ARKANSAS
ENERGY & ENVIRONMENT

March 21, 2023

Via email to: caleb.wagner@owenscorning.com & First Class Mail

Caleb Wagner
EHS Leader
Owens Corning Non-Woven Technology, LLC
5520 Planters Road
Fort Smith, AR 72916

Re: Notice of Final Permitting Decision; Permit No. 0747-AOP-R7

Dear Mr. Wagner,

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

Owens Corning Non-Woven Technology, LLC
5520 Planters Road
Fort Smith, AR 72916

Permit Number: 0747-AOP-R7

Permitting Decision: approval with permit conditions as set forth in final Permit No. 0747-AOP-R7

Accessing the Permitting Decision:
https://www.adeq.state.ar.us/downloads/WebDatabases/PermitsOnline/Air/0747-AOP-R7.pdf.

Accessing the Statement of Basis:
https://www.adeq.state.ar.us/downloads/WebDatabases/PermitsOnline/Air/0747-AOP-R7-SOB.pdf.

Rule 26.903 of the Rules of the Arkansas Operating Air Permit Program do not require a public notice or public comment period for Administrative Amendments.

Sincerely,

David Witherow, P.E.
Associate Director, Office of Air Quality, Division of Environmental Quality
5301 Northshore Drive, North Little Rock, AR 72118-5317

Enclosure: Certificate of Service

CERTIFICATE OF SERVICE

I, Natasha Oates, hereby certify that the final permit decision notice has been mailed by first class mail to Owens Corning Non-Woven Technology, LLC, 5520 Planters Road, Fort Smith, AR, 72916, on this 21st day of March, 2023.

Natasha Oates

Natasha Oates, AA, Office of Air Quality

RESPONSE TO COMMENTS

OWENS CORNING NON-WOVEN TECHNOLOGY, LLC
PERMIT #0747-AOP-R7
AFIN: 66-00294

On January 29, 2023, the Director of the Arkansas Department of Energy and Environment, Division of Environmental Quality ("Division") gave notice of a draft permitting decision for the above referenced facility. On March 1, 2023, written comments on the draft permitting decision were submitted on behalf of the facility. These comments were submitted to an address other than the airpermits@adeq.state.ar.us email address and after the comment period had ended. The Division's response to these issues follows.

Note: The following page numbers and condition numbers refer to the draft permit. These references may have changed in the final permit based on changes made during the comment period.

Comment #1:

The visible emissions limitation for SN-21 (Raw Material Handling and Storage), SN-23 (Mat Coating Line Curing/Drying Oven), and SN-25 (Mat Coating Line Edge Trim) cites Rule 19.503. Rule 19.503(B)(2) requires visible emissions from equipment used in a manufacturing process to not exceed 20% opacity. Owens Corning requests this 20% emission limit be applied to SN-21, SN-23, and SN-25 (Special Conditions #94, #99, and #112).

Response to Comment #1:

Rule 19.503 does set a maximum opacity limit of 20% for any equipment used in a manufacturing process, however, the Division regularly sets limits lower than this value due to other regulatory purposes or if proper operation of the source or control device would result in a much lower opacity.

In this instance, the sources SN-21A-C and SN-25 are routed via transfer systems to a baghouse which under proper operation will have little if any visible emissions. Visible emissions of 20% would indicate the system is not operating properly. Source SN-23 is a natural gas fired source which is typically permitted at 5% opacity which shows compliance by use of only natural gas in the source.

Specific Conditions #99 and #100 have been updated to remove the observation requirement for opacity and the 5% opacity compliance is shown by the use of only natural gas at source SN-23. Specific Conditions #94 and #112 have remained unchanged.

Comment #2:

The data provided in the permit application that was used to establish pressure drop operating parameters for the baghouses for SN-21A (Raw Material Unloading) and SN-25 (Mat Coating

Line Edge Trim) was for proposed like-kind baghouses. Vendors and actual baghouses have not yet been identified for this equipment. Therefore, Owens Corning requests that the pressure drop ranges in Special Conditions #96 and #114 be replaced with "minimum and maximum pressure drop recommended by the manufacturer".

Response to Comment #2:

Specific Conditions #96 and #114 have been updated as follows:

"The permittee, as per manufacturer's performance warranty, shall keep the baghouse for SN-21A/25 in good working condition at all times and maintain a minimum and maximum pressure drop as recommended by the manufacturer. The pressure drop across the filters shall be measured daily. The results and a copy of the manufacturer's pressure drop specification shall be kept on site and be made available to Division personnel upon request. [Rule 19.303 and Ark. Code Ann. § 8-4-203 as referenced by §§ 8-4-304 and 8-4-311]

Comment #3:

Total allowable emissions of VOC and total HAPs in the Emissions Summaries on pages 10 – 14 are not consistent with the permit application: Total Allowable Emissions – VOC should be 182.6 tpy (rather than 179.4 tpy); HAPs Total Other HAPs should be 2.33 tpy (rather than 1.51 tpy).

Response to Comment #3:

The total allowable emissions for Line 2 does sum up to 179.4 tpy VOC and 1.51 tpy Total Other HAPs as currently permitted for SN-11 through SN-15 and SN-21A through SN-25. There were no changes made to the permit as a result of this comment.

ARKANSAS DEPARTMENT OF ENERGY AND ENVIRONMENT

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DIVISION OF ENVIRONMENTAL QUALITY

OPERATING AIR PERMIT

PERMIT NUMBER: 0747-AOP-R7

IS ISSUED TO:
Owens Corning Non-Woven Technology, LLC
5520 Planters Road
Fort Smith, AR 72916
Sebastian County
AFIN: 66-00294

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:

January 27, 2020 AND January 26, 2025

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

Signed:

David Witherow, P.E.
Associate Director, Office of Air Quality
Division of Environmental Quality

March 21, 2023
Date

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Appendix D – 40 C.F.R. Part 63 Subpart KK *National Emission Standards for the Printing and Publishing Industry*

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_x	Nitrogen Oxide
NSPS	New Source Performance Standards
PM	Particulate Matter
PM_{10}	Particulate Matter Equal To Or Smaller Than Ten Microns
$PM_{2.5}$	Particulate Matter Equal To Or Smaller Than 2.5 Microns
SNAP	Significant New Alternatives Program (SNAP)
SO_2	Sulfur Dioxide
SSM	Startup, Shutdown, and Malfunction Plan
Tpy	Tons Per Year
UTM	Universal Transverse Mercator
VOC	Volatile Organic Compound

SECTION I: FACILITY INFORMATION

PERMITTEE:	Owens Corning Non-Woven Technology, LLC
AFIN:	66-00294
PERMIT NUMBER:	0747-AOP-R7
FACILITY ADDRESS:	5520 Planters Road Fort Smith, AR 72916
MAILING ADDRESS:	5520 Planters Road Fort Smith, AR 72916
COUNTY:	Sebastian County
CONTACT NAME:	Caleb Wagner
CONTACT POSITION:	EHS Leader
TELEPHONE NUMBER:	(479) 648-5327
REVIEWING ENGINEER:	Jesse Smith
UTM North South (Y):	Zone 15: 3907621.15 m
UTM East West (X):	Zone 15: 375347.3 m

SECTION II: INTRODUCTION

Summary of Permit Activity

Owens Corning owns and operates a fiberglass mat manufacturing facility at 5520 Planters Road in Fort Smith, Arkansas 72916. The facility uses chopped fiberglass and a chemical binder to produce fiberglass mats primarily for use in the roofing products industry. With this Title V significant modification, the facility has added a mat coating line to the permit (SN-21A through SN-25). These sources include material handling, a curing/drying oven, logo printing operations, and an edge trim line. With this addition, the facility is now subject to NESHAP Subparts KK and JJJJ and applicable conditions have been added. Permitted emissions have increased as follows: 13.8 tpy PM/PM_{10}/$PM_{2.5}$, 0.2 tpy SO_2, 11.9 tpy VOC, 17.7 tpy CO, 21.0 tpy NO_X, and 0.4 tpy Total HAP.

Process Description

Existing Facility (Line #1) Process Description

The fiberglass mat manufacturing process begins in the fiber preparation area. Chopped glass fibers, delivered to the site in containers, are fed into the glass bins, weighed out, and fed into the pulper on conveyor belts. In the pulper, glass fibers, white water (recycled), dispersant, ammonia, and viscosity modifier are mixed in controlled amounts and agitated to disperse the glass fibers and create “thick stock”. Once the thick stock batch is complete, the pulper contents are pumped to the holding chest and another batch of thick stock begins.

The holding chest agitates the thick stock to continue the dispersion of the glass fibers. From the holding chest, the thick stock is pumped to the constant level chest and then to the Deltaformer silo. The thick stock is then pumped through the fan pump to the distributor header and into the headbox where it is deposited on a moving wire screen. Excess liquid is removed from the screen through drainage and vacuum and is returned to the process (as white water). The air from the vacuum lines is routed through a series of moisture separators to remove entrained water vapor prior to venting to the atmosphere (SN-03). The fibers remaining on the screen form a mat which is transferred to another conveyor in the binder application section.

The urea-formaldehyde resin is used to make the binder and is applied to the glass fiber mat to allow the glass fibers to form a cohesive mat. The binder used in the process is a blend of several components mixed in the binder room. The ingredients are delivered to the site in a variety of ways, including tank trucks, drums, and bags. High-volume ingredients are stored in permanent tanks, while minor ingredients are stored in drums or totes. The components are mixed together in the binder mix tank according to a binder recipe, which yields the properties desired for the final product.

From the binder mix tank, the binder enters the binder circulation system, which continuously cycles binder circulation tanks. The binder is then pumped from the circulation tanks to the binder seal tank and binder applicator. Excess binder is recovered from the application and is pumped back to the circulation tanks where the cycle begins again. Emissions from the binder mix tank and the binder circulation tanks are collected and vented together (SN-05).

The binder is applied using a flooding weir. Excess binder is removed and recirculated by a combination of natural drainage and vacuum slots. The air from the vacuum lines is routed through a series of moisture separators to remove entrained liquid prior to venting to the atmosphere (SN-04). Fugitive emissions from the mat line exhaust through roof vents over the production line (SN-07).

The mat saturated with binder is conveyed to an oven where the binder is dried and cured. Heating in the oven is provided by the combustion of natural gas. VOC emissions from the drying/curing oven are controlled with a thermal oxidizer (SN-01). Heat from incinerated vapors can be recovered through a waste heat boiler (SN-02) to provide steam for plant operations.

The cured mat is trimmed, rolled, and packaged prior to storage in the warehouse. Mat trimmings are conveyed pneumatically to the drop-out box. Conveying air exhausts from the sides of a drop-out box (insignificant activity), and the trimmings are fed to a compactor.

The wastewater from the process is routed to the wastewater treatment equipment. The formaldehyde emissions from this source have been determined to be insignificant. The treated wastewater is then piped to the city wastewater treatment plant.

Proposed Facility (Line #2) Process Description

The fiberglass mat manufacturing process begins in the fiber preparation area. Chopped glass fibers, delivered to the site in containers, are fed into glass bins, weighed, and then fed into the pulper on conveyor belts. In the pulper, glass fibers and other raw materials are mixed in controlled amounts and agitated to disperse the glass fibers and create a thick stock. After the thick stock batch is complete, the pulper contents are pumped to the holding chest, and another batch of thick stock will begin.

The holding chest will agitate the thick stock to continue the dispersion of the glass fibers. From the holding chest, the thick stock is pumped to the constant level chest and then to the Former silo. The thick stock is then pumped through the fan pump to the distributor header and into the headbox, where it is deposited on a moving wire screen. Excess liquid is removed from the screen through drainage and vacuum and is returned to the process as white water. The air from the Former/Saturator Vacuum System lines (Suction Tube Hydroformer, Dry Suction Vacuum, and White Water Vacuum Pump) (SN-12) is routed through a series of moisture separators to remove entrained water prior to venting through the RTO stack, without control for better dispersion. The fibers remaining on the screen will form a mat, which is transferred to another conveyor in the binder application section. A resin will be applied to the glass fiber mat, serving as a binder to allow the glass fibers to form a cohesive mat.

The binder used in the process is a blend of several components mixed in the binder room. The ingredients are delivered to the site in a variety of ways, including tank trucks, drums, and bags.

High volume ingredients will be stored in permanent tanks, while minor ingredients are stored in drums or totes. The components are mixed together in the binder mix tank according to a binder recipe, which yields the properties desired for the final product.

From the binder mix tanks, the binder enters the binder circulation system, which continuously cycles binder throughout the process as follows. Binder is initially pumped from the mix tank into the binder circulation tanks. The binder is then pumped from the circulation tanks to the binder seal tank and the binder applicator. Excess binder is recovered from the application area and pumped back to the circulation tanks, where the cycle will begin again. Emissions from the binder mix tanks and the binder circulation tanks are collected and vented together from the Binder Room (SN-13).

The binder is applied using a flooding weir. Excess binder is removed and recirculated by a combination of natural drainage and vacuum slots. The air from the vacuum lines (the Binder Applicator Fan, the Binder Control Fan, and the Transfer Roll Vacuum Fan) is routed through a series of moisture separators to remove entrained liquid prior to venting through the RTO stack, without control (SN-12) for better dispersion. In addition, fugitive emissions from the mat line are not exhausted through roof vents over the production line, but are rather collected and vented to the atmosphere through the RTO stack, without control (SN-12) for better dispersion. The mat saturated with binder is conveyed to an oven, where the binder is dried and cured. Heating in the oven is provided by the combustion of natural gas. Emissions from the Curing/Drying Oven, the Pick-Up Roll Vacuum Fan, and the Oven Outlet Hood will be controlled by the RTO prior to being emitted to the atmosphere (SN-11).

As mentioned above, other emissions from the process and fugitive emissions from the building are not controlled by the RTO, but will be routed to the RTO stack, without control (SN-12).

The cured mat is trimmed, rolled, and packaged prior to storage in the warehouse. Mat trimmings are conveyed pneumatically to the Waste Trimmer Dust Collector. Conveying air exhausts from the Waste Trimmer Dust Collector (SN-14), and the trimmings are fed into a compactor.

Wastewater from the process is routed to the existing wastewater treatment equipment (SN-09). The formaldehyde emissions from this source have been determined to be insignificant. The treated wastewater is then routed to the City of Fort Smith wastewater treatment plant.

Other emission sources from the facility include a diesel-fired emergency fire pump engine (SN-15), a Quality Laboratory, and other insignificant support activities.

Owens Corning plans to operate the existing Planters Road facility while the proposed process is brought online. After completion of the proposed project, Owens Corning proposes to operate both facilities for a short time (365 days or less) until the new facility becomes operational. After Line #2 starts up, the permittee shall operate in a temporary transitional operating scenario which allows both the existing Line #1 and Line #2 to operate simultaneously for no more than 12 consecutive months.

Mat Coating Line Process Description

The mat coating process consists of applying a clay or calcium carbonate-based slurry coating to a thin fiberglass mat substrate. The mat coating line consists of a dip coating machine that includes a scraper to ensure that the slurry material is applied uniformly to the mat substrate. The coated mat then travels through a natural gas-fired drying oven where the slurry material is cured. After leaving the oven, the coated mat passes through a logo printing station with a small electric dryer before being slit, wound into rolls, and stored prior to shipment. Additional process equipment included as part of the proposed project consists of storage silos, hoppers, and transfer systems associated with the aggregate materials used in the slurry, and various storage tanks containing the liquid materials that are used to make the slurry mixture.

The mat coating line consists of the following processes: Solid Raw Material Unloading, Storage, and Transfer (SN-21), Slurry Mixture Preparation (SN-22), Mat Coating Line Drying Oven (SN-23), Logo Printing Operations (SN-24), Mat Coating Line Edge Trim (SN-25), and various Insignificant Activities.

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 HHHH – National Emission Standards for Hazardous Air Pollutants for Wet-Formed Fiberglass Mat Production
40 C.F.R. Part 63, Subpart JJJJ – National Emission Standards for Hazardous Air Pollutants: Paper and Other Web Coating
40 C.F.R. Part 63, Subpart KK – National Emission Standards for the Printing and Publishing Industry
40 C.F.R. Part 64, Compliance Assurance Monitoring

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 BEFORE LINE #2 IS FULLY OPERATIONAL, INCLUDING TRANSITION FROM LINE #1 TO LINE #2			
Source	Description	Pollutant	Emission Rates

Number			lb/hr	tpy
Total Allowable Emissions		PM	13.3	57.7
		PM_{10}	13.3	57.7
		$PM_{2.5}$	See Note*	
		SO_2	1.1	4.6
		VOC	34.6	151.3
		CO	54.1	236.7
		NO_X	14.8	64.8
HAPs		Acrylic Acid	7.10	31.10
		Formaldehyde	6.71	29.37
		Methanol	9.10	39.86
		Total Other HAPs	1.90	8.29
Air Contaminants ***		Ammonia	7.20	31.54
01	Oven Vapor Incinerator (Thermal Oxidizer)	PM	6.0	26.3
		PM_{10}	6.0	26.3
		SO_2	1.0	4.4
		VOC	3.0	13.2
		CO	50.0	219.0
		NO_x	10.0	43.8
		Acrylic Acid**	1.00	4.38
		Formaldehyde**	1.00	4.38
		Methanol**	1.00	4.38
		Total Other HAPs**	0.10	0.44
		Ammonia***	4.00	17.52
02	Waste Heat Boiler	Emissions are accounted for at SN-01		
03	Deltaformer Vacuums	PM	0.5	2.2
		PM_{10}	0.5	2.2
		VOC	3.0	13.2
		Acrylic Acid**	0.10	0.44
		Formaldehyde**	0.10	0.44
		Methanol**	0.10	0.44
		Total Other HAPs**	0.10	0.44
		Ammonia***	0.10	0.44
04	Saturator Vacuums	PM	0.5	2.2
		PM_{10}	0.5	2.2
		VOC	3.0	13.2
		Acrylic Acid**	0.50	2.19

EMISSION SUMMARY BEFORE LINE #2 IS FULLY OPERATIONAL, INCLUDING TRANSITION FROM LINE #1 TO LINE #2				
Source Number	Description	Pollutant	Emission Rates	
			lb/hr	tpy
		Formaldehyde** Methanol** Total Other HAPs** Ammonia***	0.50 2.00 0.10 0.10	2.19 8.76 0.44 0.44
05	Binder Mix & Run Tanks	VOC Acrylic Acid** Formaldehyde** Methanol** Total Other HAPs** Ammonia***	2.0 0.50 0.10 1.00 0.50 0.50	8.8 2.19 0.44 4.38 2.19 2.19
07	Mat Line Uncontrolled Emissions	PM PM_{10} VOC Acrylic Acid** Formaldehyde** Methanol** Total Other HAPs** Ammonia***	3.0 3.0 20.0 5.00 5.00 5.00 1.00 2.50	13.2 13.2 87.6 21.90 21.90 21.90 4.38 10.95
21A	Solid Raw Material Truck Unloading	PM PM_{10} $PM_{2.5}$	0.4 0.4 0.4	1.7 1.7 1.7
21B	Solid Raw Material Storage Silos	PM PM_{10} $PM_{2.5}$	1.0 1.0 1.0	4.2 4.2 4.2
21C	Solid Raw Material Storage Hopper Transfer System	PM PM_{10} $PM_{2.5}$	0.4 0.4 0.4	1.7 1.7 1.7
22	Slurry Mixture Preparation and Mat Coating	VOC	1.5	6.4
23	Mat Coating Line Curing/Drying Oven	PM PM_{10} $PM_{2.5}$ SO_2 VOC CO NO_x Formaldehyde Total Other HAPs	0.4 0.4 0.4 0.1 0.3 4.1 4.8 0.01 0.10	1.6 1.6 1.6 0.2 1.2 17.7 21.0 0.02 0.40

EMISSION SUMMARY BEFORE LINE #2 IS FULLY OPERATIONAL, INCLUDING TRANSITION FROM LINE #1 TO LINE #2				
Source Number	Description	Pollutant	Emission Rates	
			lb/hr	tpy
24	Logo Printing Operations	VOC	1.8	7.7
25	Mat Coating Line Edge Trim	PM PM_{10} $PM_{2.5}$	1.1 1.1 1.1	4.6 4.6 4.6

*$PM_{2.5}$ limits are source specific, if required. Not all sources have $PM_{2.5}$ limits.
**HAPs included in the VOC totals. Other HAPs are not included in any other totals unless specifically stated.
***Air Contaminants such as ammonia, acetone, and certain halogenated solvents are not VOCs or HAPs.

Emission Summary After Proposed Facility (Line #2) is Fully Operational

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 AFTER LINE #2 IS FULLY OPERATIONAL AND LINE #1 IS NO LONGER IN OPERATION				
Source Number	Description	Pollutant	Emission Rates	
			lb/hr	tpy
Total Allowable Emissions Line #2 Only		PM	12.6	53.4
		PM_{10}	12.6	53.4
		$PM_{2.5}$	12.6	53.4
		SO_2	0.7	0.8
		VOC	42.0	179.4
		CO	37.8	162.0
		NO_X	19.9	81.9
HAPs		Acrylic Acid Formaldehyde Methanol Styrene Triethylamine Total Other HAPs	6.19 4.78 10.79 1.31 1.31 0.56	27.07 20.82 47.21 5.68 5.68 1.51

EMISSION SUMMARY AFTER LINE #2 IS FULLY OPERATIONAL AND LINE #1 IS NO LONGER IN OPERATION				
Source Number	Description	Pollutant	Emission Rates	
			lb/hr	tpy
Air Contaminants		Ammonia***	6.19	27.07
11	Regenerative Thermal Oxidizer	PM	7.6	33.3
		PM_{10}	7.6	33.3
		$PM_{2.5}$	7.6	33.3
		SO_2	0.1	0.4
		VOC	24.3	106.2
		CO	32.9	144.1
		NO_x	13.9	60.6
		Acrylic Acid**	4.79	20.99
		Formaldehyde**	3.99	17.49
		Methanol**	6.89	30.17
		Styrene**	1.00	4.37
		Triethylamine**	1.00	4.37
		Total Other HAPs	0.26	1.10
		Ammonia***	4.79	20.99
12	Former/Saturator and Fugitive Emissions and Wet End Building Exhaust	PM	0.5	2.1
		PM_{10}	0.5	2.1
		$PM_{2.5}$	0.5	2.1
		VOC	9.3	40.6
		Acrylic Acid**	0.47	2.05
		Formaldehyde**	0.39	1.71
		Methanol**	1.98	8.67
		Styrene**	0.10	0.43
		Triethylamine**	0.10	0.43
		Ammonia***	0.47	2.05
13	Binder Room	VOC	2.0	8.8
		Acrylic Acid**	0.50	2.19
		Formaldehyde**	0.01	0.05
		Methanol**	1.00	4.38
		Styrene**	0.10	0.44
		Triethylamine**	0.10	0.44
		Ammonia***	0.50	2.19
14	Waste Trim Dust Collector	PM	1.0	4.1
		PM_{10}	1.0	4.1
		$PM_{2.5}$	1.0	4.1
		VOC	1.9	8.4
		Acrylic Acid**	0.42	1.84
		Formaldehyde**	0.35	1.54
		Methanol**	0.91	3.99

EMISSION SUMMARY AFTER LINE #2 IS FULLY OPERATIONAL AND LINE #1 IS NO LONGER IN OPERATION

Source Number	Description	Pollutant	Emission Rates	
			lb/hr	tpy
		Styrene**	0.10	0.44
		Triethylamine**	0.10	0.44
		Ammonia***	0.42	1.84
15	Diesel-Fired Emergency Fire Pump	PM	0.1	0.1
		PM_{10}	0.1	0.1
		$PM_{2.5}$	0.1	0.1
		SO_2	0.5	0.2
		VOC	0.1	0.1
		CO	0.8	0.2
		NO_x	1.2	0.3
		Formaldehyde	0.01	0.01
		Total Other HAPs	0.01	0.01
21A	Solid Raw Material Truck Unloading	PM	0.4	1.7
		PM_{10}	0.4	1.7
		$PM_{2.5}$	0.4	1.7
21B	Solid Raw Material Storage Silos	PM	1.0	4.2
		PM_{10}	1.0	4.2
		$PM_{2.5}$	1.0	4.2
21C	Solid Raw Material Storage Hopper Transfer System	PM	0.4	1.7
		PM_{10}	0.4	1.7
		$PM_{2.5}$	0.4	1.7
22	Slurry Mixture Preparation and Mat Coating	VOC	1.5	6.4
23	Mat Coating Line Curing/Drying Oven	PM	0.4	1.6
		PM_{10}	0.4	1.6
		$PM_{2.5}$	0.4	1.6
		SO_2	0.1	0.2
		VOC	0.3	1.2
		CO	4.1	17.7
		NO_x	4.8	21.0
		Formaldehyde	0.01	0.02
		Total Other HAPs	0.10	0.40
24	Logo Printing Operations	VOC	1.8	7.7
25	Mat Coating Line Edge Trim	PM	1.1	4.6
		PM_{10}	1.1	4.6
		$PM_{2.5}$	1.1	4.6

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

**HAPs included in the VOC totals. Other HAPs are not included in any other totals unless specifically stated.
***Air Contaminants such as ammonia, acetone, and certain halogenated solvents are not VOCs or HAPs.

