .</b>	<b>During periods of startup you must . . .</b>
5. Non-Emergency, non-black start stationary CI RICE >500 HP	a. Limit concentration of CO in the stationary RICE exhaust to 23 ppmvd or less at 15 percent O <sub>2</sub> ; or	
	b. Reduce CO emissions by 70 percent or more	
6. Emergency stationary SI RICE and black start stationary SI RICE. <sup>1</sup>	a. Change oil and filter every 500 hours of operation or within 1 year + 30 days of the previous change, whichever comes first; <sup>2</sup>	
	b. Inspect spark plugs every 1,000 hours of operation or within 1 year + 30 days of the previous inspection, whichever comes first, and replace as necessary;	
	c. Inspect all hoses and belts every 500 hours of operation or within 1 year + 30 days of the previous inspection, whichever comes first, and replace as necessary <sup>3</sup>	
7. Non-Emergency, non-black start stationary SI RICE <100 HP that are not 2SLB stationary RICE	a. Change oil and filter every 1,440 hours of operation or within 1 year + 30 days of the previous change, whichever comes first; <sup>2</sup>	
	b. Inspect spark plugs every 1,440 hours of operation or within 1 year + 30 days of	

For each . . .	You must meet the following requirement, except during periods of startup . . .	During periods of startup you must . . .
	the previous inspection, whichever comes first, and replace as necessary	
	c. Inspect all hoses and belts every 1,440 hours of operation or within 1 year + 30 days of the previous inspection, whichever comes first, and replace as necessary <sup>3</sup>	
8. Non-Emergency, non-black start 2SLB stationary SI RICE <100 HP	a. Change oil and filter every 4,320 hours of operation or within 1 year + 30 days of the previous change, whichever comes first; <sup>2</sup>	
	b. Inspect spark plugs every 4,320 hours of operation or within 1 year + 30 days of the previous inspection, whichever comes first, and replace as necessary;	
	c. Inspect all hoses and belts every 4,320 hours of operation or within 1 year + 30 days of the previous inspection, whichever comes first, and replace as necessary <sup>3</sup>	
9. Non-emergency, non-black start 2SLB stationary RICE 100≤HP≤500	Limit concentration of CO in the stationary RICE exhaust	

For each . . .	You must meet the following requirement, except during periods of startup . . .	During periods of startup you must . . .
	to 225 ppmvd or less at 15 percent O <sub>2</sub>	
10. Non-emergency, non-black start 4SLB stationary RICE 100≤HP≤500	Limit concentration of CO in the stationary RICE exhaust to 47 ppmvd or less at 15 percent O <sub>2</sub>	
11. Non-emergency, non-black start 4SRB stationary RICE 100≤HP≤500	Limit concentration of formaldehyde in the stationary RICE exhaust to 10.3 ppmvd or less at 15 percent O <sub>2</sub>	
12. Non-emergency, non-black start stationary RICE 100≤HP≤500 which combusts landfill or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis	Limit concentration of CO in the stationary RICE exhaust to 177 ppmvd or less at 15 percent O <sub>2</sub>	
<sup>1</sup> If an emergency engine is operating during an emergency and it is not possible to shut down the engine in order to perform the work practice requirements on the schedule required in table 2c of this subpart, or if performing the work practice on the required schedule would otherwise pose an unacceptable risk under Federal, state, or local law, the work practice can be delayed until the emergency is over or the unacceptable risk under Federal, state, or local law has abated. The work practice should be performed as soon as practicable after the emergency has ended or the unacceptable risk under Federal, state, or local law has abated. Sources must report any failure to perform the work practice on the schedule required and the Federal, state or local law under which the risk was deemed unacceptable.		
<sup>2</sup> Sources have the option to utilize an oil analysis program as described in <a href="#">§ 63.6625(i)</a> or <a href="#">(j)</a> in order to extend the specified oil change requirement in table 2c of this subpart.		

<b>For each . . .</b>	<b>You must meet the following requirement, except during periods of startup . . .</b>	<b>During periods of startup you must . . .</b>
<sup>3</sup> Sources can petition the Administrator pursuant to the requirements of <a href="#">40 CFR 63.6(g)</a> for alternative work practices.		

[[89 FR 70518](#), Aug. 30, 2024]

**Table 2d to Subpart ZZZZ of Part 63—Requirements for Existing Stationary RICE Located at Area Sources of HAP Emissions**

As stated in [§§ 63.6603](#) and [63.6640](#), you must comply with the following requirements for existing stationary RICE located at area sources of HAP emissions:

<b>For each . . .</b>	<b>You must meet the following requirement, except during periods of startup . . .</b>	<b>During periods of startup you must . . .</b>
1. Non-Emergency, non-black start CI stationary RICE $\leq 300$ HP	a. Change oil and filter every 1,000 hours of operation or within 1 year + 30 days of the previous change, whichever comes first; <sup>1</sup> b. Inspect air cleaner every 1,000 hours of operation or within 1 year + 30 days of the previous inspection, whichever comes first, and replace as necessary;	Minimize the engine's time spent at idle and minimize the engine's startup time at startup to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the non-startup emission limitations apply.
	c. Inspect all hoses and belts every 500 hours of operation or within 1 year + 30 days of the previous inspection, whichever comes first, and replace as necessary	



For each . . .	You must meet the following requirement, except during periods of startup . . .	During periods of startup you must . . .
2. Non-Emergency, non-black start CI stationary RICE $300 < \text{HP} \leq 500$	a. Limit concentration of CO in the stationary RICE exhaust to 49 ppmvd at 15 percent O <sub>2</sub> ; or	
	b. Reduce CO emissions by 70 percent or more	
3. Non-Emergency, non-black start CI stationary RICE $> 500$ HP	a. Limit concentration of CO in the stationary RICE exhaust to 23 ppmvd at 15 percent O <sub>2</sub> ; or	
	b. Reduce CO emissions by 70 percent or more	
4. Emergency stationary CI RICE and black start stationary CI RICE. <sup>2</sup>	a. Change oil and filter every 500 hours of operation or within 1 year + 30 days of the previous change, whichever comes first; <sup>1</sup>	
	b. Inspect air cleaner every 1,000 hours of operation or within 1 year + 30 days of the previous inspection, whichever comes first, and replace as necessary; and	
	c. Inspect all hoses and belts every 500 hours of operation or within 1 year + 30 days of the previous inspection, whichever	

For each . . .	You must meet the following requirement, except during periods of startup . . .	During periods of startup you must . . .
	comes first, and replace as necessary	
5. Emergency stationary SI RICE; black start stationary SI RICE; non-emergency, non-black start 4SLB stationary RICE >500 HP that operate 24 hours or less per calendar year; non-emergency, non-black start 4SRB stationary RICE >500 HP that operate 24 hours or less per calendar year. <sup>2</sup>	a. Change oil and filter every 500 hours of operation or within 1 year + 30 days of the previous change, whichever comes first; <sup>1</sup> b. Inspect spark plugs every 1,000 hours of operation or within 1 year + 30 days of the previous inspection, whichever comes first, and replace as necessary; and	
	c. Inspect all hoses and belts every 500 hours of operation or within 1 year + 30 days of the previous inspection, whichever comes first, and replace as necessary	
6. Non-emergency, non-black start 2SLB stationary RICE	a. Change oil and filter every 4,320 hours of operation or within 1 year + 30 days of the previous change, whichever comes first; <sup>1</sup>	
	b. Inspect spark plugs every 4,320 hours of operation or within 1 year + 30 days of the previous	

For each . . .	You must meet the following requirement, except during periods of startup . . .	During periods of startup you must . . .
	inspection, whichever comes first, and replace as necessary; and	
	c. Inspect all hoses and belts every 4,320 hours of operation or within 1 year + 30 days of the previous inspection, whichever comes first, and replace as necessary	
7. Non-emergency, non-black start 4SLB stationary RICE $\leq 500$ HP	a. Change oil and filter every 1,440 hours of operation or within 1 year + 30 days of the previous change, whichever comes first; <sup>1</sup>	
	b. Inspect spark plugs every 1,440 hours of operation or within 1 year + 30 days of the previous inspection, whichever comes first, and replace as necessary; and	
	c. Inspect all hoses and belts every 1,440 hours of operation or within 1 year + 30 days of the previous inspection, whichever comes first, and replace as necessary	

For each . . .	You must meet the following requirement, except during periods of startup . . .	During periods of startup you must . . .
8. Non-emergency, non-black start 4SLB remote stationary RICE >500 HP	a. Change oil and filter every 2,160 hours of operation or within 1 year + 30 days of the previous change, whichever comes first; <sup>1</sup>	
	b. Inspect spark plugs every 2,160 hours of operation or within 1 year + 30 days of the previous inspection, whichever comes first, and replace as necessary; and	
	c. Inspect all hoses and belts every 2,160 hours of operation or within 1 year + 30 days of the previous inspection, whichever comes first, and replace as necessary	
9. Non-emergency, non-black start 4SLB stationary RICE >500 HP that are not remote stationary RICE and that operate more than 24 hours per calendar year	Install an oxidation catalyst to reduce HAP emissions from the stationary RICE	
10. Non-emergency, non-black start 4SRB stationary RICE ≤500 HP	a. Change oil and filter every 1,440 hours of operation or within 1 year + 30 days of the previous change, whichever comes first; <sup>1</sup>	

For each . . .	You must meet the following requirement, except during periods of startup . . .	During periods of startup you must . . .
	b. Inspect spark plugs every 1,440 hours of operation or within 1 year + 30 days of the previous inspection, whichever comes first, and replace as necessary; and	
	c. Inspect all hoses and belts every 1,440 hours of operation or within 1 year + 30 days of the previous inspection, whichever comes first, and replace as necessary	
11. Non-emergency, non-black start 4SRB remote stationary RICE >500 HP	a. Change oil and filter every 2,160 hours of operation or within 1 year + 30 days of the previous change, whichever comes first; <sup>1</sup>	
	b. Inspect spark plugs every 2,160 hours of operation or within 1 year + 30 days of the previous inspection, whichever comes first, and replace as necessary; and	
	c. Inspect all hoses and belts every 2,160 hours of operation or within 1 year + 30 days of the previous inspection, whichever	

For each . . .	You must meet the following requirement, except during periods of startup . . .	During periods of startup you must . . .
	comes first, and replace as necessary	
12. Non-emergency, non-black start 4SRB stationary RICE >500 HP that are not remote stationary RICE and that operate more than 24 hours per calendar year	Install NSCR to reduce HAP emissions from the stationary RICE	
13. Non-emergency, non-black start stationary RICE which combusts landfill or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis	<p>a. Change oil and filter every 1,440 hours of operation or within 1 year + 30 days of the previous change, whichever comes first; <sup>1</sup></p> <p>b. Inspect spark plugs every 1,440 hours of operation or within 1 year + 30 days of the previous inspection, whichever comes first, and replace as necessary; and</p>	
	c. Inspect all hoses and belts every 1,440 hours of operation or within 1 year + 30 days of the previous inspection, whichever comes first, and replace as necessary	
<sup>1</sup> Sources have the option to utilize an oil analysis program as described in <a href="#">§ 63.6625(i)</a> or <a href="#">(j)</a> in order to extend the specified oil change requirement in table 2d of this subpart.		
<sup>2</sup> If an emergency engine is operating during an emergency and it is not possible to shut down the engine in order to perform the management practice requirements on the schedule required in table 2d of this subpart, or if performing the management practice on the required schedule		

<b>For each . . .</b>	<b>You must meet the following requirement, except during periods of startup . . .</b>	<b>During periods of startup you must . . .</b>
would otherwise pose an unacceptable risk under Federal, state, or local law, the management practice can be delayed until the emergency is over or the unacceptable risk under Federal, state, or local law has abated. The management practice should be performed as soon as practicable after the emergency has ended or the unacceptable risk under Federal, state, or local law has abated. Sources must report any failure to perform the management practice on the schedule required and the Federal, state or local law under which the risk was deemed unacceptable.		

[[89 FR 70520](#), Aug. 30, 2024]

### **Table 3 to Subpart ZZZZ of Part 63—Subsequent Performance Tests**

As stated in [§§ 63.6615](#) and [63.6620](#), you must comply with the following subsequent performance test requirements:

<b>For each . . .</b>	<b>Complying with the requirement to . . .</b>	<b>You must . . .</b>
1. New or reconstructed 2SLB stationary RICE >500 HP located at major sources; new or reconstructed 4SLB stationary RICE $\geq$ 250 HP located at major sources; and new or reconstructed CI stationary RICE >500 HP located at major sources	Reduce CO emissions and not using a CEMS	Conduct subsequent performance tests semiannually. <sup>1</sup>
2. 4SRB stationary RICE $\geq$ 5,000 HP located at major sources	Reduce formaldehyde emissions	Conduct subsequent performance tests semiannually. <sup>1</sup>
3. Stationary RICE >500 HP located at major sources and new or reconstructed 4SLB stationary RICE $250 \leq \text{HP} \leq 500$ located at major sources	Limit the concentration of formaldehyde in the stationary RICE exhaust	Conduct subsequent performance tests semiannually. <sup>1</sup>
4. Existing non-emergency, non-black start CI stationary RICE >500 HP that are not limited use stationary RICE	Limit or reduce CO emissions and not using a CEMS	Conduct subsequent performance tests every

For each . . .	Complying with the requirement to . . .	You must . . .
		8,760 hours or 3 years, whichever comes first.
5. Existing non-emergency, non-black start CI stationary RICE >500 HP that are limited use stationary RICE	Limit or reduce CO emissions and not using a CEMS	Conduct subsequent performance tests every 8,760 hours or 5 years, whichever comes first.
<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.		

[[78 FR 6711](#), Jan. 30, 2013]

#### Table 4 to Subpart ZZZZ of Part 63—Requirements for Performance Tests

As stated in §§ [63.6610](#), [63.6611](#), [63.6620](#), and [63.6640](#), you must comply with the following requirements for performance tests for stationary RICE:

For each . . .	Complying with the requirement to . . .	You must . . .	Using . . .	According to the following requirements . . .
1. 2SLB, 4SLB, and CI stationary RICE	a. Reduce CO emissions	i. Select the sampling port location and the number/location of traverse points at the inlet and outlet of the control device; and		(a) For CO, O <sub>2</sub> , and moisture measurement, ducts ≤6 inches in diameter may be sampled at a single point located at the duct centroid and ducts >6 and ≤12 inches in diameter may be sampled at 3 traverse points located at 16.7, 50.0, and 83.3% of the measurement line ('3-point long line'). If the



For each . .	Complying with the requirement to . . .	You must . . .	Using . . .	According to the following requirements . . .
				duct is >12 inches in diameter <i>and</i> the sampling port location meets the two and half-diameter criterion of section 11.1.1 of method 1 of <a href="#">40 CFR part 60, appendix A-1</a> , the duct may be sampled at '3-point long line'; otherwise, conduct the stratification testing and select sampling points according to section 8.1.2 of method 7E of <a href="#">40 CFR part 60, appendix A-4</a> .
		ii. Measure the O <sub>2</sub> at the inlet and outlet of the control device; and	(1) Method 3 or 3A or 3B of <a href="#">40 CFR part 60, appendix A-2</a> , or ASTM D6522-00 (Reapproved 2005) <sup>1 2 3</sup> (heated probe not necessary)	(b) Measurements to determine O <sub>2</sub> must be made at the same time as the measurements for CO concentration.
		iii. Measure the CO at the inlet and the outlet of the control device; and	(2) ASTM D6522-00 (Reapproved 2005) <sup>1 2 3</sup> (heated probe not necessary) or method 10 of <a href="#">40 CFR part 60, appendix A-4</a>	(c) The CO concentration must be at 15 percent O <sub>2</sub> , dry basis.

For each . ..	Complying with the requirement to ...	You must ...	Using ...	According to the following requirements ...
		iv. Measure moisture content at the inlet and outlet of the control device as needed to determine CO and O <sub>2</sub> concentrations on a dry basis	(3) Method 4 of <a href="#">40 CFR part 60, appendix A-3</a> , or method 320 of <a href="#">40 CFR part 63, appendix A</a> , or ASTM D6348-03 <sup>13</sup>	(d) Measurements to determine moisture content must be made at the same time and location as the measurements for CO concentration.
2. 4SRB stationary RICE	a. Reduce formaldehyde or THC emissions	i. Select the sampling port location and the number/location of traverse points at the inlet and outlet of the control device; and		(a) For formaldehyde, THC, O <sub>2</sub> , and moisture measurement, ducts ≤6 inches in diameter may be sampled at a single point located at the duct centroid and ducts >6 and ≤12 inches in diameter may be sampled at 3 traverse points located at 16.7, 50.0, and 83.3% of the measurement line ('3-point long line'). If the duct is >12 inches in diameter <i>and</i> the sampling port location meets the two and half-diameter criterion of section 11.1.1 of method 1 of <a href="#">40 CFR part 60, appendix A</a> , the duct may be sampled at '3-point long line'; otherwise, conduct the stratification testing and

For each . . .	Complying with the requirement to . . .	You must . . .	Using . . .	According to the following requirements . . .
				select sampling points according to section 8.1.2 of method 7E of <a href="#">40 CFR part 60, appendix A</a> .
		ii. Measure O <sub>2</sub> at the inlet and outlet of the control device; and	(1) Method 3 or 3A or 3B of <a href="#">40 CFR part 60, appendix A-2</a> , or ASTM D6522-00 (Reapproved 2005) <sup>1 3</sup> (heated probe not necessary)	(b) Measurements to determine O <sub>2</sub> concentration must be made at the same time as the measurements for formaldehyde or THC concentration.
		iii. Measure moisture content at the inlet and outlet of the control device as needed to determine formaldehyde or THC and O <sub>2</sub> concentrations on a dry basis; and	(2) Method 4 of <a href="#">40 CFR part 60, appendix A-3</a> , or method 320 of <a href="#">40 CFR part 63, appendix A</a> , or ASTM D6348-03 <sup>1 3</sup>	(c) Measurements to determine moisture content must be made at the same time and location as the measurements for formaldehyde or THC concentration.
		iv. If demonstrating compliance with the formaldehyde percent reduction requirement, measure formaldehyde at the inlet and the outlet of the control device	(3) Method 320 or 323 of <a href="#">40 CFR part 63, appendix A</a> ; or ASTM D6348-03, <sup>1 3</sup> provided in ASTM D6348-03 Annex A5 (Analyte Spiking Technique), the percent R must be greater than or	(d) 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.

For each . .	Complying with the requirement to . . .	You must . . .	Using . . .	According to the following requirements . . .
			equal to 70 and less than or equal to 130	
		v. If demonstrating compliance with the THC percent reduction requirement, measure THC at the inlet and the outlet of the control device	(4) (1) Method 25A, reported as propane, of <a href="#">40 CFR part 60, appendix A-7</a>	(e) THC 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 or CO in the stationary RICE exhaust	i. Select the sampling port location and the number/location of traverse points at the exhaust of the stationary RICE; and		(a) For formaldehyde, CO, O <sub>2</sub> , and moisture measurement, ducts ≤6 inches in diameter may be sampled at a single point located at the duct centroid and ducts >6 and ≤12 inches in diameter may be sampled at 3 traverse points located at 16.7, 50.0, and 83.3% of the measurement line ('3-point long line'). If the duct is >12 inches in diameter <i>and</i> the sampling port location meets the two and half-diameter criterion of section 11.1.1 of method 1 of <a href="#">40 CFR part 60, appendix A</a> , the duct may be sampled at '3-point long line';

For each . . .	Complying with the requirement to . . .	You must . . .	Using . . .	According to the following requirements . . .
				otherwise, conduct the stratification testing and select sampling points according to section 8.1.2 of method 7E of <a href="#">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 RICE exhaust at the sampling port location; and	(1) Method 3 or 3A or 3B of <a href="#">40 CFR part 60, appendix A-2</a> , or ASTM D6522-00 (Reapproved 2005) <sup>1 3</sup> (heated probe not necessary)	(b) Measurements to determine O <sub>2</sub> concentration must be made at the same time and location as the measurements for formaldehyde or CO concentration.
		iii. Measure moisture content of the stationary RICE exhaust at the sampling port location as needed to determine formaldehyde or CO and O <sub>2</sub> concentrations on a dry basis; and	(2) Method 4 of <a href="#">40 CFR part 60, appendix A-3</a> , or method 320 of <a href="#">40 CFR part 63, appendix A</a> , or ASTM D6348-03 <sup>1 3</sup>	(c) Measurements to determine moisture content must be made at the same time and location as the measurements for formaldehyde or CO concentration.
		iv. Measure formaldehyde at the	(3) Method 320 or 323 of <a href="#">40 CFR part 63, appendix A</a> ; or	(d) Formaldehyde concentration must be at 15 percent O <sub>2</sub> , dry basis.

For each . . .	Complying with the requirement to . . .	You must . . .	Using . . .	According to the following requirements . . .
		exhaust of the stationary RICE; or	ASTM D6348-03, <sup>1</sup> <sup>3</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	Results of this test consist of the average of the three 1-hour or longer runs.
		v. Measure CO at the exhaust of the stationary RICE	(4) Method 10 of <a href="#">40 CFR part 60, appendix A-4</a> , ASTM D6522-00 (2005), <sup>1</sup> <sup>3</sup> method 320 of <a href="#">40 CFR part 63, appendix A</a> , or ASTM D6348-03 <sup>1</sup> <sup>3</sup>	(e) CO 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.
<sup>1</sup> You may also use methods 3A and 10 as options to ASTM-D6522-00 (2005).				
<sup>2</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.				
<sup>3</sup> Incorporated by reference, see <a href="#">§ 63.14</a> .				

[[88 FR 18413](#), Mar. 29, 2023]

**Table 5 to Subpart ZZZZ of Part 63—Initial Compliance With Emission Limitations, Operating Limitations, and Other Requirements**

As stated in [§§ 63.6612](#), [63.6625](#) and [63.6630](#), you must initially comply with the emission and operating limitations as required by the following:

For each . . .	Complying with the requirement to . . .	You have demonstrated initial compliance if . . .
1. New or reconstructed non-emergency 2SLB stationary RICE >500 HP located at a major source of HAP, new or reconstructed non-emergency 4SLB stationary RICE $\geq$ 250 HP located at a major source of HAP, non-emergency stationary CI RICE >500 HP located at a major source of HAP, and existing non-emergency stationary CI RICE >500 HP located at an area source of HAP	a. Reduce CO emissions and 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 <a href="#">§ 63.6625(b)</a> ; and iii. You have recorded the catalyst pressure drop and catalyst inlet temperature during the initial performance test.
2. Non-emergency stationary CI RICE >500 HP located at a major source of HAP, and existing non-emergency stationary CI RICE >500 HP located at an area source of HAP	a. Limit the concentration of CO, using oxidation catalyst, and using a CPMS	i. The average CO concentration determined from the initial performance test is less than or equal to the CO emission limitation; and
		ii. You have installed a CPMS to continuously monitor catalyst inlet temperature according to the requirements in <a href="#">§ 63.6625(b)</a> ; and
		iii. You have recorded the catalyst pressure drop and catalyst inlet temperature during the initial performance test.
3. New or reconstructed non-emergency 2SLB stationary RICE >500 HP located at a major source of HAP, new or reconstructed non-emergency 4SLB stationary RICE $\geq$ 250 HP located at a major source of HAP, non-emergency stationary CI RICE >500 HP located at a major	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

For each . . .	Complying with the requirement to . . .	You have demonstrated initial compliance if . . .
source of HAP, and existing non-emergency stationary CI RICE >500 HP located at an area source of HAP		Administrator (if any) according to the requirements in <a href="#">§ 63.6625(b)</a> ; and iii. You have recorded the approved operating parameters (if any) during the initial performance test.
4. Non-emergency stationary CI RICE >500 HP located at a major source of HAP, and existing non-emergency stationary CI RICE >500 HP located at an area source of HAP	a. Limit the concentration of CO, and not using oxidation catalyst	i. The average CO concentration determined from the initial performance test is less than or equal to the CO emission limitation; and ii. You have installed a CPMS to continuously monitor operating parameters approved by the Administrator (if any) according to the requirements in <a href="#">§ 63.6625(b)</a> ; and
		iii. You have recorded the approved operating parameters (if any) during the initial performance test.
5. New or reconstructed non-emergency 2SLB stationary RICE >500 HP located at a major source of HAP, new or reconstructed non-emergency 4SLB stationary RICE ≥250 HP located at a major source of HAP, non-emergency stationary CI RICE >500 HP located at a major source of HAP, and existing non-emergency stationary CI RICE >500 HP located at an area source of HAP	a. Reduce CO emissions, and using a CEMS	i. You have installed a CEMS to continuously monitor CO and either O <sub>2</sub> or CO <sub>2</sub> at both the inlet and outlet of the oxidation catalyst according to the requirements in <a href="#">§ 63.6625(a)</a> ; and ii. You have conducted a performance evaluation of your CEMS using PS 3 and 4A of <a href="#">40 CFR part 60, appendix B</a> ; and
		iii. The average reduction of CO calculated using <a href="#">§ 63.6620</a> equals or exceeds the required percent



For each . . .	Complying with the requirement to . . .	You have demonstrated initial compliance if . . .
		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.
6. Non-emergency stationary CI RICE >500 HP located at a major source of HAP, and existing non-emergency stationary CI RICE >500 HP located at an area source of HAP	a. Limit the concentration of CO, and using a CEMS	i. You have installed a CEMS to continuously monitor CO and either O <sub>2</sub> or CO <sub>2</sub> at the outlet of the oxidation catalyst according to the requirements in <a href="#">§ 63.6625(a)</a> ; and
		ii. You have conducted a performance evaluation of your CEMS using PS 3 and 4A of <a href="#">40 CFR part 60, appendix B</a> ; and
		iii. The average concentration of CO calculated using <a href="#">§ 63.6620</a> is less than or equal to the CO emission limitation. The initial test comprises the first 4-hour period after successful validation of the CEMS. Compliance is based on the average concentration measured during the 4-hour period.
7. Non-emergency 4SRB stationary RICE >500 HP located at a major source of HAP	a. Reduce formaldehyde emissions and using NSCR	i. The average reduction of emissions of formaldehyde determined from the initial performance test is equal to or greater than the required formaldehyde percent reduction, or the average reduction of emissions of THC determined from the initial performance test is equal to or greater than 30 percent; and

For each . . .	Complying with the requirement to . . .	You have demonstrated initial compliance if . . .
		ii. You have installed a CPMS to continuously monitor catalyst inlet temperature according to the requirements in <a href="#">§ 63.6625(b)</a> ; and
		iii. You have recorded the catalyst pressure drop and catalyst inlet temperature during the initial performance test.
8. Non-emergency 4SRB stationary RICE >500 HP located at a major source of HAP	a. Reduce formaldehyde emissions and not using NSCR	i. The average reduction of emissions of formaldehyde determined from the initial performance test is equal to or greater than the required formaldehyde percent reduction or the average reduction of emissions of THC determined from the initial performance test is equal to or greater than 30 percent; and
		ii. You have installed a CPMS to continuously monitor operating parameters approved by the Administrator (if any) according to the requirements in <a href="#">§ 63.6625(b)</a> ; and
		iii. You have recorded the approved operating parameters (if any) during the initial performance test.
9. New or reconstructed non-emergency stationary RICE >500 HP located at a major source of HAP, new or reconstructed non-emergency 4SLB stationary RICE $250 \leq \text{HP} \leq 500$ located at a major source of HAP, and existing non-	a. Limit the concentration of formaldehyde in the stationary RICE exhaust and using	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

For each . . .	Complying with the requirement to . . .	You have demonstrated initial compliance if . . .
emergency 4SRB stationary RICE >500 HP located at a major source of HAP	oxidation catalyst or NSCR	continuously monitor catalyst inlet temperature according to the requirements in <a href="#">§ 63.6625(b)</a> ; and
		iii. You have recorded the catalyst pressure drop and catalyst inlet temperature during the initial performance test.
10. New or reconstructed non-emergency stationary RICE >500 HP located at a major source of HAP, new or reconstructed non-emergency 4SLB stationary RICE $250 \leq \text{HP} \leq 500$ located at a major source of HAP, and existing non-emergency 4SRB stationary RICE >500 HP located at a major source of HAP	a. Limit the concentration of formaldehyde in the stationary RICE exhaust and not using oxidation catalyst or NSCR	i. The average formaldehyde concentration, corrected to 15 percent O <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 <a href="#">§ 63.6625(b)</a> ; and
		iii. You have recorded the approved operating parameters (if any) during the initial performance test.
11. Existing non-emergency stationary RICE $100 \leq \text{HP} \leq 500$ located at a major source of HAP, and existing non-emergency stationary CI RICE $300 < \text{HP} \leq 500$ located at an area source of HAP	a. Reduce CO emissions	i. The average reduction of emissions of CO or formaldehyde, as applicable determined from the initial performance test is equal to or greater than the required CO or formaldehyde, as applicable, percent reduction.
12. Existing non-emergency stationary RICE $100 \leq \text{HP} \leq 500$ located at a major source of HAP, and existing non-emergency	a. Limit the concentration of formaldehyde or CO	i. The average formaldehyde or CO concentration, as applicable, corrected to 15 percent O <sub>2</sub> , dry basis, from the three test runs is less than or equal to the formaldehyde or

For each . . .	Complying with the requirement to . . .	You have demonstrated initial compliance if . . .
stationary CI RICE 300<HP≤500 located at an area source of HAP	in the stationary RICE exhaust	CO emission limitation, as applicable.
13. Existing non-emergency 4SLB stationary RICE >500 HP located at an area source of HAP that are not remote stationary RICE and that are operated more than 24 hours per calendar year	a. Install an oxidation catalyst	i. You have conducted an initial compliance demonstration as specified in <a href="#">§ 63.6630(e)</a> to show that the average reduction of emissions of CO is 93 percent or more, or the average CO concentration is less than or equal to 47 ppmvd at 15 percent O <sub>2</sub> ;
		ii. You have installed a CPMS to continuously monitor catalyst inlet temperature according to the requirements in <a href="#">§ 63.6625(b)</a> , or you have installed equipment to automatically shut down the engine if the catalyst inlet temperature exceeds 1350 °F.
14. Existing non-emergency 4SRB stationary RICE >500 HP located at an area source of HAP that are not remote stationary RICE and that are operated more than 24 hours per calendar year	a. Install NSCR	i. You have conducted an initial compliance demonstration as specified in <a href="#">§ 63.6630(e)</a> to show that the average reduction of emissions of CO is 75 percent or more, the average CO concentration is less than or equal to 270 ppmvd at 15 percent O <sub>2</sub> , or the average reduction of emissions of THC is 30 percent or more;
		ii. You have installed a CPMS to continuously monitor catalyst inlet temperature according to the requirements in <a href="#">§ 63.6625(b)</a> , or you have installed equipment to automatically shut down the engine

For each . . .	Complying with the requirement to . . .	You have demonstrated initial compliance if . . .
		if the catalyst inlet temperature exceeds 1250 °F.