SECTION III: PERMIT HISTORY

Permit 747-A was not found in the Department records.

Permit 747-AR-1 was issued on October 22, 1991. This permit modified the existing permit to include facing and reinforcement mats. It also added a baghouse dust collection system to the mat line. Permitted emissions were 20.63 tpy PM/PM_{10}, 44.46 tpy VOC, 0.04 tpy SO_2, 1.53 tpy CO, 6.13 tpy NO_x, and 0.44 tpy ammonia.

Permit 747-AR-2 was issued on January 20, 1993. This modification added a cyclone to the mat area. This change resulted in an increase in PM/PM_{10} of 14.32 tpy.

Permit 747-AR-3 was issued on September 3, 1993. Emissions were recalculated based on AP-42 emission factors. This permit allowed emissions of 35 tpy PM/PM_{10}, 0.1 tpy SO_2, 44.4 tpy VOC, 4.9 tpy CO, 19.7 tpy NO_x, and 0.5 tpy NH_3.

Permit 747-AR-4 was issued on June 29, 1999. This permit increased production rates, emission rates, and allowed the removal of a source that was no longer being used. It also allowed the incorporation of a landfill gas burning operation.

Permit 747-AOP-R0 was issued on July 13, 2004. Emissions testing and anticipated future production rates indicated that it would be prudent to permit the facility as a Title V major source. This permit modification modified existing permit limits to reflect the results of emissions testing. Also this permit included the requirements of 40 CFR Part 63, Subpart HHHH, a MACT regulation for wet formed fiberglass mat production with an effective date of April 11, 2005. Finally, Owens Corning increased the allowable landfill gas usage limit to 1,216 MMSCF/yr to represent the maximum capacity and worst case emissions.

Permit 0747-AOP-R1 was issued on December 5, 2005. This permit modification modified existing permit limits to reflect the results of the most recent emissions testing performed at the facility. The permitted rates include a safety factor to insure future compliance. Permitted emission rates for SN-07 increased by 61.3 tpy of VOC, 8.8 tpy of acrylic acid, 2.1 tpy of ammonia, and 8.8 tpy of methanol. There were no changes being made in the operation of this facility.

Permit 0747-AOP-R2 was issued on May 22, 2008. This permit modification added a coated veil manufacturing operation. The coated veil manufacturing operation will consist of Coated Veil Curing & Drying Oven (SN-10A), Coated Veil Materials Storage and Mix Tanks (SN-10B), Coated Veil Printing & Drying Oven (SN-11), four (4) Aggregate Silos (SN-12 thru SN-15), two (2) Aggregate Hoppers (SN-16 & SN-17), and a Mat Trim Baghouse (SN-18). The permitted emissions increases include 7.4 tpy PM/PM_{10}, 0.2 tpy SO_2, 13.8 tpy VOC, 9.5 tpy CO, and 11.3 tpy NO_x.

Permit 0747-AOP-R3 was issued on October 26, 2009. This initial Title V renewal was to update information pertaining to emission limits based on recent stack test results and updates to the Insignificant Activities list.

Permit 0747-AOP-R4 was issued on November 25, 2014. With the second Title V Renewal, the facility requested to remove sources SN-10 through SN-18 as well as Specific Conditions #41 through #71 and Specific Condition #36. The Coated Veil production line permitted in 2008 was never installed. The permitted emission increases associated with this renewal were 1.7 tpy Ammonia. Permitted emission decreases were 7.4 tpy PM/PM_{10}, 0.2 tpy SO_2, 11.3 tpy NO_x, 9.5 tpy CO, and 3.0 tpy VOC.

Permit 0747-AOP-R5 was issued on January 27, 2020. With this Title V Renewal, the emission limits of several pollutants were conservatively increased as well as the discontinuation of testing based on the history of facility-wide testing results. SN-08 Trim Drop-Out Box was also reclassified as an insignificant activity. Permitted emission increases associated with this renewal are 4.7 tpy PM/PM_{10}, 13.14 tpy Acrylic Acid, 6.57 Formaldehyde, 10.95 tpy Methanol, and 3.49 tpy Total Other HAPs.

Permit 0747-AOP-R6 was issued on April 27, 2021. With this Title V significant modification, the facility requested to construct and operate an additional fiberglass mat manufacturing facility (Line #2) adjacent to the existing Owens Corning facility (Line #1). The proposed facility will have similar, but not identical operations to Line #1. Owens Corning planned to eventually move all production to Line #2. After the construction of Line #2 is complete and the facility starts up, a transition period of 12 months will begin. Changes to the permit include the addition of the following:

1. Five new sources: Regenerative Thermal Oxidizer (SN-11), Former/Saturator and Fugitive Emissions and Wet End Building Exhaust (SN-12), Binder Room (SN-13), Waste Trim Dust Collector (SN-14), and a Diesel-Fired Emergency Fire Pump (SN-15);
2. Plantwide Conditions #10 through #14 (describing compliance during transition to Line #2);
3. Plantwide Condition #17 (describing initial stack testing of sources associated with Line #2 (SN-11, SN-12, SN-13 and SN-14);
4. Plantwide Condition #18 describes periodic stack testing for sources associated with Line #2 (SN-11, SN-12, SN-13 and SN-14).

Permitted emission increases associated with this permit modification were 39.6 tpy $PM_{2.5}$, 31.5 tpy VOC, 17.1 tpy NO_x, and 7.35 tpy Methanol.

SECTION IV: SPECIFIC CONDITIONS

Line 1 (SN-01, SN-02, SN-03, SN-04, SN-05 and SN-07)

SN-01
Oven Vapor Incinerator

Source Description

Emissions from the drying/curing oven are controlled by a fume incinerator that vents at this point.

The uncontrolled emissions from SN-01 fulfill the applicability criteria of the Compliance Assurance Monitoring (CAM) Rule (40 Code of Federal Regulations (CFR) Part (§) 64). Accordingly, the (CAM) Plan for the facility is provided in Appendix B. Per §64.2(a), the aforementioned source is regulated under the CAM Rule because it meets the following criteria: (1) the unit is subject to emission limitations for VOC, (2) the source is equipped with a control device (i.e., baghouse, filter), and (3) the unit has potential pre-control emissions of VOC that exceed the applicable major source threshold (i.e., 100 tons per year). In accordance with §64.3, Owens Corning has developed a CAM Plan for this source. The Plan establishes the operating parameters that will be monitored in order to demonstrate compliance with the VOC emission limit at this source.

Specific Conditions

1. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by Specific Conditions 5 and 6. [Rule 19.501 et seq., and 40 CFR Part 52, Subpart E]

SN	Description	Pollutant	lb/hr	ztpy
01	Oven Vapor Incinerator (Thermal Oxidizer)	PM_{10}	6.0	26.3
		SO_2	1.0	4.4
		VOC	3.0	13.2
		CO	50.0	219.0
		NO_x	10.0	43.8

2. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by Specific Conditions 5 and 6. [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	Oven Vapor	PM	6.0	26.3

SN	Description	Pollutant	lb/hr	tpy
	Incinerator (Thermal Oxidizer)	Acrylic Acid	1.00	4.38
		Formaldehyde	1.00	4.38
		Methanol	1.00	4.38
		Total Other HAPs	0.10	0.44
		Ammonia	4.00	17.52

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

SN	Limit	Regulatory Citation
01	20%	Rule 19.503 and 40 CFR Part 52, Subpart E

4. The permittee shall conduct weekly observations of the opacity from sources SN-01 and keep a record of these observations. These observations shall be conducted by a person familiar with the permittee's visible emissions. If visible emissions which appear to be in excess of the permitted opacity are detected, the permittee shall immediately take action to identify the cause of the visible emissions, implement corrective action, and document that visible emissions did not appear to be in excess of the permitted opacity following the corrective action. If after corrective action is taken the emissions still appear to exceed the permitted opacity, a Method 9 reading shall be performed. The permittee shall maintain records of the cause of any visible emissions and the corrective action taken. The permittee must keep these records onsite and make them available to Department personnel upon request. [Rule 19.503 and 40 CFR Part 52, Subpart E]

5. The permittee shall only combust natural gas at this source. [Rule 19.705; Rule 18.1004; Ark. Code Ann. § 8-4-203 as referenced by Ark. Code Ann. §§ 8-4-304 and 8-4-31; and 40 CFR Part 70.6]

6. The permittee shall comply with the CAM plan outlined in Appendix D of this permit for source SN-01, with the thermal oxidizer to maintain a minimum temperature of 1,385 °F (3-hour block average) in the incinerator while product is flowing to the curing oven. The Quality Improvement Plan (QIP) Threshold set by the CAM plan is 5% duration of the process operating time over a 6-month period. Compliance shall be demonstrated through compliance with Specific Condition # 7 and the CAM plan. [Rule 19.304 and Rule 19.705; Ark. Code Ann. § 8-4-203 as referenced by Ark. Code Ann. §§ 8-4-304 and 8-4-311; 40 CFR Part 64; and 40 CFR Part 70.6]

7. The permittee shall monitor the incinerator temperature continuously only while product is flowing to the curing oven and record the incinerator temperature on 15-minute and 3-hour block averages. [Rule 19.703, 40 CFR Part 52, Subpart E, 40 CFR Part 64 and Ark. Code Ann. § 8-4-203 as referenced by Ark. Code Ann. §§ 8-4-304 and 8-4-311]

40 C.F.R. Part 63, Subpart HHHH Conditions

8. This source is subject to regulation under 40 CFR Part 63, *National Emission Standards for Hazardous Air Pollutants for Wet-Formed Fiberglass Mat Production* and must comply with the following provisions by April 11, 2005. These provisions include, but are not limited to, Specific Condition 9 - 23. [Rule 19.304 and 40 CFR Part 63, Subpart HHHH]

9. The facility shall limit the formaldehyde emissions from each drying and curing oven by either: [Rule 19.304 and 40 C.F.R. §63.2983(a)(1) and (2)]
    a. Limiting emissions of formaldehyde to 0.03 kilograms or less per megagram (0.05 pounds per ton) of fiberglass mat produced; or
    b. Reducing uncontrolled formaldehyde emissions by 96 percent or more.

10. The facility shall meet the following operating limits: [Rule 19.304 and 40 C.F.R. §63.2984(a) through (e)]
    a. The permittee shall maintain operating parameters within established limits or ranges specified in your operation, maintenance, and monitoring (OMM) plan described in §63.2987. If there is a deviation of any of the specified parameters from the limit or range specified in the OMM plan, you must address the deviation according to paragraph (b) of §63.2984. You must comply with the operating limits specified in paragraphs (a)(1) through (4) of §63.2984:
        i. You must operate the thermal oxidizer so that the average operating temperature in any 3-hour block period does not fall below the temperature established during your performance test and specified in your OMM plan, except during periods when using a non-HAP binder.
        ii. You must not use a resin with a free-formaldehyde content greater than that of the resin used during your performance test and specified in your OMM plan.
        iii. You must operate the wet-formed fiberglass mat production process so that the average urea formaldehyde resin solids application rate in any 3-hour block period does not exceed the average application rate achieved during your performance test and specified in your OMM plan.
    b. When during a period of normal operations you detect that an operating parameter deviates from the limit or range established in paragraph (a) of §63.2984, you must initiate corrective actions within 1 hour according to the provisions of your OMM plan. The corrective action actions must be completed in an expeditious manner as specified in the OMM plan.
    c. You must maintain and inspect control devices according to the procedures specified in the OMM plan.
    d. You must include the operating limits specified in paragraphs (a)(1) through (3) of §63.2984 and their allowable ranges or levels in your OMM plan. Your 40 CFR part 70 operating permit for the drying and curing oven must contain a requirement that you develop and operate according to an OMM plan at all times.
    e. If you use a thermal oxidizer or other control device to achieve the emission limits in §63.2983, you must capture and convey the formaldehyde emissions from each

drying and curing oven according to the procedures in chapters 3 and 5 of "Industrial Ventilation: A Manual of Recommended Practice" (23rd Edition) or the appropriate chapters of "Industrial Ventilation: A Manual of Recommended Practice for Design" (27th Edition)(both are incorporated by reference, see §63.14). In addition, you may use an alternate as approved by the Administrator.

11. The facility must be in compliance with 40 C.F.R. Subpart HHHH at startup. [Rule 19.304 and 40 C.F.R. §63.2985(d)]

12. The facility shall comply with the following standards: [Rule 19.304 and 40 C.F.R. §63.2986(a) through (g)]
    a. You must install, maintain, and operate a thermal oxidizer or other control device or implement a process modification that reduces formaldehyde emissions from each drying and curing oven to the emission limits specified in §63.2983.
    b. You must comply with the operating limits specified in §63.2984. The operating limits prescribe the requirements for demonstrating continuous compliance based on the OMM plan. You must begin complying with the operating limits on the date by which you must complete the initial performance test.
    c. You must conduct a performance test according to §63.2991, 63.2992, and 63.2993 to demonstrate compliance for each drying and curing oven subject to the emission limits in §63.2983, and to establish or modify the operating limits or ranges for process or control device parameters that will be monitored to demonstrate continuous compliance.
    d. You must install, calibrate, maintain, and operate devices that monitor the parameters specified in your OMM plan at the frequency specified in the plan. All continuous parameter monitoring systems must be installed and operating no later than the applicable compliance date specified in §63.2985.
    e. You must prepare and follow a written OMM plan as specified in §63.2987.
    f. You must comply with the monitoring, recordkeeping, notification, and reporting requirements of this subpart as required by §63.2996 through 63.3000.
    g. You must comply with the requirements in paragraphs (g)(1) through (3) of §63.2986.
        i. You must be in compliance with the emission limits in §63.2983 and the operating limits in §63.2984 at all times, including periods of startup, shutdown, or malfunction.
        ii. You must always operate and maintain any affected source, including air pollution control and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions.
        iii. A startup, shutdown, and malfunction plan is not required for such affected sources after August 27, 2019.

13. The operation, maintenance, and monitoring (OMM) plan shall include the following: [Rule 19.304 and 40 C.F.R. §63.2987(a) through (d)]
    a. You must prescribe the monitoring that will be performed to ensure compliance with these emission limitations. Minimum monitoring requirements are listed in

table 1 of this subpart. Your plan must specify the items listed in paragraphs (a)(1) through (3) of §63.2987:

   i. Each process and control device to be monitored, the type of monitoring device that will be used, and the operating parameters that will be monitored.
   ii. A monitoring schedule that specifies the frequency that the parameter values will be determined and recorded.
   iii. The operating limits or ranges for each parameter that represent continuous compliance with the emission limits in §63.2983. Operating limits and ranges must be based on values of the monitored parameters recorded during performance tests.

b. You must establish routine and long-term maintenance and inspection schedules for each control device. You must incorporate in the schedules the control device manufacturer's recommendations for maintenance and inspections or equivalent procedures. If you use a thermal oxidizer, the maintenance schedule must include procedures for annual or more frequent inspection of the thermal oxidizer to ensure that the structural and design integrity of the combustion chamber is maintained. At a minimum, you must meet the requirements of paragraphs (b)(1) through (10) of §63.2987:
   i. Inspect all burners, pilot assemblies, and pilot sensing devices for proper operation. Clean pilot sensor if necessary.
   ii. Ensure proper adjustment of combustion air and adjust if necessary.
   iii. Inspect, when possible, all internal structures (such as baffles) to ensure structural integrity per the design specifications.
   iv. Inspect dampers, fans, and blowers for proper operation.
   v. Inspect motors for proper operation.
   vi. Inspect, when possible, combustion chamber refractory lining. Clean and repair or replace lining if necessary.
   vii. Inspect the thermal oxidizer shell for proper sealing, corrosion, and hot spots.
   viii. For the burn cycle that follows the inspection, document that the thermal oxidizer is operating properly and make any necessary adjustments.
   ix. Generally observe whether the equipment is maintained in good operating condition.
   x. Complete all necessary repairs as soon as practicable.
c. You must establish procedures for responding to operating parameter deviations. At a minimum, the procedures must include the information in paragraphs (c)(1) through (3) of §63.2987.
   i. Procedures for determining the cause of the operating parameter deviation.
   ii. Actions for correcting the deviation and returning the operating parameters to the allowable ranges or limits.
   iii. Procedures for recording the date and time that the deviation began and ended, and the times corrective actions were initiated and completed.

  d. Your plan must specify the recordkeeping procedures to document compliance with the emissions and operating limits. Table 1 of this subpart establishes the minimum recordkeeping requirements.

14. The facility must conduct a performance test for each drying and curing oven subject to this subpart according to the provisions in paragraphs (a) through (c) of §63.2991: [Rule 19.304 and 40 C.F.R. §63.2991(a) through (c)]
  a. Initially. You must conduct an initial performance test no later than 180 days after the applicable compliance date specified in §63.2985 (April 11, 2005). The initial performance test is used to demonstrate initial compliance and establish operating parameter limits and ranges to be used to demonstrate continuous compliance with the emission standards.
  b. Every 5 years. You must conduct a performance test every 5 years as part of renewing your 40 CFR part 70 operating permit.
  c. To change your OMM plan. You must conduct a performance test according to the requirements specified in §63.2992 to change the limit or range for any operating limit specified in your OMM plan established during a previous compliance test.

15. The facility shall conduct performance tests according to the following provisions: [Rule 19.304 and 40 C.F.R. §63.2992(a) through (f)]
  a. You must verify the performance of monitoring equipment as specified in §63.2994 before performing the test.
  b. You must conduct the performance test according to the procedures in §63.7(a) through (d), (e)(2) through (4), and (f) through (h).
  c. You must conduct the performance test under the conditions specified in paragraphs (c)(1) and (2) of §63.2992.
    i. The resin must have the highest specified free-formaldehyde content that will be used.
    ii. You must operate at the maximum feasible urea-formaldehyde resin solids application rate (pounds urea-formaldehyde resin solids applied per hour) that will be used.
  d. During the performance test, you must monitor and record the operating parameters that you will use to demonstrate continuous compliance after the test. These parameters are listed in table 1 of this subpart.
  e. You must conduct performance tests under conditions that are representative of the performance of the affected source. 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 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.
  f. You must conduct three separate test runs for each performance test as specified in §63.7(e)(3), and each test run must last at least 1 hour.

16. The facility shall use the following test methods when conducting performance tests: [Rule 19.304 and 40 C.F.R. §63.2993(a) through (g)]
    a. Use EPA Method 1 (40 CFR part 60, appendix A) for selecting the sampling port location and the number of sampling ports.
    b. Use EPA Method 2 (40 CFR part 60, appendix A) for measuring the volumetric flow rate.
    c. Use EPA Method 3 or 3A (40 CFR part 60, appendix A-2) for measuring oxygen and carbon dioxide concentrations needed to correct formaldehyde concentration measurements to a standard basis.
    d. Use EPA Method 4 (40 CFR part 60, appendix A-3) for measuring the moisture content of stack gas.
    e. Use EPA Method 316, 318 or 320 (40 CFR part 63, appendix A) for measuring the concentration of formaldehyde.
    f. Use the method contained in appendix A of this subpart or the resin purchase specification and the vendor specification sheet for each resin lot for determining the free-formaldehyde content in the urea-formaldehyde resin.
    g. Use the method in appendix B of this subpart for determining product loss-on-ignition.

17. The facility shall verify the performance of monitoring equipment according to the following provisions: [Rule 19.304 and 40 C.F.R. §63.2994(a) and (b)]
    a. Before conducting the performance test, you must take the steps listed in paragraphs (a)(1) through (3) of §63.2994:
        i. Install and calibrate all process equipment, control devices, and monitoring equipment.
        ii. Conduct a performance evaluation of the continuous monitoring system (CMS) according to § 63.8(e) which specifies the general requirements and requirements for notifications, the site-specific performance evaluation plan, conduct of the performance evaluation, and reporting of performance evaluation results.
        iii. Conduct a performance evaluation of the CPMS according to §63.8(e) which specifies the general requirements and requirements for notifications, the site-specific performance evaluation plan, conduct of the performance evaluation, and reporting of performance evaluation results.
    b. If you use a thermal oxidizer, the temperature monitoring device must meet the performance and equipment specifications listed in paragraphs (b)(1) through (3) of §63.2994:
        i. The temperature monitoring device must be installed either at the exit of the combustion zone of each thermal oxidizer, or at the location specified by the manufacturer. The temperature monitoring device must also be installed in a location before any heat recovery or heat exchange equipment, and it must remain in the same location for both the performance test and the continuous monitoring of temperature.

        ii. The recorder response range must include zero and 1.5 times the average temperature required in §63.2984(a)(1).
        iii. The measurement method or reference method for calibration must be a National Institute of Standards and Technology calibrated reference thermocouple-potentiometer system or an alternate reference subject to the approval of the Administrator.

18. The facility must monitor the parameters listed in table 1 of 40 C.F.R. Part 63 Subpart HHHH and any other parameters specified in your OMM plan. The parameters must be monitored, at a minimum, at the corresponding frequencies listed in the table. During periods when using a non-HAP binder, you are not required to monitor the parameters in Table 1 to Subpart HHHH [Rule 19.304 and 40 C.F.R. §63.2996(a) and (b)]

19. The facility must meet the following monitoring device requirements when using a thermal oxidizer to control formaldehyde emissions: [Rule 19.304 and 40 C.F.R. §63.2997(a) and (b)]
    a. If you control formaldehyde emissions using a thermal oxidizer, you must meet the requirements in paragraphs a(1) and (2) of this section:
        i. Install, calibrate, maintain, and operate a device to monitor and record continuously the thermal oxidizer temperature at the exit of the combustion zone before any substantial heat exchange occurs or at the location consistent with the manufacturer's recommendations.
        ii. Continuously monitor the thermal oxidizer temperature and determine and record the average temperature in 15-minute and 3-hour block averages. You may determine the average temperature more frequently than every 15 minutes and every 3 hours, but not less frequently
    b. If you use the process modifications or a control device other than a thermal oxidizer to control formaldehyde emissions, you must install, calibrate, maintain, and operate devices to monitor the parameters established in your OMM plan at the frequency established in the plan.

20. The facility must maintain records according to the procedures of §63.10 and must maintain the following records: [Rule 19.304 and 40 C.F.R. §63.2998(a) through (i), not (e)]
    a. All records required by §63.10. Table 2 of this subpart presents the applicable requirements of the general provisions.
    b. The OMM plan.
    c. Records of values of monitored parameters listed in table 1 of this subpart to show continuous compliance with each operating limit specified in table 1 of this subpart. If you do not monitor parameters in Table 1 to this subpart during periods when using non-HAP binder, you must record the dates and times that production of mat using non-HAP binder began and ended.
    d. Records of maintenance and inspections performed on the control devices.
    f. Records specified in §63.6(e)(3)(iii) through (v) are not required to be kept after August 27, 2019 for existing or new drying and curing ovens.

g. After August 27, 2019 for all other affected sources, in the event that an affected source fails to meet an applicable standard, including deviations from an emission limit in §63.2983 or an operating limit in §63.2984, you must record the number of failures and, for each failure, you must:
    i. Record the date, time, and duration of the failure;
    ii. Describe the cause of the failure;
    iii. 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; and
    iv. Record actions taken to minimize emissions in accordance with §63.2986(g)(2) and any corrective actions taken to return the affected unit to its normal or usual manner of operation and/or to return the operating parameter to the limit or to within the range specified in the OMM plan, and the dates and times at which corrective actions were initiated and completed.

h. If you operate your process or control device under alternative operating condition and have established operating limits for each condition as specified in §63.2989(c), then you must keep records of the date and time you changed operations from one condition to another, the condition under which you are operating, and the applicable operating limits for that condition.

i. Records showing how the maximum residence time was derived.

21. The facility must maintain each record required by this subpart for 5 years. You must maintain the most recent 2 years of records at the facility. The remaining 3 years of records may be retained offsite. The records must be readily available and in a form so they can be easily inspected and reviewed. You can keep the records on paper or an alternative media, such as microfilm, computer, computer disks, magnetic tape, or on microfiche. You may maintain any records that you submitted electronically via the EPA's Compliance and Emissions Data Reporting Interface (CEDRI) in electronic format. This ability to maintain 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 onsite compliance evaluation. [Rule 19.304 and 40 C.F.R. §63.2999(a) through (c)]

22. The facility must submit the following notifications and reports: [Rule 19.304 and 40 C.F.R. §63.3000(a) through (g)]

a. You must submit all notifications and reports required by the applicable general provisions and §63.3000. Table 2 of this subpart presents the applicable requirements of the general provisions.

b. Notification of compliance status. You must submit the notification of compliance status, including the performance test results, the operating limits or ranges as determined during the performance test, and other information specified in §63.9(h), before the close of business on the 60th calendar day after you complete the performance test according to §63.10(d)(2).

c. Semiannual compliance reports. You must submit semiannual compliance reports according to the requirements of paragraphs (c)(1) through (6) not (5) of §63.3000.
    i. Dates for submitting reports. Unless the Administrator has agreed to a different schedule for submitting reports under §63.10(a), you must deliver or postmark each semiannual compliance report no later than 30 days following the end of each semiannual reporting period. The first semiannual reporting period begins on the compliance date for your affected source and ends on June 30 or December 31, whichever date immediately follows your compliance date. Each subsequent semiannual reporting period for which you must submit a semiannual compliance report begins on July 1 or January 1 and ends 6 calendar months later. After February 28, 2019, you are not required to submit quarterly compliance reports.
    ii. Inclusion with Title V report. For each affected source that is subject to permitting regulations pursuant to 40 CFR part 70 or 71, and for which the permitting authority has established dates for submitting semiannual reports pursuant to 40 CFR 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 paragraph (c)(1) of this section.
    iii. Contents of reports. The semiannual compliance report must contain the information in paragraphs (c)(3)(i) through (vi) of §63.3000:
        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 report and beginning and ending dates of the reporting period.
        4. A summary of the total duration of continuous parameter monitoring system downtime during the semiannual reporting period and the total duration of continuous parameter monitoring system downtime as a percent of the total source operating time during that semiannual reporting period.
        5. The date of the latest continuous parameter monitoring system certification or audit.
        6. A description of any changes in the wet-formed fiberglass mat manufacturing process, continuous parameter monitoring system, or add-on control device since the last semiannual reporting period.
    iv. No deviations. If there were no deviations from the emission limit in §63.2983 or the operating limits in §63.2984, the semiannual compliance report must include a statement to that effect. If there were no periods during which the continuous parameter monitoring systems were out-of-control as specified in §63.8(c)(7), the semiannual compliance report must include a statement to that effect.

v. Deviations. For affected sources that commence construction or reconstruction after April 6, 2018, after February 28, 2019, and after August 27, 2019 for all other affected sources, if there was an instance where an affected source failed to meet an applicable standard, including a deviation from the emission limit in §63.2983 or an operating limit in §63.2984, the semiannual compliance report must record the number of failures and contain the information in paragraphs (c)(6)(i) through (ix) of this section:
    1. The date, time, and duration of each failure.
    2. The date and time that each continuous parameter monitoring system was inoperative, except for zero (low-level) and high-level checks.
    3. The date, time, and duration that each continuous parameter monitoring system was out-of-control, including the information in §63.8(c)(8).
    4. 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.
    5. The date and time that corrective actions were taken, a description of the cause of the failure (including unknown cause, if applicable), and a description of the corrective actions taken.
    6. A summary of the total duration of each failure during the semiannual reporting period and the total duration as a percent of the total source operating time during that semiannual reporting period.
    7. A breakdown of the total duration of the failures during the semiannual reporting period into those that were due to control equipment problems, process problems, other known causes, and other unknown causes.
    8. A brief description of the associated process units.
    9. A brief description of the continuous parameter monitoring system.

d. No startup, shutdown, or malfunction plan is required for any affected source that commences construction or reconstruction after April 6, 2018.

e. Performance test reports. You must submit results of each performance test (as defined in §63.2) required by this subpart no later than 60 days after completing the test as specified in §63.10(d)(2). You must include the values measured during the performance test for the parameters listed in Table 1 of this subpart and the operating limits or ranges that you will include in your OMM plan. For the thermal oxidizer temperature, you must include 15-minute averages and the average for the three 1-hour test runs. For affected sources that commence construction or reconstruction after April6, 2018, beginning February 28, 2019, and beginning no later than August 27, 2019 for all other affected sources, you must submit the results following the procedures specified in paragraphs (e)(1) through (3) of this section.

        i. For data collected using test methods supported by the EPA's Electronic Reporting Tool (ERT) as listed on the EPA's ERT website (*https://www.epa.gov/electronic-reporting-air-emissions/electronic-reporting-tool-ert*) at the time of the test, you must submit the results of the performance test to the EPA via CEDRI (CEDRI can be accessed through the EPA's Central Data Exchange (CDX) (*https://cdx.epa.gov/*)). You must submit performance test data in a file format generated through the use of the EPA's ERT or an alternate electronic file format consistent with the extensible markup language (XML) schema listed on the EPA's ERT website.
        ii. For data collected using test methods that are not supported by the EPA's ERT as listed on the EPA's ERT website at the time of the test, you must submit the results of the performance test to the Administrator at the appropriate address listed in §63.13, unless the Administrator agrees to or specifies an alternate reporting method.
        iii. If you claim that some of the performance test information you are submitting under paragraph (e)(1) is confidential business information (CBI), you must submit a complete file generated through the use of the EPA's ERT or an alternate electronic file consistent with the XML schema listed on the EPA's ERT website, including information claimed to be CBI, on a compact disk, flash drive or other commonly used electronic storage medium to the EPA. You must clearly mark the electronic medium as CBI and mail to U.S.EPA/OAQPS/CORE CBI omitted to the EPA via the EPA's CDX as described in paragraph (e)(1) of this section.
    f. Claims of EPA system outage. If you are required to electronically submit a report through the CEDRI in the EPA's CDX, you may assert a claim of EPA 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 (f)(1) through (7) of this section.
        i. You must have been or will be precluded from accessing CEDRI and submitting a required test report within the time prescribed due to an outage of either the EPA's CEDRI or CDX Systems.
        ii. The outage must have occurred within the period of time beginning five business days prior to the date that the submission is due.
        iii. The outage may be planned or unplanned.
        iv. 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.
        v. You must provide to the Administrator a written description identifying:
            1. The date(s) and time(s) when CDX or CEDRI was accessed and the system was unavailable;
            2. A rationale for attributing the delay in reporting beyond the regulatory deadline to EPA system outage;

        3. Measures take or to be taken to minimize the delay in reporting; and
        4. 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.
    vi. 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.
    vii. In any circumstance, the report must be submitted electronically as soon as possible after the outage is resolved.

g. Claims of force majeure. 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 (g)(1) through (5) of this section.
    i. 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 requirements 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).
    ii. 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.
    iii. You must provide to the Administrator:
        1. A written description of the force majeure event;
        2. A rationale for attributing the delay in reporting beyond the regulatory deadline to the force majeure event;
        3. Measures taken or to be taken to minimize the delay in reporting; and
        4. 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.
    iv. 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.
    v. In any circumstance, the reporting must occur as soon as possible after the force majeure event occurs.

23. The facility must comply with the requirements of the general provisions of 40 C.F.R. Part 63, subpart A, as specified in table 2 of 40 C.F.R. Part 63 Subpart HHHH. [Rule 19.304 and 40 C.F.R. §63.3001]

SN-03
Deltaformer Vacuums

Source Description

Vacuum is used to remove excess liquid from the thick stock. Air from the vacuum lines is routed through a series of moisture separators to remove entrained water prior to being emitted to the atmosphere at this source.

Specific Conditions

24. The permittee shall not exceed the emission rates set forth in the following table. Emission rates are based on stack testing and are considered to represent worst case. [Rule 19.501 et seq. and 40 CFR Part 52, Subpart E]

SN	Description	Pollutant	lb/hr	tpy
03	Deltaformer Vacuums	PM_{10}	0.5	2.2
		VOC	3.0	13.2

25. The permittee shall not exceed the emission rates set forth in the following table. Emission rates are based on stack testing and are considered to represent worst case. [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
03	Deltaformer Vacuums	PM	0.5	2.2
		Acrylic Acid	0.10	0.44
		Formaldehyde	0.10	0.44
		Methanol	0.10	0.44
		Total Other HAPs	0.10	0.44
		Ammonia	0.10	0.44

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

SN	Limit	Regulatory Citation
03	5%	Rule 18.501 and Ark. Code Ann. § 8-4-203 as referenced by Ark. Code Ann. §§ 8-4-304 and 8-4-311

27. The permittee shall conduct weekly observations of the opacity from source SN-03 and keep a record of these observations. These observations shall be conducted by a person familiar with the permittee's visible emissions. If visible emissions which appear to be in excess of the permitted opacity are detected, the permittee shall immediately take action

to identify the cause of the visible emissions, implement corrective action, and document that visible emissions did not appear to be in excess of the permitted opacity following the corrective action. If after corrective action is taken the emissions still appear to exceed the permitted opacity, a Method 9 reading shall be performed. The permittee shall maintain records of the cause of any visible emissions and the corrective action taken. The permittee must keep these records onsite and make them available to Department personnel upon request. [Rule 18.501 and Ark. Code Ann. § 8-4-203 as referenced by Ark. Code Ann. §§ 8-4-304 and 8-4-311]

SN-04
Saturator Vacuums

Source Description

Vacuum is used to remove excess liquid from the mat. Air from the vacuum lines is routed through a series of moisture separators to removed entrained water prior to being emitted to the atmosphere at this source.

Specific Conditions

28. The permittee shall not exceed the emission rates set forth in the following table. Emission rates are based on stack testing and are considered to represent worst case. [Rule 19.501 et seq. and 40 CFR Part 52, Subpart E]

SN	Description	Pollutant	lb/hr	tpy
04	Saturator Vacuums	PM_{10}	0.5	2.2
		VOC	3.0	13.2

29. The permittee shall not exceed the emission rates set forth in the following table. Emission rates are based on stack testing and are considered to represent worst case. [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
04	Saturator Vacuums	PM	0.5	2.2
		Acrylic Acid	0.50	2.19
		Formaldehyde	0.50	2.19
		Methanol	2.00	8.76
		Total Other HAPs	0.10	0.44
		Ammonia	0.10	0.44

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

SN	Limit	Regulatory Citation
04	5%	Rule 18.501 and Ark. Code Ann. § 8-4-203 as referenced by Ark. Code Ann. §§ 8-4-304 and 8-4-311

31. The permittee shall conduct weekly observations of the opacity from source SN-04 and keep a record of these observations. These observations shall be conducted by a person familiar with the permittee's visible emissions. If visible emissions which appear to be in excess of the permitted opacity are detected, the permittee shall immediately take action

to identify the cause of the visible emissions, implement corrective action, and document that visible emissions did not appear to be in excess of the permitted opacity following the corrective action. If after corrective action is taken the emissions still appear to exceed the permitted opacity, a Method 9 reading shall be performed. The permittee shall maintain records of the cause of any visible emissions and the corrective action taken. The permittee must keep these records onsite and make them available to Department personnel upon request. [Rule 18.501 and Ark. Code Ann. § 8-4-203 as referenced by Ark. Code Ann. §§ 8-4-304 and 8-4-311]

SN-05
Binder Mix & Run Tanks

Source Description

Emissions resulting from binder moving throughout the process are emitted at this source.

Specific Conditions

32. The permittee shall not exceed the emission rates set forth in the following table. Emission rates are based on stack testing and are considered to represent worst case. [Rule 19.501 et seq. and 40 CFR Part 52, Subpart E]

SN	Description	Pollutant	lb/hr	tpy
05	Binder Mix & Run Tanks	VOC	2.0	8.8

33. The permittee shall not exceed the emission rates set forth in the following table. Emission rates are based on stack testing and are considered to represent worst case. [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
05	Binder Mix & Run Tanks	Acrylic Acid	0.50	2.19
		Formaldehyde	0.10	0.44
		Methanol	1.00	4.38
		Total Other HAPs	0.50	2.19
		Ammonia	0.50	2.19

SN-07

Mat Line Uncontrolled Emissions

Source Description

Uncontrolled emissions from the mat line are exhausted through roof vents.

Specific Conditions

34. The permittee shall not exceed the emission rates set forth in the following table. Emission rates are based on stack testing and are considered to represent worst case. [Rule 19.501 et seq. and 40 CFR Part 52, Subpart E]

SN	Description	Pollutant	lb/hr	tpy
07	Mat Line Uncontrolled Emissions	PM_{10}	3.0	13.2
		VOC	20.0	87.6

35. The permittee shall not exceed the emission rates set forth in the following table. Emission rates are based on stack testing and are considered to represent worst case. [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
07	Mat Line Uncontrolled Emissions	PM	3.0	13.2
		Acrylic Acid	5.00	21.90
		Formaldehyde	5.00	21.90
		Methanol	5.00	21.90
		Total Other HAPs	1.00	4.38
		Ammonia	2.50	10.95

Line 2 (SN-11 through SN-15)

SN-11
Regenerative Thermal Oxidizer

Source Description

Emissions from the curing/drying process include PM, PM_{10}, $PM_{2.5}$, and VOC, as well as certain HAPs present in the binders and pollutants from the combustion of natural gas. The regenerative thermal oxidizer (RTO) controls the emissions from the curing/drying oven.

Specific Conditions

36. 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 40 and 41. [Rule 19.501 *et seq.* and 40 C.F.R. § 52 Subpart E]

SN	Description	Pollutant	lb/hr	tpy
11	Regenerative Thermal Oxidizer	PM_{10}	7.6	33.3
		$PM_{2.5}$	7.6	33.3
		SO_2	0.1	0.4
		VOC	24.3	106.2
		CO	32.9	144.1
		NO_x	13.9	60.6

37. 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 40 and 41 [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
11	Regenerative Thermal Oxidizer	PM	7.6	13.4
		Acrylic Acid	4.79	20.99
		Formaldehyde	3.99	17.49
		Methanol	6.89	30.17

SN	Description	Pollutant	lb/hr	tpy
		Styrene	1.00	4.37
		Triethylamine	1.00	4.37
		Total Other HAPs	0.25	1.10
		Ammonia	4.79	20.99

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

SN	Limit	Regulatory Citation
11	5%	Rule 19.503 and 40 CFR Part 52, Subpart E

39. The permittee shall conduct weekly observations of the opacity from sources SN-11 and keep a record of these observations. These observations shall be conducted by a person familiar with the permittee's visible emissions. If visible emissions which appear to be in excess of the permitted opacity are detected, the permittee shall immediately take action to identify the cause of the visible emissions, implement corrective action, and document that visible emissions did not appear to be in excess of the permitted opacity following the corrective action. If after corrective action is taken the emissions still appear to exceed the permitted opacity, a Method 9 reading shall be performed. The permittee shall maintain records of the cause of any visible emissions and the corrective action taken. The permittee must keep these records onsite and make them available to Department personnel upon request. [Rule 19.503 and 40 CFR Part 52, Subpart E]

40. The permittee shall only combust natural gas at this source. [Rule 19.705; Rule 18.1004; Ark. Code Ann. § 8-4-203 as referenced by Ark. Code Ann. §§ 8-4-304 and 8-4-311; and 40 CFR Part 70.6]

41. The permittee shall comply with the CAM plan outlined in Appendix B of this permit for source SN-11, with the thermal oxidizer to maintain a minimum temperature of 1,400 °F (3-hour block average) in the thermal oxidizer while product is flowing to the curing oven. The Quality Improvement Plan (QIP) Threshold set by the CAM plan is 5% duration of the process operating time over a 6-month period. Compliance shall be demonstrated through compliance with Specific Condition # 42 and the CAM plan. [Rule 19.304 and Rule 19.705; Ark. Code Ann. § 8-4-203 as referenced by Ark. Code Ann. §§ 8-4-304 and 8-4-311; and 40 CFR Part 70.6]

42. The permittee shall monitor the thermal oxidizer temperature continuously only while product is flowing to the curing oven and record the thermal oxidizer temperature on 15-minute and 3-hour block averages. [Rule 19.703, 40 CFR Part 52, Subpart E, 40 CFR

Part 64 and Ark. Code Ann. § 8-4-203 as referenced by Ark. Code Ann. §§ 8-4-304 and 8-4-311]

40 C.F.R. Part 63, Subpart HHHH Conditions

43. This source is subject to regulation under 40 CFR Part 63, *National Emission Standards for Hazardous Air Pollutants for Wet-Formed Fiberglass Mat Production* and must comply with the following provisions by April 11, 2005. These provisions include, but are not limited to, Specific Condition 44 - 58. [Rule 19.304 and 40 CFR Part 63, Subpart HHHH]

44. The facility shall limit the formaldehyde emissions from each drying and curing oven by either: [Rule 19.304 and 40 C.F.R. §63.2983(a)(1) and (2)]
    a. Limiting emissions of formaldehyde to 0.03 kilograms or less per megagram (0.05 pounds per ton) of fiberglass mat produced; or
    b. Reducing uncontrolled formaldehyde emissions by 96 percent or more.

45. The facility shall meet the following operating limits: [Rule 19.304 and 40 C.F.R. §63.2984(a) through (e)]
    a. The permittee shall maintain operating parameters within established limits or ranges specified in your operation, maintenance, and monitoring (OMM) plan described in §63.2987. If there is a deviation of any of the specified parameters from the limit or range specified in the OMM plan, you must address the deviation according to paragraph (b) of §63.2984. You must comply with the operating limits specified in paragraphs (a)(1) through (4) of §63.2984:
        i. You must operate the thermal oxidizer so that the average operating temperature in any 3-hour block period does not fall below the temperature established during your performance test and specified in your OMM plan, except during periods when using a non-HAP binder.
        ii. You must not use a resin with a free-formaldehyde content greater than that of the resin used during your performance test and specified in your OMM plan.
        iii. You must operate the wet-formed fiberglass mat production process so that the average urea formaldehyde resin solids application rate in any 3-hour block period does not exceed the average application rate achieved during your performance test and specified in your OMM plan.
    b. When during a period of normal operations you detect that an operating parameter deviates from the limit or range established in paragraph (a) of §63.2984, you must initiate corrective actions within 1 hour according to the provisions of your OMM plan. The corrective action actions must be completed in an expeditious manner as specified in the OMM plan.
    c. You must maintain and inspect control devices according to the procedures specified in the OMM plan.
    d. You must include the operating limits specified in paragraphs (a)(1) through (3) of §63.2984 and their allowable ranges or levels in your OMM plan. Your 40

CFR part 70 operating permit for the drying and curing oven must contain a requirement that you develop and operate according to an OMM plan at all times.

e. If you use a thermal oxidizer or other control device to achieve the emission limits in §63.2983, you must capture and convey the formaldehyde emissions from each drying and curing oven according to the procedures in chapters 3 and 5 of "Industrial Ventilation: A Manual of Recommended Practice" (23rd Edition) or the appropriate chapters of "Industrial Ventilation: A Manual of Recommended Practice for Design" (27th Edition)(both are incorporated by reference, see §63.14). In addition, you may use an alternate as approved by the Administrator.

46. The facility must be in compliance with 40 C.F.R. Subpart HHHH at startup. [Rule 19.304 and 40 C.F.R. §63.2985(d)]

47. The facility shall comply with the following standards: [Rule 19.304 and 40 C.F.R. §63.2986(a) through (g)]
    a. You must install, maintain, and operate a thermal oxidizer or other control device or implement a process modification that reduces formaldehyde emissions from each drying and curing oven to the emission limits specified in §63.2983.
    b. You must comply with the operating limits specified in §63.2984. The operating limits prescribe the requirements for demonstrating continuous compliance based on the OMM plan. You must begin complying with the operating limits on the date by which you must complete the initial performance test.
    c. You must conduct a performance test according to §63.2991, 63.2992, and 63.2993 to demonstrate compliance for each drying and curing oven subject to the emission limits in §63.2983, and to establish or modify the operating limits or ranges for process or control device parameters that will be monitored to demonstrate continuous compliance.
    d. You must install, calibrate, maintain, and operate devices that monitor the parameters specified in your OMM plan at the frequency specified in the plan. All continuous parameter monitoring systems must be installed and operating no later than the applicable compliance date specified in §63.2985.
    e. You must prepare and follow a written OMM plan as specified in §63.2987.
    f. You must comply with the monitoring, recordkeeping, notification, and reporting requirements of this subpart as required by §63.2996 through 63.3000.
    g. You must comply with the requirements in paragraphs (g)(1) through (3) of §63.2986.
        i. You must be in compliance with the emission limits in §63.2983 and the operating limits in §63.2984 at all times, including periods of startup, shutdown, or malfunction.
        ii. You must always operate and maintain any affected source, including air pollution control and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions.
        iii. No startup, shutdown, or malfunction plan (SSMP) is required for any affected source that commences construction or reconstruction after April 6, 2018.