[[78 FR 6712](#), Jan. 30, 2013]

**Table 6 to Subpart ZZZZ of Part 63—Continuous Compliance With Emission Limitations, and Other Requirements**

As stated in [§ 63.6640](#), you must continuously comply with the emissions and operating limitations and work or management practices as required by the following:

For each . . .	Complying with the requirement to . . .	You must demonstrate continuous compliance by . . .
1. New or reconstructed non-emergency 2SLB stationary RICE >500 HP located at a major source of HAP, new or reconstructed non-emergency 4SLB stationary RICE ≥250 HP located at a major source of HAP, and new or reconstructed non-emergency CI stationary RICE >500 HP located at a major source of HAP	a. Reduce CO emissions and using an oxidation catalyst, and using a CPMS	i. Conducting semiannual performance tests for CO to demonstrate that the required CO percent reduction is achieved <sup>a</sup> ; and ii. Collecting the catalyst inlet temperature data according to <a href="#">§ 63.6625(b)</a> ; 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. New or reconstructed non-emergency 2SLB stationary RICE >500 HP located at a major source	a. Reduce CO emissions and not using an oxidation	i. Conducting semiannual performance tests for CO to demonstrate that the required CO

For each . . .	Complying with the requirement to . . .	You must demonstrate continuous compliance by . . .
of HAP, new or reconstructed non-emergency 4SLB stationary RICE $\geq 250$ HP located at a major source of HAP, and new or reconstructed non-emergency CI stationary RICE $> 500$ HP located at a major source of HAP	catalyst, and using a CPMS	percent reduction is achieved <sup>a</sup> ; and ii. Collecting the approved operating parameter (if any) data according to <a href="#">§ 63.6625(b)</a> ; and iii. Reducing these data to 4-hour rolling averages; and
		iv. Maintaining the 4-hour rolling averages within the operating limitations for the operating parameters established during the performance test.
3. New or reconstructed non-emergency 2SLB stationary RICE $> 500$ HP located at a major source of HAP, new or reconstructed non-emergency 4SLB stationary RICE $\geq 250$ HP located at a major source of HAP, new or reconstructed non-emergency stationary CI RICE $> 500$ HP located at a major source of HAP, and existing non-emergency stationary CI RICE $> 500$ HP	a. Reduce CO emissions or limit the concentration of CO in the stationary RICE exhaust, and using a CEMS	i. Collecting the monitoring data according to <a href="#">§ 63.6625(a)</a> , reducing the measurements to 1-hour averages, calculating the percent reduction or concentration of CO emissions according to <a href="#">§ 63.6620</a> ; and ii. Demonstrating that the catalyst achieves the required percent reduction of CO emissions over the 4-hour averaging period, or that the emission remain at or below the CO concentration limit; and
		iii. Conducting an annual RATA of your CEMS using PS 3 and 4A of <a href="#">40 CFR part 60, appendix B</a> , as well as daily and periodic data quality checks in accordance with <a href="#">40 CFR part 60, appendix F</a> , procedure 1.
4. Non-emergency 4SRB stationary RICE $> 500$ HP located at a major source of HAP	a. Reduce formaldehyde	i. Collecting the catalyst inlet temperature data according to <a href="#">§ 63.6625(b)</a> ; and

For each . . .	Complying with the requirement to . . .	You must demonstrate continuous compliance by . . .
	emissions and using NSCR	
		ii. Reducing these data to 4-hour rolling averages; and
		iii. Maintaining the 4-hour rolling averages within the operating limitations for the catalyst inlet temperature; and
		iv. Measuring the pressure drop across the catalyst once per month and demonstrating that the pressure drop across the catalyst is within the operating limitation established during the performance test.
5. Non-emergency 4SRB stationary RICE >500 HP located at a major source of HAP	a. Reduce formaldehyde emissions and not using NSCR	i. Collecting the approved operating parameter (if any) data according to <a href="#">§ 63.6625(b)</a> ; and
		ii. Reducing these data to 4-hour rolling averages; and
		iii. Maintaining the 4-hour rolling averages within the operating limitations for the operating parameters established during the performance test.
6. Non-emergency 4SRB stationary RICE with a brake HP $\geq$ 5,000 located at a major source of HAP	a. Reduce formaldehyde emissions	Conducting semiannual performance tests for formaldehyde to demonstrate that the required formaldehyde percent reduction is achieved, or to demonstrate that the average reduction of emissions of THC determined from the

For each . . .	Complying with the requirement to . . .	You must demonstrate continuous compliance by . . .
		performance test is equal to or greater than 30 percent. <sup>a</sup>
7. New or reconstructed non-emergency stationary RICE >500 HP located at a major source of HAP and new or reconstructed non-emergency 4SLB stationary RICE $250 \leq \text{HP} \leq 500$ located at a major source of HAP	a. Limit the concentration of formaldehyde in the stationary RICE exhaust and using oxidation catalyst or NSCR	i. Conducting semiannual performance tests for formaldehyde to demonstrate that your emissions remain at or below the formaldehyde concentration limit <sup>a</sup> ; and ii. Collecting the catalyst inlet temperature data according to <a href="#">§ 63.6625(b)</a> ; and
		iii. Reducing these data to 4-hour rolling averages; and
		iv. Maintaining the 4-hour rolling averages within the operating limitations for the catalyst inlet temperature; and
		v. Measuring the pressure drop across the catalyst once per month and demonstrating that the pressure drop across the catalyst is within the operating limitation established during the performance test.
8. New or reconstructed non-emergency stationary RICE >500 HP located at a major source of HAP and new or reconstructed non-emergency 4SLB stationary RICE $250 \leq \text{HP} \leq 500$ located at a major source of HAP	a. Limit the concentration of formaldehyde in the stationary RICE exhaust and 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>a</sup> ; and ii. Collecting the approved operating parameter (if any) data according to <a href="#">§ 63.6625(b)</a> ; and
		iii. Reducing these data to 4-hour rolling averages; and



For each . . .	Complying with the requirement to . . .	You must demonstrate continuous compliance by . . .
		iv. Maintaining the 4-hour rolling averages within the operating limitations for the operating parameters established during the performance test.
<p>9. Existing emergency and black start stationary RICE <math>\leq 500</math> HP located at a major source of HAP, existing non-emergency stationary RICE <math>&lt; 100</math> HP located at a major source of HAP, existing emergency and black start stationary RICE located at an area source of HAP, existing non-emergency stationary CI RICE <math>\leq 300</math> HP located at an area source of HAP, existing non-emergency 2SLB stationary RICE located at an area source of HAP, existing non-emergency stationary SI RICE located at an area source of HAP which combusts landfill or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis, existing non-emergency 4SLB and 4SRB stationary RICE <math>\leq 500</math> HP located at an area source of HAP, existing non-emergency 4SLB and 4SRB stationary RICE <math>&gt; 500</math> HP located at an area source of HAP that operate 24 hours or less per calendar year, and existing non-emergency 4SLB and 4SRB stationary RICE <math>&gt; 500</math> HP located at an area source of HAP that are remote stationary RICE</p>	a. Work or Management practices	<p>i. Operating and maintaining the stationary RICE according to the manufacturer's emission-related operation and maintenance instructions; or</p> <p>ii. Develop and follow your own maintenance plan which must provide to the extent practicable for the maintenance and operation of the engine in a manner consistent with good air pollution control practice for minimizing emissions.</p>

For each . . .	Complying with the requirement to . . .	You must demonstrate continuous compliance by . . .
10. Existing stationary CI RICE >500 HP that are not limited use stationary RICE	a. Reduce CO emissions, or limit the concentration of CO in the stationary RICE exhaust, and using oxidation catalyst	i. Conducting performance tests every 8,760 hours or 3 years, whichever comes first, for CO or formaldehyde, as appropriate, to demonstrate that the required CO or formaldehyde, as appropriate, percent reduction is achieved or that your emissions remain at or below the CO or formaldehyde concentration limit; and
		ii. Collecting the catalyst inlet temperature data according to <a href="#">§ 63.6625(b)</a> ; 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.
11. Existing stationary CI RICE >500 HP that are not limited use stationary RICE	a. Reduce CO emissions, or limit the concentration of CO in the stationary RICE exhaust, and not using oxidation catalyst	i. Conducting performance tests every 8,760 hours or 3 years, whichever comes first, for CO or formaldehyde, as appropriate, to demonstrate that the required CO or formaldehyde, as appropriate, percent reduction is achieved or that your emissions remain at or below

For each . . .	Complying with the requirement to . . .	You must demonstrate continuous compliance by . . .
		the CO or formaldehyde concentration limit; and
		ii. Collecting the approved operating parameter (if any) data according to <a href="#">§ 63.6625(b)</a> ; and
		iii. Reducing these data to 4-hour rolling averages; and
		iv. Maintaining the 4-hour rolling averages within the operating limitations for the operating parameters established during the performance test.
12. Existing limited use CI stationary RICE >500 HP	a. Reduce CO emissions or limit the concentration of CO in the stationary RICE exhaust, and using an oxidation catalyst	i. Conducting performance tests every 8,760 hours or 5 years, whichever comes first, for CO or formaldehyde, as appropriate, to demonstrate that the required CO or formaldehyde, as appropriate, percent reduction is achieved or that your emissions remain at or below the CO or formaldehyde concentration limit; and
		ii. Collecting the catalyst inlet temperature data according to <a href="#">§ 63.6625(b)</a> ; 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

For each . . .	Complying with the requirement to . . .	You must demonstrate continuous compliance by . . .
		v. Measuring the pressure drop across the catalyst once per month and demonstrating that the pressure drop across the catalyst is within the operating limitation established during the performance test.
13. Existing limited use CI stationary RICE >500 HP	a. Reduce CO emissions or limit the concentration of CO in the stationary RICE exhaust, and not using an oxidation catalyst	i. Conducting performance tests every 8,760 hours or 5 years, whichever comes first, for CO or formaldehyde, as appropriate, to demonstrate that the required CO or formaldehyde, as appropriate, percent reduction is achieved or that your emissions remain at or below the CO or formaldehyde concentration limit; and
		ii. Collecting the approved operating parameter (if any) data according to <a href="#">§ 63.6625(b)</a> ; 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.
14. Existing non-emergency 4SLB stationary RICE >500 HP located at an area source of HAP that are not remote stationary RICE and that are operated more than 24 hours per calendar year	a. Install an oxidation catalyst	i. Conducting annual compliance demonstrations as specified in <a href="#">§ 63.6640(c)</a> to show that the average reduction of emissions of CO is 93 percent or more, or the average CO concentration is less than or equal to 47 ppmvd at 15 percent O <sub>2</sub> ; and either

For each . . .	Complying with the requirement to . . .	You must demonstrate continuous compliance by . . .
		<p>ii. Collecting the catalyst inlet temperature data according to <a href="#">§ 63.6625(b)</a>, reducing these data to 4-hour rolling averages; and maintaining the 4-hour rolling averages within the limitation of greater than 450 °F and less than or equal to 1350 °F for the catalyst inlet temperature; or</p> <p>iii. Immediately shutting down the engine if the catalyst inlet temperature exceeds 1350 °F.</p>
<p>15. Existing non-emergency 4SRB stationary RICE &gt;500 HP located at an area source of HAP that are not remote stationary RICE and that are operated more than 24 hours per calendar year</p>	<p>a. Install NSCR</p>	<p>i. Conducting annual compliance demonstrations as specified in <a href="#">§ 63.6640(c)</a> to show that the average reduction of emissions of CO is 75 percent or more, the average CO concentration is less than or equal to 270 ppmvd at 15 percent O<sub>2</sub>, or the average reduction of emissions of THC is 30 percent or more; and either</p> <p>ii. Collecting the catalyst inlet temperature data according to <a href="#">§ 63.6625(b)</a>, reducing these data to 4-hour rolling averages; and maintaining the 4-hour rolling averages within the limitation of greater than or equal to 750 °F and less than or equal to 1250 °F for the catalyst inlet temperature; or</p> <p>iii. Immediately shutting down the engine if the catalyst inlet temperature exceeds 1250 °F.</p>
<p><sup>a</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</p>		

For each . . .	Complying with the requirement to . . .	You must demonstrate continuous compliance by . . .
performance test indicate the stationary RICE is not in compliance with the CO or formaldehyde emission limitation, or you deviate from any of your operating limitations, you must resume semiannual performance tests.		

[[78 FR 6715](#), Jan. 30, 2013]

# **Table 7 to Subpart ZZZZ of Part 63—Requirements for Reports**

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

For each . . .	You must submit a . . .	The report must contain . . .	You must submit the report . . .
1. Existing non-emergency, non-black start stationary RICE $100 \leq \text{HP} \leq 500$ located at a major source of HAP; existing non-emergency, non-black start stationary CI RICE $> 500$ HP located at a major source of HAP; existing non-emergency 4SRB stationary RICE $> 500$ HP located at a major source of HAP; existing non-emergency, non-black start stationary CI RICE $> 300$ HP located at an area source of HAP; new or reconstructed non-emergency stationary RICE $> 500$ HP located at a major source of HAP; and new or reconstructed non-emergency 4SLB stationary RICE $250 \leq \text{HP} \leq 500$ located at a major source of HAP	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 CMS, including CEMS and CPMS, was out-of-control, as specified in <a href="#">§ 63.8(c)(7)</a> , 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	i. Semiannually according to the requirements in <a href="#">§ 63.6650(b)(1)-(5)</a> and <a href="#">(i)</a> for engines that are not limited use stationary RICE subject to numerical emission limitations; and ii. Annually according to the requirements in <a href="#">§ 63.6650(b)(6)-(9)</a> and <a href="#">(i)</a> for engines that are limited use stationary RICE subject to numerical emission limitations. i. Semiannually according to the requirements in <a href="#">§ 63.6650(b)</a> and <a href="#">(i)</a> .

For each . . .	You must submit a . . .	The report must contain . . .	You must submit the report . . .
		information in <a href="#">§ 63.6650(d)</a> . If there were periods during which the CMS, including CEMS and CPMS, was out-of-control, as specified in <a href="#">§ 63.8(c)(7)</a> , the information in <a href="#">§ 63.6650(e)</a> ; or	
		c. If you had a malfunction during the reporting period, the information in <a href="#">§ 63.6650(c)(4)</a>	i. Semiannually according to the requirements in <a href="#">§ 63.6650(b)</a> and <a href="#">(i)</a> .
2. New or reconstructed non-emergency stationary RICE that combusts landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis	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 <a href="#">§ 63.6650</a> .
		b. The operating limits provided in your federally enforceable permit, and any deviations from these limits; and	i. See item 2.a.i.
		c. Any problems or errors suspected with the meters	i. See item 2.a.i.

For each . . .	You must submit a . . .	The report must contain . . .	You must submit the report . . .
3. Existing non-emergency, non-black start 4SLB and 4SRB stationary RICE >500 HP located at an area source of HAP that are not remote stationary RICE and that operate more than 24 hours per calendar year	Compliance report	a. The results of the annual compliance demonstration, if conducted during the reporting period	i. Semiannually according to the requirements in <a href="#">§ 63.6650(b)(1)-(5)</a> and <a href="#">(i)</a> .
4. Emergency stationary RICE that operate for the purposes specified in <a href="#">§ 63.6640(f)(4)(ii)</a>	Report	a. The information in <a href="#">§ 63.6650(h)(1)</a>	i. Annually according to the requirements in <a href="#">§ 63.6650(h)(2)-(3)</a> and <a href="#">(i)</a> .

[[89 FR 70522](#), Aug. 30, 2024]

**Table 8 to Subpart ZZZZ of Part 63—Applicability of General Provisions to Subpart ZZZZ**

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

General provisions citation	Subject of citation	Applies to subpart	Explanation
§ 63.1	General applicability of the General Provisions	Yes	
§ 63.2	Definitions	Yes	Additional terms defined in <a href="#">§ 63.6675</a> .
§ 63.3	Units and abbreviations	Yes	
§ 63.4	Prohibited activities and circumvention	Yes	
§ 63.5	Construction and reconstruction	Yes	
§ 63.6(a)	Applicability	Yes	



<b>General provisions citation</b>	<b>Subject of citation</b>	<b>Applies to subpart</b>	<b>Explanation</b>
§ 63.6(b)(1)-(4)	Compliance dates for new and reconstructed sources	Yes	
§ 63.6(b)(5)	Notification	Yes	
§ 63.6(b)(6)	[Reserved]		
§ 63.6(b)(7)	Compliance dates for new and reconstructed area sources that become major sources	Yes	
§ 63.6(c)(1)-(2)	Compliance dates for existing sources	Yes	
§ 63.6(c)(3)-(4)	[Reserved]		
§ 63.6(c)(5)	Compliance dates for existing area sources that become major sources	Yes	
§ 63.6(d)	[Reserved]		
§ 63.6(e)	Operation and maintenance	No	
§ 63.6(f)(1)	Applicability of standards	No	
§ 63.6(f)(2)	Methods for determining compliance	Yes	
§ 63.6(f)(3)	Finding of compliance	Yes	
§ 63.6(g)(1)-(3)	Use of alternate standard	Yes	
§ 63.6(h)	Opacity and visible emission standards	No	Subpart ZZZZ does not contain opacity or visible emission standards.
§ 63.6(i)	Compliance extension procedures and criteria	Yes	

General provisions citation	Subject of citation	Applies to subpart	Explanation
§ 63.6(j)	Presidential compliance exemption	Yes	
§ 63.7(a)(1)-(2)	Performance test dates	Yes	Subpart ZZZZ contains performance test dates at <a href="#">§§ 63.6610</a> , <a href="#">63.6611</a> , and <a href="#">63.6612</a> .
§ 63.7(a)(3)	CAA section 114 authority	Yes	
§ 63.7(b)(1)	Notification of performance test	Yes	Except that <a href="#">§ 63.7(b)(1)</a> only applies as specified in <a href="#">§ 63.6645</a> .
§ 63.7(b)(2)	Notification of rescheduling	Yes	Except that <a href="#">§ 63.7(b)(2)</a> only applies as specified in <a href="#">§ 63.6645</a> .
§ 63.7(c)	Quality assurance/test plan	Yes	Except that <a href="#">§ 63.7(c)</a> only applies as specified in <a href="#">§ 63.6645</a> .
§ 63.7(d)	Testing facilities	Yes	
§ 63.7(e)(1)	Conditions for conducting performance tests	No	Subpart ZZZZ specifies conditions for conducting performance tests at <a href="#">§ 63.6620</a> .
§ 63.7(e)(2)	Conduct of performance tests and reduction of data	Yes	Subpart ZZZZ specifies test methods at <a href="#">§ 63.6620</a> .
§ 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	

General provisions citation	Subject of citation	Applies to subpart	Explanation
§ 63.8(a)(1)	Applicability of monitoring requirements	Yes	Subpart ZZZZ contains specific requirements for monitoring at <a href="#">§ 63.6625</a> .
§ 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	No	
§ 63.8(c)(1)(ii)	SSM not in Startup Shutdown Malfunction Plan	Yes	
§ 63.8(c)(1)(iii)	Compliance with operation and maintenance requirements	No	
§ 63.8(c)(2)-(3)	Monitoring system installation	Yes	
§ 63.8(c)(4)	Continuous monitoring system (CMS) requirements	Yes	Except that subpart ZZZZ does not require Continuous Opacity Monitoring System (COMS).
§ 63.8(c)(5)	COMS minimum procedures	No	Subpart ZZZZ does not require COMS.
§ 63.8(c)(6)-(8)	CMS requirements	Yes	Except that subpart ZZZZ does not require COMS.
§ 63.8(d)	CMS quality control	Yes	

General provisions citation	Subject of citation	Applies to subpart	Explanation
§ 63.8(e)	CMS performance evaluation	Yes	Except for <a href="#">§ 63.8(e)(5)(ii)</a> , which applies to COMS.
			Except that <a href="#">§ 63.8(e)</a> only applies as specified in <a href="#">§ 63.6645</a> .
§ 63.8(f)(1)-(5)	Alternative monitoring method	Yes	Except that <a href="#">§ 63.8(f)(4)</a> only applies as specified in <a href="#">§ 63.6645</a> .
§ 63.8(f)(6)	Alternative to relative accuracy test	Yes	Except that <a href="#">§ 63.8(f)(6)</a> only applies as specified in <a href="#">§ 63.6645</a> .
§ 63.8(g)	Data reduction	Yes	Except that provisions for COMS are not applicable. Averaging periods for demonstrating compliance are specified at <a href="#">§§ 63.6635</a> and <a href="#">63.6640</a> .
§ 63.9(a)	Applicability and State delegation of notification requirements	Yes	
§ 63.9(b)(1)-(5)	Initial notifications	Yes	Except that <a href="#">§ 63.9(b)(3)</a> is reserved.
			Except that <a href="#">§ 63.9(b)</a> only applies as specified in <a href="#">§ 63.6645</a> .
§ 63.9(c)	Request for compliance extension	Yes	Except that <a href="#">§ 63.9(c)</a> only applies as specified in <a href="#">§ 63.6645</a> .
§ 63.9(d)	Notification of special compliance requirements for new sources	Yes	Except that <a href="#">§ 63.9(d)</a> only applies as specified in <a href="#">§ 63.6645</a> .
§ 63.9(e)	Notification of performance test	Yes	Except that <a href="#">§ 63.9(e)</a> only applies as specified in <a href="#">§ 63.6645</a> .

General provisions citation	Subject of citation	Applies to subpart	Explanation
§ 63.9(f)	Notification of visible emission (VE)/opacity test	No	Subpart ZZZZ does not contain opacity or VE standards.
§ 63.9(g)(1)	Notification of performance evaluation	Yes	Except that <a href="#">§ 63.9(g)</a> only applies as specified in <a href="#">§ 63.6645</a> .
§ 63.9(g)(2)	Notification of use of COMS data	No	Subpart ZZZZ does not contain opacity or VE standards.
§ 63.9(g)(3)	Notification that criterion for alternative to RATA is exceeded	Yes	If alternative is in use. Except that <a href="#">§ 63.9(g)</a> only applies as specified in <a href="#">§ 63.6645</a> .
§ 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. <a href="#">§ 63.9(h)(4)</a> is reserved.
			Except that <a href="#">§ 63.9(h)</a> only applies as specified in <a href="#">§ 63.6645</a> .
§ 63.9(i)	Adjustment of submittal deadlines	Yes	
§ 63.9(j)	Change in previous information	Yes	
§ 63.9(k)	Electronic reporting procedures	Yes	Only as specified in <a href="#">§§ 63.9(j)</a> , <a href="#">63.6620</a> , <a href="#">63.6625</a> , <a href="#">63.6645</a> , and <a href="#">63.6650</a> .
§ 63.10(a)	Administrative provisions for recordkeeping/reporting	Yes	
§ 63.10(b)(1)	Record retention	Yes	Except that the most recent 2 years of data do not have to be retained on site.

General provisions citation	Subject of citation	Applies to subpart	Explanation
§ 63.10(b)(2)(i)-(v)	Records related to SSM	No	
§ 63.10(b)(2)(vi)-(xi)	Records	Yes	
§ 63.10(b)(2)(xii)	Record when under waiver	Yes	
§ 63.10(b)(2)(xiii)	Records when using alternative to RATA	Yes	For CO standard if using RATA alternative.
§ 63.10(b)(2)(xiv)	Records of supporting documentation	Yes	
§ 63.10(b)(3)	Records of applicability determination	Yes	
§ 63.10(c)	Additional records for sources using CEMS	Yes	Except that <a href="#">§ 63.10(c)(2)-(4)</a> and <a href="#">(9)</a> are reserved.
§ 63.10(d)(1)	General reporting requirements	Yes	
§ 63.10(d)(2)	Report of performance test results	Yes	
§ 63.10(d)(3)	Reporting opacity or VE observations	No	Subpart ZZZZ does not contain opacity or VE standards.
§ 63.10(d)(4)	Progress reports	Yes	
§ 63.10(d)(5)	Startup, shutdown, and malfunction reports	No	
§ 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.

General provisions citation	Subject of citation	Applies to subpart	Explanation
§ 63.10(e)(3)	Excess emission and parameter exceedances reports	No	Excess emissions and exceedance reporting is specified in <a href="#">§ 63.6650</a> .
§ 63.10(e)(4)	Reporting COMS data	No	Subpart ZZZZ does not require COMS.
§ 63.10(f)	Waiver for recordkeeping/reporting	Yes	
§ 63.11	Flares	No	
§ 63.12	State authority and delegations	Yes	
§ 63.13	Addresses	Yes	
§ 63.14	Incorporation by reference	Yes	
§ 63.15	Availability of information	Yes	

[[89 FR 70522](#), Aug. 30, 2024]

## **Appendix A to Subpart ZZZZ of Part 63—Protocol for Using an Electrochemical Analyzer to Determine Oxygen and Carbon Monoxide Concentrations From Certain Engines**

### **1.0 Scope and Application. What is this Protocol?**

This protocol is a procedure for using portable electrochemical (EC) cells for measuring carbon monoxide (CO) and oxygen (O<sub>2</sub>) concentrations in controlled and uncontrolled emissions from existing stationary 4-stroke lean burn and 4-stroke rich burn reciprocating internal combustion engines as specified in the applicable rule.

### **1.1 Analytes. What does this protocol determine?**

This protocol measures the engine exhaust gas concentrations of carbon monoxide (CO) and oxygen (O<sub>2</sub>).