48. The operation, maintenance, and monitoring (OMM) plan shall include the following: [Rule 19.304 and 40 C.F.R. §63.2987(a) through (d)]
    a. You must prescribe the monitoring that will be performed to ensure compliance with these emission limitations. Minimum monitoring requirements are listed in table 1 of this subpart. Your plan must specify the items listed in paragraphs (a)(1) through (3) of §63.2987:
        i. Each process and control device to be monitored, the type of monitoring device that will be used, and the operating parameters that will be monitored.
        ii. A monitoring schedule that specifies the frequency that the parameter values will be determined and recorded.
        iii. The operating limits or ranges for each parameter that represent continuous compliance with the emission limits in §63.2983. Operating limits and ranges must be based on values of the monitored parameters recorded during performance tests.
    b. You must establish routine and long-term maintenance and inspection schedules for each control device. You must incorporate in the schedules the control device manufacturer's recommendations for maintenance and inspections or equivalent procedures. If you use a thermal oxidizer, the maintenance schedule must include procedures for annual or more frequent inspection of the thermal oxidizer to ensure that the structural and design integrity of the combustion chamber is maintained. At a minimum, you must meet the requirements of paragraphs (b)(1) through (10) of §63.2987:
        i. Inspect all burners, pilot assemblies, and pilot sensing devices for proper operation. Clean pilot sensor if necessary.
        ii. Ensure proper adjustment of combustion air and adjust if necessary.
        iii. Inspect, when possible, all internal structures (such as baffles) to ensure structural integrity per the design specifications.
        iv. Inspect dampers, fans, and blowers for proper operation.
        v. Inspect motors for proper operation.
        vi. Inspect, when possible, combustion chamber refractory lining. Clean and repair or replace lining if necessary.
        vii. Inspect the thermal oxidizer shell for proper sealing, corrosion, and hot spots.
        viii. For the burn cycle that follows the inspection, document that the thermal oxidizer is operating properly and make any necessary adjustments.
        ix. Generally observe whether the equipment is maintained in good operating condition.
        x. Complete all necessary repairs as soon as practicable.
    c. You must establish procedures for responding to operating parameter deviations. At a minimum, the procedures must include the information in paragraphs (c)(1) through (3) of §63.2987.
        i. Procedures for determining the cause of the operating parameter deviation.

    ii. Actions for correcting the deviation and returning the operating parameters to the allowable ranges or limits.
    iii. Procedures for recording the date and time that the deviation began and ended, and the times corrective actions were initiated and completed.
  d. Your plan must specify the recordkeeping procedures to document compliance with the emissions and operating limits. Table 1 of this subpart establishes the minimum recordkeeping requirements.

49. The facility must conduct a performance test for each drying and curing oven subject to this subpart according to the provisions in paragraphs (a) through (c) of §63.2991: [Rule 19.304 and 40 C.F.R. §63.2991(a) through (c)]
  a. Initially. You must conduct an initial performance test no later than 180 days after the applicable compliance date specified in §63.2985 (at startup). The initial performance test is used to demonstrate initial compliance and establish operating parameter limits and ranges to be used to demonstrate continuous compliance with the emission standards.
  b. Every 5 years. You must conduct a performance test every 5 years as part of renewing your 40 CFR part 70 operating permit.
  c. To change your OMM plan. You must conduct a performance test according to the requirements specified in §63.2992 to change the limit or range for any operating limit specified in your OMM plan established during a previous compliance test.

50. The facility shall conduct performance tests according to the following provisions: [Rule 19.304 and 40 C.F.R. §63.2992(a) through (f)]
  a. You must verify the performance of monitoring equipment as specified in §63.2994 before performing the test.
  b. You must conduct the performance test according to the procedures in §63.7(a) through (d), (e)(2) through (4), and (f) through (h).
  c. You must conduct the performance test under the conditions specified in paragraphs (c)(1) and (2) of §63.2992.
    i. The resin must have the highest specified free-formaldehyde content that will be used.
    ii. You must operate at the maximum feasible urea-formaldehyde resin solids application rate (pounds urea-formaldehyde resin solids applied per hour) that will be used.
  d. During the performance test, you must monitor and record the operating parameters that you will use to demonstrate continuous compliance after the test. These parameters are listed in table 1 of this subpart.
  e. You must conduct performance tests under conditions that are representative of the performance of the affected source. 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 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.

f. You must conduct three separate test runs for each performance test as specified in §63.7(e)(3), and each test run must last at least 1 hour.

51. The facility shall use the following test methods when conducting performance tests: [Rule 19.304 and 40 C.F.R. §63.2993(a) through (g)]
    a. Use EPA Method 1 (40 CFR part 60, appendix A) for selecting the sampling port location and the number of sampling ports.
    b. Use EPA Method 2 (40 CFR part 60, appendix A) for measuring the volumetric flow rate.
    c. Use EPA Method 3 or 3A (40 CFR part 60, appendix A-2) for measuring oxygen and carbon dioxide concentrations needed to correct formaldehyde concentration measurements to a standard basis.
    d. Use EPA Method 4 (40 CFR part 60, appendix A-3) for measuring the moisture content of stack gas.
    e. Use EPA Method 316, 318 or 320 (40 CFR part 63, appendix A) for measuring the concentration of formaldehyde.
    f. Use the method contained in appendix A of this subpart or the resin purchase specification and the vendor specification sheet for each resin lot for determining the free-formaldehyde content in the urea-formaldehyde resin.
    g. Use the method in appendix B of this subpart for determining product loss-on-ignition.

52. The facility shall verify the performance of monitoring equipment according to the following provisions: [Rule 19.304 and 40 C.F.R. §63.2994(a) and (b)]
    a. Before conducting the performance test, you must take the steps listed in paragraphs (a)(1) through (3) of §63.2994:
        i. Install and calibrate all process equipment, control devices, and monitoring equipment.
        ii. Conduct a performance evaluation of the continuous monitoring system (CMS) according to § 63.8(e) which specifies the general requirements and requirements for notifications, the site-specific performance evaluation plan, conduct of the performance evaluation, and reporting of performance evaluation results.
        iii. Conduct a performance evaluation of the CPMS according to §63.8(e) which specifies the general requirements and requirements for notifications, the site-specific performance evaluation plan, conduct of the performance evaluation, and reporting of performance evaluation results.
    b. If you use a thermal oxidizer, the temperature monitoring device must meet the performance and equipment specifications listed in paragraphs (b)(1) through (3) of §63.2994:
        i. The temperature monitoring device must be installed either at the exit of the combustion zone of each thermal oxidizer, or at the location specified by the manufacturer. The temperature monitoring device must also be

installed in a location before any heat recovery or heat exchange equipment, and it must remain in the same location for both the performance test and the continuous monitoring of temperature.

ii. The recorder response range must include zero and 1.5 times the average temperature required in §63.2984(a)(1).

iii. The measurement method or reference method for calibration must be a National Institute of Standards and Technology calibrated reference thermocouple-potentiometer system or an alternate reference subject to the approval of the Administrator.

53. The facility must monitor the parameters listed in table 1 of 40 C.F.R. Part 63 Subpart HHHH and any other parameters specified in your OMM plan. The parameters must be monitored, at a minimum, at the corresponding frequencies listed in the table. During periods when using a non-HAP binder, you are not required to monitor the parameters in Table 1 to Subpart HHHH [Rule 19.304 and 40 C.F.R. §63.2996(a) and (b)]

54. The facility must meet the following monitoring device requirements when using a thermal oxidizer to control formaldehyde emissions: [Rule 19.304 and 40 C.F.R. §63.2997(a) and (b)]
    a. If you control formaldehyde emissions using a thermal oxidizer, you must meet the requirements in paragraphs a(1) and (2) of this section:
        i. Install, calibrate, maintain, and operate a device to monitor and record continuously the thermal oxidizer temperature at the exit of the combustion zone before any substantial heat exchange occurs or at the location consistent with the manufacturer's recommendations.
        ii. Continuously monitor the thermal oxidizer temperature and determine and record the average temperature in 15-minute and 3-hour block averages. You may determine the average temperature more frequently than every 15 minutes and every 3 hours, but not less frequently
    b. If you use the process modifications or a control device other than a thermal oxidizer to control formaldehyde emissions, you must install, calibrate, maintain, and operate devices to monitor the parameters established in your OMM plan at the frequency established in the plan.

55. The facility must maintain records according to the procedures of §63.10 and must maintain the following records: [Rule 19.304 and 40 C.F.R. §63.2998(a) through (i), not (e)]
    a. All records required by §63.10. Table 2 of this subpart presents the applicable requirements of the general provisions.
    b. The OMM plan.
    c. Records of values of monitored parameters listed in table 1 of this subpart to show continuous compliance with each operating limit specified in table 1 of this subpart. If you do not monitor parameters in Table 1 to this subpart during periods when using non-HAP binder, you must record the dates and times that production of mat using non-HAP binder began and ended.

d. Records of maintenance and inspections performed on the control devices.
e. Records specified in §63.6(e)(3)(iii) through (v) are not required to be kept after August 27, 2019 for existing or new drying and curing ovens.
f. After August 27, 2019 for all other affected sources, in the event that an affected source fails to meet an applicable standard, including deviations from an emission limit in §63.2983 or an operating limit in §63.2984, you must record the number of failures and, for each failure, you must:
   i. Record the date, time, and duration of the failure;
   ii. Describe the cause of the failure;
   iii. 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; and
   iv. Record actions taken to minimize emissions in accordance with §63.2986(g)(2) and any corrective actions taken to return the affected unit to its normal or usual manner of operation and/or to return the operating parameter to the limit or to within the range specified in the OMM plan, and the dates and times at which corrective actions were initiated and completed.
g. If you operate your process or control device under alternative operating condition and have established operating limits for each condition as specified in §63.2989(c), then you must keep records of the date and time you changed operations from one condition to another, the condition under which you are operating, and the applicable operating limits for that condition.
h. Records showing how the maximum residence time was derived.

56. The facility must maintain each record required by this subpart for 5 years. You must maintain the most recent 2 years of records at the facility. The remaining 3 years of records may be retained offsite. The records must be readily available and in a form so they can be easily inspected and reviewed. You can keep the records on paper or an alternative media, such as microfilm, computer, computer disks, magnetic tape, or on microfiche. You may maintain any records that you submitted electronically via the EPA's Compliance and Emissions Data Reporting Interface (CEDRI) in electronic format. This ability to maintain 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 onsite compliance evaluation. [Rule 19.304 and 40 C.F.R. §63.2999(a) through (c)]

57. The facility must submit the following notifications and reports: [Rule 19.304 and 40 C.F.R. §63.3000(a) through (g)]
a. You must submit all notifications and reports required by the applicable general provisions and §63.3000. Table 2 of this subpart presents the applicable requirements of the general provisions.
b. Notification of compliance status. You must submit the notification of compliance status, including the performance test results, the operating limits or ranges as determined during the performance test, and other information specified in

§63.9(h), before the close of business on the 60th calendar day after you complete the performance test according to §63.10(d)(2).

c. Semiannual compliance reports. You must submit semiannual compliance reports according to the requirements of paragraphs (c)(1) through (6) not (5) of §63.3000.
    i. Dates for submitting reports. Unless the Administrator has agreed to a different schedule for submitting reports under §63.10(a), you must deliver or postmark each semiannual compliance report no later than 30 days following the end of each semiannual reporting period. The first semiannual reporting period begins on the compliance date for your affected source and ends on June 30 or December 31, whichever date immediately follows your compliance date. Each subsequent semiannual reporting period for which you must submit a semiannual compliance report begins on July 1 or January 1 and ends 6 calendar months later. After February 28, 2019, you are not required to submit quarterly compliance reports.
    ii. Inclusion with Title V report. For each affected source that is subject to permitting regulations pursuant to 40 CFR part 70 or 71, and for which the permitting authority has established dates for submitting semiannual reports pursuant to 40 CFR 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 paragraph (c)(1) of this section.
    iii. Contents of reports. The semiannual compliance report must contain the information in paragraphs (c)(3)(i) through (vi) of §63.3000:
        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 report and beginning and ending dates of the reporting period.
        4. A summary of the total duration of continuous parameter monitoring system downtime during the semiannual reporting period and the total duration of continuous parameter monitoring system downtime as a percent of the total source operating time during that semiannual reporting period.
        5. The date of the latest continuous parameter monitoring system certification or audit.
        6. A description of any changes in the wet-formed fiberglass mat manufacturing process, continuous parameter monitoring system, or add-on control device since the last semiannual reporting period.
    iv. No deviations. If there were no deviations from the emission limit in §63.2983 or the operating limits in §63.2984, the semiannual compliance report must include a statement to that effect. If there were no periods during which the continuous parameter monitoring systems were out-of-

control as specified in §63.8(c)(7), the semiannual compliance report must include a statement to that effect.

   v. Deviations. For affected sources that commence construction or reconstruction after April 6, 2018, after February 28, 2019, and after August 27, 2019 for all other affected sources, if there was an instance where an affected source failed to meet an applicable standard, including a deviation from the emission limit in §63.2983 or an operating limit in §63.2984, the semiannual compliance report must record the number of failures and contain the information in paragraphs (c)(6)(i) through (ix) of this section:
      1. The date, time, and duration of each failure.
      2. The date and time that each continuous parameter monitoring system was inoperative, except for zero (low-level) and high-level checks.
      3. The date, time, and duration that each continuous parameter monitoring system was out-of-control, including the information in §63.8(c)(8).
      4. 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.
      5. The date and time that corrective actions were taken, a description of the cause of the failure (including unknown cause, if applicable), and a description of the corrective actions taken.
      6. A summary of the total duration of each failure during the semiannual reporting period and the total duration as a percent of the total source operating time during that semiannual reporting period.
      7. A breakdown of the total duration of the failures during the semiannual reporting period into those that were due to control equipment problems, process problems, other known causes, and other unknown causes.
      8. A brief description of the associated process units.
      9. A brief description of the continuous parameter monitoring system.

d. No startup, shutdown, or malfunction plan is required for any affected source that commences construction or reconstruction after April 6, 2018.

e. Performance test reports. You must submit results of each performance test (as defined in §63.2) required by this subpart no later than 60 days after completing the test as specified in §63.10(d)(2). You must include the values measured during the performance test for the parameters listed in Table 1 of this subpart and the operating limits or ranges that you will include in your OMM plan. For the thermal oxidizer temperature, you must include 15-minute averages and the average for the three 1-hour test runs. For affected sources that commence construction or reconstruction after April6, 2018, beginning February 28, 2019, and beginning no later than August 27, 2019 for all other affected sources, you must submit the results following the procedures specified in paragraphs (e)(1) through (3) of this section.

  i. For data collected using test methods supported by the EPA's Electronic Reporting Tool (ERT) as listed on the EPA's ERT website (*https://www.epa.gov/electronic-reporting-air-emissions/electronic-reporting-tool-ert*) at the time of the test, you must submit the results of the performance test to the EPA via CEDRI (CEDRI can be accessed through the EPA's Central Data Exchange (CDX) (*https://cdx.epa.gov/*)). You must submit performance test data in a file format generated through the use of the EPA's ERT or an alternate electronic file format consistent with the extensible markup language (XML) schema listed on the EPA's ERT website.
  ii. For data collected using test methods that are not supported by the EPA's ERT as listed on the EPA's ERT website at the time of the test, you must submit the results of the performance test to the Administrator at the appropriate address listed in §63.13, unless the Administrator agrees to or specifies an alternate reporting method.
  iii. If you claim that some of the performance test information you are submitting under paragraph (e)(1) is confidential business information (CBI), you must submit a complete file generated through the use of the EPA's ERT or an alternate electronic file consistent with the XML schema listed on the EPA's ERT website, including information claimed to be CBI, on a compact disk, flash drive or other commonly used electronic storage medium to the EPA. You must clearly mark the electronic medium as CBI and mail to U.S.EPA/OAQPS/CORE CBI omitted to the EPA via the EPA's CDX as described in paragraph (e)(1) of this section.

f. Claims of EPA system outage. If you are required to electronically submit a report through the CEDRI in the EPA's CDX, you may assert a claim of EPA 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 (f)(1) through (7) of this section.
  i. You must have been or will be precluded from accessing CEDRI and submitting a required test report within the time prescribed due to an outage of either the EPA's CEDRI or CDX Systems.
  ii. The outage must have occurred within the period of time beginning five business days prior to the date that the submission is due.
  iii. The outage may be planned or unplanned.
  iv. 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.
  v. You must provide to the Administrator a written description identifying:
    1. The date(s) and time(s) when CDX or CEDRI was accessed and the system was unavailable;

        2. A rationale for attributing the delay in reporting beyond the regulatory deadline to EPA system outage;
        3. Measures take or to be taken to minimize the delay in reporting; and
        4. 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.
    vi. 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.
    vii. In any circumstance, the report must be submitted electronically as soon as possible after the outage is resolved.

g. Claims of force majeure. 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 (g)(1) through (5) of this section.
    i. 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 requirements 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).
    ii. 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.
    iii. You must provide to the Administrator:
        1. A written description of the force majeure event;
        2. A rationale for attributing the delay in reporting beyond the regulatory deadline to the force majeure event;
        3. Measures taken or to be taken to minimize the delay in reporting; and
        4. 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.
    iv. 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.

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

58. The facility must comply with the requirements of the general provisions of 40 C.F.R. Part 63, subpart A, as specified in table 2 of 40 C.F.R. Part 63 Subpart HHHH. [Rule 19.304 and 40 C.F.R. §63.3001]

SN-12
Former/Saturator and Fugitive emissions and Wet End Building Exhaust

Source Description

After exiting the pulping system, the thick stock is deposited on a moving wire screen in the forming system. In the forming system, excess liquid is removed from the screen through drainage and a vacuum and is returned to the process as white water. A resin, mixed in the binder room, is applied to the glass fiber mat, saturating the mat. The air from the former/saturator vacuum system lines (Suction Tube Hydroformer, Dry Suction Vacuum, and White Water Vacuum Pump) are routed through a series of moisture separators and vented to the RTO stack, without control.

The binder is applied using a flooding weir. Excess binder is removed and recirculated by a combination of natural drainage and vacuum slots. The air from the vacuum lines (the Binder Applicator Fan, the Binder Control Fan, and the Transfer Roll Vacuum Fan) is routed through a series of moisture separators to remove entrained liquid prior to venting to the atmosphere through the RTO stack, without control (SN-11) for better dispersion. In addition, fugitive emissions from the mat line are not exhausted through roof vents over the production line, but are rather collected and vented to the atmosphere through the RTO stack, without control.

Other emissions from the process and fugitive emissions from the building are not controlled by the RTO, but will be routed to the RTO stack, without control.

Specific Conditions

59. The permittee shall not exceed the emission rates set forth in the following table. Emission rates are based on stack testing and are considered to represent worst case. [Rule 19.501 *et seq.* and 40 C.F.R. § 52 Subpart E]

SN	Description	Pollutant	lb/hr	tpy
12	Former/Saturator and Fugitive Emissions and Wet End Building Exhaust	PM_{10}	0.5	2.1
		$PM_{2.5}$	0.5	2.1
		VOC	9.3	40.6

60. The permittee shall not exceed the emission rates set forth in the following table. Emission rates are based on stack testing and are considered to represent worst case. [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
12	Former/Saturator and Fugitive Emissions and Wet End Building Exhaust Exhaust	PM	0.5	2.1
		Acrylic Acid	0.47	2.05
		Formaldehyde	0.39	1.71
		Methanol	1.98	8.67
		Styrene	0.10	0.43
		Triethylamine	0.10	0.43
		Ammonia	0.47	2.05

SN-13
Binder Room

Source Description

Binder is delivered to the site in a variety of ways, including tank trucks, drums, and bags. High volume ingredients are stored in permanent tanks, while minor ingredients are stored in drums or totes. The binder room is where components are mixed together in a mix tank according to a binder recipe. Emissions from the binder mix tanks and the binder circulation tanks are collected and vented to the atmosphere.

Specific Conditions

61. The permittee shall not exceed the emission rates set forth in the following table. Emission rates are based on stack testing and are considered to represent worst case. [Rule 19.501 *et seq.* and 40 C.F.R. § 52 Subpart E]

SN	Description	Pollutant	lb/hr	tpy
13	Binder Room	VOC	2.0	8.8

62. The permittee shall not exceed the emission rates set forth in the following table. Emission rates are based on stack testing and are considered to represent worst case. [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
13	Binder Room	Acrylic Acid	0.50	2.19
		Formaldehyde	0.01	0.05
		Methanol	1.00	4.38
		Styrene	0.10	0.44
		Triethylamine	0.10	0.44
		Ammonia	0.50	2.19

SN-14
Waste Trim Dust Collector

Source Description

After the saturated mats have been dried and cured, the mats are trimmed, rolled and packaged. The mat trimmings are then pneumatically conveyed to a waste trimmer dust collector. The conveying air is sent to the dust collector while the trimmings are fed into a compactor.

Specific Conditions

63. The permittee shall not exceed the emission rates set forth in the following table. Emission rates are based on stack testing and are considered to represent worst case. [Rule 19.501 *et seq.* and 40 C.F.R. § 52 Subpart E]

SN	Description	Pollutant	lb/hr	tpy
14	Waste Trim Dust Collector	PM_{10}	1.0	4.1
		$PM_{2.5}$	1.0	4.1
		VOC	1.9	8.4

64. The permittee shall not exceed the emission rates set forth in the following table. Emission rates are based on stack testing and are considered to represent worst case. [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
14	Waste Trim Dust Collector	PM	1.0	4.1
		Acrylic Acid	0.42	1.84
		Formaldehyde	0.35	1.54
		Methanol	0.91	3.99
		Styrene	0.10	0.44
		Triethylamine	0.10	0.44
		Ammonia	0.42	1.84

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

SN	Limit	Regulatory Citation
14	5%	Rule 18.501 and Ark. Code Ann. § 8-4-203 as referenced by Ark. Code Ann. §§ 8-4-304 and 8-4-311

66. The permittee shall conduct weekly observations of the opacity from source SN-14 and keep a record of these observations. These observations shall be conducted by a person familiar with the permittee's visible emissions. If visible emissions which appear to be in excess of the permitted opacity are detected, the permittee shall immediately take action to identify the cause of the visible emissions, implement corrective action, and document that visible emissions did not appear to be in excess of the permitted opacity following the corrective action. If after corrective action is taken the emissions still appear to exceed the permitted opacity, a Method 9 reading shall be performed. The permittee shall maintain records of the cause of any visible emissions and the corrective action taken. The permittee must keep these records onsite and make them available to Department personnel upon request. [Rule 18.501 and Ark. Code Ann. § 8-4-203 as referenced by Ark. Code Ann. §§ 8-4-304 and 8-4-311]

SN-15
Diesel-Fired Emergency Fire Pump

Source Description

SN-15 Diesel-Fired Emergency Fire Pump is subject to NESHAP 40 C.F.R. Part 63 Subpart ZZZZ and NSPS 40 C.F.R. Part 60 Subpart IIII.

Specific Conditions

67. 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 #70 through #91. [Rule 19.501 *et seq.* and 40 C.F.R. § 52 Subpart E]

SN	Description	Pollutant	lb/hr	tpy
15	Diesel-Fired Emergency Fire Pump	PM_{10}	0.1	0.1
		$PM_{2.5}$	0.1	0.1
		SO_2	0.5	0.2
		VOC	0.1	0.1
		CO	0.8	0.2
		NO_x	1.2	0.3

68. 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 #70 through #91. [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
15	Diesel-Fired Emergency Fire Pump	PM	0.1	0.1
		Formaldehyde	0.01	0.01
		Other HAPs	0.01	0.01

69. Visible emissions may not exceed the limits specified in the following table of this permit as measured by EPA Reference Method 9. [Rule 19.503 and Ark. Code Ann. § 8-4-203 as referenced by Ark. Code Ann. §§ 8-4-304 and 8-4-311]

SN	Limit	Regulatory Citation
15	20%	Rule 19.503 and 40 CFR Part 52, Subpart E

70. The permittee shall conduct an annual observation of the opacity from SN-15 (when operating), and keep a record of these observations. If the permittee detects visible emissions, the permittee must immediately conduct a 6 minute opacity reading in accordance with EPA Reference Method #9 and must take action to identify and correct the cause of the visible emissions. Results of these observations or readings shall be recorded in a log. After implementing the corrective action, the permittee must document that the source complies with the visible emissions requirements. The permittee shall maintain records of the cause of any visible emissions and the corrective action taken. The permittee must keep these records onsite and make them available to Department personnel upon request. [Ark. Code Ann. §8-4-203 as referenced by §8-4-304 and §8-4-311]

71. The permittee shall not operate the emergency generator SN-15 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 Rule 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]

72. The permittee shall maintain monthly records to demonstrate compliance with Specific Condition #71. 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]

40 C.F.R. § 63 Subpart ZZZZ Condition for Emergency Compression Ignition Engines ≤ 500 HP (Constructed or Reconstructed On or After 6-12-2006) at a Major Source

73. SN-15 is subject to 40 C.F.R. § 63 Subpart ZZZZ. The permittee shall meet the requirements of 40 C.F.R. § 63 Subpart ZZZZ by meeting the requirements of 40 C.F.R. § 60 Subpart IIII. [Rule 19.304 and 40 C.F.R. § 63.6590(c)(6)]

40 C.F.R. § 60 Subpart IIII Conditions for Fire Pump Compression Ignition Engines < 30 L/Cylinder (Constructed After 7-11-2005 and Manufactured After 7-1-2006)

74. SN-15 is subject to 40 C.F.R. § 60 Subpart IIII. The permitee shall comply with all applicable provisions of 40 C.F.R. § 60 Subpart IIII which includes, but is not limited to, Specific Conditions #75 through #90. [Rule 19.304 and 40 C.F.R. § 60 Subpart IIII]

75. The permittee must comply with the emission standards in the table below for all pollutants. [Rule 19.304 and 40 C.F.R. § 60.4205(c) and Table 4 to 40 C.F.R. § 60 Subpart IIII]

Maximum engine power	**Model year(s)**	**NMHC + NO_X g/KW-hr (g/HP-hr)**	**CO g/KW-hr (g/HP-hr)**	**PM g/KW-hr (g/HP-hr)**
KW<8 (HP<11)	2010 and earlier	10.5 (7.8)	8.0 (6.0)	1.0 (0.75)
	2011 +	7.5 (5.6)		0.40 (0.30)
8≤KW<19 (11≤HP<25)	2010 and earlier	9.5 (7.1)	6.6 (4.9)	0.80 (0.60)
	2011 +	7.5 (5.6)		0.40 (0.30)
19≤KW<37 (25≤HP<50)	2010 and earlier	9.5 (7.1)	5.5 (4.1)	0.80 (0.60)
	2011 +	7.5 (5.6)		0.30 (0.22)
37≤KW<56 (50≤HP<75)	2010 and earlier	10.5 (7.8)	5.0 (3.7)	0.80 (0.60)
	2011 +[1]	4.7 (3.5)		0.40 (0.30)
56≤KW<75 (75≤HP<100)	2010 and earlier	10.5 (7.8)	5.0 (3.7)	0.80 (0.60)
	2011 +[1]	4.7 (3.5)		0.40 (0.30)
75≤KW<130 (100≤HP<175)	2009 and earlier	10.5 (7.8)	5.0 (3.7)	0.80 (0.60)
	2010 +[2]	4.0 (3.0)		0.30 (0.22)
130≤KW<225 (175≤HP<300)	2008 and earlier	10.5 (7.8)	3.5 (2.6)	0.54 (0.40)
	2009 +[3]	4.0 (3.0)		0.20 (0.15)
225≤KW<450 (300≤HP<600)	2008 and earlier	10.5 (7.8)	3.5 (2.6)	0.54 (0.40)
	2009 +[3]	4.0 (3.0)		0.20 (0.15)
450≤KW≤560 (600≤HP≤750)	2008 and earlier	10.5 (7.8)	3.5 (2.6)	0.54 (0.40)
	2009 +	4.0 (3.0)		0.20 (0.15)
KW>560 (HP>750)	2007 and earlier	10.5 (7.8)	3.5 (2.6)	0.54 (0.40)
	2008 +	6.4 (4.8)		0.20 (0.15)

[1] For model years 2011-2013, manufacturers, owners and operators of fire pump stationary CI ICE in this engine power category with a rated speed of greater than 2,650 revolutions per minute (rpm) may comply with the emission limitations for 2010 model year engines.

[2] For model years 2010-2012, manufacturers, owners and operators of fire pump stationary CI ICE in this engine power category with a rated speed of greater than 2,650 rpm may comply with the emission limitations for 2009 model year engines.

[3] In model years 2009-2011, manufacturers of fire pump stationary CI ICE in this engine power category with a rated speed of greater than 2,650 rpm may comply with the emission limitations for 2008 model year engines.

76. The permittee must operate and maintain stationary CI ICE that achieve the emission standards as required in § 60.4205 over the entire life of the engine. [Rule 19.304 and 40 C.F.R. § 60.4206]

77. The permittee must use diesel fuel that meets the requirements of 40 C.F.R. § 80.510(b) for nonroad diesel fuel. [Rule 19.304 and 40 C.F.R. § 60.4207(b)]

78. Stationary CI ICE that have a national security exemption under § 60.4200(d) are also exempt from the fuel requirements in § 60.4207. [Rule 19.304 and 40 C.F.R. § 60.4207(e)]

79. In addition to the requirements specified in §§ 60.4201, 60.4202, 60.4204, and 60.4205, it is prohibited to import stationary CI ICE with a displacement of less than 30 liters per cylinder that do not meet the applicable requirements specified in § 60.4208(a) through (g) after the dates specified in § 60.4208(a) through (g). [Rule 19.304 and 40 C.F.R. § 60.4208(h)]

80. The requirements of this section do not apply to owners or operators of stationary CI ICE that have been modified, reconstructed, and do not apply to engines that were removed from one existing location and reinstalled at a new location. [Rule 19.304 and 40 C.F.R. § 60.4208(i)]

81. The permittee must install a non-resettable hour meter prior to startup of the engine. [Rule 19.304 and 40 C.F.R. § 60.4209(a)]

82. If you are an owner or operator of a stationary CI internal combustion engine equipped with a diesel particulate filter to comply with the emission standards in § 60.4204, the diesel particulate filter must be installed with a backpressure monitor that notifies the owner or operator when the high backpressure limit of the engine is approached. [Rule 19.304 and 40 C.F.R. § 60.4209(b)]

83. If you are an owner or operator and must comply with the emission standards specified in 40 C.F.R. § 60 Subpart IIII, you must do all of the following, except as permitted under § 60.4211(g): [Rule 19.304 and 40 C.F.R. § 60.4211(a)]
    a. Operate and maintain the stationary CI internal combustion engine and control device according to the manufacturer's emission-related written instructions; [Rule 19.304 and 40 C.F.R. § 60.4211(a)(1)]
    b. Change only those emission-related settings that are permitted by the manufacturer; and [Rule 19.304 and 40 C.F.R. § 60.4211(a)(2)]
    c. Meet the requirements of 40 C.F.R. §§ 89, 94 and/or 1068, as they apply to you. [Rule 19.304 and 40 C.F.R. § 60.4211(a)(3)]

84. If you are an owner or operator of a CI fire pump engine that is manufactured prior to the model years in table 3 to 40 C.F.R. § 60 Subpart IIII and must comply with the emission standards specified in § 60.4205(c), you must demonstrate compliance according to one of the methods specified in § 60.4211(b)(1) through (5). [Rule 19.304 and 40 C.F.R. § 60.4211(b)]
    a. Purchasing an engine certified according to 40 C.F.R. § 89 or 40 C.F.R. § 94, as applicable, for the same model year and maximum engine power. The engine must be installed and configured according to the manufacturer's specifications. [Rule 19.304 and 40 C.F.R. § 60.4211(b)(1)]
    b. Keeping records of performance test results for each pollutant for a test conducted on a similar engine. The test must have been conducted using the same methods specified in 40 C.F.R. § 60 Subpart IIII and these methods must have been followed correctly. [Rule 19.304 and 40 C.F.R. § 60.4211(b)(2)]
    c. Keeping records of engine manufacturer data indicating compliance with the standards. [Rule 19.304 and 40 C.F.R. § 60.4211(b)(3)]
    d. Keeping records of control device vendor data indicating compliance with the standards. [Rule 19.304 and 40 C.F.R. § 60.4211(b)(4)]
    e. Conducting an initial performance test to demonstrate compliance with the emission standards according to the requirements specified in § 60.4212, as applicable. [Rule 19.304 and 40 C.F.R. § 60.4211(b)(5)]

85. If you are an owner or operator of a CI fire pump engine the is manufactured during or after the model year that applies to your fire pump engine rating in table 3 to 40 C.F.R. § 60 Subpart IIII and must comply with the emission standards specified in § 60.4205(c), the permittee must demonstrate compliance by purchasing an engine certified to the emission standards in § 60.4205(c) for the same model year and NFPA nameplate engine power. The engine must be installed and configured according to the manufacturer's emission-related specifications, except as permitted in § 60.4211(g). [Rule 19.304 and 40 C.F.R. § 60.4211(c)]

86. The permittee must operate the emergency stationary ICE according to the requirements in § 60.4211(f)(1) through (3). In order for the engine to be considered an emergency stationary ICE under 40 C.F.R. § 60 Subpart IIII, any operation other than emergency operation, maintenance and testing, and operation in non-emergency situations for 50 hours per year, as described in § 60.4211(f)(1) through (3), is prohibited. If you do not operate the engine according to the requirements in § 60.4211(f)(1) through (3), the engine will not be considered an emergency engine under 40 C.F.R. § 60 Subpart IIII and must meet all requirements for non-emergency engines. [Rule 19.304 and 40 C.F.R. § 60.4211(f)]
    a. There is no time limit on the use of emergency stationary ICE in emergency situations. [Rule 19.304 and 40 C.F.R. § 60.4211(f)(1)]
    b. The permittee may operate the emergency stationary ICE for any combination of the purposes specified in § 60.4211(f)(2)(i) for a maximum of 100 hours per calendar year. Any operation for non-emergency situations as allowed by

§ 60.4211(f)(3) counts as part of the 100 hours per calendar year allowed by § 60.4211(f)(2). [Rule 19.304 and 40 C.F.R. § 60.4211(f)(2)]

   i. Emergency stationary ICE may be operated for maintenance checks and readiness testing, provided that the tests are recommended by federal, state or local government, the manufacturer, the vendor, the regional transmission organization or equivalent balancing authority and transmission operator, or the insurance company associated with the engine. The owner or operator may petition the Administrator for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the owner or operator maintains records indicating that federal, state, or local standards require maintenance and testing of emergency ICE beyond 100 hours per calendar year. [Rule 19.304 and 40 C.F.R. § 60.4211(f)(2)(i)]

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 provided in § 60.4211(f)(2). Except as provided in § 60.4211(f)(3)(i), the 50 hours per calendar year for non-emergency situations cannot be used for peak shaving or non-emergency demand response, or to generate income for a facility to an electric grid or otherwise supply power as part of a financial arrangement with another entity. [Rule 19.304 and 40 C.F.R. § 60.4211(f)(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: [Rule 19.304 and 40 C.F.R. § 60.4211(f)(3)(i)]

      1. The engine is dispatched by the local balancing authority or local transmission and distribution system operator; [Rule 19.304 and 40 C.F.R. § 60.4211(f)(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. [Rule 19.304 and 40 C.F.R. § 60.4211(f)(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. [Rule 19.304 and 40 C.F.R. § 60.4211(f)(3)(i)(C)]
      4. The power is provided only to the facility itself or to support the local transmission and distribution system. [Rule 19.304 and 40 C.F.R. § 60.4211(f)(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. [Rule 19.304 and 40 C.F.R. § 60.4211(f)(3)(i)(E)]

87. If you do not install, configure, operate, and maintain your engine and control device according to the manufacturer's emission-related written instructions, or you change emission-related settings in a way that is not permitted by the manufacturer, you must demonstrate compliance as follows: [Rule 19.304 and 40 C.F.R. § 60.4211(g)]
    a. If you are an owner or operator of a stationary CI internal combustion engine with maximum engine power less than 100 HP, you must keep a maintenance plan and records of conducted maintenance to demonstrate compliance and must, to the extent practicable, maintain and operate the engine in a manner consistent with good air pollution control practice for minimizing emissions. In addition, if you do not install and configure the engine and control device according to the manufacturer's emission-related written instructions, or you change the emission-related settings in a way that is not permitted by the manufacturer, you must conduct an initial performance test to demonstrate compliance with the applicable emission standards within 1 year of such action. [Rule 19.304 and 40 C.F.R. § 60.4211(g)(1)]
    b. If you are an owner or operator of a stationary CI internal combustion engine greater than or equal to 100 HP and less than or equal to 500 HP, you must keep a maintenance plan and records of conducted maintenance and must, to the extent practicable, maintain and operate the engine in a manner consistent with good air pollution control practice for minimizing emissions. In addition, you must conduct an initial performance test to demonstrate compliance with the applicable emission standards within 1 year of startup, or within 1 year after an engine and control device is no longer installed, configured, operated, and maintained in accordance with the manufacturer's emission-related written instructions, or within 1 year after you change emission-related settings in a way that is not permitted by the manufacturer. [Rule 19.304 and 40 C.F.R. § 60.4211(g)(2)]
    c. If you are an owner or operator of a stationary CI internal combustion engine greater than 500 HP, you must keep a maintenance plan and records of conducted maintenance and must, to the extent practicable, maintain and operate the engine in a manner consistent with good air pollution control practice for minimizing emissions. In addition, you must conduct an initial performance test to demonstrate compliance with the applicable emission standards within 1 year of startup, or within 1 year after an engine and control device is no longer installed, configured, operated, and maintained in accordance with the manufacturer's emission-related written instructions, or within 1 year after you change emission-related settings in a way that is not permitted by the manufacturer. You must conduct subsequent performance testing every 8,760 hours of engine operation or 3 years, whichever comes first, thereafter to demonstrate compliance with the applicable emission standards. [Rule 19.304 and 40 C.F.R. § 60.4211(g)(3)]

88. Owners and operators of stationary CI ICE with a displacement of less than 30 liters per cylinder who conduct performance tests pursuant to 40 C.F.R. § 60 Subpart IIII must do so according to § 60.4212(a) through (e). [Rule 19.304 and 40 C.F.R. § 60.4212]

89. The permittee is not required to submit an initial notification. Starting with the model years in the table below, if the emergency engine does not meet the standards applicable to non-emergency engines in the applicable model year, the owner or operator must keep records of the operation of the engine in emergency and non-emergency service that are recorded through the non-resettable hour meter. The owner must record the time of operation of the engine and the reason the engine was in operation during that time. [Rule 19.304 and 40 C.F.R. § 60.4214(b) and Table 5 to 40 C.F.R. § 60 Subpart IIII]

Engine power	**Starting model year**
19≤KW<56 (25≤HP<75)	2013
56≤KW<130 (75≤HP<175)	2012
KW≥130 (HP≥175)	2011

90. If the stationary CI internal combustion engine is equipped with a diesel particulate filter, the owner or operator must keep records of any corrective action taken after the backpressure monitor has notified the owner or operator that the high backpressure limit of the engine is approached. [Rule 19.304 and 40 C.F.R. § 60.4214(c)]

91. Table 8 to 40 C.F.R. § 60 Subpart IIII shows which parts of the General Provisions in §§ 60.1 through 60.19 apply to you. [Rule 19.304 and 40 C.F.R. § 60.4218]

SN-21A, SN-21B, SN-21C

Solid Raw Material Truck Unloading
Solid Raw Material Storage Silos
Solid Raw Material Storage Hopper Transfer System

Source Description

The aggregate minerals used in the process are received at the facility via truck and pneumatically transferred into one of five (5) storage silos (one for clay and four for calcium carbonate). A fabric filter baghouse with a control efficiency of 99.9% is used to capture dust from the unloading process.

Passive bin vent filters, which are an inherent part of the silos, prevent material losses and minimize dust emissions from the storage silos. The minerals are then transferred via vacuum blower transfer systems to one of three (3) hoppers (one for clay and two for calcium carbonate), which again has bin vent filters that are an inherent part of the process to prevent material losses and minimize dust emissions when conveying minerals from the silos through the storage hoppers to the mixing tanks.

Specific Conditions

92. 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 # 96 and Plantwide Condition #5. [Rule 19.501 *et seq.* and 40 C.F.R. § 52 Subpart E]

SN	Description	Pollutant	lb/hr	tpy
21A	Solid Raw Material Truck Unloading	PM_{10}	0.4	1.7
		$PM_{2.5}$	0.4	1.7
21B	Solid Raw Material Storage Silos	PM_{10}	1.0	4.2
		$PM_{2.5}$	1.0	4.2
21C	Solid Raw Material Storage Hopper Transfer System	PM_{10}	0.4	1.7
		$PM_{2.5}$	0.4	1.7

93. 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 # 96 and Plantwide Condition #5. [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
21A	Solid Raw Material Truck Unloading	PM	0.4	1.7
21B	Solid Raw Material Storage Silos	PM	1.0	4.2
21C	Solid Raw Material Storage Hopper Transfer System	PM	0.4	1.7

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

SN	Limit	Regulatory Citation
21A 21B 21C	5%	Rule 19.503 *et seq.* and 40 C.F.R. § 52 Subpart E

95. Weekly observations of the opacity from SN-21A, SN-21B, and SN-21C shall be conducted by a person trained but not necessarily certified in EPA Reference Method 9. If visible emissions in excess of the permitted levels are detected, the permittee shall immediately take action to identify the cause of the visible emissions in excess of the permit limit, implement corrective action, and document that visible emissions did not appear to be in excess of the permitted opacity 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 monthly, kept on site, and made available to Division of Environmental Quality personnel upon request. [Rule 19.503 *et seq.* and 40 C.F.R. § 52 Subpart E]
    a. The date and time of the observation.
    b. If visible emissions which appeared to be above the permitted limit were detected.
    c. If visible emissions which appeared to be above the permitted limit were detected, the cause of the exceedance of the opacity limit, the corrective action taken, and if the visible emissions appeared to be below the permitted limit after the corrective action was taken.
    d. The name of the person conducting the opacity observations.

96. The permittee, as per manufacturer's performance warranty, shall keep the baghouse for SN-21A in good working condition at all times and maintain a minimum and maximum pressure drop as recommended by the manufacturer. The pressure drop across the filters shall be measured daily. The results and a copy of the manufacturer's pressure drop specification shall be kept on site and be made available to Division personnel upon request. [Rule 19.303 and Ark. Code Ann. § 8-4-203 as referenced by §§ 8-4-304 and 8-4-311]

SN-22 and SN-23

Slurry Mixture Preparation and Mat Coating Line Curing/Drying Oven

Source Description

The slurry mixture used in the process is a blend of several components mixed in tanks in the Mixing Building. Liquid materials used in the process are contained in storage tanks (high volume ingredients), tote bins, and poly drums (for minor ingredients). The solid and liquid raw materials are mixed in a coating mix tank located within the Mixing Building to form the slurry mixture according to a slurry recipe, which yields the properties desired for the final product. The slurry is transferred from the coating mix tank to two (2) coating storage tanks and then to a coating working tank, where it will be applied with a dip coater to the fiberglass mat substrate. The slurry mixture is primarily water based and will release only small quantities of VOC emissions when sent through the drying oven.

The primary drying oven has multiple zones equipped with a total of 12 low-NO_X burners, each rated at 4.1 MMBtu/hr, for an overall maximum heat input of 49.2 MMBtu/hr. The oven is fired with natural gas (which is also used at the two existing fiberglass mat lines).

Specific Conditions

97. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by compliance with Specific Conditions #100 through #103. [Rule 19.501 *et seq.* and 40 C.F.R. § 52 Subpart E]

SN	Description	Pollutant	lb/hr	tpy
22	Slurry Mixture Preparation and Mat Coating	VOC	1.5	6.4
23	Mat Coating Line Curing/Drying Oven	PM_{10}	0.4	1.6
		$PM_{2.5}$	0.4	1.6
		SO_2	0.1	0.2
		VOC	0.3	1.2
		CO	4.1	17.7
		NO_x	4.8	21.0

98. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by compliance with Specific Conditions #100 through #103. [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
23	Mat Coating Line Curing/Drying Oven	PM	0.4	1.6
		Formaldehyde	0.01	0.02
		Total Other HAPs	0.10	0.40

99. Visible emissions may not exceed the limits specified in the following table of this permit as measured by EPA Reference Method 9. Compliance with this condition will be shown by combustion of natural gas fuel only at SN-23 and compliance with Plantwide Condition 5.

SN	Limit	Regulatory Citation
23	5%	Rule 19.503 and 40 CFR Part 52, Subpart E

40 C.F.R. Part 63, Subpart JJJJ Conditions

100. SN-23 is subject to regulation under 40 C.F.R. Part 63, *National Emission Standards for Hazardous Air Pollutants: Paper and Other Web Coating* and must comply with the following provisions. These provisions include, but are not limited to, Specific Conditions #101 through #103. [Rule 19.304 and 40 CFR Part 63, Subpart JJJJ]

101. The permittee must limit organic HAP emissions to no more than 1.6 percent of the mass of coating materials applied for each month. The permittee shows compliance with this condition by utilizing non-HAP coatings. [Rule 19.304 and 40 C.F.R. § 63.3320(b)(2)]

102. The permittee must demonstrate that all of the coatings applied at SN-23 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 outlined below:
    a. 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).
    b. Submit to the Division a report certifying that all coatings applied at all web coating lines at the source are non-HAP coatings.
    c. Maintain records of coating formulations used as required in § 63.3410(a)(1)(iii).

[Rule 19.304 and 40 C.F.R. § 63.3370 (s)(3)]

103. If all of the subject web coating lines at the facility utilize non-HAP coatings, the permittee may become exempt from the reporting requirements of this subpart, provided the permittee submit a one-time report as required in § 63.3370(s) to the Division

documenting the use of only non-HAP coatings. [Rule 19.304 and 40 C.F.R. § 63.3300(j)]

SN-24

Logo Printing Operations

Source Description

The coated mat is printed as needed according to customer specifications using a flexographic printing station. The station will print customer logos on the finished product, and based on projected line speeds, the printing stations consumes a maximum quantity of 15.8 kg of ink per hour while in operation. The printing ink is a water-based ink that is approximately 5% by weight (no HAPs). After the ink is applied, the finished mat passes through a small (0.256 MMBtu/hr) electrically heated drying oven.