Analyte	CAS No.	Sensitivity
Carbon monoxide (CO)	630-08-0	Minimum detectable limit should be 2 percent of the nominal range or 1 ppm, whichever is less restrictive.
Oxygen (O <sub>2</sub> )	7782-44-7	

### 1.2 Applicability. When is this protocol acceptable?

This protocol is applicable to [40 CFR part 63, subpart ZZZZ](#). Because of inherent cross sensitivities of EC cells, you must not apply this protocol to other emissions sources without specific instruction to that effect.

### 1.3 Data Quality Objectives. How good must my collected data be?

Refer to Section 13 to verify and document acceptable analyzer performance.

### 1.4 Range. What is the targeted analytical range for this protocol?

The measurement system and EC cell design(s) conforming to this protocol will determine the analytical range for each gas component. The nominal ranges are defined by choosing up-scale calibration gas concentrations near the maximum anticipated flue gas concentrations for CO and O<sub>2</sub>, or no more than twice the permitted CO level.

### 1.5 Sensitivity. What minimum detectable limit will this protocol yield for a particular gas component?

The minimum detectable limit depends on the nominal range and resolution of the specific EC cell used, and the signal to noise ratio of the measurement system. The minimum detectable limit should be 2 percent of the nominal range or 1 ppm, whichever is less restrictive.

## 2.0 Summary of Protocol

In this protocol, a gas sample is extracted from an engine exhaust system and then conveyed to a portable EC analyzer for measurement of CO and O<sub>2</sub> gas concentrations. This method provides measurement system performance specifications and sampling protocols to ensure reliable data. You may use additions to, or modifications of vendor supplied measurement systems (e.g., heated or unheated sample lines, thermocouples, flow meters, selective gas scrubbers, etc.) to meet the design specifications of this protocol. Do not make changes to the measurement system from the as-verified configuration (Section 3.12).

## 3.0 Definitions



**3.1 Measurement System.** The total equipment required for the measurement of CO and O<sub>2</sub> concentrations. The measurement system consists of the following major subsystems:

**3.1.1 Data Recorder.** A strip chart recorder, computer or digital recorder for logging measurement data from the analyzer output. You may record measurement data from the digital data display manually or electronically.

**3.1.2 Electrochemical (EC) Cell.** A device, similar to a fuel cell, used to sense the presence of a specific analyte and generate an electrical current output proportional to the analyte concentration.

**3.1.3 Interference Gas Scrubber.** A device used to remove or neutralize chemical compounds that may interfere with the selective operation of an EC cell.

**3.1.4 Moisture Removal System.** Any device used to reduce the concentration of moisture in the sample stream so as to protect the EC cells from the damaging effects of condensation and to minimize errors in measurements caused by the scrubbing of soluble gases.

**3.1.5 Sample Interface.** The portion of the system used for one or more of the following: sample acquisition; sample transport; sample conditioning or protection of the EC cell from any degrading effects of the engine exhaust effluent; removal of particulate matter and condensed moisture.

**3.2 Nominal Range.** The range of analyte concentrations over which each EC cell is operated (normally 25 percent to 150 percent of up-scale calibration gas value). Several nominal ranges can be used for any given cell so long as the calibration and repeatability checks for that range remain within specifications.

**3.3 Calibration Gas.** A vendor certified concentration of a specific analyte in an appropriate balance gas.

**3.4 Zero Calibration Error.** The analyte concentration output exhibited by the EC cell in response to zero-level calibration gas.

**3.5 Up-Scale Calibration Error.** The mean of the difference between the analyte concentration exhibited by the EC cell and the certified concentration of the up-scale calibration gas.

**3.6 Interference Check.** A procedure for quantifying analytical interference from components in the engine exhaust gas other than the targeted analytes.

**3.7 Repeatability Check.** A protocol for demonstrating that an EC cell operated over a given nominal analyte concentration range provides a stable and consistent response and is not significantly affected by repeated exposure to that gas.

**3.8 Sample Flow Rate.** The flow rate of the gas sample as it passes through the EC cell. In some situations, EC cells can experience drift with changes in flow rate. The flow rate must be monitored and documented during all phases of a sampling run.

**3.9 Sampling Run.** A timed three-phase event whereby an EC cell's response rises and plateaus in a sample conditioning phase, remains relatively constant during a measurement data phase, then declines during a refresh phase. The sample conditioning phase exposes the EC cell to the gas sample for a length of time sufficient to reach a constant response. The measurement data phase is the time interval during which gas sample measurements can be made that meet the acceptance criteria of this protocol. The refresh phase then purges the EC cells with CO-free air. The refresh phase replenishes requisite O<sub>2</sub> and moisture in the electrolyte reserve and provides a mechanism to de-gas or desorb any interference gas scrubbers or filters so as to enable a stable CO EC cell response. There are four primary types of sampling runs: pre-sampling calibrations; stack gas sampling; post-sampling calibration checks; and measurement system repeatability checks. Stack gas sampling runs can be chained together for extended evaluations, providing all other procedural specifications are met.

**3.10 Sampling Day.** A time not to exceed twelve hours from the time of the pre-sampling calibration to the post-sampling calibration check. During this time, stack gas sampling runs can be repeated without repeated recalibrations, providing all other sampling specifications have been met.

**3.11 Pre-Sampling Calibration/Post-Sampling Calibration Check.** The protocols executed at the beginning and end of each sampling day to bracket measurement readings with controlled performance checks.

**3.12 Performance-Established Configuration.** The EC cell and sampling system configuration that existed at the time that it initially met the performance requirements of this protocol.

#### 4.0 Interferences.

When present in sufficient concentrations, NO and NO<sub>2</sub> are two gas species that have been reported to interfere with CO concentration measurements. In the likelihood of this occurrence, it is the protocol user's responsibility to employ and properly maintain an appropriate CO EC cell filter or scrubber for removal of these gases, as described in Section 6.2.12.

#### 5.0 Safety. [Reserved]

#### 6.0 Equipment and Supplies.

##### 6.1 What equipment do I need for the measurement system?

The system must maintain the gas sample at conditions that will prevent moisture condensation in the sample transport lines, both before and as the sample gas contacts the EC cells. The essential components of the measurement system are described below.

## 6.2 Measurement System Components.

**6.2.1 Sample Probe.** A single extraction-point probe constructed of glass, stainless steel or other non-reactive material, and of length sufficient to reach any designated sampling point. The sample probe must be designed to prevent plugging due to condensation or particulate matter.

**6.2.2 Sample Line.** Non-reactive tubing to transport the effluent from the sample probe to the EC cell.

**6.2.3 Calibration Assembly (optional).** A three-way valve assembly or equivalent to introduce calibration gases at ambient pressure at the exit end of the sample probe during calibration checks. The assembly must be designed such that only stack gas or calibration gas flows in the sample line and all gases flow through any gas path filters.

**6.2.4 Particulate Filter (optional).** Filters before the inlet of the EC cell to prevent accumulation of particulate material in the measurement system and extend the useful life of the components. All filters must be fabricated of materials that are non-reactive to the gas mixtures being sampled.

**6.2.5 Sample Pump.** A leak-free pump to provide undiluted sample gas to the system at a flow rate sufficient to minimize the response time of the measurement system. If located upstream of the EC cells, the pump must be constructed of a material that is non-reactive to the gas mixtures being sampled.

**6.2.8 Sample Flow Rate Monitoring.** An adjustable rotameter or equivalent device used to adjust and maintain the sample flow rate through the analyzer as prescribed.

**6.2.9 Sample Gas Manifold (optional).** A manifold to divert a portion of the sample gas stream to the analyzer and the remainder to a by-pass discharge vent. The sample gas manifold may also include provisions for introducing calibration gases directly to the analyzer. The manifold must be constructed of a material that is non-reactive to the gas mixtures being sampled.

**6.2.10 EC cell.** A device containing one or more EC cells to determine the CO and O<sub>2</sub> concentrations in the sample gas stream. The EC cell(s) must meet the applicable performance specifications of Section 13 of this protocol.

**6.2.11 Data Recorder.** A strip chart recorder, computer or digital recorder to make a record of analyzer output data. The data recorder resolution (i.e., readability) must be no greater than 1 ppm for CO; 0.1 percent for O<sub>2</sub>; and one degree (either °C or °F) for temperature. Alternatively, you may use a digital or analog meter having the same resolution to observe and manually record the analyzer responses.

**6.2.12 Interference Gas Filter or Scrubber.** A device to remove interfering compounds upstream of the CO EC cell. Specific interference gas filters or scrubbers used in the performance-established configuration of the analyzer must continue to be used. Such a filter or scrubber must

have a means to determine when the removal agent is exhausted. Periodically replace or replenish it in accordance with the manufacturer's recommendations.

## 7.0 Reagents and Standards. What calibration gases are needed?

**7.1 Calibration Gases.** CO calibration gases for the EC cell must be CO in nitrogen or CO in a mixture of nitrogen and O<sub>2</sub>. Use CO calibration gases with labeled concentration values certified by the manufacturer to be within  $\pm 5$  percent of the label value. Dry ambient air (20.9 percent O<sub>2</sub>) is acceptable for calibration of the O<sub>2</sub> cell. If needed, any lower percentage O<sub>2</sub> calibration gas must be a mixture of O<sub>2</sub> in nitrogen.

**7.1.1 Up-Scale CO Calibration Gas Concentration.** Choose one or more up-scale gas concentrations such that the average of the stack gas measurements for each stack gas sampling run are between 25 and 150 percent of those concentrations. Alternatively, choose an up-scale gas that does not exceed twice the concentration of the applicable outlet standard. If a measured gas value exceeds 150 percent of the up-scale CO calibration gas value at any time during the stack gas sampling run, the run must be discarded and repeated.

### 7.1.2 Up-Scale O<sub>2</sub> Calibration Gas Concentration.

Select an O<sub>2</sub> gas concentration such that the difference between the gas concentration and the average stack gas measurement or reading for each sample run is less than 15 percent O<sub>2</sub>. When the average exhaust gas O<sub>2</sub> readings are above 6 percent, you may use dry ambient air (20.9 percent O<sub>2</sub>) for the up-scale O<sub>2</sub> calibration gas.

**7.1.3 Zero Gas.** Use an inert gas that contains less than 0.25 percent of the up-scale CO calibration gas concentration. You may use dry air that is free from ambient CO and other combustion gas products (e.g., CO<sub>2</sub>).

## 8.0 Sample Collection and Analysis

### 8.1 Selection of Sampling Sites.

**8.1.1 Control Device Inlet.** Select a sampling site sufficiently downstream of the engine so that the combustion gases should be well mixed. Use a single sampling extraction point near the center of the duct (e.g., within the 10 percent centroidal area), unless instructed otherwise.

**8.1.2 Exhaust Gas Outlet.** Select a sampling site located at least two stack diameters downstream of any disturbance (e.g., turbocharger exhaust, crossover junction or recirculation take-off) and at least one-half stack diameter upstream of the gas discharge to the atmosphere. Use a single sampling extraction point near the center of the duct (e.g., within the 10 percent centroidal area), unless instructed otherwise.

**8.2 Stack Gas Collection and Analysis.** Prior to the first stack gas sampling run, conduct that the pre-sampling calibration in accordance with Section 10.1. Use Figure 1 to record all data. Zero the analyzer with zero gas. Confirm and record that the scrubber media color is correct and not

exhausted. Then position the probe at the sampling point and begin the sampling run at the same flow rate used during the up-scale calibration. Record the start time. Record all EC cell output responses and the flow rate during the “sample conditioning phase” once per minute until constant readings are obtained. Then begin the “measurement data phase” and record readings every 15 seconds for at least two minutes (or eight readings), or as otherwise required to achieve two continuous minutes of data that meet the specification given in Section 13.1. Finally, perform the “refresh phase” by introducing dry air, free from CO and other combustion gases, until several minute-to-minute readings of consistent value have been obtained. For each run use the “measurement data phase” readings to calculate the average stack gas CO and O<sub>2</sub> concentrations.

**8.3 EC Cell Rate.** Maintain the EC cell sample flow rate so that it does not vary by more than  $\pm 10$  percent throughout the pre-sampling calibration, stack gas sampling and post-sampling calibration check. Alternatively, the EC cell sample flow rate can be maintained within a tolerance range that does not affect the gas concentration readings by more than  $\pm 3$  percent, as instructed by the EC cell manufacturer.

## 9.0 Quality Control (Reserved)

## 10.0 Calibration and Standardization

**10.1 Pre-Sampling Calibration.** Conduct the following protocol once for each nominal range to be used on each EC cell before performing a stack gas sampling run on each field sampling day. Repeat the calibration if you replace an EC cell before completing all of the sampling runs. There is no prescribed order for calibration of the EC cells; however, each cell must complete the measurement data phase during calibration. Assemble the measurement system by following the manufacturer's recommended protocols including for preparing and preconditioning the EC cell. Assure the measurement system has no leaks and verify the gas scrubbing agent is not depleted. Use Figure 1 to record all data.

**10.1.1 Zero Calibration.** For both the O<sub>2</sub> and CO cells, introduce zero gas to the measurement system (e.g., at the calibration assembly) and record the concentration reading every minute until readings are constant for at least two consecutive minutes. Include the time and sample flow rate. Repeat the steps in this section at least once to verify the zero calibration for each component gas.

**10.1.2 Zero Calibration Tolerance.** For each zero gas introduction, the zero level output must be less than or equal to  $\pm 3$  percent of the up-scale gas value or  $\pm 1$  ppm, whichever is less restrictive, for the CO channel and less than or equal to  $\pm 0.3$  percent O<sub>2</sub> for the O<sub>2</sub> channel.

**10.1.3 Up-Scale Calibration.** Individually introduce each calibration gas to the measurement system (e.g., at the calibration assembly) and record the start time. Record all EC cell output responses and the flow rate during this “sample conditioning phase” once per minute until readings are constant for at least two minutes. Then begin the “measurement data phase” and

record readings every 15 seconds for a total of two minutes, or as otherwise required. Finally, perform the “refresh phase” by introducing dry air, free from CO and other combustion gases, until readings are constant for at least two consecutive minutes. Then repeat the steps in this section at least once to verify the calibration for each component gas. Introduce all gases to flow through the entire sample handling system (i.e., at the exit end of the sampling probe or the calibration assembly).

**10.1.4 Up-Scale Calibration Error.** The mean of the difference of the “measurement data phase” readings from the reported standard gas value must be less than or equal to  $\pm 5$  percent or  $\pm 1$  ppm for CO or  $\pm 0.5$  percent O<sub>2</sub>, whichever is less restrictive, respectively. The maximum allowable deviation from the mean measured value of any single “measurement data phase” reading must be less than or equal to  $\pm 2$  percent or  $\pm 1$  ppm for CO or  $\pm 0.5$  percent O<sub>2</sub>, whichever is less restrictive, respectively.

**10.2 Post-Sampling Calibration Check.** Conduct a stack gas post-sampling calibration check after the stack gas sampling run or set of runs and within 12 hours of the initial calibration. Conduct up-scale and zero calibration checks using the protocol in Section 10.1. Make no changes to the sampling system or EC cell calibration until all post-sampling calibration checks have been recorded. If either the zero or up-scale calibration error exceeds the respective specification in Sections 10.1.2 and 10.1.4 then all measurement data collected since the previous successful calibrations are invalid and re-calibration and re-sampling are required. If the sampling system is disassembled or the EC cell calibration is adjusted, repeat the calibration check before conducting the next analyzer sampling run.

## 11.0 Analytical Procedure

The analytical procedure is fully discussed in Section 8.

## 12.0 Calculations and Data Analysis

Determine the CO and O<sub>2</sub> concentrations for each stack gas sampling run by calculating the mean gas concentrations of the data recorded during the “measurement data phase”.

## 13.0 Protocol Performance

Use the following protocols to verify consistent analyzer performance during each field sampling day.

**13.1 Measurement Data Phase Performance Check.** Calculate the mean of the readings from the “measurement data phase”. The maximum allowable deviation from the mean for each of the individual readings is  $\pm 2$  percent, or  $\pm 1$  ppm, whichever is less restrictive. Record the mean value and maximum deviation for each gas monitored. Data must conform to Section 10.1.4. The EC cell flow rate must conform to the specification in Section 8.3.

**Example:** A measurement data phase is invalid if the maximum deviation of any single reading comprising that mean is greater than  $\pm 2$  percent *or*  $\pm 1$  ppm (the default criteria). For example, if the mean = 30 ppm, single readings of below 29 ppm and above 31 ppm are disallowed).

**13.2 Interference Check.** Before the initial use of the EC cell and interference gas scrubber in the field, and semi-annually thereafter, challenge the interference gas scrubber with NO and NO<sub>2</sub> gas standards that are generally recognized as representative of diesel-fueled engine NO and NO<sub>2</sub> emission values. Record the responses displayed by the CO EC cell and other pertinent data on Figure 1 or a similar form.

**13.2.1 Interference Response.** The combined NO and NO<sub>2</sub> interference response should be less than or equal to  $\pm 5$  percent of the up-scale CO calibration gas concentration.

**13.3 Repeatability Check.** Conduct the following check once for each nominal range that is to be used on the CO EC cell within 5 days prior to each field sampling program. If a field sampling program lasts longer than 5 days, repeat this check every 5 days. Immediately repeat the check if the EC cell is replaced or if the EC cell is exposed to gas concentrations greater than 150 percent of the highest up-scale gas concentration.

**13.3.1 Repeatability Check Procedure.** Perform a complete EC cell sampling run (all three phases) by introducing the CO calibration gas to the measurement system and record the response. Follow Section 10.1.3. Use Figure 1 to record all data. Repeat the run three times for a total of four complete runs. During the four repeatability check runs, do not adjust the system except where necessary to achieve the correct calibration gas flow rate at the analyzer.

**13.3.2 Repeatability Check Calculations.** Determine the highest and lowest average “measurement data phase” CO concentrations from the four repeatability check runs and record the results on Figure 1 or a similar form. The absolute value of the difference between the maximum and minimum average values recorded must not vary more than  $\pm 3$  percent or  $\pm 1$  ppm of the up-scale gas value, whichever is less restrictive.

14.0 Pollution Prevention (Reserved)

15.0 Waste Management (Reserved)

16.0 Alternative Procedures (Reserved)

17.0 References

(1) “*Development of an Electrochemical Cell Emission Analyzer Test Protocol*”, Topical Report, Phil Juneau, Emission Monitoring, Inc., July 1997.

(2) “*Determination of Nitrogen Oxides, Carbon Monoxide, and Oxygen Emissions from Natural Gas-Fired Engines, Boilers, and Process Heaters Using Portable Analyzers*”, EMC Conditional Test Protocol 30 (CTM-30), Gas Research Institute Protocol GRI-96/0008, Revision 7, October 13, 1997.

(4) “*Code of Federal Regulations*”, Protection of Environment, [40 CFR](#), Part 60, Appendix A, Methods 1-4; 10.

Facility\_\_\_\_\_ Engine I.D.\_\_\_\_\_ Date\_\_\_\_\_

[illegible]



Table 1: Appendix A—Sampling Run Data.

Facility \_\_\_\_\_ Engine I.D. \_\_\_\_\_ Date \_\_\_\_\_

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Mean											
Refresh Phase											
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[[78 FR 6721](#), Jan. 30, 2013]

**eCFR Content**

## Appendix E

### Subpart JJJJ—National Emission Standards for Hazardous Air Pollutants: Paper and Other Web Coating

Source: [67 FR 72341](#), Dec. 4, 2002, unless otherwise noted.

#### What This Subpart Covers

##### § 63.3280 What is in this subpart?

This subpart describes the actions you must take to reduce emissions of organic hazardous air pollutants (HAP) from paper and other web coating operations. This subpart establishes emission standards for web coating lines and specifies what you must do to comply if you own or operate a facility with web coating lines that is a major source of HAP. Certain requirements apply to all who are subject to this subpart; others depend on the means you use to comply with an emission standard.

##### § 63.3290 Does this subpart apply to me?

The provisions of this subpart apply to each new and existing facility that is a major source of HAP, as defined in [§ 63.2](#), at which web coating lines are operated.

##### § 63.3300 Which of my emission sources are affected by this subpart?

The affected source subject to this subpart is the collection of all web coating lines at your facility. This includes web coating lines engaged in the coating of metal webs that are used in flexible packaging, and web coating lines engaged in the coating of fabric substrates for use in pressure sensitive tape and abrasive materials. Web coating lines specified in [paragraphs \(a\) through \(g\)](#) of this section are not part of the affected source of this subpart.

(a) Any web coating line that is stand-alone equipment under [subpart KK of this part](#) (National Emission Standards for Hazardous Air Pollutants (NESHAP) for the Printing and Publishing Industry) which the owner or operator includes in the affected source under subpart KK.

(b) Any web coating line that is a product and packaging rotogravure or wide-web flexographic press under [subpart KK of this part](#) (NESHAP for the Printing and Publishing Industry) which is included in the affected source under subpart KK.

(c) Web coating in lithography, screenprinting, letterpress, and narrow-web flexographic printing processes.

(d) Any web coating line subject to [subpart EE of this part](#) (NESHAP for Magnetic Tape Manufacturing Operations).

(e) Any web coating line subject to [subpart SSSS of this part](#) (NESHAP for Surface Coating of Metal Coil).

(f) Any web coating line subject to [subpart OOOO of this part](#) (NESHAP for the Printing, Coating, and Dyeing of Fabrics and Other Textiles). This includes any web coating line that coats both a paper or other web substrate and a fabric or other textile substrate, except for a fabric substrate used for pressure sensitive tape and abrasive materials.

(g) Any web coating line that is defined as research or laboratory equipment in [§ 63.3310](#).

(h) Any web coating line that coats both paper or a web, and another substrate such as fabric, may comply with the subpart of this part that applies to the predominant activity conducted on the affected source. Predominant activity for this subpart is 90 percent of the mass of substrate coated during the compliance period. For example, a web coating line that coats 90 percent or more of a paper substrate, and 10 percent or less of a fabric or other textile substrate, would be subject to this subpart and not [subpart OOOO of this part](#). You may use data for any reasonable time period of at least one year in determining the relative amount of coating activity, as long as they are expected to represent the way the source will continue to operate in the future. You must demonstrate and document the predominant activity annually.

(i) Any web coating line subject to this part that is modified to include printing activities, may continue to demonstrate compliance with this part, in lieu of demonstrating compliance with [subpart KK of this part](#). Any web coating line with product and packaging rotogravure print station(s) and/or a wide-web flexographic print station(s) that is subject to this subpart may elect to continue demonstrating compliance with this subpart in lieu of [subpart KK of this part](#), if the mass of the materials applied to the line's print station(s) in a month ever exceed 5 percent of the total mass of materials applied onto the line during the same period.

(j) If all of the subject web coating lines at your facility utilize non-HAP coatings, you can become exempt from the reporting requirements of this subpart, provided you submit a one-time report as required in [§ 63.3370\(s\)](#) to your permitting authority documenting the use of only non-HAP coatings.

[[67 FR 72341](#), Dec. 4, 2002, as amended at [71 FR 29805](#), May 24, 2006; [85 FR 41295](#), July 9, 2020]

### **§ 63.3310 What definitions are used in this subpart?**

All terms used in this subpart that are not defined in this section have the meaning given to them in the Clean Air Act (CAA) and in [subpart A of this part](#).

*Always-controlled work station* means a work station associated with a dryer from which the exhaust is delivered to a control device with no provision for the dryer exhaust to bypass the control device unless there is an interlock to interrupt and prevent continued coating during a bypass. Sampling lines for analyzers, relief valves needed for safety purposes, and periodic cycling of exhaust dampers to ensure safe operation are not considered bypass lines.

*Applied* means, for the purposes of this subpart, the amount of organic HAP, coating material, or coating solids (as appropriate for the emission standards in [§ 63.3320\(b\)](#)) used by the affected source during the compliance period.

*As-applied* means the condition of a coating at the time of application to a substrate, including any added solvent.

*As-purchased* means the condition of a coating as delivered to the user.

*Capture efficiency* means the fraction of all organic HAP emissions generated by a process that is delivered to a control device, expressed as a percentage.

*Capture system* means a hood, enclosed room, or other means of collecting organic HAP emissions into a closed-vent system that exhausts to a control device.

*Car-seal* means a seal that is placed on a device that is used to change the position of a valve or damper (*e.g.*, from open to closed) in such a way that the position of the valve or damper cannot be changed without breaking the seal.

*Coating material(s)* means all liquid or semi-liquid materials (including the solids fraction of those materials as applied), such as inks, varnishes, adhesives (including hot melt adhesives or other hot melt materials), primers, solvents, reducers, and other materials applied to a substrate via a web coating line. Materials used to form a substrate or applied via vapor deposition, and dry abrasive materials deposited on top of a coated web, are not considered coating materials.

*Control device* means a device such as a solvent recovery device or oxidizer which reduces the organic HAP in an exhaust gas by recovery or by destruction.

*Control device efficiency* means the ratio of organic HAP emissions recovered or destroyed by a control device to the total organic HAP emissions that are introduced into the control device, expressed as a percentage.

*Day* means a 24-consecutive-hour period.

*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 (including any operating limit) or work practice standard;
- (2) Fails to meet any term or condition that is adopted to implement an applicable requirement in this subpart and that is included in the operating permit for any affected source required to obtain such a permit; or
- (3) Fails to meet any emission limitation (including any operating limit) or work practice standard in this subpart during start-up, shutdown, or malfunction, regardless of whether or not such failure is permitted by this subpart.

*Existing affected source* means any affected source the construction or reconstruction of which is commenced on or before September 13, 2000, and has not undergone reconstruction as defined in [§ 63.2](#).

*Fabric* means any woven, knitted, plaited, braided, felted, or non-woven material made of filaments, fibers, or yarns including thread. This term includes material made of fiberglass, natural fibers, synthetic fibers, or composite materials.

*Facility* means all contiguous or adjoining property that is under common ownership or control, including properties that are separated only by a road or other public right-of-way.

*Flexible packaging* means any package or part of a package the shape of which can be readily changed. Flexible packaging includes, but is not limited to, bags, pouches, labels, liners and wraps utilizing paper, plastic, film, aluminum foil, metalized or coated paper or film, or any combination of these materials.

*Formulation data* means data on the organic HAP mass fraction, volatile matter mass fraction, or coating solids mass fraction of a material that is generated by the manufacturer or means other than a test method specified in this subpart or an approved alternative method.

*HAP* means hazardous air pollutants.

*HAP applied* means the organic HAP content of all coating materials applied to a substrate by a web coating line at an affected source.

*Intermittently-controlled work station* means a work station associated with a dryer with provisions for the dryer exhaust to be delivered to or diverted from a control device through a bypass line, depending on the position of a valve or damper. Sampling lines for analyzers, relief valves needed for safety purposes, and periodic cycling of exhaust dampers to ensure safe operation are not considered bypass lines.

*Metal coil* means a continuous metal strip that is at least 0.15 millimeter (0.006 inch) thick which is packaged in a roll or coil prior to coating. After coating, it may or may not be rewound into a roll or coil. Metal coil does not include metal webs that are coated for use in flexible packaging.

*Month* means a calendar month or a pre-specified period of 28 days to 35 days to allow for flexibility in recordkeeping when data are based on a business accounting period.

*Never-controlled work station* means a work station that is not equipped with provisions by which any emissions, including those in the exhaust from any associated dryer, may be delivered to a control device.

*New affected source* means any affected source the construction or reconstruction of which is commenced after September 13, 2000.

*Overall organic HAP control efficiency* means the total efficiency of a capture and control system.

*Pressure sensitive tape* means a flexible backing material with a pressure-sensitive adhesive coating on one or both sides of the backing. Examples include, but are not limited to, duct/duct insulation tape and medical tape.

*Research or laboratory equipment* means any equipment for which the primary purpose is to conduct research and development into new processes and products where such equipment is operated under the close supervision of technically trained personnel and is not engaged in the manufacture of products for commercial sale in commerce except in a *de minimis* manner.

*Rewind or cutting station* means a unit from which substrate is collected at the outlet of a web coating line.

*Uncontrolled coating line* means a coating line consisting of only never-controlled work stations.

*Unwind or feed station* means a unit from which substrate is fed to a web coating line.

*Web* means a continuous substrate (*e.g.*, paper, film, foil) which is flexible enough to be wound or unwound as rolls.

*Web coating line* means any number of work stations, of which one or more applies a continuous layer of liquid or semi-liquid coating material across the entire width or any portion of the width of a web substrate, and any associated curing/drying equipment between an unwind or feed station and a rewind or cutting station.