Specific Conditions

104. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by compliance with Specific Conditions #105 through #108. [Rule 19.501 *et seq.* and 40 C.F.R. § 52 Subpart E]

SN	Description	Pollutant	lb/hr	tpy
24	Logo Printing Operations	VOC	1.8	7.7

40 C.F.R. Part 63, Subpart KK Conditions

105. This source (SN-24) is subject to regulation under 40 CFR Part 63, *National Emission Standards for the Printing and Publishing Industry* and must comply with the following provisions by April 11, 2005. These provisions include, but are not limited to, Specific Condition #106 through #108. [Rule 19.304 and 40 CFR Part 63, Subpart HHHH]

106. The sum of the total mass of inks, coatings, varnishes, adhesives, primers, solvents, thinners, reducers, and other materials applied by the press using wide web flexographic print stations in each month never exceeds 5 percent of the total mass of inks, coatings, varnishes, adhesives, primers, solvents, thinners, reducers, and other materials applied by the press in that month, including all inboard and outboard stations. [Rule 19.304 and 40 C.F.R. § 63.821 (a)(2)(ii)(A)]

107. The permittee must maintain records of the total mass of each material applied each month on the press, including all inboard and outboard stations, and the total mass of each material applied each month on the press by product and packaging rotogravure or wide-web flexographic printing operations. These records shall be maintained for five years and submitted to the Division upon request. [Rule 19.304 and 40 C.F.R. § 63.829 (f)]

108. The permittee shall submit an initial notification as required in § 63.9. [Rule 19.304 and 40 C.F.R. § 63.830 (a) and (b)(1)]

SN-25

Mat Coating Line Edge Trim

Source Description

The coated mat is trimmed, rolled, and packaged prior to storage in the warehouse. Coated mat trimmings are conveyed pneumatically to the Mat Coating Line Edge Trim Dust Collector (Baghouse). Conveying air exhausts from the Edge Trim Dust Collector (SN-25) , and the trimmings are fed into a compactor.

Specific Conditions

109. 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 Condition #113 and Plantwide Condition #5. [Rule 19.501 *et seq.* and 40 C.F.R. § 52 Subpart E]

SN	Description	Pollutant	lb/hr	tpy
25	Mat Coating Line Edge Trim	PM_{10}	1.1	4.6
		$PM_{2.5}$	1.1	4.6

110. 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 Condition #113 and Plantwide Condition #5. [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
25	Mat Coating Line Edge Trim	PM	1.1	4.6

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

SN	Limit	Regulatory Citation
25	5%	Rule 19.5031 *et seq.* and 40 C.F.R. § 52 Subpart E

112. Weekly observations of the opacity from SN-25 shall be conducted by a person trained but not necessarily certified in EPA Reference Method 9. If visible emissions in excess of the permitted levels are detected, the permittee shall immediately take action to identify the cause of the visible emissions in excess of the permit limit, implement

corrective action, and document that visible emissions did not appear to be in excess of the permitted opacity 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 monthly, kept on site, and made available to Division of Environmental Quality personnel upon request. [Rule 19.5031 *et seq.* and 40 C.F.R. § 52 Subpart E]

a. The date and time of the observation.
b. If visible emissions which appeared to be above the permitted limit were detected.
c. If visible emissions which appeared to be above the permitted limit were detected, the cause of the exceedance of the opacity limit, the corrective action taken, and if the visible emissions appeared to be below the permitted limit after the corrective action was taken.
d. The name of the person conducting the opacity observations.

113. The permittee, as per manufacturer's performance warranty, shall keep the baghouse for SN-25 in good working condition at all times and maintain a minimum and maximum pressure drop as recommended by the manufacturer. The pressure drop across the filters shall be measured daily. The results and a copy of the manufacturer's pressure drop specification shall be kept on site and be available to Division personnel upon request. [Rule 19.303 and Ark. Code Ann. § 8-4-203 as referenced by §§ 8-4-304 and 8-4-311]

SECTION V: COMPLIANCE PLAN AND SCHEDULE

Owens Corning Non-Woven Technology, LLC will continue to operate in compliance with those identified regulatory provisions. The facility will examine and analyze future rules and regulations that may apply and determine their applicability with any necessary action taken on a timely basis.

SECTION VI: PLANTWIDE CONDITIONS

1. The permittee shall notify the Director in writing within thirty (30) days after commencing construction, completing construction, first placing the equipment and/or facility in operation, and reaching the equipment and/or facility target production rate. [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]

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]

Line #1 Conditions (SN-01, SN-03, SN-04, SN-05 and SN-07) Conditions

8. The permittee shall not exceed a throughput of 55,100 tons of fiberglass mat finished product per rolling 12 month period. [Rule 19.705, Rule 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]

9. The permittee shall maintain monthly records to demonstrate compliance with Plantwide Condition #8. The permittee shall update these records by the fifteenth day of the month following the month to which the records pertain. The twelve month rolling totals and each individual month's data shall be maintained on-site, made available to Department personnel upon request, and submitted in accordance with General Provision #7. [Rule 19.705, 40 C.F.R. § 52 Subpart E, Rule 18.1004 and Ark. Code Ann. § 8-4-203 as referenced by Ark. Code Ann. §§ 8-4-304 and 8-4-311]

Line #1 to Line #2 Transition Period Conditions

10. After Line #2 starts up, the permittee shall operate in a temporary transitional operating scenario which allows both the existing Line 1 and Line 2 to operate simultaneously for no more than 12 consecutive months. [Ark. Code Ann. § 8-4-203 as referenced by Ark. Code Ann. §§ 8-4-304 and 8-4-311]

11. During the temporary transitional operating scenario, the total production for both Line #1 and Line #2 will be limited to 55,100 tons/yr of finished mats. [Rule 19.705, Rule 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]

12. The transitional operating scenario period will end when the permittee notifies the Administration that the shutdown of Line #1 is finalized. [Ark. Code Ann. § 8-4-203 as referenced by Ark. Code Ann. §§ 8-4-304 and 8-4-311]

13. After the shutdown of Line #1 is finalized, the permittee shall submit an Administrative Amendment to modify the permit to remove Line #1 and the associated conditions and emission limits with Line #1. [Ark. Code Ann. § 8-4-203 as referenced by Ark. Code Ann. §§ 8-4-304 and 8-4-311]

14. The permittee shall maintain monthly records to demonstrate compliance with Plantwide Condition #11. The permittee shall update these records by the fifteenth day of the

month following the month to which the records pertain. The twelve month rolling totals and each individual month's data shall be maintained on-site, made available to Department personnel upon request, and submitted in accordance with General Provision #7. [Rule 19.705, 40 C.F.R. § 52 Subpart E, Rule 18.1004 and Ark. Code Ann. § 8-4-203 as referenced by Ark. Code Ann. §§ 8-4-304 and 8-4-311]

Line #2 Conditions (SN-11, SN-12, SN-13, SN-14, and SN-15) Conditions

15. The permittee shall not exceed a throughput of 133,000 tons of fiberglass mat finished product per rolling 12 month period. [Rule 19.705, Rule 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]

16. The permittee shall maintain monthly records to demonstrate compliance with Plantwide Condition #15. The permittee shall update these records by the fifteenth day of the month following the month to which the records pertain. The twelve month rolling totals and each individual month's data shall be maintained on-site, made available to Department personnel upon request, and submitted in accordance with General Provision #7. [Rule 19.705, 40 C.F.R. § 52 Subpart E, Rule 18.1004 and Ark. Code Ann. § 8-4-203 as referenced by Ark. Code Ann. §§ 8-4-304 and 8-4-311]

17. The permittee shall conduct initial stack testing to verify the emission rates established for sources SN-11, SN-12, SN-13 and SN-14. While performing the tests, the equipment shall be operating at least 90% of the maximum throughput rate, unless otherwise approved by the Department. If testing is conducted at a rate lower than 90%, the facility shall be limited to an operating rate of 110% of the tested rate until compliance at a higher rate is demonstrated. The permittee may employ a bypass line that can allow the SN-12 emissions to exhaust to the atmosphere during stack testing of the RTO control device. If a test result indicates emissions in excess of a permitted rate, the permittee shall conduct a new stack test for that pollutant within 90 days of the date of the last failing stack test. In addition, the permittee shall submit a permit application to modify and/or re-evaluate compliance testing mechanisms. Testing shall be conducted in accordance with Plantwide Condition #3. The results of these tests shall be submitted to the Department at the address listed in General Provision #7. The following table outlines the last testing dates. [Rule 19.702 and 40 C.F.R. § 52 Subpart E; Rule 18.1002 and Ark. Code Ann. § 8-4-203 as referenced by Ark. Code Ann. §§ 8-4-304 and 8-4-311]

SN	Description	Pollutant	Last Test Date
11	Regenerative Thermal Oxidizer	PM/PM_{10} VOC Acrylic Acid Formaldehyde Methanol Ammonia	N/A

SN	Description	Pollutant	Last Test Date
12	Former/Saturator and Fugitive Emissions and Wet End Building Exhaust	VOC Acrylic Acid Formaldehyde Methanol Ammonia	N/A
13	Binder Room	VOC Acrylic Acid Formaldehyde Methanol Ammonia	N/A
14	Waste Trim Dust Collector	PM/PM_{10} VOC Acrylic Acid Formaldehyde Methanol Ammonia	N/A

18. The permittee shall conduct periodic stack testing to verify the emission rates for all pollutants established by this permit for sources SN-11, SN-12, SN-13 and SN-14. This testing shall be performed a minimum of once every five (5) years. While performing the tests, the equipment shall be operating at least 90% of the maximum throughput rate, unless otherwise approved by the Department. If testing is conducted at a rate lower than 90%, the facility shall be limited to an operating rate of 110% of the tested rate until compliance at a higher rate is demonstrated. The permittee may employ a bypass line that can allow the SN-12 emissions to exhaust to the atmosphere during stack testing of the RTO control device. If a test result indicates emissions in excess of a permitted rate, the permittee shall conduct a new stack test for that pollutant within 90 days of the date of the last failing stack test. Testing shall be conducted in accordance with Plantwide Condition #3. The results of these tests shall be submitted to the Department at the address listed in General Provision #7. The following table outlines the last testing dates. [Rule 19.702 and 40 C.F.R. § 52 Subpart E; Rule 18.1002 and Ark. Code Ann. § 8-4-203 as referenced by Ark. Code Ann. §§ 8-4-304 and 8-4-311]

SN	Description	Pollutant	Last Test Date
11	Regenerative Thermal Oxidizer	VOC Acrylic Acid Formaldehyde	N/A

SN	Description	Pollutant	Last Test Date
12	Former/Saturator and Fugitive Emissions and Wet End Building Exhaust	VOC Acrylic Acid Formaldehyde	N/A
13	Binder Room	VOC Acrylic Acid Formaldehyde	N/A
14	Waste Trim Dust Collector	VOC Acrylic Acid Formaldehyde	N/A

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 September 26, 2022. [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
Thickener Tank, T-12	Group A, #3
WWTP Reactors 1-4, T-16, T-17, T-18, T-19	Group A, #3
WWTP Solids Holding Tank, T-20	Group A, #3
WWTP Filtrate Tank, T-22	Group A, #3
WWTP Coagulant Tank, T-23	Group A, #3
WWTP Flocculant, T-24	Group A, #3
Coating Mix Tank, T-25	Group A, #3
Coating Storage Tank, T-26	Group A, #3
Coating Storage Tank, T-27	Group A, #3
Coating Working Tank, T-28	Group A, #3
4 Binder A/B Tanks, T-01, T-02, T-03, T-04	Group A, #13
Dispersant Tank, T-05	Group A, #13
Biocide Tank, T-06	Group A, #13
5 Toner Tanks, T-07, T-08, T-09, T-10, T-11	Group A, #13
WWTP Tank, T-14	Group A, #13
WWTP Equalizer Tank, T-15	Group A, #13
WWTP Reactors 1-4, T-16, T-17, T-18, T-19	Group A, #13
WWTP Pre-treatment Tank, T-21	Group A, #13
Comfort Heaters	Group B, #2
Water Heaters (non-process)	Group B, #73
Laboratory Equipment	Group B, #34

Description	Category
Diesel Tank (55 gal) (mower & tractor fuel)	Group B, #14
Biocide Storage Tote (400 gal) (vented indoors)	Group B, #21
Ferric Chloride Storage Tank W1 (8,221 gal)	Group B, #21
Lime Slurry Mix Tank W5	Group B, #21
Polymer Storage Tank W17	Group B, #21

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://eportal.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.

[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

40 C.F.R. Part 63, Subpart HHHH – *National Emission Standards for Hazardous Air Pollutants for Wet-Formed Fiberglass Mat Production*

Subpart HHHH—National Emission Standards for Hazardous Air Pollutants for Wet-Formed Fiberglass Mat Production

SOURCE: 67 FR 17835, Apr. 11, 2002, unless otherwise noted.

WHAT THIS SUBPART COVERS

§63.2980 What is the purpose of this subpart?

This subpart establishes national emission standards for hazardous air pollutants (NESHAP) for emissions from facilities that produce wet-formed fiberglass mat. This subpart also establishes requirements to demonstrate initial and continuous compliance with the emission limitations.

§63.2981 Does this subpart apply to me?

You must comply with this subpart if you meet the criteria in paragraphs (a) and (b) of this section:

(a) You own or operate a drying and curing oven at a wet-formed fiberglass mat production facility.

(b) Your drying and curing oven or the facility at which your drying and curing oven is located is a major source of hazardous air pollutants (HAP). A major source is any stationary source or group of stationary sources located within a contiguous area and under common control that emits or can potentially emit, considering controls, in the aggregate, 9.07 megagrams (10 tons) or more per year of a single HAP or 22.68 megagrams (25 tons) or more per year of any combination of HAP.

§63.2982 What parts of my plant does this subpart cover?

(a) This subpart applies to each new, reconstructed, or existing affected source. The affected source (the portion of your plant covered by this subpart) is each wet-formed fiberglass mat drying and curing oven.

(b) An affected source is a new affected source if you commenced construction of the affected source after May 26, 2000, and you meet the applicability criteria in §63.2981 at start-up.

(c) An affected source is reconstructed if you meet the criteria as defined in §63.2.

(d) An affected source is existing if it is not new or reconstructed.

EMISSION LIMITATIONS

§63.2983 What emission limits must I meet?

(a) You must limit the formaldehyde emissions from each drying and curing oven by either:

(1) Limiting emissions of formaldehyde to 0.03 kilograms or less per megagram (0.05 pounds per ton) of fiberglass mat produced; or

(2) Reducing uncontrolled formaldehyde emissions by 96 percent or more.

(b) [Reserved]

§63.2984 What operating limits must I meet?

(a) You must maintain operating parameters within established limits or ranges specified in your operation, maintenance, and monitoring (OMM) plan described in §63.2987. If there is a deviation of any of the specified parameters from the limit or range specified in the OMM plan, you must address the deviation according to paragraph (b) of this section. You must comply with the operating limits specified in paragraphs (a)(1) through (4) of this section:

(1) You must operate the thermal oxidizer so that the average operating temperature in any 3-hour block period does not fall below the temperature established during your performance test and specified in your OMM plan, except during periods when using a non-HAP binder.

(2) You must not use a resin with a free-formaldehyde content greater than that of the resin used during your performance test and specified in your OMM plan.

(3) You must operate the wet-formed fiberglass mat production process so that the average urea formaldehyde resin solids application rate in any 3-hour block period does not exceed the average application rate achieved during your performance test and specified in your OMM plan.

(4) If you use an add-on control device other than a thermal oxidizer or wish to monitor an alternative parameter and comply with a different operating limit than the limit specified in paragraph (a)(1) of this section, you must obtain approval for the alternative monitoring under §63.8(f). You must include the approved alternative monitoring and operating limits in the OMM plan specified in §63.2987.

(b) When during a period of normal operation, you detect that an operating parameter deviates from the limit or range established in paragraph (a) of this section, you must initiate corrective actions within 1 hour according to the provisions of your OMM plan. The corrective actions must be completed in an expeditious manner as specified in the OMM plan.

(c) You must maintain and inspect control devices according to the procedures specified in the OMM plan.

(d) You must include the operating limits specified in paragraphs (a)(1) through (4) of this section and their allowable ranges or levels in your OMM plan. Your 40 CFR part 70 operating permit for the drying and curing oven must contain a requirement that you develop and operate according to an OMM plan at all times.

(e) If you use a thermal oxidizer or other control device to achieve the emission limits in §63.2983, you must capture and convey the formaldehyde emissions from each drying and curing oven according to the procedures in Chapters 3 and 5 of “Industrial Ventilation: A Manual of Recommended Practice” (23rd Edition) or the appropriate chapters of “Industrial Ventilation: A Manual of Recommended Practice for Design” (27th Edition) (both are incorporated by reference, see §63.14). In addition, you may use an alternate as approved by the Administrator.

[67 FR 17835, Apr. 11, 2002, as amended at 71 FR 20464, Apr. 20, 2006; 84 FR 6692, Feb. 28, 2019]

§63.2985 When do I have to comply with these standards?

(a) Existing drying and curing ovens must be in compliance with this subpart no later than April 11, 2005, except as otherwise specified in this section and §§63.2986, 63.2998, 63.3000, and 63.3004 and Table 2 to this subpart.

(b) Drying and curing ovens constructed or reconstructed after May 26, 2000 and before April 9, 2018 must be in compliance with this subpart at startup or by April 11, 2002, whichever is later, except as otherwise specified in this section and §§63.2986, 63.2998, 63.3000, and 63.3004 and Table 2 to this subpart.

(c) If your facility is an area source that increases its emissions or its potential to emit such that it becomes a major source of HAP, the following apply:

(1) Any portion of the existing facility that is a new affected source or a new reconstructed affected source must be in compliance upon startup.

(2) All other parts of the source must be in compliance with this subpart 1 year after becoming a major source or by April 11, 2005, whichever is later.

(d) Drying and curing ovens constructed or reconstructed after April 6, 2018 must be in compliance with this subpart at startup or by February 28, 2019 whichever is later.

[67 FR 17835, Apr. 11, 2002, as amended at 84 FR 6692, Feb. 28, 2019]

§63.2986 How do I comply with the standards?

(a) You must install, maintain, and operate a thermal oxidizer or other control device or implement a process modification that reduces formaldehyde emissions from each drying and curing oven to the emission limits specified in §63.2983.

(b) You must comply with the operating limits specified in §63.2984. The operating limits prescribe the requirements for demonstrating continuous compliance based on the OMM plan. You must begin complying with the operating limits on the date by which you must complete the initial performance test.

(c) You must conduct a performance test according to §§63.2991, 63.2992, and 63.2993 to demonstrate compliance for each drying and curing oven subject to the emission limits in §63.2983, and to establish or modify the operating limits or ranges for process or control device parameters that will be monitored to demonstrate continuous compliance.

(d) You must install, calibrate, maintain, and operate devices that monitor the parameters specified in your OMM plan at the frequency specified in the plan. All continuous parameter monitoring systems must be installed and operating no later than the applicable compliance date specified in §63.2985.

(e) You must prepare and follow a written OMM plan as specified in §63.2987.

(f) You must comply with the monitoring, recordkeeping, notification, and reporting requirements of this subpart as required by §§63.2996 through 63.3000.

(g) You must comply with the requirements in paragraphs (g)(1) through (3) of this section.

(1) Before August 28, 2019, existing drying and curing ovens and drying and curing ovens constructed or reconstructed after May 26, 2000 and before April 7, 2018 must be in compliance with the emission limits in §63.2983 and the operating limits in §63.2984 at all times, except during periods of startup, shutdown, or malfunction. After August 27, 2019, affected sources must be in compliance with the emission limits in §63.2983 and the operating limits in §63.2984 at all times, including periods of startup, shutdown, or malfunction. Affected sources that commence construction or reconstruction after April 6, 2018, must comply with all requirements of the subpart, no later than February 28, 2019 or upon startup, whichever is later.

(2) Before August 28, 2019, existing drying and curing ovens and drying and curing ovens constructed or reconstructed after May 26, 2000 and before April 9, 2018 must always operate and maintain any affected source, including air pollution control equipment and monitoring equipment, according to the provisions in §63.6(e)(1). After August 27, 2019, for such affected sources, and after February 28, 2019 for affected sources that commence construction or reconstruction after April 6, 2018, 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 you are in compliance with the emissions limits required by this subpart. The Administrator will base the determination of whether a source is operating in compliance with operation and maintenance requirements 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.

(3) Before August 28, 2019, for each existing source and for each new or reconstructed source for which construction commenced after May 26, 2000 and before April 9, 2018, you must maintain your written startup, shutdown, and malfunction plan according to the provisions in §63.6(e)(3). The startup, shutdown, and malfunction plan must address the startup, shutdown, and corrective actions taken for malfunctioning process and air pollution control equipment. A startup, shutdown, and malfunction plan is not required for such affected sources after August 27, 2019. No startup, shutdown, or malfunction plan is required for any affected source that commences construction or reconstruction after April 6, 2018.

[67 FR 17835, Apr. 11, 2002, as amended at 71 FR 20464, Apr. 20, 2006; 84 FR 6693, Feb. 28, 2019]

OPERATION, MAINTENANCE, AND MONITORING PLAN

§63.2987 What must my operation, maintenance, and monitoring (OMM) plan include?

(a) You must prescribe the monitoring that will be performed to ensure compliance with these emission limitations. Table 1 to this subpart lists the minimum monitoring requirements. Your plan must specify the items listed in paragraphs (a)(1) through (3) of this section:

(1) Each process and control device to be monitored, the type of monitoring device that will be used, and the operating parameters that will be monitored.

(2) A monitoring schedule that specifies the frequency that the parameter values will be determined and recorded.

(3) The operating limits or ranges for each parameter that represent continuous compliance with the emission limits in §63.2983. Operating limits and ranges must be based on values of the monitored parameters recorded during performance tests.

(b) You must establish routine and long-term maintenance and inspection schedules for each control device. You must incorporate in the schedules the control device manufacturer's recommendations for maintenance and inspections or equivalent procedures. If you use a thermal oxidizer, the maintenance schedule must include procedures for annual or more frequent inspection of the thermal oxidizer to ensure that the structural and design integrity of the combustion chamber is maintained. At a minimum, you must meet the requirements of paragraphs (b)(1) through (10) of this section:

(1) Inspect all burners, pilot assemblies, and pilot sensing devices for proper operation. Clean pilot sensor if necessary.

(2) Ensure proper adjustment of combustion air and adjust if necessary.

(3) Inspect, when possible, all internal structures (such as baffles) to ensure structural integrity per the design specifications.

(4) Inspect dampers, fans, and blowers for proper operation.

(5) Inspect motors for proper operation.

(6) Inspect, when possible, combustion chamber refractory lining. Clean and repair or replace lining if necessary.

(7) Inspect the thermal oxidizer shell for proper sealing, corrosion, and hot spots.

(8) For the burn cycle that follows the inspection, document that the thermal oxidizer is operating properly and make any necessary adjustments.

(9) Generally observe whether the equipment is maintained in good operating condition.

(10) Complete all necessary repairs as soon as practicable.

(c) You must establish procedures for responding to operating parameter deviations. At a minimum, the procedures must include the information in paragraphs (c)(1) through (3) of this section.

(1) Procedures for determining the cause of the operating parameter deviation.

(2) Actions for correcting the deviation and returning the operating parameters to the allowable ranges or limits.

(3) Procedures for recording the date and time that the deviation began and ended, and the times corrective actions were initiated and completed.

(d) Your plan must specify the recordkeeping procedures to document compliance with the emissions and operating limits. Table 1 to this subpart establishes the minimum recordkeeping requirements.

[67 FR 17835, Apr. 11, 2002, as amended at 84 FR 6693, Feb. 28, 2019]

§63.2988 [Reserved]

§63.2989 How do I change my OMM plan?

Changes to the operating limits or ranges in your OMM plan require a new performance test.

(a) To revise the ranges or levels established for your operating limits in §63.2984, you must meet the requirements in paragraphs (a)(1) and (2) of this section:

(1) Submit a notification of performance test to the Administrator as specified in §63.7(b) to revise your operating ranges or limits.

(2) After completing the performance test to demonstrate that compliance with the emissions limits can be achieved at the revised levels of the operating limits, you must submit the performance test results and the revised operating limits as part of the notification of compliance status required under §63.9(h).

(b) If you are revising the inspection and maintenance procedures in your plan that are specified in §63.2987(b), you do not need to conduct a new performance test.

(c) If you plan to operate your process or control device under alternative operating conditions and do not wish to revise your OMM plan when you change operating conditions, you can perform a separate compliance test to establish operating limits for each condition. You can then include the operating limits for each condition in your OMM plan. After completing the performance tests, you must record the date and time when you change operations from one condition to another, the condition under which you are operating, and the operating limits that apply under that condition. If you can perform a single performance test that establishes the most stringent operating limits that cover all alternative operating conditions, then you do not need to comply with the provisions of this paragraph.

[67 FR 17835, Apr. 11, 2002, as amended at 84 FR 6693, Feb. 28, 2019]

§63.2990 Can I conduct short-term experimental production runs that cause parameters to deviate from operating limits?

With the approval of the Administrator, you may conduct short-term experimental production runs during which your operating parameters deviate from the operating limits. Experimental runs may include, but are not limited to, runs using resin with a higher free-formaldehyde content than specified in the OMM plan, or using experimental pollution prevention techniques. To conduct a short-term experimental production run, you must complete the requirements in paragraphs (a) and (b) of this section.

(a) Prepare an application to the Administrator for approval to conduct the experimental production runs. Your application must include the items listed in paragraphs (a)(1) through (6) of this section.

(1) The purpose of the experimental production run.

(2) Identification of the affected line.

(3) An explanation of how the operating parameters will deviate from the previously approved ranges and limits.

(4) The duration of the experimental production run.

(5) The date and time of the experimental production run.

(6) A description of any emission testing to be performed during the experimental production run.

(b) Submit the application to the Administrator for approval at least 30 days before you conduct the experimental production run.

(c) If you conduct such experimental production runs without first receiving approval from the Administrator, then you must conduct a performance test under those same experimental production run conditions to show that you were in compliance with the formaldehyde emission limits in §63.2983.

TESTING AND INITIAL COMPLIANCE REQUIREMENTS

§63.2991 When must I conduct performance tests?

Except for drying and curing ovens subject to a federally enforceable permit that requires the exclusive use of non-HAP binders, you must conduct a performance test for each drying and curing oven subject to this subpart according to the provisions in paragraphs (a) through (c) of this section:

(a) *Initially.* You must conduct a performance test to demonstrate initial compliance and to establish operating parameter limits and ranges to be used to demonstrate continuous compliance with the emission standards no later than 180 days after the applicable compliance date specified in §63.2985.

(b) *Every 5 years.* You must conduct a performance test every 5 years as part of renewing your 40 CFR part 70 operating permit.

(c) *To change your OMM plan.* You must conduct a performance test according to the requirements specified in §63.2992 to change the limit or range for any operating limit specified in your OMM plan established during a previous compliance test.

[67 FR 17835, Apr. 11, 2002, as amended at 84 FR 6693, Feb. 28, 2019]

§63.2992 How do I conduct a performance test?

(a) You must verify the performance of monitoring equipment as specified in §63.2994 before performing the test.

(b) You must conduct the performance test according to the requirements in §63.7(a) through (d), (e)(2) through (4), and (f) through (h).

(c) You must conduct the performance test under the conditions specified in paragraphs (c)(1) and (2) of this section.

(1) The resin must have the highest specified free-formaldehyde content that will be used.

(2) You must operate at the maximum feasible urea-formaldehyde resin solids application rate (pounds urea-formaldehyde resin solids applied per hour) that will be used.

(d) During the performance test, you must monitor and record the operating parameters that you will use to demonstrate continuous compliance after the test. These parameters are listed in Table 1 to this subpart.

(e) You must conduct performance tests under conditions that are representative of the performance of the affected source. 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 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.

(f) You must conduct three separate test runs for each performance test as specified in §63.7(e)(3), and each test run must last at least 1 hour.

[67 FR 17835, Apr. 11, 2002, as amended at 84 FR 6693, Feb. 28, 2019]

§63.2993 What test methods must I use in conducting performance tests?

(a) Use EPA Method 1 (40 CFR part 60, appendix A-1) for selecting the sampling port location and the number of sampling ports.

(b) Use EPA Method 2 (40 CFR part 60, appendix A-1) for measuring the volumetric flow rate of the stack gas.

(c) Use EPA Method 3 or 3A (40 CFR part 60, appendix A-2) for measuring oxygen and carbon dioxide concentrations needed to correct formaldehyde concentration measurements to a standard basis.

(d) Use EPA Method 4 (40 CFR part 60, appendix A-3) for measuring the moisture content of the stack gas.

(e) Use EPA Method 316, 318, or 320 (40 CFR part 63, appendix A) for measuring the concentration of formaldehyde.

(f) Use the method contained in appendix A to this subpart or the resin purchase specification and the vendor specification sheet for each resin lot for determining the free-formaldehyde content in the urea-formaldehyde resin.

(g) Use the method in appendix B to this subpart for determining product loss-on-ignition.

[84 FR 6694, Feb. 28, 2019]

§63.2994 How do I verify the performance of monitoring equipment?

(a) Before conducting the performance test, you must take the steps listed in paragraphs (a)(1) through (3) of this section:

(1) Install and calibrate all process equipment, control devices, and monitoring equipment.

(2) Develop and implement a continuous parameter monitoring system (CPMS) quality control program that includes written procedures for CPMS according to §63.8(d)(1) and (2). You must 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 subpart, to be made available for inspection, upon request, by the Administrator. If you revise the performance evaluation plan, 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. You should include the program of corrective action in the plan required under §63.8(d)(2).

(3) Conduct a performance evaluation of the CPMS according to §63.8(e) which specifies the general requirements and requirements for notifications, the site-specific performance evaluation plan, conduct of the performance evaluation, and reporting of performance evaluation results.

(b) If you use a thermal oxidizer, the temperature monitoring device must meet the performance and equipment specifications listed in paragraphs (b)(1) through (3) of this section:

(1) The temperature monitoring device must be installed either at the exit of the combustion zone of each thermal oxidizer, or at the location specified by the manufacturer. The temperature monitoring device must also be installed in a location before any heat recovery or heat exchange equipment, and it must remain in the same location for both the performance test and the continuous monitoring of temperature.

(2) The recorder response range must include zero and 1.5 times the average temperature required in §63.2984(a)(1).

(3) The measurement method or reference method for calibration must be a National Institute of Standards and Technology calibrated reference thermocouple-potentiometer system or an alternate reference subject to the approval of the Administrator.

[67 FR 17835, Apr. 11, 2002, as amended at 84 FR 6694, Feb. 28, 2019]

§63.2995 What equations must I use to determine compliance?

(a) *Percent reduction for formaldehyde.* To determine compliance with the percent reduction formaldehyde emission standard, use equation 1 of this section as follows:

$$E_f = \frac{M_i - M_o}{M_i} \times 100 \qquad (Eq.\ 1)$$

Where:

E_f = Formaldehyde control efficiency, percent.

M_i = Mass flow rate of formaldehyde entering the control device, kilograms (pounds) per hour.

M_o = Mass flow rate of formaldehyde exiting the control device, kilograms (pounds) per hour.

(b) *Formaldehyde mass emissions rate.* To determine compliance with the kilogram per megagram (pound per ton) formaldehyde emission standard, use equation 2 of this section as follows:

$$E = \frac{M}{P} \qquad (Eq.\ 2)$$

Where:

E = Formaldehyde mass emissions rate, kilograms (pounds) of formaldehyde per megagram (ton) of fiberglass mat produced.

M = Formaldehyde mass emissions rate, kilograms (pounds) per hour.

P = The wet-formed fiberglass mat production rate during the emissions sampling period, including any material trimmed from the final product, megagrams (tons) per hour.

(c) *Urea-formaldehyde (UF) resin solids application rate.* To determine the UF resin solids application rate, use equation 3 of this section as follows:

$$\frac{UF\ \text{Solids}}{Hour} = LOI \times UFL \times MW \times SQ \qquad (Eq.\ 3)$$

Where:

UF solids/hour = UF resin solids application rate (pounds per hour).

LOI = loss on ignition (weight faction), or pound of organic binder per pound of mat.

UFL = UF-to-latex ratio in the binder (mass fraction of UF resin solids in total combined resin solids for UF and latex), or pound of UF solids per pound of total resin solids (UF and latex).

MW = weight of the final mat per square (pounds per roofing square).

SQ = roofing squares produced per hour.

MONITORING REQUIREMENTS

§63.2996 What must I monitor?

(a) You must monitor the parameters listed in Table 1 to this subpart and any other parameters specified in your OMM plan. You must monitor the parameters, at a minimum, at the corresponding frequencies listed in Table 1 to this subpart, except as specified in paragraph (b) of this section.

(b) During periods when using a non-HAP binder, you are not required to monitor the parameters in Table 1 to this subpart.

[84 FR 6694, Feb. 28, 2019]

§63.2997 What are the requirements for monitoring devices?

(a) If you control formaldehyde emissions using a thermal oxidizer, you must meet the requirements in paragraphs (a)(1) and (2) of this section:

(1) Install, calibrate, maintain, and operate a device to monitor and record continuously the thermal oxidizer temperature at the exit of the combustion zone before any substantial heat exchange occurs or at the location consistent with the manufacturer's recommendations.

(2) Continuously monitor the thermal oxidizer temperature and determine and record the average temperature in 15-minute and 3-hour block averages. You may determine the average temperature more frequently than every 15 minutes and every 3 hours, but not less frequently.

(b) If you use process modifications or a control device other than a thermal oxidizer to control formaldehyde emissions, you must install, calibrate, maintain, and operate devices to monitor the parameters established in your OMM plan at the frequency established in the plan.

[67 FR 17835, Apr. 11, 2002, as amended at 84 FR 6694, Feb. 28, 2019]

NOTIFICATIONS, REPORTS, AND RECORDS

§63.2998 What records must I maintain?

You must maintain records according to the procedures of §63.10. You must maintain the records listed in paragraphs (a) through (i) of this section.

(a) All records required by §63.10, where applicable. Table 2 of this subpart presents the applicable requirements of the general provisions.

(b) The OMM plan.

(c) During periods when the binder formulation being applied contains HAP, records of values of monitored parameters listed in Table 1 to this subpart to show continuous compliance with each operating limit specified in Table 1 to this subpart. If you do not monitor the parameters in Table 1 to this subpart during periods when using non-HAP binder, you must record the dates and times that production of mat using non-HAP binder began and ended.

(d) Records of maintenance and inspections performed on the control devices.

(e) Before August 28, 2019, for existing drying and curing ovens and drying and curing ovens constructed or reconstructed after May 26, 2000 and before April 7, 2018, if an operating parameter deviation occurs, you must record:

(1) The date, time, and duration of the operating parameter deviation;

(2) A brief description of the cause of the operating parameter deviation;

(3) The dates and times at which corrective actions were initiated and completed;

(4) A brief description of the corrective actions taken to return the parameter to the limit or to within the range specified in the OMM plan; and

(5) A record of whether the deviation occurred during a period of startup, shutdown, or malfunction.

(f) Before August 28, 2019, for existing drying and curing ovens and drying and curing ovens constructed or reconstructed after May 26, 2000 and before April 7, 2018, keep all records specified in §63.6(e)(3)(iii) through (v) related to startup, shutdown, and malfunction. Records specified in §63.6(e)(3)(iii) through (v) are not required to be kept after August 27, 2019 for existing or new drying and curing ovens.

(g) After February 28, 2019 for affected sources that commence construction or reconstruction after April 6, 2018, and after August 27, 2019 for all other affected sources, in the event that an affected source fails to meet an applicable standard, including deviations from an emission limit in §63.2983 or an operating limit in §63.2984, you must record the number of failures and, for each failure, you must:

(1) Record the date, time, and duration of the failure;

(2) Describe the cause of the failure;

(3) 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; and

(4) Record actions taken to minimize emissions in accordance with §63.2986(g)(2) and any corrective actions taken to return the affected unit to its normal or usual manner of operation and/or to return the

operating parameter to the limit or to within the range specified in the OMM plan, and the dates and times at which corrective actions were initiated and completed.

(h) If you operate your process or control device under alternative operating condition and have established operating limits for each condition as specified in §63.2989(c), then you must keep records of the date and time you changed operations from one condition to another, the condition under which you are operating, and the applicable operating limits for that condition.

(i) Records showing how the maximum residence time was derived.

[67 FR 17835, Apr. 11, 2002, as amended at 84 FR 6694, Feb. 28, 2019]

§63.2999 In what form and for how long must I maintain records?

(a) You must maintain each record required by this subpart for 5 years. You must maintain the most recent 2 years of records at the facility. The remaining 3 years of records may be retained offsite.

(b) Your records must be readily available and in a form so they can be easily inspected and reviewed. You can keep the records on paper or an alternative medium, such as microfilm, computer, computer disks, compact disk, digital versatile disk, flash drive, other commonly used electronic storage medium, magnetic tape, or on microfiche.

(c) You may maintain any records that you submitted electronically via the EPA's Compliance and Emissions Data Reporting Interface (CEDRI) 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 onsite compliance evaluation.

[67 FR 17835, Apr. 11, 2002, as amended at 84 FR 6695, Feb. 28, 2019]

§63.3000 What notifications and reports must I submit?

(a) You must submit all notifications and reports required by the applicable general provisions and this section. Table 2 of this subpart presents the applicable requirements of the general provisions.

(b) *Notification of compliance status.* You must submit the notification of compliance status, including the performance test results, the operating limits or ranges as determined during the performance test, and other information specified in §63.9(h), before the close of business on the 60th calendar day after you complete the performance test according to §63.10(d)(2).

(c) *Semiannual compliance reports.* You must submit semiannual compliance reports according to the requirements of paragraphs (c)(1) through (6) of this section.

(1) *Dates for submitting reports.* Unless the Administrator has agreed to a different schedule for submitting reports under §63.10(a), you must deliver or postmark each semiannual compliance report no later than 30 days following the end of each semiannual reporting period. The first semiannual reporting period begins on the compliance date for your affected source and ends on June 30 or December 31, whichever date immediately follows your compliance date. Each subsequent semiannual reporting period for which you must

submit a semiannual compliance report begins on July 1 or January 1 and ends 6 calendar months later. Before March 1, 2019, as required by §63.10(e)(3), you must begin submitting quarterly compliance reports if you deviate from the emission limits in §63.2983 or the operating limits in §63.2984. After February 28, 2019, you are not required to submit quarterly compliance reports. If you deviate from the emission limits in §63.2983 or the operating limits in §63.2984 in the quarter prior to February 28, 2019, you must include this information in the report for the first full semiannual reporting period following February 28, 2019.

(2) *Inclusion with title V report.* For each affected source that is subject to permitting regulations pursuant to 40 CFR part 70 or 71, and for which the permitting authority has established dates for submitting semiannual reports pursuant to 40 CFR 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 paragraph (c)(1) of this section.

(3) *Contents of reports.* The semiannual compliance report must contain the information in paragraphs (c)(3)(i) through (vi) of this section:

(i) Company name and address.

(ii) 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.

(iii) Date of report and beginning and ending dates of the reporting period.

(iv) A summary of the total duration of continuous parameter monitoring system downtime during the semiannual reporting period and the total duration of continuous parameter monitoring system downtime as a percent of the total source operating time during that semiannual reporting period.

(v) The date of the latest continuous parameter monitoring system certification or audit.

(vi) A description of any changes in the wet-formed fiberglass mat manufacturing process, continuous parameter monitoring system, or add-on control device since the last semiannual reporting period.

(4) *No deviations.* If there were no instances where an affected source failed to meet an applicable standard, including no deviations from the emission limit in §63.2983 or the operating limits in §63.2984, the semiannual compliance report must include a statement to that effect. If there were no periods during which the continuous parameter monitoring systems were out-of-control as specified in §63.8(c)(7), the semiannual compliance report must include a statement to that effect.

(5) *Deviations.* Before August 28, 2019, for existing drying and curing ovens and drying and curing ovens constructed or reconstructed after May 26, 2000 and before April 7, 2018, if there was a deviation from the emission limit in §63.2983 or an operating limit in §63.2984, the semiannual compliance report must contain the information in paragraphs (c)(5)(i) through (ix) of this section:

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

(ii) The date and time that each continuous parameter monitoring system was inoperative, except for zero (low-level) and high-level checks.

(iii) The date, time, and duration that each continuous parameter monitoring system was out-of-control, including the information in §63.8(c)(8).

(iv) 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.

(v) The date and time that corrective actions were taken, a description of the cause of the deviation, and a description of the corrective actions taken.

(vi) A summary of the total duration of each deviation during the semiannual reporting period and the total duration as a percent of the total source operating time during that semiannual reporting period.

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

(viii) A brief description of the associated process units.

(ix) A brief description of the associated continuous parameter monitoring system.

(6) *Deviations.* For affected sources that commence construction or reconstruction after April 6, 2018, after February 28, 2019, and after August 27, 2019 for all other affected sources, if there was an instance where an affected source failed to meet an applicable standard, including a deviation from the emission limit in §63.2983 or an operating limit in §63.2984, the semiannual compliance report must record the number of failures and contain the information in paragraphs (c)(6)(i) through (ix) of this section:

(i) The date, time, and duration of each failure.

(ii) The date and time that each continuous parameter monitoring system was inoperative, except for zero (low-level) and high-level checks.

(iii) The date, time, and duration that each continuous parameter monitoring system was out-of-control, including the information in §63.8(c)(8).

(iv) 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.

(v) The date and time that corrective actions were taken, a description of the cause of the failure (including unknown cause, if applicable), and a description of the corrective actions taken.

(vi) A summary of the total duration of each failure during the semiannual reporting period and the total duration as a percent of the total source operating time during that semiannual reporting period.

(vii) A breakdown of the total duration of the failures during the semiannual reporting period into those that were due to control equipment problems, process problems, other known causes, and other unknown causes.

(viii) A brief description of the associated process units.

(ix) A brief description of the associated continuous parameter monitoring system.

(d) *Startup, shutdown, malfunction reports.* Before August 28, 2019, for existing drying and curing ovens and drying and curing ovens constructed or reconstructed after May 26, 2000 and before April 7, 2018, if you have a startup, shutdown, or malfunction during the semiannual reporting period, you must submit the reports specified §63.10(d)(5). No startup, shutdown, or malfunction plan is required for any affected source that commences construction or reconstruction after April 6, 2018.

(e) *Performance test results.* You must submit results of each performance test (as defined in §63.2) required by this subpart no later than 60 days after completing the test as specified in §63.10(d)(2). You must include the values measured during the performance test for the parameters listed in Table 1 of this subpart and the operating limits or ranges that you will include in your OMM plan. For the thermal oxidizer temperature, you must include 15-minute averages and the average for the three 1-hour test runs. For affected sources that commence construction or reconstruction after April 6, 2018, beginning February 28, 2019, and beginning no later than August 27, 2019 for all other affected sources, you must submit the results following the procedures specified in paragraphs (e)(1) through (3) of this section.

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

(2) For data collected using test methods that are not supported by the EPA's ERT as listed on the EPA's ERT website at the time of the test, you must submit the results of the performance test to the Administrator at the appropriate address listed in §63.13, unless the Administrator agrees to or specifies an alternate reporting method.

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

(f) *Claims of EPA system outage.* If you are required to electronically submit a report through the CEDRI in the EPA's CDX, you may assert a claim of EPA 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 (f)(1) through (7) of this section.

(1) You must have been or will be precluded from accessing CEDRI and submitting a required test 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.

(g) *Claims of force majeure.* 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 (g)(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 requirements 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.

[67 FR 17835, Apr. 11, 2002, as amended at 84 FR 6695, Feb. 28, 2019]

OTHER REQUIREMENTS AND INFORMATION

§63.3001 What sections of the general provisions apply to me?

You must comply with the requirements of the general provisions of 40 CFR part 63, subpart A, as specified in Table 2 of this subpart.

[84 FR 6696, Feb. 28, 2019]

§63.3002 Who implements and enforces this subpart?

(a) This subpart can be implemented and enforced by the U.S. EPA or a delegated authority, such as your State, local, or tribal agency. If the Administrator has delegated authority to your State, local, or tribal agency, then that agency is the primary enforcement authority. If the Administrator has not delegated authority to your State, only EPA enforces this subpart. You should contact your U.S. EPA Regional Office to find out if implementation and enforcement of this subpart is delegated to your State, local, or tribal agency.

(b) In delegating implementation and enforcement authority of this subpart to a State, local, or tribal agency under section 40 CFR part 63, subpart E, the authorities contained in paragraphs (b)(1) through (4) of this section are retained by the Administrator of U.S. EPA and are not transferred to the State, local, or tribal agency.

(1) The authority under §63.6(g) to approve alternatives to the emission limits in §63.2983 and operating limits in §63.2984 is not delegated.

(2) The authority under §63.7(e)(2)(ii) and (f) to approve of major alternatives (as defined in §63.90) to the test methods in §63.2993 is not delegated.

(3) The authority under §63.8(f) to approve major alternatives (as defined in §63.90) to the monitoring requirements in §§63.2996 and 63.2997 is not delegated.

(4) The authority under §63.10(f) to approve major alternatives (as defined in §63.90) to recordkeeping, notification, and reporting requirements in §§63.2998 through 63.3000 is not delegated.

§63.3003 [Reserved]

§63.3004 What definitions apply to this subpart?

Terms used in this subpart are defined the Clean Air Act, in §63.2, and in this section as follows:

Administrator means the Administrator of the United States Environmental Protection Agency or his or her authorized representative (e.g., a State that has been delegated the authority to implement the provisions of this part).

Deviation means:

(1) Before August 28, 2019, any instance in which an affected source subject to this subpart, or an owner or operator of such a source:

(i) 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;

(ii) 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

(iii) 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.

(2) After February 28, 2019 for affected sources that commence construction or reconstruction after April 6, 2018, and after August 27, 2019 for all other affected sources, any instance in which an affected source subject to this subpart, or an owner or operator of such a source:

(i) 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

(ii) 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.

Drying and curing oven means the process section that evaporates excess moisture from a fiberglass mat and cures the resin that binds the fibers.

Emission limitation means an emission limit, operating limit, or work practice standard.

Fiberglass mat production rate means the weight of finished fiberglass mat produced per hour of production including any trim removed after the binder is applied and before final packaging.

Loss-on-ignition means the percentage decrease in weight of fiberglass mat measured before and after it has been ignited to burn off the applied binder. The loss-on-ignition is used to monitor the weight percent of binder in fiberglass mat.

Maximum residence time means the longest time, during normal operation and excluding periods of ramping up to speed during startup, that a particular point on the fiberglass mat remains in the drying and curing oven. It is determined for each line by the equation:

$$T = L/S$$

Where:

T is the residence time, in seconds;

L is the length of the drying and curing oven, in feet; and

S is the slowest line speed normally operated on the line, excluding periods of ramping up to speed during startup, in feet per second.