*Work station* means a unit on a web coating line where coating material is deposited onto a web substrate.

[[67 FR 72341](#), Dec. 4, 2002, as amended at [85 FR 41296](#), July 9, 2020]

## **Emission Standards and Compliance Dates**

### **§ 63.3320 What emission standards must I meet?**

(a) If you own or operate any affected source that is subject to the requirements of this subpart, you must comply with these requirements on and after the compliance dates as specified in [§ 63.3330](#).

(b) You must limit organic HAP emissions to the level specified in [paragraph \(b\)\(1\), \(2\), \(3\), or \(4\)](#) of this section for all periods of operation, including startup, shutdown, and malfunction (SSM).

(1) No more than 5 percent of the organic HAP applied for each month (95 percent reduction) at existing affected sources, and no more than 2 percent of the organic HAP applied for each month (98 percent reduction) at new affected sources; or

(2) No more than 4 percent of the mass of coating materials applied for each month at existing affected sources, and no more than 1.6 percent of the mass of coating materials applied for each month at new affected sources; or

(3) No more than 20 percent of the mass of coating solids applied for each month at existing affected sources, and no more than 8 percent of the coating solids applied for each month at new affected sources.

(4) If you use an oxidizer to control organic HAP emissions, operate the oxidizer such that an outlet organic HAP concentration of no greater than 20 parts per million by volume (ppmv) on a dry basis is achieved and the efficiency of the capture system is 100 percent.

(c) You must demonstrate compliance with this subpart by following the procedures in [§ 63.3370](#).

[[67 FR 72341](#), Dec. 4, 2002, as amended at [85 FR 41296](#), July 9, 2020]

#### **§ 63.3321 What operating limits must I meet?**

(a) For any web coating line or group of web coating lines for which you use add-on control devices to demonstrate compliance with the emission standards in [§ 63.3320](#), unless you use a solvent recovery system and conduct a liquid-liquid material balance, you must meet the operating limits specified in Table 1 to this subpart or according to [paragraph \(b\)](#) of this section. These operating limits apply to emission capture systems and control devices used to demonstrate compliance with this subpart, and you must establish the operating limits during the performance test according to the requirements in [§ 63.3360\(c\)\(3\)](#). You must meet the operating limits at all times after you establish them.

(b) If you use an add-on control device other than those listed in Table 1 to this subpart or wish to monitor an alternative parameter and comply with a different operating limit, you must apply to the Administrator for approval of alternative monitoring under [§ 63.8\(f\)](#).

[[67 FR 72341](#), Dec. 4, 2002, as amended at [85 FR 41296](#), July 9, 2020]

#### **§ 63.3330 When must I comply?**

(a) For affected sources which commenced construction or reconstruction prior to September 19, 2019, you must comply as follows:

(1) Before July 9, 2021, the affected coating operation(s) must be in compliance with the applicable emission limit in [§ 63.3320](#) at all times, except during periods of SSM. On and after July 9, 2021, the affected coating operation(s) must be in compliance with the applicable emission limit in [§ 63.3320](#) at all times, including periods of SSM.

(2) A periodic emissions performance test must be performed by July 9, 2023, or within 60 months of the previous test, whichever is later, and subsequent tests no later than 60 months

thereafter, as required in [§ 63.3360](#). Performance testing for HAP or VOC destruction efficiency required by state agencies can be used to meet this requirement.

(3) After July 9, 2021, you must electronically submit initial notifications, notifications of compliance status, performance evaluation reports, and performance test reports, as required in [§ 63.3400](#). Semiannual compliance reports must be submitted electronically for the first full semiannual compliance period after the template has been available in the Compliance and Emissions Data Reporting Interface (CEDRI) for 1 year.

(b) For new affected sources which commenced construction or reconstruction after September 19, 2019, you must comply as indicated in [paragraphs \(b\)\(1\) through \(3\)](#) of this section. Existing affected sources which have undergone reconstruction as defined in [§ 63.2](#) are subject to the requirements for new affected sources. The costs associated with the purchase and installation of air pollution control equipment are not considered in determining whether the existing affected source has been reconstructed. Additionally, the costs of retrofitting and replacing of equipment that is installed specifically to comply with this subpart are not considered reconstruction costs.

(1) The coating operation(s) must be in compliance with the applicable emission limit in [§ 63.3320](#) at all times, including periods of SSM, starting July 9, 2020, or immediately upon startup, whichever is later.

(2) You must complete any initial performance test required in [§ 63.3360](#) within the time limits specified in [§ 63.7\(a\)\(2\)](#), and subsequent tests no later than 60 months thereafter.

(3) You must electronically submit initial notifications, notifications of compliance status, performance evaluation reports, and performance test reports as required in [§ 63.3400](#) starting July 9, 2020, or immediately upon startup, whichever is later. Semiannual compliance reports must be submitted electronically for the first full semiannual compliance period after the template has been available in CEDRI for 1 year.

[\[85 FR 41296, July 9, 2020\]](#)

## **General Requirements for Compliance With the Emission Standards and for Monitoring and Performance Tests**

### **§ 63.3340 What general requirements must I meet to comply with the standards?**

(a) Before July 9, 2021, for each existing source for which construction or reconstruction commenced on or before September 19, 2019, you must be in compliance with the emission limits and operating limits in this subpart at all times, except during periods of SSM. On and after July 9, 2021, for each such source you must be in compliance with the emission limits and operating limits in this subpart at all times. For new and reconstructed sources for which construction or reconstruction commenced after September 19, 2019, you must be in compliance with the emission limits and operating limits in this subpart at all times, starting July 9, 2020, or immediately upon startup, whichever is later.



(b) For affected sources as of September 19, 2019, before July 9, 2021, you must always operate and maintain your affected source, including all air pollution control and monitoring equipment you use for purposes of complying with this subpart, according to the provisions in [§ 63.6\(e\)\(1\)\(i\)](#). On and after July 9, 2021, for such sources and on July 9, 2020, or immediately upon startup, whichever is later, for new or reconstructed affected sources, you must always operate and maintain your affected source, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. The general duty to minimize emissions does not require the owner or operator to make any further efforts to reduce emissions if levels required by the applicable standard have been achieved. Determination of whether a source is operating in compliance with operation and maintenance requirements will be based on information available to the Administrator which may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source.

(c) You must conduct each performance test required by [§ 63.3360](#) according to the requirements in [§ 63.3360\(e\)\(2\)](#) and under the conditions in this section unless you obtain a waiver of the performance test according to the provisions in [§ 63.7\(h\)](#).

(1) Representative coating operation operating conditions. You must conduct the performance test under representative operating conditions for the coating operation. Operations during periods of startup, shutdown, and nonoperation do not constitute representative conditions. You may not conduct performance tests during periods of malfunction. You must record the process information that is necessary to document operating conditions during the test and explain why the conditions represent normal operation. Upon request, you shall make available to the Administrator such records as may be necessary to determine the conditions of performance tests.

(2) Representative emission capture system and add-on control device operating conditions. You must conduct the performance test when the emission capture system and add-on control device are operating at a representative flow rate, and the add-on control device is operating at a representative inlet concentration. Representative conditions exclude periods of startup and shutdown. You may not conduct performance tests during periods of malfunction. You must record information that is necessary to document emission capture system and add-on control device operating conditions during the test and explain why the conditions represent normal operation.

(d) Table 2 to this subpart specifies the provisions of [subpart A of this part](#) that apply if you are subject to subpart JJJJ.

[\[85 FR 41296, July 9, 2020\]](#)

**§ 63.3350 If I use a control device to comply with the emission standards, what monitoring must I do?**

(a) A summary of monitoring you must do follows:

<b>If you operate a web coating line, and have the following:</b>	<b>Then you must:</b>
(1) Intermittently-controlled work stations	Record parameters related to possible exhaust flow bypass of control device and to coating use ( <a href="#">§ 63.3350(c)</a> ).
(2) Solvent recovery unit	Operate continuous emission monitoring system and perform quarterly audits or determine volatile matter recovered and conduct a liquid-liquid material balance ( <a href="#">§ 63.3350(d)</a> ).
(3) Control Device	Operate continuous parameter monitoring system ( <a href="#">§ 63.3350(e)</a> ).
(4) Capture system	Monitor capture system operating parameter ( <a href="#">§ 63.3350(f)</a> ).

(b) Following the date on which the initial or periodic performance test of a control device is completed to demonstrate continuing compliance with the standards, you must monitor and inspect each capture system and each control device used to comply with [§ 63.3320](#). You must install and operate the monitoring equipment as specified in [paragraphs \(c\)](#) and [\(f\)](#) of this section.

(c) ***Bypass and coating use monitoring.*** If you own or operate web coating lines with intermittently-controlled work stations, you must monitor bypasses of the control device and the mass of each coating material applied at the work station during any such bypass. If using a control device for complying with the requirements of this subpart, you must demonstrate that any coating material applied on a never-controlled work station or an intermittently-controlled work station operated in bypass mode is allowed in your compliance demonstration according to [§ 63.3370\(o\)](#) and [\(p\)](#). The bypass monitoring must be conducted using at least one of the procedures in [paragraphs \(c\)\(1\)](#) through [\(4\)](#) of this section for each work station and associated dryer.

(1) ***Flow control position indicator.*** Install, calibrate, maintain, and operate according to the manufacturer's specifications a flow control position indicator that provides a record indicating whether the exhaust stream from the dryer was directed to the control device or was diverted from the control device. The time and flow control position must be recorded at least once per hour as well as every time the flow direction is changed. A flow control position indicator must be installed at the entrance to any bypass line that could divert the exhaust stream away from the control device to the atmosphere.

(2) ***Car-seal or lock-and-key valve closures.*** Secure any bypass line valve in the closed position with a car-seal or a lock-and-key type configuration. A visual inspection of the seal or closure mechanism must be performed at least once every month to ensure that the valve or damper is maintained in the closed position, and the exhaust stream is not diverted through the bypass line.

(3) ***Valve closure continuous monitoring.*** Ensure that any bypass line valve or damper is in the closed position through continuous monitoring of valve position when the emission source is in operation and is using a control device for compliance with the requirements of this subpart. The monitoring system must be inspected at least once every month to verify that the monitor will indicate valve position.

(4) ***Automatic shutdown system.*** Use an automatic shutdown system in which the web coating line is stopped when flow is diverted away from the control device to any bypass line when the control device is in operation. The automatic system must be inspected at least once every month to verify that it will detect diversions of flow and would shut down operations in the event of such a diversion.

(d) ***Solvent recovery unit.*** If you own or operate a solvent recovery unit to comply with [§ 63.3320](#), you must meet the requirements in either [paragraph \(d\)\(1\)](#) or [\(2\)](#) of this section depending on how control efficiency is determined.

(1) ***Continuous emission monitoring system (CEMS).*** If you are demonstrating compliance with the emission standards in [§ 63.3320](#) through continuous emission monitoring of a control device, you must install, calibrate, operate, and maintain the CEMS according to [paragraphs \(d\)\(1\)\(i\)](#) through [\(iii\)](#) of this section.

(i) Measure the total organic volatile matter mass flow rate at both the control device inlet and the outlet such that the reduction efficiency can be determined. Each continuous emission monitor must comply with performance specification 6, 8, or 9 of [40 CFR part 60, appendix B](#), as appropriate.

(ii) You must follow the quality assurance procedures in procedure 1, appendix F of [40 CFR part 60](#). In conducting the quarterly audits of the monitors as required by procedure 1, appendix F, you must use compounds representative of the gaseous emission stream being controlled.

(iii) You must have valid data from at least 90 percent of the hours when the process is operated. Invalid or missing data should be reported as a deviation in the semiannual compliance report.

(2) ***Liquid-liquid material balance.*** If you are demonstrating compliance with the emission standards in [§ 63.3320](#) through liquid-liquid material balance, you must install, calibrate, maintain, and operate according to the manufacturer's specifications a device that indicates the cumulative amount of volatile matter recovered by the solvent recovery device on a monthly basis. The device must be certified by the manufacturer to be accurate to within  $\pm 2.0$  percent by mass.

(e) ***Continuous parameter monitoring system (CPMS)***. If you are using a control device to comply with the emission standards in [§ 63.3320](#), you must install, operate, and maintain each CPMS specified in [paragraphs \(e\)\(10\)](#) and [\(11\)](#) and [\(f\)](#) of this section according to the requirements in [paragraphs \(e\)\(1\)](#) through [\(9\)](#) of this section. You must install, operate, and maintain each CPMS specified in [paragraph \(c\)](#) of this section according to [paragraphs \(e\)\(5\)](#) through [\(8\)](#) of this section.

(1) Each CPMS must complete a minimum of one cycle of operation for each successive 15-minute period. You must have a minimum of four equally spaced successive cycles of CPMS operation to have a valid hour of data.

(2) You must have valid data from at least 90 percent of the hours when the process operated.

(3) You must determine the hourly average of all recorded readings according to [paragraphs \(e\)\(3\)\(i\)](#) and [\(ii\)](#) of this section.

(i) To calculate a valid hourly value, you must have at least three of four equally spaced data values from that hour from a continuous monitoring system (CMS) that is not out-of-control.

(ii) Provided all of the readings recorded in accordance with [paragraph \(e\)\(3\)](#) of this section clearly demonstrate continuous compliance with the standard that applies to you, then you are not required to determine the hourly average of all recorded readings.

(4) You must determine the block 3-hour average of all recorded readings for each operating period. To calculate the average for each 3-hour averaging period, you must have at least two of three of the hourly averages for that period using only average values that are based on valid data (*i.e.*, not from out-of-control periods).

(5) Except for temperature sensors, you must develop a quality control program that must contain, at a minimum, a written protocol that describes the procedures for each of the operations in [§ 63.3350\(e\)\(5\)\(i\)](#) through [\(vi\)](#). The owner or operator shall keep these written procedures on record for the life of the affected source or until the affected source is no longer subject to the provisions of this part, to be made available for inspection, upon request, by the Administrator. If the performance evaluation plan is revised, the owner or operator shall keep previous (*i.e.*, superseded) versions of the performance evaluation plan on record to be made available for inspection, upon request, by the Administrator, for a period of 5 years after each revision to the plan. For temperature sensors, you must follow the requirements in [§ 63.3350\(e\)\(10\)](#).

(i) Initial and any subsequent calibration of the continuous monitoring system (CMS);

(ii) Determination and adjustment of the calibration drift of the CMS;

(iii) Preventative maintenance of the CMS, including spare parts inventory;

(iv) Data recording, calculations, and reporting;

(v) Accuracy audit procedures, including sampling and analysis methods; and

(vi) Program of corrective action for a malfunctioning CMS.

(6) You must record the results of each inspection, calibration, and validation check of the CPMS.

(7) At all times, you must maintain the monitoring system in proper working order including, but not limited to, maintaining necessary parts for routine repairs of the monitoring equipment.

(8) Except for monitoring malfunctions, associated repairs, or required quality assurance or control activities (including calibration checks or required zero and span adjustments), you must conduct all monitoring at all times that the unit is operating. Data recorded during monitoring malfunctions, associated repairs, out-of-control periods, or required quality assurance or control activities shall not be used for purposes of calculating the emissions concentrations and percent reductions specified in [§ 63.3370](#). You must use all the valid data collected during all other periods in assessing compliance of the control device and associated control system. A monitoring malfunction is any sudden, infrequent, not reasonably preventable failure of the monitoring system to provide valid data. Monitoring failures that are caused in part by poor maintenance or careless operation are not malfunctions.

(9) Any averaging period for which you do not have valid monitoring data and such data are required constitutes a deviation, and you must notify the Administrator in accordance with [§ 63.3400\(c\)](#).

(10) **Oxidizer.** If you are using an oxidizer to comply with the emission standards of this subpart, you must comply with [paragraphs \(e\)\(10\)\(i\)](#) through [\(vi\)](#) of this section.

(i) Install, maintain, and operate temperature monitoring equipment according to the manufacturer's specifications.

(ii) For an oxidizer other than a catalytic oxidizer, install, operate, and maintain a temperature monitoring device equipped with a continuous recorder. The device must be capable of monitoring temperature with an accuracy of  $\pm 1$  percent of the temperature being monitored in degrees Fahrenheit or  $\pm 1.8$  degrees Fahrenheit, whichever is greater. The temperature sensor must be installed in the combustion chamber at a location in the combustion zone.

(iii) For a catalytic oxidizer, install, operate, and maintain a temperature monitoring device equipped with a continuous recorder. The device must be capable of monitoring temperature with an accuracy of  $\pm 1$  percent of the temperature being monitored in degrees Fahrenheit or  $\pm 1.8$  degrees Fahrenheit, whichever is greater. The temperature sensor must be installed in the vent stream at the nearest feasible point to the inlet and outlet of the catalyst bed. Calculate the temperature rise across the catalyst.

(iv) For temperature sensors, you must develop a quality control program that must contain, at a minimum, a written protocol that describes the procedures for verifying that the temperature sensor is operating properly using at least one of the methods in [paragraph \(e\)\(10\)\(iv\)\(A\)](#), [\(B\)](#), [\(C\)](#), [\(D\)](#), [\(E\)](#), or [\(F\)](#) of this section. The owner or operator shall keep these written procedures on record for the life of the affected source or until the affected source is no longer subject to the provisions of this part, to be made available for inspection, upon request, by the Administrator:

(A) Semiannually, compare measured readings to a National Institute of Standards and Technology (NIST) traceable temperature measurement device or simulate a typical operating temperature using a NIST traceable temperature simulation device. When the temperature measurement device method is used, the sensor of the calibrated device must be placed as close as practicable to the process sensor, and both devices must be subjected to the same environmental conditions. The accuracy of the temperature measured must be 2.5 percent of the temperature measured by the NIST traceable device or 5 degrees Fahrenheit whichever is greater.

(B) Annually validate the temperature sensor by following applicable mechanical and electrical validation procedures in the manufacturer owner's manual.

(C) Annually request the temperature sensor manufacturer to certify or re-certify electromotive force (electrical properties) of the thermocouple.

(D) Annually replace the temperature sensor with a new certified temperature sensor in lieu of validation.

(E) Permanently install a redundant temperature sensor as close as practicable to the process temperature sensor. The sensors must yield a reading within 2.5 percent of each other for thermal oxidizers and catalytic oxidizers.

(F) Permanently install a temperature sensor with dual sensors to account for the possibility of failure.

(v) Conduct the validation checks in [paragraph \(e\)\(10\)\(iv\)\(A\)](#), [\(B\)](#), or [\(C\)](#) of this section any time the temperature sensor exceeds the manufacturer's specified maximum operating temperature range or install a new temperature sensor.

(vi) At least quarterly, inspect temperature sensor components for proper connection and integrity or continuously operate an electronic monitoring system designed to notify personnel if the signal from the temperature sensor is interrupted.

(11) ***Other types of control devices.*** If you use a control device other than an oxidizer or wish to monitor an alternative parameter and comply with a different operating limit, you must apply to the Administrator for approval of an alternative monitoring method under [§ 63.8\(f\)](#).

(f) ***Capture system monitoring.*** If you are complying with the emission standards in [§ 63.3320](#) through the use of a capture system and control device for one or more web coating lines, you

must develop a site-specific monitoring plan containing the information specified in [paragraphs \(f\)\(1\) and \(2\)](#) of this section for these capture systems. You must monitor the capture system in accordance with [paragraph \(f\)\(3\)](#) of this section. You must make the monitoring plan available for inspection by the permitting authority upon request.

(1) The monitoring plan must:

- (i) Identify the operating parameter to be monitored to ensure that the capture efficiency determined during the initial compliance test is maintained; and
- (ii) Explain why this parameter is appropriate for demonstrating ongoing compliance; and
- (iii) Identify the specific monitoring procedures.

(2) The monitoring plan must specify the operating parameter value or range of values that demonstrate compliance with the emission standards in [§ 63.3320](#). The specified operating parameter value or range of values must represent the conditions present when the capture system is being properly operated and maintained.

(3) You must conduct all capture system monitoring in accordance with the plan.

(4) Any deviation from the operating parameter value or range of values which are monitored according to the plan will be considered a deviation from the operating limit.

(5) You must review and update the capture system monitoring plan at least annually.

[[67 FR 72341](#), Dec. 4, 2002, as amended at [85 FR 41297](#), July 9, 2020]

#### **§ 63.3360 What performance tests must I conduct?**

(a) The performance test methods you must conduct are as follows:

<b>If you control organic HAP on any individual web coating line or any group of web coating lines to demonstrate compliance with the emission limits in <a href="#">§ 63.3320</a> by:</b>	<b>You must:</b>
(1) Limiting organic HAP or volatile	Determine the organic HAP or volatile matter and coating solids content of coating materials according to procedures in <a href="#">paragraphs (c) and (d)</a> of this section. If applicable, determine the mass of volatile matter retained



<p><b>If you control organic HAP on any individual web coating line or any group of web coating lines to demonstrate compliance with the emission limits in <a href="#">§ 63.3320</a> by:</b></p>	<p><b>You must:</b></p>
<p>matter content of coatings</p>	<p>in the coated web or otherwise not emitted to the atmosphere according to <a href="#">paragraph (g)</a> of this section.</p>
<p>(2) Using a capture and control system</p>	<p>(i) Initially, conduct a performance test for each capture and control system to determine: The destruction or removal efficiency of each control device other than solvent recovery according to <a href="#">§ 63.3360(e)</a>, and the capture efficiency of each capture system according to <a href="#">§ 63.3360(f)</a>. If applicable, determine the mass of volatile matter retained in the coated web or otherwise not emitted to the atmosphere according to <a href="#">§ 63.3360(g)</a>.</p>
	<p>(ii) Perform a periodic test once every 5 years for each thermal oxidizer to determine the destruction or removal efficiency according to <a href="#">§ 63.3360(e)</a>. If applicable, determine the mass of volatile matter retained in the coated web or otherwise not emitted to the atmosphere according to <a href="#">§ 63.3360(g)</a>.</p>
	<p>(iii) Either perform a periodic test once every 5 years for each catalytic oxidizer to determine the destruction or removal efficiency according to <a href="#">§ 63.3360(e)</a> OR perform a catalyst activity test annually on each catalytic oxidizer to ensure that the catalyst is performing properly according to <a href="#">§ 63.3360(e)(3)(ii)(D)(1)</a>. If applicable, determine the mass of volatile matter retained in the coated web or otherwise not emitted to the atmosphere according to <a href="#">§ 63.3360(g)</a>.</p>

(b) **Control Device.** If you are using a control device to comply with the emission standards in [§ 63.3320](#), you are not required to conduct a performance test to demonstrate compliance if one or more of the criteria in [paragraphs \(b\)\(1\) through \(3\)](#) of this section are met.

(1) The control device is equipped with continuous emission monitoring systems (CEMS) for determining inlet and outlet total organic volatile matter concentration and meeting the



requirements of Performance Specification 6, 8, or 9 in appendix B to 40 CFR part 60 and capture efficiency has been determined in accordance with the requirements of this subpart such that an overall organic HAP control efficiency can be calculated, and the CEMS are used to demonstrate continuous compliance in accordance with [§ 63.3350](#); or

(2) You have met the requirements of [§ 63.7\(h\)](#) (for waiver of performance testing); or

(3) The control device is a solvent recovery system and you comply by means of a monthly liquid-liquid material balance.

(c) **Organic HAP content.** If you determine compliance with the emission standards in [§ 63.3320](#) by means other than determining the overall organic HAP control efficiency of a control device, you must determine the organic HAP mass fraction of each coating material “as-purchased” by following one of the procedures in [paragraphs \(c\)\(1\)](#) through [\(3\)](#) of this section, and determine the organic HAP mass fraction of each coating material “as-applied” by following the procedures in [paragraph \(c\)\(4\)](#) of this section. If the organic HAP content values are not determined using the procedures in [paragraphs \(c\)\(1\)](#) through [\(3\)](#) of this section, the owner or operator must submit an alternative test method for determining their values for approval by the Administrator in accordance with [§ 63.7\(f\)](#). The recovery efficiency of the test method must be determined for all of the target organic HAP and a correction factor, if necessary, must be determined and applied.

(1) **Method 311.** You may test the coating material in accordance with Method 311 of [appendix A of this part](#). The Method 311 determination may be performed by the manufacturer of the coating material and the results provided to the owner or operator. The organic HAP content must be calculated according to the criteria and procedures in [paragraphs \(c\)\(1\)\(i\)](#) through [\(iii\)](#) of this section.

(i) Include each organic HAP determined to be present at greater than or equal to 0.1 mass percent for Occupational Safety and Health Administration (OSHA)-defined carcinogens as specified in section A.6.4 of appendix A to 29 CFR 1910.1200 and greater than or equal to 1.0 mass percent for other organic HAP compounds.

(ii) Express the mass fraction of each organic HAP you include according to [paragraph \(c\)\(1\)\(i\)](#) of this section as a value truncated to four places after the decimal point (for example, 0.3791).

(iii) Calculate the total mass fraction of organic HAP in the tested material by summing the counted individual organic HAP mass fractions and truncating the result to three places after the decimal point (for example, 0.763).

(2) **Method 24.** For coatings, determine the volatile organic content as mass fraction of nonaqueous volatile matter and use it as a substitute for organic HAP using Method 24 of appendix A-7 to [40 CFR part 60](#). The Method 24 determination may be performed by the manufacturer of the coating and the results provided to you. One of the voluntary consensus

standards in [paragraphs \(c\)\(2\)\(i\) through \(v\)](#) of this section may be used as an alternative to using Method 24.

- (i) ASTM D1963-85 (Reapproved 1996), (incorporated by reference, see [§ 63.14](#));
- (ii) ASTM D2111-10 (Reapproved 2015), (incorporated by reference, see [§ 63.14](#));
- (iii) ASTM D2369-10 (Reapproved 2015)<sup>e</sup>, (incorporated by reference, see [§ 63.14](#));
- (iv) ASTM D2697-03 (Reapproved 2014), (incorporated by reference, see [§ 63.14](#)); and
- (v) ASTM D6093-97 (Reapproved 2016), (incorporated by reference, see [§ 63.14](#)).

(3) **Formulation data.** You may use formulation data to determine the organic HAP mass fraction of a coating material. Formulation data may be provided to the owner or operator by the manufacturer of the material. In the event of an inconsistency between Method 311 (appendix A to this part) test data and a facility's formulation data, and the Method 311 test value is higher, the Method 311 data will govern. Formulation data may be used provided that the information represents all organic HAP present at a level equal to or greater than 0.1 percent for OSHA-defined carcinogens as specified in section A.6.4 of appendix A to 29 CFR 1910.1200 and equal to or greater than 1.0 percent for other organic HAP compounds in any raw material used.

(4) **As-applied organic HAP mass fraction.** If the as-purchased coating material is applied to the web without any solvent or other material added, then the as-applied organic HAP mass fraction is equal to the as-purchased organic HAP mass fraction. Otherwise, the as-applied organic HAP mass fraction must be calculated using Equation 4 of [§ 63.3370](#).

(d) **Volatile organic and coating solids content.** If you determine compliance with the emission standards in [§ 63.3320](#) by means other than determining the overall organic HAP control efficiency of a control device and you choose to use the volatile organic content as a surrogate for the organic HAP content of coatings, you must determine the as-purchased volatile organic content and coating solids content of each coating material applied by following the procedures in [paragraph \(d\)\(1\)](#) or [\(2\)](#) of this section, and the as-applied volatile organic content and coating solids content of each coating material by following the procedures in [paragraph \(d\)\(3\)](#) of this section.

(1) **Method 24.** You may determine the volatile organic and coating solids mass fraction of each coating applied using Method 24 (appendix A-7 to [40 CFR part 60](#)). The Method 24 determination may be performed by the manufacturer of the material and the results provided to you. When using volatile organic compound content as a surrogate for HAP, you may also use ASTM D3960-98, (incorporated by reference, see [§ 63.14](#)) as an alternative to Method 24. If these values cannot be determined using either of these methods, you must submit an alternative technique for determining their values for approval by the Administrator.

(2) **Formulation data.** You may determine the volatile organic content and coating solids content of a coating material based on formulation data and may rely on volatile organic content data provided by the manufacturer of the material. In the event of any inconsistency between the formulation data and the results of Method 24 of appendix A-7 to [40 CFR part 60](#) and the Method 24 results are higher, the results of Method 24 will govern.

(3) **As-applied volatile organic content and coating solids content.** If the as-purchased coating material is applied to the web without any solvent or other material added, then the as-applied volatile organic content is equal to the as-purchased volatile content and the as-applied coating solids content is equal to the as-purchased coating solids content. Otherwise, the as-applied volatile organic content must be calculated using Equation 5 to [§ 63.3370\(c\)\(4\)](#) and the as-applied coating solids content must be calculated using Equation 6 to [§ 63.3370\(d\)](#).

(e) **Control device efficiency.** If you are using an add-on control device other than solvent recovery, such as an oxidizer, to comply with the emission standards in [§ 63.3320](#), you must conduct a performance test to establish the destruction or removal efficiency of the control device according to the methods and procedures in [paragraphs \(e\)\(1\) and \(2\)](#) of this section. During the performance test, you must establish the operating limits required by [§ 63.3321](#) according to [paragraph \(e\)\(3\)](#) of this section.

(1) **Initial performance test.** An initial performance test to establish the destruction or removal efficiency of the control device used to comply with the emission standards in [§ 63.3320](#) must be conducted such that control device inlet and outlet testing is conducted simultaneously, and the data are reduced in accordance with the test methods and procedures in [paragraphs \(e\)\(1\)\(i\) through \(ix\)](#) of this section. You must conduct three test runs as specified in [§ 63.7\(e\)\(3\)](#), and each test run must last at least 1 hour.

(i) Method 1 or 1A of appendix A-1 to [40 CFR part 60](#) must be used for sample and velocity traverses to determine sampling locations.

(ii) Method 2, 2A, 2C, 2D, or 2F of appendix A-1 to [40 CFR part 60](#), or Method 2G of appendix A-2 to [40 CFR part 60](#) must be used to determine gas volumetric flow rate.

(iii) Method 3, 3A, or 3B of appendix A-2 to [40 CFR part 60](#) must be used for gas analysis to determine dry molecular weight. You may also use as an alternative to Method 3B the manual method for measuring the oxygen, carbon dioxide, and carbon monoxide content of exhaust gas in ANSI/ASME PTC 19.10-1981 Part 10, (incorporated by reference, see [§ 63.14](#)).

(iv) Method 4 of appendix A-3 to [40 CFR part 60](#) must be used to determine stack gas moisture.

(v) Methods for determining the gas volumetric flow rate, dry molecular weight, and stack gas moisture must be performed, as applicable, during each test run.

(vi) Method 25 or 25A of appendix A-7 to [40 CFR part 60](#) must be used to determine total gaseous organic matter concentration. Use the same test method for both the inlet and outlet

measurements which must be conducted simultaneously. You must submit notice of the intended test method to the Administrator for approval along with notification of the performance test required under [§ 63.7\(b\)](#). You must use method 25A if any of the conditions described in [paragraphs \(e\)\(1\)\(vi\)\(A\)](#) through [\(D\)](#) of this section apply to the control device.

(A) The control device is not an oxidizer.

(B) The control device is an oxidizer but an exhaust gas volatile organic matter concentration of 50 ppmv or less is required to comply with the emission standards in [§ 63.3320](#); or

(C) The control device is an oxidizer but the volatile organic matter concentration at the inlet to the control system and the required level of control are such that they result in exhaust gas volatile organic matter concentrations of 50 ppmv or less; or

(D) The control device is an oxidizer but because of the high efficiency of the control device the anticipated volatile organic matter concentration at the control device exhaust is 50 ppmv or less, regardless of inlet concentration.

(vii) Except as provided in [§ 63.7\(e\)\(3\)](#), each performance test must consist of three separate runs with each run conducted for at least 1 hour under the conditions that exist when the affected source is operating under normal operating conditions. For the purpose of determining volatile organic compound concentrations and mass flow rates, the average of the results of all the runs will apply.

(viii) Volatile organic matter mass flow rates must be determined for each run specified in [paragraph \(e\)\(1\)\(vii\)](#) of this section using Equation 1:

$$M_f = Q_{sd} C_c [12][0.0416][10^{-6}]$$

Equation 1

Where:

$M_f$  = Total organic volatile matter mass flow rate, kilograms (kg)/hour (h).

$Q_{sd}$  = Volumetric flow rate of gases entering or exiting the control device, as determined according to [paragraph \(e\)\(1\)\(ii\)](#) of this section, dry standard cubic meters (dscm)/h.

$C_c$  = Concentration of organic compounds as carbon, ppmv.

12.0 = Molecular weight of carbon.

0.0416 = Conversion factor for molar volume, kg-moles per cubic meter ( $\text{mol/m}^3$ ) (@293 Kelvin (K) and 760 millimeters of mercury (mmHg)).

(ix) For each run, emission control device destruction or removal efficiency must be determined using Equation 2:

$$E = \frac{M_{fi} - M_{fo}}{M_{fi}} \times 100$$

Equation 2

Where:

E = Organic volatile matter control efficiency of the control device, percent.

$M_{fi}$  = Organic volatile matter mass flow rate at the inlet to the control device, kg/h.

$M_{fo}$  = Organic volatile matter mass flow rate at the outlet of the control device, kg/h.

(x) The control device destruction or removal efficiency is determined as the average of the efficiencies determined in the test runs and calculated in Equation 2.

(2) **Process information.** You must record such process information as may be necessary to determine the conditions in existence at the time of the performance test. Representative conditions exclude periods of startup and shutdown. You may not conduct performance tests during periods of malfunction. You must record the process information that is necessary to document operating conditions during the test and include in such record an explanation to support that such conditions represent normal operation. Upon request, you shall make available to the Administrator such records as may be necessary to determine the conditions of performance tests.

(3) **Operating limits.** If you are using one or more add-on control device other than a solvent recovery system for which you conduct a liquid-liquid material balance to comply with the emission standards in [§ 63.3320](#), you must establish the applicable operating limits required by [§ 63.3321](#). These operating limits apply to each add-on emission control device, and you must establish the operating limits during the performance test required by [paragraph \(e\)](#) of this section according to the requirements in [paragraphs \(e\)\(3\)\(i\)](#) and [\(ii\)](#) of this section.

(i) Thermal oxidizer. If your add-on control device is a thermal oxidizer, establish the operating limits according to [paragraphs \(e\)\(3\)\(i\)\(A\)](#) and [\(B\)](#) of this section.

(A) During the performance test, you must monitor and record the combustion temperature at least once every 15 minutes during each of the three test runs. You must monitor the temperature in the firebox of the thermal oxidizer or immediately downstream of the firebox before any substantial heat exchange occurs.

(B) Use the data collected during the performance test to calculate and record the average combustion temperature maintained during the performance test. Maintain the 3-hour average combustion temperature no more than 50 degrees Fahrenheit lower than this average combustion temperature.

(ii) Catalytic oxidizer. If your add-on control device is a catalytic oxidizer, establish the operating limits according to paragraphs (e)(3)(ii)(A) and (B) or [paragraphs \(e\)\(3\)\(ii\)\(C\) and \(D\)](#) of this section.

(A) During the performance test, you must monitor and record the temperature just before the catalyst bed and the temperature difference across the catalyst bed at least once every 15 minutes during each of the three test runs.

(B) Use the data collected during the performance test to calculate and record the average temperature just before the catalyst bed and the average temperature difference across the catalyst bed maintained during the performance test. Maintain the 3-hour average combustion temperature no more than 50 degrees Fahrenheit lower than this average combustion temperature or maintain the 3-hour average temperature difference across the catalyst bed at no less than 80 percent of this average temperature differential, provided that the minimum temperature is always 50 degrees Fahrenheit above the catalyst's ignition temperature.

(C) As an alternative to monitoring the temperature difference across the catalyst bed, you may monitor the temperature at the inlet to the catalyst bed and implement a site-specific inspection and maintenance plan for your catalytic oxidizer as specified in [paragraph \(e\)\(3\)\(ii\)\(D\)](#) of this section. During the performance test, you must monitor and record the temperature just before the catalyst bed at least once every 15 minutes during each of the three test runs. Use the data collected during the performance test to calculate and record the average temperature just before the catalyst bed during the performance test. Maintain the 3-hour average combustion temperature no more than 50 degrees Fahrenheit lower than this average combustion temperature.

(D) You must develop and implement an inspection and maintenance plan for your catalytic oxidizer(s) for which you elect to monitor according to [paragraph \(e\)\(3\)\(ii\)\(C\)](#) of this section. The plan must address, at a minimum, the elements specified in [paragraphs \(e\)\(3\)\(ii\)\(D\)\(1\) through \(3\)](#) of this section.

(1) Annual sampling and analysis of the catalyst activity (*i.e.*, conversion efficiency) following the manufacturer's or catalyst supplier's recommended procedures,

(2) Monthly inspection of the oxidizer system including the burner assembly and fuel supply lines for problems, and

(3) Annual internal and monthly external visual inspection of the catalyst bed to check for channeling, abrasion, and settling. If problems are found, you must take corrective action consistent with the manufacturer's recommendations and conduct a new performance test to determine destruction efficiency in accordance with this section.

(4) ***Control Destruction Efficiency Curve Development.*** If you are using one or more add-on control devices other than a solvent recovery system for which you conduct a liquid-liquid



material balance to comply with the emission standards in [§ 63.3320](#), you may establish a control destruction efficiency curve for use in estimating emissions that occur during deviations of the 3-hour operating parameters. This curve can be generated using test data or manufacturer's data that specifically documents the level of control at varying temperatures for your control device.

(f) **Capture efficiency.** If you demonstrate compliance by meeting the requirements of [§ 63.3370\(f\)](#), [\(g\)](#), [\(h\)](#), [\(i\)](#), [\(j\)\(2\)](#), [\(l\)](#), [\(o\)\(2\)](#) or [\(3\)](#), or [\(q\)](#), you must determine capture efficiency using the procedures in [paragraph \(f\)\(1\)](#), [\(2\)](#), or [\(3\)](#) of this section, as applicable.

(1) You may assume your capture efficiency equals 100 percent if your capture system is a permanent total enclosure (PTE). You must confirm that your capture system is a PTE by demonstrating that it meets the requirements of section 6 of EPA Method 204 of [40 CFR part 51, appendix M](#), and that all exhaust gases from the enclosure are delivered to a control device.

(2) You may determine capture efficiency according to the protocols for testing with temporary total enclosures that are specified in Methods 204 and 204A through F of [40 CFR part 51, appendix M](#). You may exclude never-controlled work stations from such capture efficiency determinations.

(3) You may use any capture efficiency protocol and test methods that satisfy the criteria of either the Data Quality Objective or the Lower Confidence Limit approach as described in appendix A of [subpart KK of this part](#). You may exclude never-controlled work stations from such capture efficiency determinations.

(g) **Volatile matter retained in the coated web or otherwise not emitted to the atmosphere.** You may choose to take into account the mass of volatile matter retained in the coated web after curing or drying or otherwise not emitted to the atmosphere when determining compliance with the emission standards in [§ 63.3320](#). If you choose this option, you must develop a site- and product-specific emission factor (EF) and determine the amount of volatile matter retained in the coated web or otherwise not emitted using Equation 3 to [§ 63.3360\(g\)\(1\)](#). The EF must be developed by conducting a performance test using an approved EPA test method, or alternative approved by the Administrator by obtaining the average of a three-run test. You may additionally use manufacturer's emissions test data (as long as it replicates the facility's coating formulation and operating conditions), or a mass-balance type approach using a modified Method 24 (including ASTM D5403-93 for radiation-cureable coatings). The EF should equal the proportion of the mass of volatile organics emitted to the mass of volatile organics in the coating materials evaluated. You may use the EF in your compliance calculations only for periods that the work station(s) was (were) used to make the product, or a similar product, corresponding to that produced during the performance test. You must develop a separate EF for each group of different products that you choose to utilize an EF for calculating emissions by conducting a separate performance test for that group of products. You must conduct a periodic performance test to re-establish the EF if there is a change in coating formulation, operating conditions, or

other change that could reasonably be expected to increase emissions since the time of the last test that was used to establish the EF.

(1) Calculate the mass of volatile organics retained in the coated web or otherwise not emitted for the month from each group of similar products using Equation 3:

$$M_{vret} = (C_{vi}M_i + \sum_{j=1}^q C_{vij}M_{ij}) \times (1 - EF_i) \quad \text{Equation 3}$$

Where:

$M_{vret}$  = Mass of volatile matter retained in the coated web after curing or drying, or otherwise not emitted to the atmosphere, kg.

$C_{vi}$  = Volatile organic content of coating material, i, expressed as a mass fraction, kg/kg.

$M_i$  = Mass of as-purchased coating material, i, applied in a month, kg.

q = Number of different materials added to the coating material.

$C_{vij}$  = Volatile organic content of material, j, added to as-purchased coating material, i, expressed as a mass fraction, kg/kg.

$M_{ij}$  = Mass of material, j, added to as-purchased coating material, i, in a month, kg.

$EF_i$  = Volatile organic matter site- and product-specific emission factor (three-run average determined from performance testing, evaluated as proportion of mass volatile organics emitted to mass of volatile organics in the coatings used during the performance test).

(2) [Reserved]

(h) **Control devices in series.** If you use multiple control devices in series to comply with the emission standards in [§ 63.3320](#), the performance test must include, at a minimum, the inlet to the first control device in the series, the outlet of the last control device in the series, and all intermediate streams (e.g., gaseous exhaust to the atmosphere or a liquid stream from a recovery device) that are not subsequently treated by any of the control devices in the series.

[[67 FR 72341](#), Dec. 4, 2002, as amended at [85 FR 41298](#), July 9, 2020; [88 FR 18413](#), Mar. 29, 2023]

## Requirements for Showing Compliance

### § 63.3370 How do I demonstrate compliance with the emission standards?

You must demonstrate compliance each month with the emission limitations in [§ 63.3320\(b\)\(1\)](#) through [\(4\)](#). For each monthly demonstration, you may apply any combination of the emission limitations to each of your web coating lines individually, to each of one or more groupings of your lines (including a single grouping encompassing all lines of your affected source), or to any combination of individual and grouped lines, so long as each web coating line is included in the



compliance demonstration for the month (*i.e.*, you are not required to apply the same emission limitation to each of the individual lines or groups of lines). You may change the emission limitation that you apply each month to your individual or grouped lines, and you may change line groupings for your monthly compliance demonstration.

(a) A summary of how you must demonstrate compliance follows:

<b>If you choose to demonstrate compliance by:</b>	<b>Then you must demonstrate that:</b>	<b>To accomplish this:</b>
(1) Use of “as-purchased” compliant coating materials	(i) Each coating material used at an existing affected source does not exceed 0.04 kg organic HAP per kg coating material, and each coating material used at a new affected source does not exceed 0.016 kg organic HAP per kg coating material as-purchased; or	Follow the procedures set out in <a href="#">§ 63.3370(b)</a> .
	(ii) Each coating material used at an existing affected source does not exceed 0.2 kg organic HAP per kg coating solids, and each coating material used at a new affected source does not exceed 0.08 kg organic HAP per kg coating solids as-purchased	Follow the procedures set out in <a href="#">§ 63.3370(b)</a> .
(2) Use of “as-applied” compliant coating materials	(i) Each coating material used at an existing affected source does not exceed 0.04 kg organic HAP per kg coating material, and each coating material used at a new affected source does not exceed 0.016 kg organic HAP per kg coating material as-applied; or	Follow the procedures set out in <a href="#">§ 63.3370(c)(1)</a> . Use either Equation 4 or 5 of <a href="#">§ 63.3370</a> to determine compliance with <a href="#">§ 63.3320(b)(2)</a> in accordance with <a href="#">§ 63.3370(c)(5)(i)</a> .
	(ii) Each coating material used at an existing affected source does not exceed 0.2 kg organic HAP per kg coating solids, and each coating	Follow the procedures set out in <a href="#">§ 63.3370(c)(2)</a> . Use Equations 6 and 7 of <a href="#">§ 63.3370</a> to determine compliance

If you choose to demonstrate compliance by:	Then you must demonstrate that:	To accomplish this:
	material used at a new affected source does not exceed 0.08 kg organic HAP per kg coating solids as-applied; or	with <a href="#">§ 63.3320(b)(3)</a> in accordance with <a href="#">§ 63.3370(c)(5)(i)</a> .
	(iii) Monthly average of all coating materials used at an existing affected source does not exceed 0.04 kg organic HAP per kg coating material, and monthly average of all coating materials used at a new affected source does not exceed 0.016 kg organic HAP per kg coating material as-applied on a monthly average basis; or	Follow the procedures set out in <a href="#">§ 63.3370(c)(3)</a> . Use Equation 8 of <a href="#">§ 63.3370</a> to determine compliance with <a href="#">§ 63.3320(b)(2)</a> in accordance with <a href="#">§ 63.3370(c)(5)(ii)</a> .
	(iv) Monthly average of all coating materials used at an existing affected source does not exceed 0.2 kg organic HAP per kg coating solids, and monthly average of all coating materials used at a new affected source does not exceed 0.08 kg organic HAP per kg coating solids as-applied on a monthly average basis	Follow the procedures set out in <a href="#">§ 63.3370(c)(4)</a> . Use Equation 9 of <a href="#">§ 63.3370</a> to determine compliance with <a href="#">§ 63.3320(b)(3)</a> in accordance with <a href="#">§ 63.3370(c)(5)(ii)</a> .
(3) Tracking total monthly organic HAP applied	Total monthly organic HAP applied does not exceed the calculated limit based on emission limitations	Follow the procedures set out in <a href="#">§ 63.3370(d)</a> . Show that total monthly HAP applied (Equation 10 of <a href="#">§ 63.3370</a> ) is less than the calculated equivalent allowable organic HAP (Equation 17 or 18 of <a href="#">§ 63.3370</a> ).
(4) Accounting for volatile matter retained in the	A site- and product-specific emission factor was appropriately established for the group of	Follow the procedures set out in <a href="#">§ 63.3360(g)</a> and <a href="#">§ 63.3370(e)</a>

If you choose to demonstrate compliance by:	Then you must demonstrate that:	To accomplish this:
coated web or otherwise not emitted	products for which the site- and product-specific emission factor was used in the compliance calculations	
(5) Use of a capture system and control device	(i) Overall organic HAP control efficiency is equal to 95 percent at an existing affected source and 98 percent at a new affected source on a monthly basis; or oxidizer outlet organic HAP concentration is no greater than 20 ppmv and capture efficiency is 100 percent; or operating parameters are continuously monitored; or	Follow the procedures set out in <a href="#">§ 63.3370(f)</a> to determine compliance with <a href="#">§ 63.3320(b)(1)</a> according to <a href="#">§ 63.3370(j)</a> if using a solvent recovery device, or <a href="#">§ 63.3370(k)</a> if using a control device and CPMS, or <a href="#">§ 63.3370(l)</a> if using an oxidizer.
	(ii) Overall organic HAP emission rate does not exceed 0.2 kg organic HAP per kg coating solids for an existing affected source or 0.08 kg organic HAP per kg coating solids for a new affected source on a monthly average as-applied basis;	Follow the procedures set out in <a href="#">§ 63.3370(g)</a> to determine compliance with <a href="#">§ 63.3320(b)(3)</a> according to <a href="#">§ 63.3370(j)</a> if using a solvent recovery device, or <a href="#">§ 63.3370(l)</a> if using an oxidizer.
	(iii) Overall organic HAP emission rate does not exceed 0.04 kg organic HAP per kg coating material for an existing affected source or 0.016 kg organic HAP per kg coating material for a new affected source on a monthly average as-applied basis; or	Follow the procedures set out in <a href="#">§ 63.3370(h)</a> to determine compliance with <a href="#">§ 63.3320(b)(2)</a> according to <a href="#">§ 63.3370(j)</a> if using a solvent recovery device, or <a href="#">§ 63.3370(l)</a> if using an oxidizer.
	(iv) Overall organic HAP emission rate does not exceed the calculated limit based on emission limitations	Follow the procedures set out in <a href="#">§ 63.3370(i)</a> . Show that the monthly organic HAP emission rate is less than the calculated equivalent allowable

If you choose to demonstrate compliance by:	Then you must demonstrate that:	To accomplish this:
		organic HAP emission rate (Equation 17 or 18 of <a href="#">§ 63.3370</a> ). Calculate the monthly organic HAP emission rate according to <a href="#">§ 63.3370(j)</a> if using a solvent recovery device, or <a href="#">§ 63.3370(l)</a> if using an oxidizer.
(6) Use of multiple capture and/or control devices	(i) Overall organic HAP control efficiency is equal to 95 percent at an existing affected source and 98 percent at a new affected source on a monthly basis; or	Follow the procedures set out in <a href="#">§ 63.3370(f)</a> to determine compliance with <a href="#">§ 63.3320(b)(1)</a> according to <a href="#">§ 63.3370(f)(1)</a> or <a href="#">(2)</a> .
	(ii) Average equivalent organic HAP emission rate does not exceed 0.2 kg organic HAP per kg coating solids for an existing affected source or 0.08 kg organic HAP per kg coating solids for a new affected source on a monthly average as-applied basis; or	Follow the procedures set out in <a href="#">§ 63.3370(g)</a> to determine compliance with <a href="#">§ 63.3320(b)(3)</a> according to <a href="#">§ 63.3370(o)</a> .
	(iii) Average equivalent organic HAP emission rate does not exceed 0.04 kg organic HAP per kg coating material for an existing affected source or 0.016 kg organic HAP per kg coating material for a new affected source on a monthly average as-applied basis; or	Follow the procedures set out in <a href="#">§ 63.3370(h)</a> to determine compliance with <a href="#">§ 63.3320(b)(2)</a> according to <a href="#">§ 63.3370(o)</a> .
	(iv) Average equivalent organic HAP emission rate does not exceed the calculated limit based on emission limitations	Follow the procedures set out in <a href="#">§ 63.3370(i)</a> . Show that the monthly organic HAP emission rate is less than the calculated equivalent allowable organic HAP emission rate (Equation

If you choose to demonstrate compliance by:	Then you must demonstrate that:	To accomplish this:
		17 or 18 of <a href="#">§ 63.3370</a> ) according to <a href="#">§ 63.3370(o)</a> .
(7) Use of a combination of compliant coatings and control devices	(i) Average equivalent organic HAP emission rate does not exceed 0.2 kg organic HAP per kg coating solids for an existing affected source or 0.08 kg organic HAP per kg coating solids for a new affected source on a monthly average as-applied basis; or	Follow the procedures set out in <a href="#">§ 63.3370(g)</a> to determine compliance with <a href="#">§ 63.3320(b)(3)</a> according to <a href="#">§ 63.3370(o)</a> .
	(ii) Average equivalent organic HAP emission rate does not exceed 0.04 kg organic HAP per kg coating material for an existing affected source or 0.016 kg organic HAP per kg coating material for a new affected source on a monthly average as-applied basis; or	Follow the procedures set out in <a href="#">§ 63.3370(h)</a> to determine compliance with <a href="#">§ 63.3320(b)(2)</a> according to <a href="#">§ 63.3370(o)</a> .
	(iii) Average equivalent organic HAP emission rate does not exceed the calculated limit based on emission limitations	Follow the procedures set out in <a href="#">§ 63.3370(i)</a> . Show that the monthly organic HAP emission rate is less than the calculated equivalent allowable organic HAP emission rate (Equation 17 or 18 of <a href="#">§ 63.3370</a> ) according to <a href="#">§ 63.3370(o)</a> .
(8) Use of non-HAP coatings	All coatings for all coating lines at an affected source have organic HAP contents below 0.1 percent by mass for OSHA-defined carcinogens as specified in section A.6.4 of appendix A to 29 CFR 1910.1200, and below 1.0 percent	Follow the procedures set out in <a href="#">§ 63.3370(s)</a> .

If you choose to demonstrate compliance by:	Then you must demonstrate that:	To accomplish this:
	by mass for other organic HAP compounds	

**(b) *As-purchased “compliant” coating materials.***

(1) If you comply by using coating materials that individually meet the emission standards in [§ 63.3320\(b\)\(2\)](#) or [\(3\)](#), you must demonstrate that each coating material applied during the month at an existing affected source contains no more than 0.04 mass fraction organic HAP or 0.2 kg organic HAP per kg coating solids, and that each coating material applied during the month at a new affected source contains no more than 0.016 mass fraction organic HAP or 0.08 kg organic HAP per kg coating solids on an as-purchased basis as determined in accordance with [§ 63.3360\(c\)](#).

(2) You are in compliance with emission standards in [§ 63.3320\(b\)\(2\)](#) and [\(3\)](#) if each coating material applied at an existing affected source is applied as-purchased and contains no more than 0.04 kg organic HAP per kg coating material or 0.2 kg organic HAP per kg coating solids, and each coating material applied at a new affected source is applied as-purchased and contains no more than 0.016 kg organic HAP per kg coating material or 0.08 kg organic HAP per kg coating solids.

**(c) *As-applied “compliant” coating materials.*** If you comply by using coating materials that meet the emission standards in [§ 63.3320\(b\)\(2\)](#) or [\(3\)](#) as-applied, you must demonstrate compliance by following one of the procedures in [paragraphs \(c\)\(1\)](#) through [\(4\)](#) of this section. Compliance is determined in accordance with [paragraph \(c\)\(5\)](#) of this section.

(1) ***Each coating material as-applied meets the mass fraction of coating material standard*** ([§ 63.3320\(b\)\(2\)](#)). You must demonstrate that each coating material applied at an existing affected source during the month contains no more than 0.04 kg organic HAP per kg coating material applied, and each coating material applied at a new affected source contains no more than 0.016 kg organic HAP per kg coating material applied as determined in accordance with [paragraphs \(c\)\(1\)\(i\)](#) and [\(ii\)](#) of this section. You must calculate the as-applied organic HAP content of as-purchased coating materials which are reduced, thinned, or diluted prior to application.

(i) Determine the organic HAP content or volatile organic content of each coating material applied on an as-purchased basis in accordance with [§ 63.3360\(c\)](#).

(ii) Calculate the as-applied organic HAP content of each coating material using Equation 4:

$$C_{ahi} = \frac{\left( C_{hi}M_i + \sum_{j=1}^q C_{hij}M_{ij} \right)}{M_i + \sum_{j=1}^q M_{ij}}$$

Equation 4

Where:

$C_{ahi}$  = Monthly average, as-applied, organic HAP content of coating material, i, expressed as a mass fraction, kg/kg.

$C_{hi}$  = Organic HAP content of coating material, i, as-purchased, expressed as a mass fraction, kg/kg.

$M_i$  = Mass of as-purchased coating material, i, applied in a month, kg.

$q$  = number of different materials added to the coating material.

$C_{hij}$  = Organic HAP content of material, j, added to as-purchased coating material, i, expressed as a mass fraction, kg/kg.

$M_{ij}$  = Mass of material, j, added to as-purchased coating material, i, in a month, kg. or calculate the as-applied volatile organic content of each coating material using Equation 5:

$$C_{avi} = \frac{\left( C_{vi}M_i + \sum_{j=1}^q C_{vij}M_{ij} \right)}{M_i + \sum_{j=1}^q M_{ij}}$$

Equation 5

Where:

$C_{avi}$  = Monthly average, as-applied, volatile organic content of coating material, i, expressed as a mass fraction, kg/kg.

$C_{vi}$  = Volatile organic content of coating material, i, expressed as a mass fraction, kg/kg.

$M_i$  = Mass of as-purchased coating material, i, applied in a month, kg.

$q$  = Number of different materials added to the coating material.

$C_{vij}$  = Volatile organic content of material, j, added to as-purchased coating material, i, expressed as a mass fraction, kg/kg.

$M_{ij}$  = Mass of material, j, added to as-purchased coating material, i, in a month, kg.

(2) *Each coating material as-applied meets the mass fraction of coating solids standard ([§ 63.3320\(b\)\(3\)](#))*. You must demonstrate that each coating material applied at an existing affected

source contains no more than 0.20 kg of organic HAP per kg of coating solids applied and each coating material applied at a new affected source contains no more than 0.08 kg of organic HAP per kg of coating solids applied. You must demonstrate compliance in accordance with [paragraphs \(c\)\(2\)\(i\) and \(ii\)](#) of this section.

(i) Determine the as-applied coating solids content of each coating material following the procedure in [§ 63.3360\(d\)](#). You must calculate the as-applied coating solids content of coating materials which are reduced, thinned, or diluted prior to application, using Equation 6:

$$C_{asi} = \frac{\left( C_{si}M_i + \sum_{j=1}^q C_{sij}M_{ij} \right)}{M_i + \sum_{j=1}^q M_{ij}}$$

Equation 6

Where:

$C_{si}$  = Coating solids content of coating material, i, expressed as a mass fraction, kg/kg.

$M_i$  = Mass of as-purchased coating material, i, applied in a month, kg.

$q$  = Number of different materials added to the coating material.

$C_{sij}$  = Coating solids content of material, j, added to as-purchased coating material, i, expressed as a mass-fraction, kg/kg.

$M_{ij}$  = Mass of material, j, added to as-purchased coating material, i, in a month, kg.

(ii) Calculate the as-applied organic HAP to coating solids ratio using Equation 7:

$$H_{si} = \frac{C_{ahi}}{C_{asi}}$$

Equation 7

Where:

$H_{si}$  = As-applied, organic HAP to coating solids ratio of coating material, i.

$C_{ahi}$  = Monthly average, as-applied, organic HAP content of coating material, i, expressed as a mass fraction, kg/kg.

$C_{asi}$  = Monthly average, as-applied, coating solids content of coating material, i, expressed as a mass fraction, kg/kg.

**(3) *Monthly average organic HAP content of all coating materials as-applied is less than the mass percent limit*** ([§ 63.3320\(b\)\(2\)](#)). Demonstrate that the monthly average as-applied organic HAP content of all coating materials applied at an existing affected source is less than 0.04 kg organic HAP per kg of coating material applied, and all coating materials applied at a new



affected source are less than 0.016 kg organic HAP per kg of coating material applied, as determined by Equation 8:

$$H_L = \frac{\sum_{i=1}^p C_{hi}M_i + \sum_{j=1}^q C_{hij}M_{ij} - M_{vret}}{\sum_{i=1}^p M_i + \sum_{j=1}^q M_{ij}}$$

Equation 8

Where:

$H_L$  = Monthly average, as-applied, organic HAP content of all coating materials applied, expressed as kg organic HAP per kg of coating material applied, kg/kg.

$p$  = Number of different coating materials applied in a month.

$C_{hi}$  = Organic HAP content of coating material,  $i$ , as-purchased, expressed as a mass fraction, kg/kg.

$M_i$  = Mass of as-purchased coating material,  $i$ , applied in a month, kg.

$q$  = Number of different materials added to the coating material.

$C_{hij}$  = Organic HAP content of material,  $j$ , added to as-purchased coating material,  $i$ , expressed as a mass fraction, kg/kg.

$M_{ij}$  = Mass of material,  $j$ , added to as-purchased coating material,  $i$ , in a month, kg.

$M_{vret}$  = Mass of volatile matter retained in the coated web after curing or drying, or otherwise not emitted to the atmosphere, kg. The value of this term will be zero in all cases except where you choose to take into account the volatile matter retained in the coated web or otherwise not emitted to the atmosphere for the compliance demonstration procedures in [§ 63.3370](#).

**(4) *Monthly average organic HAP content of all coating materials as-applied is less than the mass fraction of coating solids limit (§ 63.3320(b)(3))*.** Demonstrate that the monthly average as-applied organic HAP content on the basis of coating solids applied of all coating materials applied at an existing affected source is less than 0.20 kg organic HAP per kg coating solids applied, and all coating materials applied at a new affected source are less than 0.08 kg organic HAP per kg coating solids applied, as determined by Equation 9:

$$H_S = \frac{\sum_{i=1}^p C_{hi}M_i + \sum_{j=1}^q C_{hij}M_{ij} - M_{vret}}{\sum_{i=1}^p C_{si}M_i + \sum_{j=1}^q C_{sij}M_{ij}}$$

Equation 9

Where:

$H_s$  = Monthly average, as-applied, organic HAP to coating solids ratio, kg organic HAP/kg coating solids applied.

$p$  = Number of different coating materials applied in a month.

$C_{hi}$  = Organic HAP content of coating material,  $i$ , as-purchased, expressed as a mass fraction, kg/kg.

$M_i$  = Mass of as-purchased coating material,  $i$ , applied in a month, kg.

$q$  = Number of different materials added to the coating material.

$C_{hij}$  = Organic HAP content of material,  $j$ , added to as-purchased coating material,  $i$ , expressed as a mass fraction, kg/kg.

$M_{ij}$  = Mass of material,  $j$ , added to as-purchased coating material,  $i$ , in a month, kg.

$M_{vret}$  = Mass of volatile matter retained in the coated web after curing or drying, or otherwise not emitted to the atmosphere, kg. The value of this term will be zero in all cases except where you choose to take into account the volatile matter retained in the coated web or otherwise not emitted to the atmosphere for the compliance demonstration procedures in [§ 63.3370](#).

$C_{si}$  = Coating solids content of coating material,  $i$ , expressed as a mass fraction, kg/kg.

$C_{sij}$  = Coating solids content of material,  $j$ , added to as-purchased coating material,  $i$ , expressed as a mass-fraction, kg/kg.

(5) The affected source is in compliance with emission standards in [§ 63.3320\(b\)\(2\)](#) or [\(3\)](#) if:

(i) The organic HAP content of each coating material as-applied at an existing affected source is no more than 0.04 kg organic HAP per kg coating material or 0.2 kg organic HAP per kg coating solids, and the organic HAP content of each coating material as-applied at a new affected source contains no more than 0.016 kg organic HAP per kg coating material or 0.08 kg organic HAP per kg coating solids; or

(ii) The monthly average organic HAP content of all as-applied coating materials at an existing affected source are no more than 0.04 kg organic HAP per kg coating material or 0.2 kg organic HAP per kg coating solids, and the monthly average organic HAP content of all as-applied coating materials at a new affected source is no more than 0.016 kg organic HAP per kg coating material or 0.08 kg organic HAP per kg coating solids.

(d) **Monthly allowable organic HAP applied.** Demonstrate that the total monthly organic HAP applied as determined by Equation 10 is less than the calculated equivalent allowable organic HAP as determined by Equation 17 or 18 in [paragraph \(m\)](#) of this section:

$$H_m = \sum_{i=1}^p C_{hi} M_i + \sum_{j=1}^q C_{hij} M_j - M_{vret}$$

Equation 10

Where:

$H_m$  = Total monthly organic HAP applied, kg.

$p$  = Number of different coating materials applied in a month.

$C_{hi}$  = Organic HAP content of coating material,  $i$ , as-purchased, expressed as a mass fraction, kg/kg.

$M_i$  = Mass of as-purchased coating material,  $i$ , applied in a month, kg.

$q$  = Number of different materials added to the coating material.

$C_{hij}$  = Organic HAP content of material,  $j$ , added to as-purchased coating material,  $i$ , expressed as a mass fraction, kg/kg.

$M_{ij}$  = Mass of material,  $j$ , added to as-purchased coating material,  $i$ , in a month, kg.

$M_{vret}$  = Mass of volatile matter retained in the coated web after curing or drying, or otherwise not emitted to the atmosphere, kg. The value of this term will be zero in all cases except where you choose to take into account the volatile matter retained in the coated web or otherwise not emitted to the atmosphere for the compliance demonstration procedures in [§ 63.3370](#).

(e) ***Accounting for volatile matter retained in the coated web or otherwise not emitted.*** If you choose to use the equation in [§ 63.3360\(g\)](#) to take into account volatile organic matter that is retained in the coated web or otherwise not emitted, you must identify each group of similar products that can utilize each site- and product-specific emission factor. Details regarding the test methods and calculations are provided in [§ 63.3360\(g\)](#).

(f) ***Capture and control to reduce emissions to no more than allowable limit (§ 63.3320(b)(1)).*** Operate a capture system and control device and demonstrate an overall organic HAP control efficiency of at least 95 percent at an existing affected source and at least 98 percent at a new affected source for each month, or operate a capture system and oxidizer so that an outlet organic HAP concentration of no greater than 20 ppmv on a dry basis is achieved as long as the capture efficiency is 100 percent as detailed in [§ 63.3320\(b\)\(4\)](#). Unless one of the cases described in [paragraph \(f\)\(1\), \(2\), or \(3\)](#) of this section applies to the affected source, you must either demonstrate compliance in accordance with the procedure in [paragraph \(i\)](#) of this section when emissions from the affected source are controlled by a solvent recovery device, or the procedure in [paragraph \(l\)](#) of this section when emissions are controlled by an oxidizer or demonstrate compliance for a web coating line by operating each capture system and each control device and continuous parameter monitoring according to the procedures in [paragraph \(k\)](#) of this section.

(1) If the affected source has only always-controlled work stations and operates more than one capture system or more than one control device, you must demonstrate compliance in accordance with the provisions of either [paragraph \(o\)](#) or [\(q\)](#) of this section.

(2) If the affected source operates one or more never-controlled work stations or one or more intermittently-controlled work stations, you must demonstrate compliance in accordance with the provisions of [paragraph \(o\)](#) of this section.

(3) An alternative method of demonstrating compliance with [§ 63.3320\(b\)\(1\)](#) is the installation of a PTE around the web coating line that achieves 100 percent capture efficiency and ventilation of all organic HAP emissions from the total enclosure to an oxidizer with an outlet organic HAP concentration of no greater than 20 ppmv on a dry basis. If this method is selected, you must demonstrate compliance by following the procedures in [paragraphs \(f\)\(3\)\(i\)](#) and [\(ii\)](#) of this section. Compliance is determined according to [paragraph \(f\)\(3\)\(iii\)](#) of this section.

(i) Demonstrate that a total enclosure is installed. An enclosure that meets the requirements in [§ 63.3360\(f\)\(1\)](#) will be considered a total enclosure.

(ii) Determine the organic HAP concentration at the outlet of your total enclosure using the procedures in [paragraph \(f\)\(3\)\(ii\)\(A\)](#) or [\(B\)](#) of this section.

(A) Determine the control device efficiency using Equation 2 of [§ 63.3360](#) and the applicable test methods and procedures specified in [§ 63.3360\(e\)](#).

(B) Use a CEMS to determine the organic HAP emission rate according to [paragraphs \(j\)\(2\)\(i\)](#) through [\(x\)](#) of this section.

(iii) You are in compliance if the installation of a total enclosure is demonstrated and the organic HAP concentration at the outlet of the incinerator is demonstrated to be no greater than 20 ppmv on a dry basis.

(g) ***Capture and control to achieve mass fraction of coating solids applied limit*** ([§ 63.3320\(b\)\(3\)](#)). Operate a capture system and control device and limit the organic HAP emission rate from an existing affected source to no more than 0.20 kg organic HAP emitted per kg coating solids applied, and from a new affected source to no more than 0.08 kg organic HAP emitted per kg coating solids applied as determined on a monthly average as-applied basis. If the affected source operates more than one capture system, more than one control device, one or more never-controlled work stations, or one or more intermittently-controlled work stations, then you must demonstrate compliance in accordance with the provisions of [paragraph \(o\)](#) of this section. Otherwise, you must demonstrate compliance following the procedure in [paragraph \(j\)](#) of this section when emissions from the affected source are controlled by a solvent recovery device or the procedure in [paragraph \(l\)](#) of this section when emissions are controlled by an oxidizer.

(h) ***Capture and control to achieve mass fraction limit*** ([§ 63.3320\(b\)\(2\)](#)). Operate a capture system and control device and limit the organic HAP emission rate to no more than 0.04 kg organic HAP emitted per kg coating material applied at an existing affected source, and no more than 0.016 kg organic HAP emitted per kg coating material applied at a new affected source as

determined on a monthly average as-applied basis. If the affected source operates more than one capture system, more than one control device, one or more never-controlled work stations, or one or more intermittently-controlled work stations, then you must demonstrate compliance in accordance with the provisions of [paragraph \(o\)](#) of this section. Otherwise, you must demonstrate compliance following the procedure in [paragraph \(j\)](#) of this section when emissions from the affected source are controlled by a solvent recovery device or the procedure in [paragraph \(l\)](#) of this section when emissions are controlled by an oxidizer.

(i) ***Capture and control to achieve allowable emission rate.*** Operate a capture system and control device and limit the monthly organic HAP emissions to less than the allowable emissions as calculated in accordance with [paragraph \(m\)](#) of this section. If the affected source operates more than one capture system, more than one control device, one or more never-controlled work stations, or one or more intermittently-controlled work stations, then you must demonstrate compliance in accordance with the provisions of [paragraph \(o\)](#) of this section. Otherwise, the owner or operator must demonstrate compliance following the procedure in [paragraph \(j\)](#) of this section when emissions from the affected source are controlled by a solvent recovery device or the procedure in [paragraph \(l\)](#) of this section when emissions are controlled by an oxidizer.

(j) ***Solvent recovery device compliance demonstration.*** If you use a solvent recovery device to control emissions, you must show compliance by following the procedures in either [paragraph \(j\)\(1\)](#) or [\(2\)](#) of this section:

(1) ***Liquid-liquid material balance.*** Perform a monthly liquid-liquid material balance as specified in [paragraphs \(j\)\(1\)\(i\)](#) through [\(v\)](#) of this section and use the applicable equations in [paragraphs \(j\)\(1\)\(vi\)](#) through [\(ix\)](#) of this section to convert the data to units of the selected compliance option in [paragraphs \(f\)](#) through [\(i\)](#) of this section. Compliance is determined in accordance with [paragraph \(j\)\(1\)\(x\)](#) of this section.

(i) Determine the mass of each coating material applied on the web coating line or group of web coating lines controlled by a common solvent recovery device during the month.

(ii) If demonstrating compliance on the basis of organic HAP emission rate based on coating solids applied, organic HAP emission rate based on coating material applied, or emission of less than the calculated allowable organic HAP, determine the organic HAP content of each coating material as-applied during the month following the procedure in [§ 63.3360\(c\)](#).

(iii) Determine the volatile organic content of each coating material as-applied during the month following the procedure in [§ 63.3360\(d\)](#).

(iv) If demonstrating compliance on the basis of organic HAP emission rate based on coating solids applied or emission of less than the calculated allowable organic HAP, determine the coating solids content of each coating material applied during the month following the procedure in [§ 63.3360\(d\)](#).

(v) Determine and monitor the amount of volatile organic matter recovered for the month according to the procedures in [§ 63.3350\(d\)](#).

(vi) **Recovery efficiency.** Calculate the volatile organic matter collection and recovery efficiency using Equation 11:

$$R_v = \frac{M_{vr} + M_{vret}}{\sum_{i=1}^p C_{vi} M_i + \sum_{j=1}^q C_{vij} M_{ij}} \times 100$$

Equation 11

Where:

$R_v$  = Organic volatile matter collection and recovery efficiency, percent.

$M_{vr}$  = Mass of volatile matter recovered in a month, kg.

$M_{vret}$  = Mass of volatile matter retained in the coated web after curing or drying, or otherwise not emitted to the atmosphere, kg. The value of this term will be zero in all cases except where you choose to take into account the volatile matter retained in the coated web or otherwise not emitted to the atmosphere for the compliance demonstration procedures in this section.

$p$  = Number of different coating materials applied in a month.

$C_{vi}$  = Volatile organic content of coating material,  $i$ , expressed as a mass fraction, kg/kg.

$M_i$  = Mass of as-purchased coating material,  $i$ , applied in a month, kg.

$q$  = Number of different materials added to the coating material.

$C_{vij}$  = Volatile organic content of material,  $j$ , added to as-purchased coating material,  $i$ , expressed as a mass fraction, kg/kg.

$M_{ij}$  = Mass of material,  $j$ , added to as-purchased coating material,  $i$ , in a month, kg.

(vii) **Organic HAP emitted.** Calculate the organic HAP emitted during the month using Equation 12:

$$H_e = \left[ 1 - \frac{R_v}{100} \right] \left[ \sum_{i=1}^p C_{hi} M_i + \sum_{j=1}^q C_{hij} M_{ij} - M_{vret} \right]$$

Equation 12

Where:

$H_e$  = Total monthly organic HAP emitted, kg.

$R_v$  = Organic volatile matter collection and recovery efficiency, percent.

$p$  = Number of different coating materials applied in a month.

$C_{hi}$  = Organic HAP content of coating material, i, as-purchased, expressed as a mass fraction, kg/kg.

$M_i$  = Mass of as-purchased coating material, i, applied in a month, kg.

$q$  = Number of different materials added to the coating material.

$C_{hij}$  = Organic HAP content of material, j, added to as-purchased coating material, i, expressed as a mass fraction, kg/kg.

$M_{ij}$  = Mass of material, j, added to as-purchased coating material, i, in a month, kg.

$M_{vret}$  = Mass of volatile matter retained in the coated web after curing or drying, or otherwise not emitted to the atmosphere, kg. The value of this term will be zero in all cases except where you choose to take into account the volatile matter retained in the coated web or otherwise not emitted to the atmosphere for the compliance demonstration procedures in this section.

(viii) **Organic HAP emission rate based on coating solids applied.** Calculate the organic HAP emission rate based on coating solids applied using Equation 13:

$$L = \frac{H_e}{\sum_{i=1}^p C_{si}M_i + \sum_{j=1}^q C_{sij}M_{ij}}$$

Equation 13

Where:

$L$  = Mass organic HAP emitted per mass of coating solids applied, kg/kg.

$H_e$  = Total monthly organic HAP emitted, kg.

$p$  = Number of different coating materials applied in a month.

$C_{si}$  = Coating solids content of coating material, i, expressed as a mass fraction, kg/kg.

$M_i$  = Mass of as-purchased coating material, i, applied in a month, kg.

$q$  = Number of different materials added to the coating material.

$C_{sij}$  = Coating solids content of material, j, added to as-purchased coating material, i, expressed as a mass-fraction, kg/kg.

$M_{ij}$  = Mass of material, j, added to as-purchased coating material, i, in a month, kg.

(ix) **Organic HAP emission rate based on coating materials applied.** Calculate the organic HAP emission rate based on coating material applied using Equation 14:

$$S = \frac{H_e}{\sum_{i=1}^p M_i + \sum_{j=1}^q M_{ij}}$$

Equation 14

Where:

S = Mass organic HAP emitted per mass of material applied, kg/kg.

H<sub>e</sub> = Total monthly organic HAP emitted, kg.

p = Number of different coating materials applied in a month.

M<sub>i</sub> = Mass of as-purchased coating material, i, applied in a month, kg.

q = Number of different materials added to the coating material.

M<sub>ij</sub> = Mass of material, j, added to as-purchased coating material, i, in a month, kg.

(x) You are in compliance with the emission standards in [§ 63.3320\(b\)](#) if:

(A) The volatile organic matter collection and recovery efficiency is 95 percent or greater at an existing affected source and 98 percent or greater at a new affected source; or

(B) The organic HAP emission rate based on coating solids applied is no more than 0.20 kg organic HAP per kg coating solids applied at an existing affected source and no more than 0.08 kg organic HAP per kg coating solids applied at a new affected source; or

(C) The organic HAP emission rate based on coating material applied is no more than 0.04 kg organic HAP per kg coating material applied at an existing affected source and no more than 0.016 kg organic HAP per kg coating material applied at a new affected source; or

(D) The organic HAP emitted during the month is less than the calculated allowable organic HAP as determined using [paragraph \(m\)](#) of this section.

**(2) *Continuous emission monitoring of capture system and control device performance.***

Demonstrate initial compliance through a performance test on capture efficiency and continuing compliance through continuous emission monitors and continuous monitoring of capture system operating parameters following the procedures in [paragraphs \(j\)\(2\)\(i\)](#) through [\(vii\)](#) of this section. Use the applicable equations specified in [paragraphs \(j\)\(2\)\(viii\)](#) through [\(x\)](#) of this section to convert the monitoring and other data into units of the selected compliance option in [paragraphs \(f\)](#) through [\(i\)](#) of this section. Compliance is determined in accordance with [paragraph \(j\)\(2\)\(xi\)](#) of this section.

(i) ***Control device efficiency.*** Continuously monitor the gas stream entering and exiting the control device to determine the total organic volatile matter mass flow rate (*e.g.*, by determining the concentration of the vent gas in grams per cubic meter and the volumetric flow rate in cubic



meters per second such that the total organic volatile matter mass flow rate in grams per second can be calculated) such that the control device efficiency of the control device can be calculated for each month using Equation 2 of [§ 63.3360](#).

(ii) **Capture efficiency monitoring.** Whenever a web coating line is operated, continuously monitor the operating parameters established in accordance with [§ 63.3350\(f\)](#) to ensure capture efficiency.

(iii) Determine the percent capture efficiency in accordance with [§ 63.3360\(f\)](#).

(iv) **Control efficiency.** Calculate the overall organic HAP control efficiency achieved for each month using Equation 15:

$$R = \frac{(E)(CE)}{100}$$

Equation 15

Where:

R = Overall organic HAP control efficiency, percent.

E = Organic volatile matter control efficiency of the control device, percent.

CE = Organic volatile matter capture efficiency of the capture system, percent.

(v) If demonstrating compliance on the basis of organic HAP emission rate based on coating solids applied, organic HAP emission rate based on coating materials applied, or emission of less than the calculated allowable organic HAP, determine the mass of each coating material applied on the web coating line or group of web coating lines controlled by a common control device during the month.

(vi) If demonstrating compliance on the basis of organic HAP emission rate based on coating solids applied, organic HAP emission rate based on coating material applied, or emission of less than the calculated allowable organic HAP, determine the organic HAP content of each coating material as-applied during the month following the procedure in [§ 63.3360\(c\)](#).

(vii) If demonstrating compliance on the basis of organic HAP emission rate based on coating solids applied or emission of less than the calculated allowable organic HAP, determine the coating solids content of each coating material as-applied during the month following the procedure in [§ 63.3360\(d\)](#).

(viii) **Organic HAP emitted.** Calculate the organic HAP emitted during the month for each month using Equation 16:

$$H_e = (1 - R) \left( \sum_{i=1}^P C_{shi} M_i \right) - M_{wet}$$

Equation 16

Where:

$H_e$  = Total monthly organic HAP emitted, kg.

$R$  = Overall organic HAP control efficiency, percent.

$p$  = Number of different coating materials applied in a month.

$C_{ahi}$  = Monthly average, as-applied, organic HAP content of coating material,  $i$ , expressed as a mass fraction, kg/kg.

$M_i$  = Mass of as-purchased coating material,  $i$ , applied in a month, kg.

$M_{vret}$  = Mass of volatile matter retained in the coated web after curing or drying, or otherwise not emitted to the atmosphere, kg. The value of this term will be zero in all cases except where you choose to take into account the volatile matter retained in the coated web or otherwise not emitted to the atmosphere for the compliance demonstration procedures in this section.

(ix) ***Organic HAP emission rate based on coating solids applied.*** Calculate the organic HAP emission rate based on coating solids applied using Equation 13 of this section.

(x) ***Organic HAP emission rate based on coating materials applied.*** Calculate the organic HAP emission rate based on coating material applied using Equation 14 of this section.

(xi) ***Compare actual performance to the performance required by compliance option.*** The affected source is in compliance with the emission standards in [§ 63.3320\(b\)](#) for each month if the capture system is operated such that the average capture system operating parameter is greater than or less than (as appropriate) the operating parameter value established in accordance with [§ 63.3350\(f\)](#); and

(A) The organic volatile matter collection and recovery efficiency is 95 percent or greater at an existing affected source and 98 percent or greater at a new affected source; or

(B) The organic HAP emission rate based on coating solids applied is no more than 0.20 kg organic HAP per kg coating solids applied at an existing affected source and no more than 0.08 kg organic HAP per kg coating solids applied at a new affected source; or

(C) The organic HAP emission rate based on coating material applied is no more than 0.04 kg organic HAP per kg coating material applied at an existing affected source and no more than 0.016 kg organic HAP per kg coating material applied at a new affected source; or

(D) The organic HAP emitted during the month is less than the calculated allowable organic HAP as determined using [paragraph \(m\)](#) of this section.

(k) ***Capture and control system compliance demonstration procedures using a CPMS.*** If you use an add-on control device, you must demonstrate initial compliance for each capture system and each control device through performance tests and demonstrate continuing compliance

through continuous monitoring of capture system and control device operating parameters as specified in [paragraphs \(k\)\(1\) through \(3\)](#) of this section. Compliance is determined in accordance with [paragraph \(k\)\(4\)](#) or [\(k\)\(5\)](#) of this section.

(1) Determine the control device destruction or removal efficiency using the applicable test methods and procedures in [§ 63.3360\(e\)](#).

(2) Determine the emission capture efficiency in accordance with [§ 63.3360\(f\)](#).

(3) Whenever a web coating line is operated, continuously monitor the operating parameters established according to [§ 63.3350\(e\)](#) and [\(f\)](#).

(4) **No operating limit deviations.** You are in compliance with the emission standards in [§ 63.3320\(b\)](#) if the thermal oxidizer is operated such that the average combustion temperature does not fall more than 50 degrees Fahrenheit below the temperature established in accordance with [§ 63.3360\(e\)\(3\)\(i\)](#) for each 3-hour period or if the catalytic oxidizer is operating such that the three-hour average temperature difference across the bed does not fall more than 80 percent of the average temperature established in accordance with [§ 63.3360\(e\)\(3\)\(ii\)](#) and the minimum temperature is always 50 degrees Fahrenheit above the catalyst's ignition temperature, or the catalytic oxidizer average combustion temperature does not fall more than 50 °F below the temperature established in accordance with [§ 63.3360\(e\)\(3\)\(ii\)](#) for each 3-hour period, and the capture system operating parameter is operated at an average value greater than or less than (as appropriate) the operating parameter value established in accordance with [§ 63.3350\(f\)](#); and

(i) The overall organic HAP control efficiency is 95 percent or greater at an existing affected source and 98 percent or greater at a new affected source; or

(ii) The organic HAP emission rate based on coating solids applied is no more than 0.20 kg organic HAP per kg coating solids applied at an existing affected source and no more than 0.08 kg organic HAP per kg coating solids applied at a new affected source; or

(iii) The organic HAP emission rate based on coating material applied is no more than 0.04 kg organic HAP per kg coating material applied at an existing affected source and no more than 0.016 kg organic HAP per kg coating material applied at a new affected source; or

(iv) The organic HAP emitted during the month is less than the calculated allowable organic HAP as determined using [paragraph \(m\)](#) of this section.

(5) **Operating limit deviations.** If one or more operating limit deviations occurred during the monthly averaging period, compliance with the emission standards in [§ 63.3320\(b\)](#) is determined by either assuming no control of emissions or by estimating the emissions using a control destruction efficiency curve during each 3-hour period that was a deviation. You are in compliance with the emission standards in [§ 63.3320\(b\)](#) if, including the periods of deviations:

(i) The overall organic HAP control efficiency is 95 percent or greater at an existing affected source and 98 percent or greater at a new affected source; or

(ii) The organic HAP emission rate based on coating solids applied is no more than 0.20 kg organic HAP per kg coating solids applied at an existing affected source and no more than 0.08 kg organic HAP per kg coating solids applied at a new affected source; or

(iii) The organic HAP emission rate based on coating material applied is no more than 0.04 kg organic HAP per kg coating material applied at an existing affected source and no more than 0.016 kg organic HAP per kg coating material applied at a new affected source; or

(iv) The organic HAP emitted during the month is less than the calculated allowable organic HAP as determined using [paragraph \(m\)](#) of this section.

(1) ***Oxidizer compliance demonstration procedures.*** If you use an oxidizer to control emissions to comply with this subpart, you must show compliance by following the procedures in [paragraph \(1\)\(1\)](#) of this section. Use the applicable equations specified in [paragraph \(1\)\(2\)](#) of this section to convert the monitoring and other data into units of the selected compliance option in [paragraph \(f\)](#) through [\(i\)](#) of this section. Compliance is determined in accordance with [paragraph \(1\)\(3\)](#) or [\(1\)\(4\)](#) of this section.

(1) Demonstrate initial compliance through performance tests of capture efficiency and control device efficiency and continuing compliance through continuous monitoring of capture system and control device operating parameters as specified in [paragraphs \(1\)\(1\)\(i\)](#) through [\(vi\)](#) of this section:

(i) Determine the oxidizer destruction efficiency using the procedure in [§ 63.3360\(e\)](#).

(ii) Determine the capture system capture efficiency in accordance with [§ 63.3360\(f\)](#).

(iii) ***Capture and control efficiency monitoring.*** Whenever a web coating line is operated, continuously monitor the operating parameters established in accordance with [§ 63.3350\(e\)](#) and [\(f\)](#) to ensure capture and control efficiency.

(iv) If demonstrating compliance on the basis of organic HAP emission rate based on coating solids applied, organic HAP emission rate based on coating materials applied, or emission of less than the calculated allowable organic HAP, determine the mass of each coating material applied on the web coating line or group of web coating lines controlled by a common oxidizer during the month.

(v) If demonstrating compliance on the basis of organic HAP emission rate based on coating solids applied, organic HAP emission rate based on coating material applied, or emission of less than the calculated allowable organic HAP, determine the organic HAP content of each coating material as-applied during the month following the procedure in [§ 63.3360\(c\)](#).

(vi) If demonstrating compliance on the basis of organic HAP emission rate based on coating solids applied or emission of less than the calculated allowable organic HAP, determine the coating solids content of each coating material applied during the month following the procedure in [§ 63.3360\(d\)](#).

(2) Convert the information obtained under [paragraph \(q\)\(1\)](#) of this section into the units of the selected compliance option using the calculation procedures specified in [paragraphs \(1\)\(2\)\(i\)](#) through [\(iv\)](#) of this section.

(i) **Control efficiency.** Calculate the overall organic HAP control efficiency achieved using Equation 15.

(ii) **Organic HAP emitted.** Calculate the organic HAP emitted during the month using Equation 16.

(iii) **Organic HAP emission rate based on coating solids applied.** Calculate the organic HAP emission rate based on coating solids applied for each month using Equation 13.

(iv) **Organic HAP emission rate based on coating materials applied.** Calculate the organic HAP emission rate based on coating material applied using Equation 14.

(3) **No operating limit deviations.** You are in compliance with the emission standards in [§ 63.3320\(b\)](#) if the oxidizer is operated such that the average combustion temperature does not fall more than 50 degrees Fahrenheit below the temperature established in accordance with [§ 63.3360\(e\)\(3\)\(i\)](#) for each 3-hour period, or the catalytic oxidizer average combustion temperature does not fall more than 50 degrees Fahrenheit below the temperature established in accordance with [§ 63.3360\(e\)\(3\)\(ii\)](#) for each 3-hour period or the temperature difference across the bed does not fall more than 80 percent of the average temperature established in accordance with [§ 63.3360\(e\)\(3\)\(ii\)](#) and the minimum temperature is always 50 degrees Fahrenheit above the catalyst's ignition temperature, and the capture system operating parameter is operated at an average value greater than or less than (as appropriate) the operating parameter value established in accordance with [§ 63.3350\(f\)](#); and

(i) The overall organic HAP control efficiency is 95 percent or greater at an existing affected source and 98 percent or greater at a new affected source; or

(ii) The organic HAP emission rate based on coating solids applied is no more than 0.20 kg organic HAP per kg coating solids applied at an existing affected source and no more than 0.08 kg organic HAP per kg coating solids applied at a new affected source; or

(iii) The organic HAP emission rate based on coating material applied is no more than 0.04 kg organic HAP per kg coating material applied at an existing affected source and no more than 0.016 kg organic HAP per kg coating material applied at a new affected source; or

(iv) The organic HAP emitted during the month is less than the calculated allowable organic HAP as determined using [paragraph \(m\)](#) of this section.

(4) **Operating limit deviations.** If one or more operating limit deviations occurred during the monthly averaging period, compliance with the emission standards in [§ 63.3320\(b\)](#) is determined by assuming no control of emissions or by estimating the emissions using a control destruction efficiency curve during each 3-hour period that was a deviation. You are in compliance with the emission standards in [§ 63.3320\(b\)](#) if, including the periods of deviation:

(i) The overall organic HAP control efficiency is 95 percent or greater at an existing affected source and 98 percent or greater at a new affected source; or

(ii) The organic HAP emission rate based on coating solids applied is no more than 0.20 kg organic HAP per kg coating solids applied at an existing affected source and no more than 0.08 kg organic HAP per kg coating solids applied at a new affected source; or

(iii) The organic HAP emission rate based on coating material applied is no more than 0.04 kg organic HAP per kg coating material applied at an existing affected source and no more than 0.016 kg organic HAP per kg coating material applied at a new affected source; or

(iv) The organic HAP emitted during the month is less than the calculated allowable organic HAP as determined using [paragraph \(m\)](#) of this section.

(m) **Monthly allowable organic HAP emissions.** This paragraph provides the procedures and calculations for determining monthly allowable organic HAP emissions for use in demonstrating compliance in accordance with [paragraph \(d\)](#), [\(i\)](#), [\(j\)\(1\)\(x\)\(D\)](#), [\(j\)\(2\)\(xi\)\(D\)](#), or [\(l\)\(3\)\(iv\)](#) of this section. You will need to determine the amount of coating material applied at greater than or equal to 20 mass percent coating solids and the amount of coating material applied at less than 20 mass percent coating solids. The allowable organic HAP limit is then calculated based on coating material applied at greater than or equal to 20 mass percent coating solids complying with 0.2 kg organic HAP per kg coating solids at an existing affected source or 0.08 kg organic HAP per kg coating solids at a new affected source, and coating material applied at less than 20 mass percent coating solids complying with 4 mass percent organic HAP at an existing affected source and 1.6 mass-percent organic HAP at a new affected source as follows:

(1) Determine the as-purchased mass of each coating material applied each month.

(2) Determine the as-purchased coating solids content of each coating material applied each month in accordance with [§ 63.3360\(d\)\(1\)](#).

(3) Determine the as-purchased mass fraction of each coating material which was applied at 20 mass percent or greater coating solids content on an as-applied basis.

(4) Determine the total mass of each solvent, diluent, thinner, or reducer added to coating materials which were applied at less than 20 mass percent coating solids content on an as-applied basis each month.

(5) Calculate the monthly allowable organic HAP emissions using Equation 17 for an existing affected source:

$$H_a = 0.20 \left[ \sum_{i=1}^p M_i G_i C_{si} \right] + 0.04 \left[ \sum_{i=1}^p M_i (1 - G_i) + \sum_{j=1}^q M_{L_j} \right] \quad \text{Equation 17}$$

Where:

$H_a$  = Monthly allowable organic HAP emissions, kg.

$p$  = Number of different coating materials applied in a month.

$M_i$  = mass of as-purchased coating material,  $i$ , applied in a month, kg.

$G_i$  = Mass fraction of each coating material,  $i$ , which was applied at 20 mass percent or greater coating solids content, on an as-applied basis, kg/kg.

$C_{si}$  = Coating solids content of coating material,  $i$ , expressed as a mass fraction, kg/kg.

$q$  = Number of different materials added to the coating material.

$M_{L_j}$  = Mass of non-coating-solids-containing coating material,  $j$ , added to coating-solids-containing coating materials which were applied at less than 20 mass percent coating solids content, on an as-applied basis, in a month, kg.

or Equation 18 for a new affected source:

$$H_a = 0.08 \left[ \sum_{i=1}^p M_i G_i C_{si} \right] + 0.016 \left[ \sum_{i=1}^p M_i (1 - G_i) + \sum_{j=1}^q M_{L_j} \right] \quad \text{Equation 18}$$

Where:

$H_a$  = Monthly allowable organic HAP emissions, kg.

$p$  = Number of different coating materials applied in a month.

$M_i$  = Mass of as-purchased coating material,  $i$ , applied in a month, kg.

$G_i$  = Mass fraction of each coating material,  $i$ , which was applied at 20 mass percent or greater coating solids content, on an as-applied basis, kg/kg.

$C_{si}$  = Coating solids content of coating material,  $i$ , expressed as a mass fraction, kg/kg.

$q$  = Number of different materials added to the coating material.

$M_{Lj}$  = Mass of non-coating-solids-containing coating material, j, added to coating-solids-containing coating materials which were applied at less than 20 mass percent coating solids content, on an as-applied basis, in a month, kg.

(n) [Reserved]

(o) ***Combinations of capture and control.*** If you operate more than one capture system, more than one control device, one or more never-controlled work stations, or one or more intermittently-controlled work stations, you must calculate organic HAP emissions according to the procedures in [paragraphs \(o\)\(1\) through \(4\)](#) of this section, and use the calculation procedures specified in [paragraph \(o\)\(5\)](#) of this section to convert the monitoring and other data into units of the selected control option in [paragraphs \(f\) through \(i\)](#) of this section. Use the procedures specified in [paragraph \(o\)\(6\)](#) of this section to demonstrate compliance.

(1) ***Solvent recovery system using liquid-liquid material balance compliance demonstration.*** If you choose to comply by means of a liquid-liquid material balance for each solvent recovery system used to control one or more web coating lines, you must determine the organic HAP emissions for those web coating lines controlled by that solvent recovery system either:

(i) In accordance with [paragraphs \(j\)\(1\)\(i\) through \(iii\)](#) and [\(v\) through \(vii\)](#) of this section, if the web coating lines controlled by that solvent recovery system have only always-controlled work stations; or

(ii) In accordance with [paragraphs \(j\)\(1\)\(ii\), \(iii\), \(v\), and \(vi\)](#) and [\(p\)](#) of this section, if the web coating lines controlled by that solvent recovery system have one or more never-controlled or intermittently-controlled work stations.

(2) ***Solvent recovery system using performance test compliance demonstration and CEMS.*** To demonstrate compliance through an initial test of capture efficiency, continuous monitoring of a capture system operating parameter, and a CEMS on each solvent recovery system used to control one or more web coating lines, you must:

(i) For each capture system delivering emissions to that solvent recovery system, monitor the operating parameter established in accordance with [§ 63.3350\(f\)](#) to ensure capture system efficiency; and

(ii) Determine the organic HAP emissions for those web coating lines served by each capture system delivering emissions to that solvent recovery system either:

(A) In accordance with [paragraphs \(j\)\(2\)\(i\) through \(iii\), \(v\), \(vi\), and \(viii\)](#) of this section, if the web coating lines served by that capture and control system have only always-controlled work stations; or



(B) In accordance with [paragraphs \(j\)\(2\)\(i\) through \(iii\), \(vi\), and \(p\)](#) of this section, if the web coating lines served by that capture and control system have one or more never-controlled or intermittently-controlled work stations.

(3) **Oxidizer.** To demonstrate compliance through performance tests of capture efficiency and control device efficiency, continuous monitoring of capture system, and CPMS for control device operating parameters for each oxidizer used to control emissions from one or more web coating lines, you must:

(i) Monitor the operating parameter in accordance with [§ 63.3350\(e\)](#) to ensure control device efficiency; and

(ii) For each capture system delivering emissions to that oxidizer, monitor the operating parameter established in accordance with [§ 63.3350\(f\)](#) to ensure capture efficiency; and

(iii) Determine the organic HAP emissions for those web coating lines served by each capture system delivering emissions to that oxidizer either:

(A) In accordance with [paragraphs \(l\)\(1\)\(i\) through \(vi\)](#) of this section, if the web coating lines served by that capture and control system have only always-controlled work stations; or

(B) In accordance with [paragraphs \(l\)\(1\)\(i\) through \(iii\), \(v\), and \(p\)](#) of this section, if the web coating lines served by that capture and control system have one or more never-controlled or intermittently-controlled work stations.

(4) **Uncontrolled coating lines.** If you own or operate one or more uncontrolled web coating lines, you must determine the organic HAP applied on those web coating lines using Equation 10. The organic HAP emitted from an uncontrolled web coating line is equal to the organic HAP applied on that web coating line.

(5) Convert the information obtained under [paragraphs \(o\)\(1\) through \(4\)](#) of this section into the units of the selected compliance option using the calculation procedures specified in [paragraphs \(o\)\(5\)\(i\) through \(iv\)](#) of this section.

(i) **Organic HAP emitted.** Calculate the organic HAP emissions for the affected source for the month by summing all organic HAP emissions calculated according to [paragraphs \(o\)\(1\), \(o\)\(2\)\(ii\), \(o\)\(3\)\(iii\), and \(o\)\(4\)](#) of this section.

(ii) **Coating solids applied.** If demonstrating compliance on the basis of organic HAP emission rate based on coating solids applied or emission of less than the calculated allowable organic HAP, the owner or operator must determine the coating solids content of each coating material applied during the month following the procedure in [§ 63.3360\(d\)](#).

(iii) **Organic HAP emission rate based on coating solids applied.** Calculate the organic HAP emission rate based on coating solids applied for each month using Equation 13.

(iv) **Organic HAP based on materials applied.** Calculate the organic HAP emission rate based on material applied using Equation 14.

(6) **Compliance.** The affected source is in compliance with the emission standards in [§ 63.3320\(b\)](#) for the month if all operating parameters required to be monitored under [paragraphs \(o\)\(1\) through \(3\)](#) of this section were maintained at the values established under [§§ 63.3350 and 63.3360](#) and one of the standards in [paragraphs \(o\)\(6\)\(i\) through \(iv\)](#) of this section were met. If operating parameter deviations occurred, the affected source is in compliance with the emission standards in [§ 63.3320\(b\)](#) for the month if, assuming no control of emissions or by estimating the emissions using a control destruction efficiency curve for each 3-hour deviation period, one of the standards in [paragraphs \(6\)\(i\) through \(iv\)](#) of this section were met.

(i) The total mass of organic HAP emitted by the affected source based on coating solids applied is no more than 0.20 kg organic HAP per kg coating solids applied at an existing affected source and no more than 0.08 kg organic HAP per kg coating solids applied at a new affected source; or

(ii) The total mass of organic HAP emitted by the affected source based on material applied is no more than 0.04 kg organic HAP per kg material applied at an existing affected source and no more than 0.016 kg organic HAP per kg material applied at a new affected source; or

(iii) The total mass of organic HAP emitted by the affected source during the month is less than the calculated allowable organic HAP as determined using [paragraph \(m\)](#) of this section; or

(iv) The total mass of organic HAP emitted by the affected source was not more than 5 percent of the total mass of organic HAP applied for the month at an existing affected source and no more than 2 percent of the total mass of organic HAP applied for the month at a new affected source. The total mass of organic HAP applied by the affected source in the month must be determined using Equation 10.

(p) **Intermittently-controlled and never-controlled work stations.** If you have been expressly referenced to this paragraph by [paragraph \(o\)\(1\)\(ii\)](#), [\(o\)\(2\)\(ii\)\(B\)](#), or [\(o\)\(3\)\(iii\)\(B\)](#) of this section for calculation procedures to determine organic HAP emissions for your intermittently-controlled and never-controlled work stations, you must:

(1) Determine the sum of the mass of all coating materials as-applied on intermittently-controlled work stations operating in bypass mode and the mass of all coating materials as-applied on never-controlled work stations during the month.

(2) Determine the sum of the mass of all coating materials as-applied on intermittently-controlled work stations operating in a controlled mode and the mass of all coating materials applied on always-controlled work stations during the month.

(3) **Liquid-liquid material balance compliance demonstration.** For each web coating line or group of web coating lines for which you use the provisions of [paragraph \(o\)\(1\)\(ii\)](#) of this

section, you must calculate the organic HAP emitted during the month using Equation 19 of this section:

$$H_e = \left[ \sum_{i=1}^p M_{Ci} C_{ahi} \right] \left[ 1 - \frac{R_v}{100} \right] + \left[ \sum_{i=1}^p M_{Bi} C_{ahi} \right] - M_{vret} \quad \text{Equation 19}$$

Where:

$H_e$  = Total monthly organic HAP emitted, kg.

$p$  = Number of different coating materials applied in a month.

$M_{Ci}$  = Sum of the mass of coating material,  $i$ , as-applied on intermittently-controlled work stations operating in controlled mode and the mass of coating material,  $i$ , as-applied on always-controlled work stations, in a month, kg.

$C_{ahi}$  = Monthly average, as-applied, organic HAP content of coating material,  $i$ , expressed as a mass fraction, kg/kg.

$R_v$  = Organic volatile matter collection and recovery efficiency, percent.

$M_{Bi}$  = Sum of the mass of coating material,  $i$ , as-applied on intermittently-controlled work stations operating in bypass mode and the mass of coating material,  $i$ , as-applied on never-controlled work stations, in a month, kg.

$C_{ahi}$  = Monthly average, as-applied, organic HAP content of coating material,  $i$ , expressed as a mass fraction, kg/kg.

$M_{vret}$  = Mass of volatile matter retained in the coated web after curing or drying, or otherwise not emitted to the atmosphere, kg. The value of this term will be zero in all cases except where you choose to take into account the volatile matter retained in the coated web or otherwise not emitted to the atmosphere for the compliance demonstration procedures in this section.

(4) ***Performance test to determine capture efficiency and control device efficiency.*** For each web coating line or group of web coating lines for which you use the provisions of [paragraph \(o\)\(2\)\(ii\)\(B\)](#) or [\(o\)\(3\)\(iii\)\(B\)](#) of this section, you must calculate the organic HAP emitted during the month using Equation 20:

$$H_e = \left[ \sum_{i=1}^p M_{Ci} C_{ahi} \right] \left[ 1 - \frac{R}{100} \right] + \left[ \sum_{i=1}^p M_{Bi} C_{ahi} \right] - M_{vret} \quad \text{Equation 20}$$

Where:

$H_e$  = Total monthly organic HAP emitted, kg.

$p$  = Number of different coating materials applied in a month.

$M_{ci}$  = Sum of the mass of coating material, i, as-applied on intermittently-controlled work stations operating in controlled mode and the mass of coating material, i, as-applied on always-controlled work stations, in a month, kg.

$C_{ahi}$  = Monthly average, as-applied, organic HAP content of coating material, i, expressed as a mass fraction, kg/kg.

R = Overall organic HAP control efficiency, percent.

$M_{Bi}$  = Sum of the mass of coating material, i, as-applied on intermittently-controlled work stations operating in bypass mode and the mass of coating material, i, as-applied on never-controlled work stations, in a month, kg.

$C_{ahi}$  = Monthly average, as-applied, organic HAP content of coating material, i, expressed as a mass fraction, kg/kg.

$M_{vret}$  = Mass of volatile matter retained in the coated web after curing or drying, or otherwise not emitted to the atmosphere, kg. The value of this term will be zero in all cases except where you choose to take into account the volatile matter retained in the coated web or otherwise not emitted to the atmosphere for the compliance demonstration procedures in this section.

(q) ***Always-controlled work stations with more than one capture and control system.*** If you operate more than one capture system or more than one control device and only have always-controlled work stations, then you are in compliance with the emission standards in [§ 63.3320\(b\)\(1\)](#) for the month if for each web coating line or group of web coating lines controlled by a common control device:

(1) The volatile matter collection and recovery efficiency as determined by [paragraphs \(j\)\(1\)\(i\), \(iii\), \(v\), and \(vi\)](#) of this section is at least 95 percent at an existing affected source and at least 98 percent at a new affected source; or

(2) The overall organic HAP control efficiency as determined by [paragraphs \(j\)\(2\)\(i\) through \(iv\)](#) of this section for each web coating line or group of web coating lines served by that control device and a common capture system is at least 95 percent at an existing affected source and at least 98 percent at a new affected source; or

(3) The overall organic HAP control efficiency as determined by [paragraphs \(l\)\(1\)\(i\) through \(iii\) and \(l\)\(2\)\(i\)](#) of this section for each web coating line or group of web coating lines served by that control device and a common capture system is at least 95 percent at an existing affected source and at least 98 percent at a new affected source.

(r) ***Mass-balance approach.*** As an alternative to [§ 63.3370\(b\)](#) through [\(p\)](#), you may demonstrate monthly compliance using a mass-balance approach in accordance with this section, except for any month that you elect to meet the emission limitation in [§ 63.3320\(b\)\(4\)](#). The mass-balance approach should be performed as follows:

(1) Separately for each individual/grouping(s) of lines, you must sum the mass of organic HAP emitted during the month and divide by the corresponding total mass of all organic HAP applied on the lines, or total mass of coating materials applied on the lines, or total mass of coating solids applied on the lines, for the same period, in accordance with the emission limitation that you have elected at [§ 63.3320\(b\)\(1\)](#) through [\(3\)](#) for the month's demonstration. You may also choose to use volatile organic content as a surrogate for organic HAP for the compliance demonstration in accordance with [§ 63.3360\(d\)](#). You are required to include all emissions and inputs that occur during periods that each line or grouping of lines operates in accordance with the applicability criteria in [§ 63.3300](#).

(2) You must include all of the organic HAP emitted by your individual/grouping(s) of lines, as follows.

(i) You must record the mass of organic HAP or volatile organic content utilized at all work stations of all of your individually/grouping(s) of lines. You must additionally record the mass of all coating materials applied at these work stations if you are demonstrating compliance for the month with the emission limitation at [§ 63.3320\(b\)\(2\)](#) (the “coating materials” option). You must additionally record the mass of all coating solids applied at these work stations if you are demonstrating compliance for the month with the emission limitation at [§ 63.3320\(b\)\(3\)](#) (the “coating solids” option).

(ii) You must assume that all of the organic HAP input to all never-controlled work stations is emitted, unless you have determined an emission factor in accordance with [§ 63.3360\(g\)](#).

(iii) For all always-controlled work stations, you must assume that all of the organic HAP or volatile organic content is emitted, less the reductions provided by the corresponding capture system and control device, in accordance with the most recently measured capture and destruction efficiencies, or in accordance with the measured mass of volatile organic compounds (VOC) recovered for the month (*e.g.*, carbon control or condensers). You may account for organic HAP or volatile organic content retained in the coated web or otherwise not emitted if you have determined an emission factor in accordance with [§ 63.3360\(g\)](#).

(iv) For all intermittently-controlled work stations, you must assume that all of the organic HAP or volatile organic content is emitted during periods of no control. During periods of control, you must assume that all of the organic HAP or volatile organic content is emitted, less the reductions provided by the corresponding capture system and control device, in accordance with the most recently measured capture and destruction efficiencies, or in accordance with the measured mass of VOC recovered for the month (*e.g.*, carbon control or condensers). You may account for organic HAP or volatile organic content retained in the coated web or otherwise not emitted if you have determined an emission factor in accordance with [§ 63.3360\(g\)](#).

(v) You must record the organic HAP or volatile organic content input to all work stations of your individual/grouping(s) of lines and the mass of coating materials and/or solids applied, if

applicable, and determine corresponding emissions during all periods of operation, including malfunctions or startups and shutdowns of any web coating line or control device.

(3) You are in compliance with the emission standards in [§ 63.3320\(b\)](#) if each of your individual/grouping(s) of lines, meets one of the requirements in [paragraphs \(r\)\(3\)\(i\)](#) through [\(iii\)](#) of this section, as applicable. If operating parameter limit deviations occurred, including periods that the oxidizer control device(s), if any, operated at an average combustion temperature more than 50 degrees Fahrenheit below the temperature established in accordance with [§ 63.3360\(e\)](#), or the 3-hour average temperature difference across the catalyst bed at no less than 80 percent of this average temperature differential and the catalytic oxidizer maintained a minimum temperature 50 degrees Fahrenheit above the catalyst's ignition temperature, you are in compliance with the emission standards in [§ 63.3320\(b\)](#) for the month, if assuming no control of emissions for each 3-hour deviation period (or in accordance with an alternate approved method), one of the requirements in [paragraphs \(r\)\(3\)\(i\)](#) through [\(iii\)](#) of this section was met.

(i) The total mass of organic HAP emitted by the affected source based on HAP applied is no more than 0.05 kg organic HAP per kg HAP applied at an existing affected source and no more than 0.02 kg organic HAP per kg HAP applied at a new affected source; or

(ii) The total mass of organic HAP emitted by the affected source based on coating solids applied is no more than 0.20 kg organic HAP per kg coating solids applied at an existing affected source and no more than 0.08 kg organic HAP per kg coating solids applied at a new affected source; or

(iii) The total mass of organic HAP emitted by the affected source based on material applied is no more than 0.04 kg organic HAP per kg material applied at an existing affected source and no more than 0.016 kg organic HAP per kg material applied at a new affected source.

(s) **Non-HAP coating.** You must demonstrate that all of the coatings applied at all of the web coating lines at the affected source have organic HAP contents below 0.1 percent by mass for OSHA-defined carcinogens as specified in section A.6.4 of appendix A to 29 CFR 1910.1200, and below 1.0 percent by mass for other organic HAP compounds using the procedures in [§ 63.3370\(s\)\(1\)](#) through [\(3\)](#).

(1) Determine the organic HAP mass fraction of each coating material “as purchased” by following one of the procedures in [paragraphs § 63.3360\(c\)\(1\)](#) through [\(3\)](#) and determine the organic HAP mass fraction of each coating material “as applied” by following the procedures in [paragraph § 63.3360\(c\)\(4\)](#).

(2) Submit to your permitting authority a report certifying that all coatings applied at all of the web coating lines at your effected source are non-HAP coatings.

(3) Maintain records of coating formulations used as required in [§ 63.3410\(a\)\(1\)\(iii\)](#).

(4) Resume reporting requirements if any of the coating formulations are modified to exceed the thresholds in [§ 63.3370\(s\)](#) or new coatings which exceed the thresholds in [paragraph \(s\)](#) of this section are used.

[[67 FR 72341](#), Dec. 4, 2002, as amended at [85 FR 41301](#), July 9, 2020]

## **Notifications, Reports, and Records**

### **§ 63.3400 What notifications and reports must I submit?**

(a) **Reports.** Each owner or operator of an affected source subject to this subpart must submit the reports specified in [paragraphs \(b\)](#) through [\(k\)](#) of this section to the Administrator.

(b) **Initial notifications.** You must submit an initial notification as required by [§ 63.9\(b\)](#), using the procedure in [§ 63.3400\(h\)](#).

(1) Initial notification for existing affected sources must be submitted no later than 1 year before the compliance date specified in [§ 63.3330\(a\)](#), or no later than 120 days after the source becomes subject to this subpart, whichever is later.

(2) Initial notification for new and reconstructed affected sources must be submitted as required by [§ 63.9\(b\)](#).

(3) For the purpose of this subpart, a title V or part 70 permit application may be used in lieu of the initial notification required under [§ 63.9\(b\)](#), provided the same information is contained in the permit application as required by [§ 63.9\(b\)](#) and the State to which the permit application has been submitted has an approved operating permit program under [part 70 of this chapter](#) and has received delegation of authority from the EPA to implement and enforce this subpart.

(4) If you are using a permit application in lieu of an initial notification in accordance with [paragraph \(b\)\(3\)](#) of this section, the permit application must be submitted by the same due date specified for the initial notification.

(c) You must submit a semiannual compliance report according to [paragraphs \(c\)\(1\)](#) and [\(2\)](#) of this section.

(1) Compliance report dates.

(i) The first compliance report must cover the period beginning on the compliance date that is specified for your affected source in [§ 63.3330](#) and ending on June 30 or December 31, whichever date is the first date following the end of the calendar half immediately following the compliance date that is specified for your affected source in [§ 63.3330](#).

(ii) The first compliance report is due no later than July 31 or January 31, whichever date follows the end of the calendar half immediately following the compliance date that is specified for your affected source in [§ 63.3330](#). Prior to the electronic template being available in CEDRI for one year, the report must be postmarked or delivered by the aforementioned dates. After the



electronic template has been available in CEDRI for 1 year, the next full report must be submitted electronically as described in [paragraph \(h\)](#) of this section.

(iii) Each subsequent compliance report must cover the semiannual reporting period from January 1 through June 30 or the semiannual reporting period from July 1 through December 31.

(iv) Each subsequent compliance report must be submitted electronically no later than July 31 or January 31, whichever date is the first date following the end of the semiannual reporting period.

(v) For each affected source that is subject to permitting regulations pursuant to [40 CFR part 70](#) or [40 CFR part 71](#), and the permitting authority has established dates for submitting semiannual reports pursuant to [§ 70.6\(a\)\(3\)\(iii\)\(A\)](#) or [§ 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 \(c\)\(1\)\(i\)](#) through [\(iv\)](#) of this section.

(2) **Compliance report contents.** The compliance report must contain the information in [paragraphs \(c\)\(2\)\(i\)](#) through [\(viii\)](#) of this section:

(i) Company name and address.

(ii) Statement by a responsible official with that official's name, title, and signature certifying the accuracy of the content of the report.

(iii) Date of report and beginning and ending dates of the reporting period.

(iv) If there are no deviations from any emission limitations (emission limit or operating limit) that apply to you, a statement that there were no deviations from the emission limitations during the reporting period, and that no CMS was inoperative, inactive, malfunctioning, out-of-control, repaired, or adjusted.

(v) For each deviation from an emission limitation (emission limit or operating limit) that applies to you and that occurs at an affected source where you are not using a CMS to comply with the emission limitations in this subpart, the compliance report must contain the following information:

(A) The total operating time of the web coating line(s) during the reporting period.

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

(C) An estimate of the quantity of each regulated pollutant emitted over the emission limits in [§ 63.3320](#) for each monthly period covered in the report if the source failed to meet an applicable emission limit of this subpart.

(vi) For each deviation from an emission limit occurring at an affected source where you are using a CEMS or CPMS to comply with the emission limit in this subpart, you must include the following information:



- (A) The total operating time of the web coating line(s) during the reporting period.
- (B) The date and time that each CEMS and CPMS, if applicable, was inoperative except for zero (low-level) and high-level checks.
- (C) The date and time that each CEMS and CPMS, if applicable, was out-of-control, including the information in [§ 63.8\(c\)\(8\)](#).
- (D) The date and time that each deviation started and stopped, and whether each deviation occurred during a period of startup, shutdown, or malfunction or during another period.
- (E) A summary of the total duration (in hours) of each deviation during the reporting period and the total duration of each deviation as a percent of the total source operating time during that reporting period.
- (F) A breakdown of the total duration of the deviations during the reporting period into those that are due to startup, shutdown, control equipment problems, process problems, other known causes, and other unknown causes.
- (G) A summary of the total duration (in hours) of CEMS and/or CPMS downtime during the reporting period and the total duration of CEMS and/or CPMS downtime as a percent of the total source operating time during that reporting period.
- (H) A breakdown of the total duration of CEMS and/or CPMS downtime during the reporting period into periods that are due to monitoring equipment malfunctions, non-monitoring equipment malfunctions, quality assurance/quality control calibrations, other known causes, and other unknown causes.
- (I) The date of the latest CEMS and/or CPMS certification or audit.
- (J) A description of any changes in CEMS, CPMS, or controls since the last reporting period.
- (K) An estimate of the quantity of each regulated pollutant emitted over the emission limits in [§ 63.3320](#) for each monthly period covered in the report if the source failed to meet an applicable emission limit of this subpart.
- (d) You must submit a Notification of Performance Tests as specified in [§§ 63.7](#) and [63.9\(e\)](#) if you are complying with the emission standard using a control device and you are required to conduct a performance test of the control device. This notification and the site-specific test plan required under [§ 63.7\(c\)\(2\)](#) must identify the operating parameters to be monitored to ensure that the capture efficiency of the capture system and the control efficiency of the control device determined during the performance test are maintained. Unless EPA objects to the parameter or requests changes, you may consider the parameter approved.
- (e) **Notification of Compliance Status.** You must submit a Notification of Compliance Status as specified in [§ 63.9\(h\)](#). For affected sources that commence construction or reconstruction after

September 19, 2019, the Notification of Compliance Status must be submitted electronically using the procedure in [paragraph \(h\)](#) of this section. For affected sources that commenced construction or reconstruction on or before September 19, 2019, the Notification of Compliance Status must be submitted electronically using the procedure in paragraph (h) starting July 9, 2021.

(f) **Performance test reports.** You must submit performance test reports as specified in [§ 63.10\(d\)\(2\)](#) if you are using a control device to comply with the emission standard and you have not obtained a waiver from the performance test requirement or you are not exempted from this requirement by [§ 63.3360\(b\)](#). Catalyst activity test results are not required to be submitted but must be maintained onsite. Within 60 days after the date of completing each performance test required by this subpart, you must submit the results of the performance test following the procedures specified in [paragraphs \(f\)\(1\)](#) through [\(3\)](#) of this section. For affected sources that commence construction or reconstruction after September 19, 2019, the performance test reports must be submitted electronically using the procedure in [paragraph \(h\)](#) of this section. For affected sources that commenced construction or reconstruction on or before September 19, 2019, the performance test reports must be submitted electronically using the procedure in paragraph (h) starting July 9, 2021.

(1) **Data collected using test methods supported by EPA's Electronic Reporting Tool (ERT) as listed on EPA's ERT website** (<https://www.epa.gov/electronic-reporting-air-emissions/electronic-reporting-tool-ert>) **at the time of the test.** Submit the results of the performance test to EPA via CEDRI, which can be accessed through EPA's Central Data Exchange (CDX) (<https://cdx.epa.gov/>). The data must be submitted in a file format generated through the use of EPA's ERT. Alternatively, you may submit an electronic file consistent with the extensible markup language (XML) schema listed on EPA's ERT website.

(2) **Data collected using test methods that are not supported by EPA's ERT as listed on EPA's ERT website at the time of the test.** The results of the performance test must be included as an attachment in the ERT or an alternate electronic file consistent with the XML schema listed on EPA's ERT website. Submit the ERT generated package or alternative file to EPA via CEDRI.

(3) **Confidential business information (CBI).** If you claim some of the information submitted under [paragraph \(f\)\(1\)](#) of this section is CBI, you must submit a complete file, including information claimed to be CBI, to EPA. The file must be generated through the use of EPA's ERT or an alternate electronic file consistent with the XML schema listed on EPA's ERT website. Submit the file on a compact disc, flash drive, or other commonly used electronic storage medium and clearly mark the medium as CBI. Mail the electronic medium to U.S. EPA/OAQPS/CORE CBI Office, Attention: Group Leader, Measurement Policy Group, MD C404-02, 4930 Old Page Rd., Durham, NC 27703. The same file with the CBI omitted must be submitted to EPA via EPA's CDX as described in [paragraph \(f\)\(1\)](#) of this section.

(g) **Performance evaluation reports.** You must submit the results of performance evaluations within 60 days of completing each CMS performance evaluation (as defined in [§ 63.2](#)) following the procedures specified in [paragraphs \(g\)\(1\)](#) through [\(3\)](#) of this section. For affected sources that commence construction or reconstruction after September 19, 2019, the performance evaluation reports must be submitted electronically using the procedure in [paragraph \(h\)](#) of this section. For affected sources that commenced construction or reconstruction on or before September 19, 2019, the performance evaluation reports must be submitted electronically using the procedure in [paragraph \(h\)](#) starting July 9, 2021.

(1) **Performance evaluations of CMS measuring relative accuracy test audit (RATA) pollutants that are supported by EPA's ERT as listed on EPA's ERT website at the time of the evaluation.** Submit the results of the performance evaluation to EPA via CEDRI, which can be accessed through EPA's CDX. The data must be submitted in a file format generated through the use of EPA's ERT. Alternatively, you may submit an electronic file consistent with the XML schema listed on EPA's ERT website.

(2) **Performance evaluations of CMS measuring RATA pollutants that are not supported by EPA's ERT as listed on EPA's ERT website at the time of the evaluation.** The results of the performance evaluation must be included as an attachment in the ERT or an alternate electronic file consistent with the XML schema listed on EPA's ERT website. Submit the ERT generated package or alternative file to EPA via CEDRI.

(3) **Confidential business information (CBI).** If you claim some of the information submitted under [paragraph \(g\)\(1\)](#) of this section is CBI, you must submit a complete file, including information claimed to be CBI, to EPA. The file must be generated through the use of EPA's ERT or an alternate electronic file consistent with the XML schema listed on EPA's ERT website. Submit the file on a compact disc, flash drive, or other commonly used electronic storage medium and clearly mark the medium as CBI. Mail the electronic medium to U.S. EPA/OAQPS/CORE CBI Office, Attention: Group Leader, Measurement Policy Group, MD C404-02, 4930 Old Page Rd., Durham, NC 27703. The same file with the CBI omitted must be submitted to EPA via EPA's CDX as described in [paragraph \(g\)\(1\)](#) of this section.

(h) **Electronic reporting.** If you are required to submit reports following the procedure specified in this paragraph, you must submit reports to EPA via CEDRI, which can be accessed through EPA's CDX (<https://cdx.epa.gov/>). Initial notifications and notifications of compliance status must be submitted as portable document formats (PDF) to CEDRI using the attachment module of the ERT. You must use the semiannual compliance report template on the CEDRI website (<https://www.epa.gov/electronic-reporting-air-emissions/compliance-and-emissions-data-reporting-interface-cedri>) for this subpart 1 year after it becomes available. The date report templates become available will be listed on the CEDRI website. The report must be submitted by the deadline specified in this subpart, regardless of the method in which the report is submitted. If you claim some of the information required to be submitted via CEDRI is CBI,

submit a complete report, including information claimed to be CBI to EPA. The report must be generated using the appropriate form on the CEDRI website. Submit the file on a compact disc, flash drive, or other commonly used electronic storage medium and clearly mark the medium as CBI. Mail the electronic medium to U.S. EPA/OAQPS/CORE CBI Office, Attention: Group Leader, Measurement Policy Group, MD C404-02, 4930 Old Page Rd., Durham, NC 27703. The same file with the CBI omitted must be submitted to EPA via EPA's CDX as described earlier in this paragraph.

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

(1) You must have been or will be precluded from accessing CEDRI and submitting a required report within the time prescribed due to an outage of either EPA's CEDRI or CDX systems.

(2) The outage must have occurred within the period of time beginning 5 business days prior to the date that the submission is due.

(3) The outage may be planned or unplanned.

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

(5) You must provide to the Administrator a written description identifying:

(i) The date(s) and time(s) when CDX or CEDRI was accessed and the system was unavailable;

(ii) A rationale for attributing the delay in reporting beyond the regulatory deadline to EPA system outage;

(iii) Measures taken or to be taken to minimize the delay in reporting; and

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

(6) The decision to accept the claim of EPA system outage and allow an extension to the reporting deadline is solely within the discretion of the Administrator.

(7) In any circumstance, the report must be submitted electronically as soon as possible after the outage is resolved.

(j) ***Extension for force majeure events.*** If you are required to electronically submit a report through CEDRI in EPA's CDX, you may assert a claim of force majeure for failure to timely comply with the reporting requirement. To assert a claim of force majeure, you must meet the requirements outlined in [paragraphs \(j\)\(1\)](#) through [\(5\)](#) of this section.

(1) You may submit a claim if a force majeure event is about to occur, occurs, or has occurred or there are lingering effects from such an event within the period of time beginning five business days prior to the date the submission is due. For the purposes of this section, a force majeure event is defined as an event that will be or has been caused by circumstances beyond the control of the affected facility, its contractors, or any entity controlled by the affected facility that prevents you from complying with the requirement to submit a report electronically within the time period prescribed. Examples of such events are acts of nature (*e.g.*, hurricanes, earthquakes, or floods), acts of war or terrorism, or equipment failure or safety hazard beyond the control of the affected facility (*e.g.*, large scale power outage).

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

(3) You must provide to the Administrator:

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

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

(iii) Measures taken or to be taken to minimize the delay in reporting; and

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

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

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

(k) **SSM reports.** For affected sources that commenced construction or reconstruction before September 19, 2019, you must submit SSM reports as specified in [§ 63.10\(d\)\(5\)](#), except that the provisions in [subpart A of this part](#) pertaining to startups, shutdowns, and malfunctions do not apply unless a control device is used to comply with this subpart. On and after, July 9, 2021, and for affected sources that commence construction or reconstruction after September 19, 2019, this section is no longer relevant.

(1) If actions taken by an owner or operator during a startup, shutdown, or malfunction of an affected source (including actions taken to correct a malfunction) are not consistent with the procedures specified in the affected source's SSMP required by [§ 63.6\(e\)\(3\)](#), the owner or operator must state such information in the report. The startup, shutdown, or malfunction report must consist of a letter containing the name, title, and signature of the responsible official who is certifying its accuracy and must be submitted to the Administrator.

(2) Separate startup, shutdown, and malfunction reports are not required if the information is included in the report specified in [paragraph \(c\)\(2\)\(vi\)](#) of this section.

[[67 FR 72341](#), Dec. 4, 2002, as amended at [85 FR 41313](#), July 9, 2020; [85 FR 73905](#), Nov. 19, 2020]

### **§ 63.3410 What records must I keep?**

(a) Each owner or operator of an affected source subject to this subpart must maintain the records specified in [paragraphs \(a\)\(1\)](#) and [\(2\)](#) of this section on a monthly basis in accordance with the requirements of [§ 63.10\(b\)\(1\)](#):

(1) Records specified in [§ 63.10\(b\)\(2\)](#) of all measurements needed to demonstrate compliance with this standard as indicated in Table 2 to subpart JJJJ of part 63, including:

(i) Continuous emission monitor data in accordance with the requirements of [§ 63.3350\(d\)](#);

(ii) Control device and capture system operating parameter data in accordance with the requirements of [§ 63.3350\(c\)](#), [\(e\)](#), and [\(f\)](#);

(iii) Organic HAP content data for the purpose of demonstrating compliance in accordance with the requirements of [§ 63.3360\(c\)](#);

(iv) Volatile matter and coating solids content data for the purpose of demonstrating compliance in accordance with the requirements of [§ 63.3360\(d\)](#);

(v) Overall control efficiency determination using capture efficiency and control device destruction or removal efficiency test results in accordance with the requirements of [§ 63.3360\(e\)](#) and [\(f\)](#);

(vi) Material usage, organic HAP usage, volatile matter usage, and coating solids usage and compliance demonstrations using these data in accordance with the requirements of [§ 63.3370\(b\)](#), [\(c\)](#), and [\(d\)](#); and

(vii) Emission factor development calculations and HAP content for coating materials used to develop the emission factor as needed for [§ 63.3360\(g\)](#).

(2) Records specified in [§ 63.10\(c\)](#) for each CMS operated by the owner or operator in accordance with the requirements of [§ 63.3350\(b\)](#), as indicated in Table 2 to subpart JJJJ of part 63.

(b) Each owner or operator of an affected source subject to this subpart must maintain records of all liquid-liquid material balances performed in accordance with the requirements of [§ 63.3370](#). The records must be maintained in accordance with the applicable requirements of [§ 63.10\(b\)](#).

(c) For each deviation from an operating limit occurring at an affected source, you must record the following information.

- (1) The total operating time the web coating line(s) controlled by the corresponding add-on control device and/or emission capture system during the reporting period.
- (2) Date, time, duration, and cause of the deviations.
- (3) If the facility determines by its monthly compliance demonstration, in accordance with [§ 63.3370](#), as applicable, that the source failed to meet an applicable emission limit of this subpart, you must record the following for the corresponding affected equipment:
  - (i) Record an estimate of the quantity of HAP (or VOC if used a surrogate in accordance with [§ 63.3360\(d\)](#)) emitted in excess of the emission limit for the month, and a description of the method used to estimate the emissions.
  - (ii) Record actions taken to minimize emissions in accordance with [§ 63.3340\(a\)](#), and any corrective actions taken to return the affected unit to its normal or usual manner of operation.
- (d) Records of results from the annual catalyst activity test, if applicable.
- (e) Any records required to be maintained by this part that are submitted electronically via EPA's CEDRI may be maintained in electronic format. This ability to maintain electronic copies does not affect the requirement for facilities to make records, data, and reports available upon request to a delegated air agency or the EPA as part of an on-site compliance evaluation.

[[85 FR 41316](#), July 9, 2020]

### **Delegation of Authority**

#### **§ 63.3420 What authorities may be delegated to the States?**

- (a) In delegating implementation and enforcement authority to a state, local, or tribal agency under [40 CFR part 63, subpart E](#), the authorities contained in [paragraph \(b\)](#) of this section must be retained by the EPA Administrator and not transferred to a state, local, or tribal agency.
- (b) Authority which will not be delegated to state, local, or tribal agencies are listed in [paragraphs \(b\)\(1\) and \(2\)](#) of this section:
  - (1) Approval of alternate test method for organic HAP content determination under [§ 63.3360\(c\)](#).
  - (2) Approval of alternate test method for volatile matter determination under [§ 63.3360\(d\)](#).

[[85 FR 41316](#), July 9, 2020]

### **Table 1 to Subpart JJJJ of Part 63—Operating Limits if Using Add-On Control Devices and Capture System**

If you are required to comply with operating limits by [§ 63.3321](#), you must comply with the applicable operating limits in the following table:



<b>For the following device:</b>	<b>You must meet the following operating limit:</b>	<b>And you must demonstrate continuous compliance with operating limits by:</b>
1. Thermal oxidizer	a. The average combustion temperature in any 3-hour period must not fall more than 50 °F below the combustion temperature limit established according to <a href="#">§ 63.3360(e)(3)(i)</a>	i. Collecting the combustion temperature data according to <a href="#">§ 63.3350(e)(10)</a> ; ii. Reducing the data to 3-hour block averages; and
		iii. Maintain the 3-hour average combustion temperature at or above the temperature limit.
2. Catalytic oxidizer	a. The average temperature at the inlet to the catalyst bed in any 3-hour period must not fall more than 50 degrees Fahrenheit below the combustion temperature limit established according to <a href="#">§ 63.3360(e)(3)(ii)</a>	i. Collecting the catalyst bed inlet temperature data according to <a href="#">§ 63.3350(e)(10)</a> ; ii. Reducing the data to 3-hour block averages; and iii. Maintain the 3-hour average catalyst bed inlet temperature at or above the temperature limit.
	b. The temperature rise across the catalyst bed must not fall below 80 percent of the limit established according to <a href="#">§ 63.3360(e)(3)(ii)</a> , provided that the minimum temperature is always 50 degrees Fahrenheit above the catalyst's ignition temperature	i. Collecting the catalyst bed inlet and outlet temperature data according to <a href="#">§ 63.3350(e)(10)</a> ; ii. Reducing the data to 3-hour block averages; and iii. Maintain the 3-hour average temperature rise across the catalyst bed at or above the limit, and maintain the minimum temperature at least 50 degrees Fahrenheit above the catalyst's ignition temperature
3. Emission capture system	Submit monitoring plan to the Administrator that identifies operating parameters to be monitored according to <a href="#">§ 63.3350(f)</a>	Conduct monitoring according to the plan ( <a href="#">§ 63.3350(f)(3)</a> ).

[[85 FR 41316](#), July 9, 2020]



**Table 2 to Subpart JJJJ of Part 63—Applicability of [40 CFR Part 63](#) General Provisions to Subpart JJJJ**

You must comply with the applicable General Provisions requirements according to the following table:

General provisions reference	Applicable to subpart JJJJ	Explanation
§ 63.1(a)(1)-(4)	Yes	
§ 63.1(a)(5)	No	Reserved.
§ 63.1(a)(6)-(8)	Yes	
§ 63.1(a)(9)	No	Reserved.
§ 63.1(a)(10)-(14)	Yes	
§ 63.1(b)(1)	No	Subpart JJJJ specifies applicability.
§ 63.1(b)(2)-(3)	Yes	
§ 63.1(c)(1)	Yes	
§ 63.1(c)(2)	No	Area sources are not subject to emission standards of subpart JJJJ.
§ 63.1(c)(3)	No	Reserved.
§ 63.1(c)(4)	Yes	
§ 63.1(c)(5)	Yes	
§ 63.1(c)(6)	Yes	
§ 63.1(d)	No	Reserved.
§ 63.1(e)	Yes	
§ 63.2	Yes	Additional definitions in subpart JJJJ.
§ 63.3(a)-(c)	Yes	
§ 63.4(a)(1)-(3)	Yes	

General provisions reference	Applicable to subpart JJJJ	Explanation
§ 63.4(a)(4)	No	Reserved.
§ 63.4(a)(5)	Yes	
§ 63.4(b)-(c)	Yes	
§ 63.5(a)(1)-(2)	Yes	
§ 63.5(b)(1)	Yes	
§ 63.5(b)(2)	No	Reserved.
§ 63.5(b)(3)-(6)	Yes	
§ 63.5(c)	No	Reserved.
§ 63.5(d)	Yes	
§ 63.5(e)	Yes	
§ 63.5(f)	Yes	
§ 63.6(a)	Yes	Applies only when capture and control system is used to comply with the standard.
§ 63.6(b)(1)-(5)	No	§ 63.3330 specifies compliance dates.
§ 63.6(b)(6)	No	Reserved.
§ 63.6(b)(7)	Yes	
§ 63.6(c)(1)-(2)	Yes	
§ 63.6(c)(3)-(4)	No	Reserved.
§ 63.6(c)(5)	Yes	
§ 63.6(d)	No	Reserved.
§ 63.6(e)(1)(i)	Depends, see explanation	No, for new or reconstructed sources which commenced construction or reconstruction after September 19, 2019, see <a href="#">§ 63.3340(a)</a> for general duty requirement. Yes, for all other

General provisions reference	Applicable to subpart JJJJ	Explanation
		affected sources before July 9, 2021, and No thereafter, see <a href="#">§ 63.3340(a)</a> for general duty requirement.
§ 63.6(e)(1)(ii)	Depends, see explanation	No, for new or reconstructed sources which commenced construction or reconstruction after September 19, 2019. Yes, for all other affected sources before July 9, 2021, and No thereafter.
§ 63.6(e)(1)(iii)	Yes	
§ 63.6(e)(2)	No	Reserved.
§ 63.6(e)(3)	Depends, see explanation	No, for new or reconstructed sources which commenced construction or reconstruction after September 19, 2019. Yes, for all other affected sources before July 9, 2021, and No thereafter.
§ 63.6(f)(1)	Depends, see explanation	No, for new or reconstructed sources which commenced construction or reconstruction after September 19, 2019. Yes, for all other affected sources before July 9, 2021, and No thereafter.
§ 63.6(f)(2)-(3)	Yes	
§ 63.6(g)	Yes	
§ 63.6(h)	No	Subpart JJJJ does not require continuous opacity monitoring systems (COMS).
§ 63.6(i)(1)-(14)	Yes	
§ 63.6(i)(15)	No	Reserved.
§ 63.6(i)(16)	Yes	
§ 63.6(j)	Yes	
§ 63.7(a)-(d)	Yes	
§ 63.7(e)(1)	No	See <a href="#">§ 63.3360(e)(2)</a> .

General provisions reference	Applicable to subpart JJJJ	Explanation
§ 63.7(e)(2)-(3)	Yes	
§ 63.7(f)-(h)	Yes	
§ 63.8(a)(1)-(2)	Yes	
§ 63.8(a)(3)	No	Reserved.
§ 63.8(a)(4)	No	Subpart JJJJ does not have monitoring requirements for flares.
§ 63.8(b)	Yes	
§ 63.8(c)(1) and <a href="#">§ 63.8(c)(1)(i)</a>	Depends, see explanation	No, for new or reconstructed sources which commenced construction or reconstruction after September 19, 2019, see <a href="#">§ 63.3340(a)</a> for general duty requirement. Yes, for all other affected sources before July 9, 2021, and No thereafter, see <a href="#">§ 63.3340(a)</a> for general duty requirement.
§ 63.8(c)(1)(ii)	Yes	§ 63.8(c)(1)(ii) only applies if you use capture and control systems.
§ 63.8(c)(1)(iii)	Depends, see explanation	No, for new or reconstructed sources which commenced construction or reconstruction after September 19, 2019. Yes, for all other affected sources before July 9, 2021, and No thereafter.
§ 63.8(c)(2)-(3)	Yes	See <a href="#">§ 63.3350(e)(10)(iv)</a> for temperature sensor validation procedures
§ 63.8(c)(4)	No	§ 63.3350 specifies the requirements for the operation of CMS for capture systems and add-on control devices at sources using these to comply.
§ 63.8(c)(5)	No	Subpart JJJJ does not require COMS.
§ 63.8(c)(6)-(8)	Yes	Provisions for COMS are not applicable.
§ 63.8(d)(1)-(2)	Yes	Refer to <a href="#">§ 63.3350(e)(5)</a> for CPMS quality control procedures to be included in the quality control program.

General provisions reference	Applicable to subpart JJJJ	Explanation
§ 63.8(d)(3)	No	§ 63.3350(e)(5) specifies the program of corrective action.
§ 63.8(e)-(f)	Yes	§ 63.8(e)(2) does not apply to CPMS. <a href="#">§ 63.8(f)(6)</a> only applies if you use CEMS.
§ 63.8(g)	Yes	Only applies if you use CEMS.
§ 63.9(a)	Yes	
§ 63.9(b)(1)	Yes	
§ 63.9(b)(2)	Yes	Except <a href="#">§ 63.3400(b)(1)</a> requires submittal of initial notification for existing affected sources no later than 1 year before compliance date.
§ 63.9(b)(3)-(5)	Yes	
§ 63.9(c)-(e)	Yes	
§ 63.9(f)	No	Subpart JJJJ does not require opacity and visible emissions observations.
§ 63.9(g)	Yes	Provisions for COMS are not applicable.
§ 63.9(h)(1)-(3)	Yes	
§ 63.9(h)(4)	No	Reserved.
§ 63.9(h)(5)-(6)	Yes	
§ 63.9(i)	Yes	
§ 63.9(j)	Yes	
§ 63.9(k)	Yes	Only as specified in <a href="#">§ 63.9(j)</a> .
§ 63.10(a)	Yes	
§ 63.10(b)(1)	Yes	

General provisions reference	Applicable to subpart JJJJ	Explanation
§ 63.10(b)(2)(i)	Depends, see explanation	No, for new or reconstructed sources which commenced construction or reconstruction after September 19, 2019. Yes, for all other affected sources before July 9, 2021, and No thereafter.
§ 63.10(b)(2)(ii)	No	See <a href="#">§ 63.3410</a> for recordkeeping of relevant information.
§ 63.10(b)(2)(iii)	Yes	§ 63.10(b)(2)(iii) only applies if you use a capture and control system.
§ 63.10(b)(2)(iv)-(v)	Depends, see explanation	No, for new or reconstructed sources which commenced construction or reconstruction after September 19, 2019. Yes, for all other affected sources before July 9, 2021, and No thereafter.
§ 63.10(b)(2)(vi)-(xiv)	Yes	
§ 63.10(b)(3)	Yes	
§ 63.10(c)(1)	Yes	
§ 63.10(c)(2)-(4)	No	Reserved.
§ 63.10(c)(5)-(8)	Yes	
§ 63.10(c)(9)	No	Reserved.
§ 63.10(c)(10)-(14)	Yes	
§ 63.10(c)(15)	Depends, see explanation	No, for new or reconstructed sources which commenced construction or reconstruction after September 19, 2019. Yes, for all other affected sources before July 9, 2021, and No thereafter.
§ 63.10(d)(1)-(2)	Yes	
§ 63.10(d)(3)	No	Subpart JJJJ does not require opacity and visible emissions observations.

General provisions reference	Applicable to subpart JJJJ	Explanation
§ 63.10(d)(4)	Yes	
§ 63.10(d)(5)(i)	Depends, see explanation	No, for new or reconstructed sources which commenced construction or reconstruction after September 19, 2019. Yes, for all other affected sources before July 9, 2021, and No thereafter. See <a href="#">§ 63.3400(c)</a> for malfunction reporting requirements.
§ 63.10(d)(5)(ii)	Depends, see explanation	No, for new or reconstructed sources which commenced construction or reconstruction after September 19, 2019. Yes, for all other affected sources before July 9, 2021, and No thereafter. See <a href="#">§ 63.3400(c)</a> for malfunction reporting requirements.
§ 63.10(e)(1)-(2)	Yes	Provisions for COMS are not applicable.
§ 63.10(e)(3)-(4)	No	Subpart JJJJ does not require opacity and visible emissions observations.
§ 63.10(f)	Yes	
§ 63.11	No	Subpart JJJJ does not specify use of flares for compliance.
§ 63.12	Yes	
§ 63.13	Yes	
§ 63.14	Yes	Subpart JJJJ includes provisions for alternative ASME and ASTM test methods that are incorporated by reference.
§ 63.15	Yes	
§ 63.16	Yes	

[[85 FR 41317](#), July 9, 2020, as amended at [85 FR 73905](#), Nov. 19, 2020]

**eCFR Content**