Non-HAP binder means a binder formulation that does not contain any substance that is required to be listed in Section 3 of a safety data sheet (SDS) pursuant to 29 CFR 1910.1200(g) and that is a HAP as defined in section 112(b) of the Clean Air Act. In designating a non-HAP binder under this subpart, you may not rely on the SDS for a binder where the manufacturer has withheld the specific chemical identity, including the chemical name, other specific identification of a hazardous chemical, or the exact percentage (concentration) of the substance in a mixture from Section 3 of the SDS. You may not withhold this information when making the case that the binder is a non-HAP binder for the purposes of §63.2996.

Nonwoven wet-formed fiberglass mat manufacturing means the production of a fiberglass mat by bonding glass fibers to each other using a resin solution. Nonwoven wet-formed fiberglass mat manufacturing is also referred to as wet-formed fiberglass mat manufacturing.

Roofing square means the amount of finished product needed to cover an area 10 feet by 10 feet (100 square feet) of finished roof.

Shutdown after February 28, 2019 for affected sources that commence construction or reconstruction after April 6, 2018, and after August 27, 2019 for all other affected sources, means the cessation of operation of the drying and curing of any binder-infused fiberglass mat for any purpose. Shutdown ends when the maximum residence time has elapsed after binder-infused fiberglass mat ceases to enter the drying and curing oven.

Startup after February 28, 2019 for affected sources that commence construction or reconstruction after April 6, 2018, and after August 27, 2019 for all other affected sources, means the setting in operation of the drying and curing of binder-infused fiberglass mat for any purpose. Startup begins when binder-infused fiberglass mat enters the oven to be dried and cured for the first time or after a shutdown event.

Thermal oxidizer means an air pollution control device that uses controlled flame combustion inside a combustion chamber to convert combustible materials to noncombustible gases.

Urea-formaldehyde content in binder formulation means the mass-based percent of urea-formaldehyde resin in the total binder mix as it is applied to the glass fibers to form the mat.

[67 FR 17835, Apr. 11, 2002, as amended at 84 FR 6696, Feb. 28, 2019]

§§63.3005-63.3079 [Reserved]

Table 1 to Subpart HHHH of Part 63—Minimum Requirements for Monitoring and Recordkeeping

As stated in §63.2998(c), you must comply with the minimum requirements for monitoring and recordkeeping in the following table:

You must monitor these parameters:	At this frequency:	And record for the monitored parameter:

1. Thermal oxidizer temperature[14]	Continuously	15-minute and 3-hour block averages.
2. Other process or control device parameters specified in your OMM plan[24]	As specified in your OMM plan	As specified in your OMM plan.
3. Urea-formaldehyde resin solids application rate[4]	On each operating day, calculate the average lb/h application rate for each product manufactured during that day	The average lb/h value for each product manufactured during the day.
4. Resin free-formaldehyde content[4]	For each lot of resin purchased	The value for each lot used during the operating day.
5. Loss-on-ignition[34]	Measured at least once per day, for each product manufactured during that day	The value for each product manufactured during the operating day.
6. UF-to-latex ratio in the binder[34]	For each batch of binder prepared the operating day	The value for each batch of binder prepared during the operating day.
7. Weight of the final mat product per square (lb/roofing square)[34]	Each product manufactured during the operating day	The value for each product manufactured during the operating day.
8. Average nonwoven wet-formed fiberglass mat production rate (roofing square/h)[34]	For each product manufactured during the operating day	The average value for each product manufactured during operating day.

[1] Required if a thermal oxidizer is used to control formaldehyde emissions.

[2] Required if process modifications or a control device other than a thermal oxidizer is used to control formaldehyde emissions.

[3] These parameters must be monitored and values recorded, but no operating limits apply.

[4] You are not required to monitor or record these parameters during periods when using a non-HAP binder. If you do not monitor these parameters during periods when using a non-HAP binder, you must record the dates and times that production of mat using the non-HAP binder began and ended.

[84 FR 6697, Feb. 28, 2019]

Table 2 to Subpart HHHH of Part 63—Applicability of General Provisions (40 CFR Part 63, Subpart A) to Subpart HHHH

As stated in §63.3001, you must comply with the applicable General Provisions requirements according to the following table:

Citation	Requirement	Applies to subpart HHHH	Explanation
§63.1(a)(1)-(4)	General Applicability	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)	Initial Applicability Determination	Yes.	
§63.1(c)(1)	Applicability After Standard Established	Yes.	
§63.1(c)(2)		Yes	Some plants may be area sources.
§63.1(c)(3)		No	[Reserved].
§63.1(c)(4)-(5)		Yes.	
§63.1(d)		No	[Reserved].
§63.1(e)	Applicability of Permit Program	Yes.	
§63.2	Definitions	Yes	Additional definitions in §63.3004.
§63.3	Units and Abbreviations	Yes.	
§63.4(a)(1)-(3)	Prohibited Activities	Yes.	
§63.4(a)(4)		No	[Reserved].
§63.4(a)(5)		Yes.	
§63.4(b)-(c)	Circumvention/Severability	Yes.	
§63.5(a)	Construction/Reconstruction	Yes.	
§63.5(b)(1)	Existing/Constructed/Reconstruction	Yes.	
§63.5(b)(2)		No	[Reserved].
§63.5(b)(3)-(6)		Yes.	
§63.5(c)		No	[Reserved].
§63.5(d)	Application for Approval of Construction/Reconstruction	Yes.	
§63.5(e)	Approval of Construction/Reconstruction	Yes.	
§63.5(f)	Approval of Construction/Reconstruction Based on State Review	Yes.	
§63.6(a)	Compliance with Standards and Maintenance—Applicability	Yes.	
§63.6(b)(1)-(5)	New and Reconstructed Sources-Dates	Yes.	
§63.6(b)(6)		No	[Reserved].

§63.6(b)(7)		Yes.	
§63.6(c)(1)-(2)	Existing Sources Dates	Yes	§63.2985 specifies dates.
§63.6(c)(3)-(4)		No	[Reserved].
§63.6(c)(5)		Yes.	
§63.6(d)		No	[Reserved].
§63.6(e)(1)(i)	General Duty to Minimize Emissions	No, for new or reconstructed sources which commenced construction or reconstruction after April 6, 2018. Yes, for all other affected sources before August 28, 2019, and No thereafter	See §63.2986(g) for general duty requirement.
§63.6(e)(1)(ii)	Requirement to Correct Malfunctions As Soon As Possible	No, for new or reconstructed sources which commenced construction or reconstruction after April 6, 2018. Yes, for all other affected sources before August 28, 2019, and No thereafter	
§63.6(e)(1)(iii)	Operation and Maintenance Requirements	Yes	§§63.2984 and 63.2987 specify additional requirements.
§63.6(e)(2)		No	[Reserved].
§63.6(e)(3)	SSM Plan Requirements	No, for new or reconstructed sources which commenced construction or reconstruction after April 6, 2018. Yes, for all other affected sources before August 28, 2019, and No thereafter	
§63.6(f)(1)	SSM Exemption	No, for new or reconstructed sources which commenced construction or reconstruction after April 6, 2018. Yes, for all other affected sources before August 28, 2019, and No thereafter	
§63.6(f)(2) and (3)	Compliance with Non-Opacity Emission Standards	Yes.	

§63.6(g)	Alternative Non-Opacity Emission Standard	Yes	EPA retains approval authority.
§63.6(h)	Compliance with Opacity/Visible Emissions Standards	No	Subpart HHHH does not specify opacity or visible emission standards.
§63.6(i)(1)-(14)	Extension of Compliance	Yes.	
§63.6(i)(15)		No	[Reserved].
§63.6(i)(16)		Yes.	
§63.6(j)	Exemption from Compliance	Yes.	
§63.7(a)	Performance Test Requirements—Applicability and Dates	Yes.	
§63.7(b)	Notification of Performance Test	Yes.	
§63.7(c)	Quality Assurance Program/Test Plan	Yes.	
§63.7(d)	Testing Facilities	Yes.	
§63.7(e)(1)	Performance Testing	No, for new or reconstructed sources which commenced construction or reconstruction after April 6, 2018. Yes, for all other affected sources before August 28, 2019, and No thereafter	See §63.2992(c).
§63.7(e)(2)-(4)	Conduct of Tests	Yes	§§63.2991-63.2994 specify additional requirements.
§63.7(f)	Alternative Test Method	Yes	EPA retains approval authority
§63.7(g)	Data Analysis	Yes.	
§63.7(h)	Waiver of Tests	Yes.	
§63.8(a)(1)-(2)	Monitoring Requirements—Applicability	Yes.	
§63.8(a)(3)		No	[Reserved].
§63.8(a)(4)		Yes.	
§63.8(b)	Conduct of Monitoring	Yes.	
§63.8(c)(1)(i)	General Duty to Minimize Emissions and CMS Operation	No, for new or reconstructed sources which commenced construction or reconstruction after April 6, 2018. Yes, for all other affected sources before	

		August 28, 2019, and No thereafter	
§63.8(c)(1)(ii)	Continuous Monitoring System (CMS) Operation and Maintenance	Yes.	
§63.8(c)(1)(iii)	Requirement to Develop SSM Plan for CMS	No, for new or reconstructed sources which commenced construction or reconstruction after April 6, 2018. Yes, for all other affected sources before August 28, 2019, and No thereafter	
§63.8(c)(2)-(4)		Yes.	
§63.8(c)(5)	Continuous Opacity Monitoring System (COMS) Procedures	No	Subpart HHHH does not specify opacity or visible emission standards.
§63.8(c)(6)-(8)		Yes.	
§63.8(d)(1) and (2)	Quality Control	Yes.	
§63.8(d)(3)	Written Procedures for CMS	No, for new or reconstructed sources which commenced construction or reconstruction after April 6, 2018. Yes, for all other affected sources before August 28, 2019, and No thereafter	See §63.2994(a).
§63.8(e)	CMS Performance Evaluation	Yes.	
§63.8(f)(1)-(5)	Alternative Monitoring Method	Yes	EPA retains approval authority.
§63.8(f)(6)	Alternative to Relative Accuracy Test	No	Subpart HHHH does not require the use of continuous emissions monitoring systems (CEMS).
§63.8(g)(1)	Data Reduction	Yes.	
§63.8(g)(2)	Data Reduction	No	Subpart HHHH does not require the use of CEMS or COMS.
§63.8(g)(3)-(5)	Data Reduction	Yes.	
§63.9(a)	Notification Requirements—Applicability	Yes.	

§63.9(b)	Initial Notifications	Yes.	
§63.9(c)	Request for Compliance Extension	Yes.	
§63.9(d)	New Source Notification for Special Compliance Requirements	Yes.	
§63.9(e)	Notification of Performance Test	Yes.	
§63.9(f)	Notification of Visible Emissions/Opacity Test	No	Subpart HHHH does not specify opacity or visible emission standards.
§63.9(g)(1)	Additional CMS Notifications	Yes.	
§63.9(g)(2)-(3)		No	Subpart HHHH does not require the use of COMS or CEMS.
§63.9(h)(1)-(3)	Notification of Compliance Status	Yes	§63.3000(b) specifies additional requirements.
§63.9(h)(4)		No	[Reserved].
§63.9(h)(5)-(6)		Yes.	
§63.9(i)	Adjustment of Deadlines	Yes.	
§63.9(j)	Change in Previous Information	Yes.	
§63.10(a)	Recordkeeping/Reporting—Applicability	Yes.	
§63.10(b)(1)	General Recordkeeping Requirements	Yes	§63.2998 includes additional requirements.
§63.10(b)(2)(i)	Recordkeeping of Occurrence and Duration of Startups and Shutdowns	No, for new or reconstructed sources which commenced construction or reconstruction after April 6, 2018. Yes, for all other affected sources before August 28, 2019, and No thereafter	
§63.10(b)(2)(ii)	Recordkeeping of Failures to Meet a Standard	No, for new or reconstructed sources which commenced construction or reconstruction after April 6, 2018. Yes, for all other affected sources before August 28, 2019, and No thereafter	See §63.2998(g) for recordkeeping requirements for an affected source that fails to meet an applicable standard.
§63.10(b)(2)(iii)	Maintenance Records	Yes.	

§63.10(b)(2)(iv) and (v)	Actions Taken to Minimize Emissions During SSM	No, for new or reconstructed sources which commenced construction or reconstruction after April 6, 2018. Yes, for all other affected sources before August 28, 2019, and No thereafter	
§63.10(b)(2)(vi)	Recordkeeping for CMS Malfunctions	Yes.	
§63.10(b)(2)(vii)-(xiv)	Other CMS Requirements	Yes.	
§63.10(b)(3)	Recordkeeping requirement for applicability determinations	Yes.	
§63.10(c)(1)	Additional CMS Recordkeeping	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)	Use of SSM Plan	No, for new or reconstructed sources which commenced construction or reconstruction after April 6, 2018. Yes, for all other affected sources before August 28, 2019, and No thereafter	
§63.10(d)(1)	General Reporting Requirements	Yes	§63.3000 includes additional requirements.
§63.10(d)(2)	Performance Test Results	Yes	§63.3000 includes additional requirements.
§63.10(d)(3)	Opacity or Visible Emissions Observations	No	Subpart HHHH does not specify opacity or visible emission standards.
§63.10(d)(4)	Progress Reports Under Extension of Compliance	Yes.	
§63.10(d)(5)	SSM Reports	No, for new or reconstructed sources which commenced construction or reconstruction after April 6, 2018. Yes, for all other	See §63.3000(c) for malfunction reporting requirements.

		affected sources before August 28, 2019, and No thereafter	
§63.10(e)(1)	Additional CMS Reports—General	No	Subpart HHHH does not require CEMS.
§63.10(e)(2)	Reporting results of CMS performance evaluations.	Yes.	
§63.10(e)(3)	Excess Emission/CMS Performance Reports.	Yes.	
§63.10(e)(4)	COMS Data Reports	No	Subpart HHHH does not specify opacity or visible emission standards.
§63.10(f)	Recordkeeping/Reporting Waiver	Yes	EPA retains approval authority.
§63.11	Control Device Requirements—Applicability.	No	Facilities subject to subpart HHHH do not use flares as control devices.
§63.12	State Authority and Delegations	Yes.	
§63.13	Addresses	Yes.	
§63.14	Incorporation by Reference	Yes	See §63.14(b)(2) and (3) for applicability requirements.
§63.15	Availability of Information/Confidentiality	Yes.	

[84 FR 6697, Feb. 28, 2019]

Appendix A to Subpart HHHH of Part 63—Method for Determining Free-Formaldehyde in Urea-Formaldehyde Resins by Sodium Sulfite (Iced & Cooled)

1.0 Scope

This procedure corresponds to the Housing and Urban Development method of determining free-formaldehyde in urea-formaldehyde resins. This method applies to samples that decompose to yield formaldehyde under the conditions of other free-formaldehyde methods. The primary use is for urea-formaldehyde resins.

2.0 Part A—Testing Resins

Formaldehyde will react with sodium sulfite to form the sulfite addition products and liberate sodium hydroxide (NaOH); however, at room temperature, the methanol groups present will also react to liberate NaOH. Titrate at 0 degrees Celsius (°C) to minimize the reaction of the methanol groups.

2.1 Apparatus Required.

2.1.1 Ice crusher.

2.1.2 One 100-milliliter (mL) graduated cylinder.

2.1.3 Three 400-mL beakers.

2.1.4 One 50-mL burette.

2.1.5 Analytical balance accurate to 0.1 milligrams (mg).

2.1.6 Magnetic stirrer.

2.1.7 Magnetic stirring bars.

2.1.8 Disposable pipettes.

2.1.9 Several 5-ounce (oz.) plastic cups.

2.1.10 Ice cube trays (small cubes).

2.2 Materials Required.

2.2.1 Ice cubes (made with distilled water).

2.2.2 A solution of 1 molar (M) sodium sulfite (Na_2SO_3) (63 grams (g) Na_2SO_3/500 mL water (H_2O) neutralized to thymolphthalein endpoint).

2.2.3 Standardized 0.1 normal (N) hydrochloric acid (HCl).

2.2.4 Thymolphthalein indicator (1.0 g thymolphthalein/199 g methanol).

2.2.5 Sodium chloride (NaCl) (reagent grade).

2.2.6 Sodium hydroxide (NaOH).

2.3 Procedure.

2.3.1 Prepare sufficient quantity of crushed ice for three determinations (two trays of cubes).

2.3.2 Put 70 cubic centimeters (cc) of 1 M Na_2SO_3 solution into a 400-mL beaker. Begin stirring and add approximately 100 g of crushed ice and 2 g of NaCl. Maintain 0 °C during test, adding ice as necessary.

2.3.3 Add 10-15 drops of thymolphthalein indicator to the chilled solution. If the solution remains clear, add 0.1 N NaOH until the solution turns blue; then add 0.1 N HCl back to the colorless endpoint. If the solution turns blue upon adding the indicator, add 0.1 N HCl to the colorless endpoint.

2.3.4 On the analytical balance, accurately weigh the amount of resin indicated under the "*Resin Sample Size*" chart (see below) as follows.

RESIN SAMPLE SIZE

Approximate free HCHO (percent)	**Sample weight (gram(s))**
<0.5	10
0.5-1.0	5
1.0-3.0	2
3.0	1

2.3.4.1 Pour about 1 inch of resin into a 5 oz. plastic cup.

2.3.4.2 Determine the gross weight of the cup, resin, and disposable pipette (with the narrow tip broken off) fitted with a small rubber bulb.

2.3.4.3 Pipette out the desired amount of resin into the stirring, chilled solution (approximately 1.5 to 2 g per pipette-full).

2.3.4.4 Quickly reweigh the cup, resin, and pipette with the bulb.

2.3.4.5 The resultant weight loss equals the grams of resin being tested.

2.3.5 Rapidly titrate the solution with 0.1 N HCl to the colorless endpoint described in Step 3 (2.3.3).

2.3.6 Repeat the test in triplicate.

2.4 Calculation.

2.4.1 The percent free-formaldehyde (%HCHO) is calculated as follows:

$$\%HCHO = \frac{(mL\ 0.1\ \mathrm{N\,HCl})\ (N\ \mathrm{of\ Acid})\ (3.003)}{Weight\ \mathrm{of\ Sample}}$$

2.4.2 Compute the average percent free-formaldehyde of the three tests.

(NOTE: If the results of the three tests are not within a range of ±0.5 percent or if the average of the three tests does not meet expected limits, carry out Part B and then repeat Part A.)

3.0 Part B—Standard Check

Part B ensures that test reagents used in determining percent free-formaldehyde in urea-formaldehyde resins are of proper concentration and that operator technique is correct. Should any doubts arise in either of these areas, the formaldehyde standard solution test should be carried out.

3.1 Preparation and Standardization of a 1 Percent Formalin Solution.

Prepare a solution containing approximately 1 percent formaldehyde from a stock 37 percent formalin solution. Standardize the prepared solution by titrating the hydroxyl ions resulting from the formation of the formaldehyde bisulfite complex.

3.2 Apparatus Required.

NOTE: All reagents must be American Chemical Society analytical reagent grade or better.

3.2.1 One 1-liter (L) volumetric flask (class A).

3.2.2 One 250-mL volumetric flask (class A).

3.2.3 One 250-mL beaker.

3.2.4 One 100-mL pipette (class A).

3.2.5 One 10-mL pipette (class A).

3.2.6 One 50-mL graduated cylinder (class A).

3.2.7 A pH meter, standardized using pH 7 and pH 10 buffers.

3.2.8 Magnetic stirrer.

3.2.9 Magnetic stirring bars.

3.2.10 Several 5-oz. plastic cups.

3.2.11 Disposal pipettes.

3.2.12 Ice cube trays (small cubes).

3.3 Materials Required.

3.3.1 A solution of 37 percent formalin.

3.3.2 Anhydrous Na_2SO_3.

3.3.3 Distilled water.

3.3.4 Standardized 0.100 N HCl.

3.3.5 Thymolphthalein indicator (1.0 g thymolphthalein/199 g methanol).

3.4 Preparation of Solutions and Reagents.

3.4.1 Formaldehyde Standard Solution (approximately 1 percent). Measure, using a graduated cylinder, 27.0 mL of analytical reagent 37 percent formalin solution into a 1-L volumetric flask. Fill the flask to volume with distilled water.

(NOTE: You must standardize this solution as described in section 3.5. This solution is stable for 3 months.)

3.4.2 Sodium Sulfite Solution 1.0 M (used for standardization of Formaldehyde Standard Solution). Quantitatively transfer, using distilled water as the transfer solvent, 31.50 g of anhydrous Na_2SO_3 into a 250-mL volumetric flask. Dissolve in approximately 100 mL of distilled water and fill to volume.

(NOTE: You must prepare this solution daily, but the calibration of the Formaldehyde Standard Solution needs to be done only once.)

3.4.3 Hydrochloric Acid Standard Solution 0.100 M. This reagent should be readily available as a primary standard that only needs to be diluted.

3.5 Standardization.

3.5.1 Standardization of Formaldehyde Standard Solution.

3.5.1.1 Pipette 100.0 mL of 1 M sodium sulfite into a stirred 250-mL beaker.

3.5.1.2 Using a standardized pH meter, measure and record the pH. The pH should be around 10. It is not essential the pH be 10; however, it is essential that the value be accurately recorded.

3.5.1.3 To the stirring Na_2SO_3 solution, pipette in 10.0 mL of Formaldehyde Standard Solution. The pH should rise sharply to about 12.

3.5.1.4 Using the pH meter as a continuous monitor, titrate the solution back to the original exact pH using 0.100 N HCl. Record the milliliters of HCl used as titrant. (NOTE: Approximately 30 to 35 mL of HCl will be required.)

3.5.1.5 Calculate the concentration of the Formaldehyde Standard Solution using the equation as follows:

$$\%HCHO = \frac{(mL\ \mathrm{HCl})\ (\mathrm{N\ HCl})\ (3.003)}{\mathrm{mL\ sample}}$$

3.6 Procedure.

3.6.1 Prepare a sufficient quantity of crushed ice for three determinations (two trays of cubes).

3.6.2 Put 70 cc of 1 M Na_2SO_3 solution into a 400-mL beaker. Begin stirring and add approximately 100 g of crushed ice and 2 g NaCl. Maintain 0 °C during the test, adding ice as necessary.

3.6.3 Add 10-15 drops of thymolphthalein indicator to the chilled solution. If the solution remains clear, add 0.1 N NaOH until the solution turns blue; then add 0.1 N HCl back to the colorless endpoint. If the solution turns blue upon adding the indicator, add 0.1 N HCl to the colorless endpoint.

3.6.4 On the analytical balance, accurately weigh a sample of Formaldehyde Standard Solution as follows.

3.6.4.1 Pour about 0.5 inches of Formaldehyde Standard Solution into a 5-oz. plastic cup.

3.6.4.2 Determine the gross weight of the cup, Formaldehyde Standard Solution, and a disposable pipette fitted with a small rubber bulb.

3.6.4.3 Pipette approximately 5 g of the Formaldehyde Standard Solution into the stirring, chilled Na_2SO_3 solution.

3.6.4.4 Quickly reweigh the cup, Formaldehyde Standard Solution, and pipette with the bulb.

3.6.4.5 The resultant weight loss equals the grams of Formaldehyde Standard Solution being tested.

3.6.5 Rapidly titrate the solution with 0.1 N HCl to the colorless endpoint in Step 3 (3.6.3).

3.6.6 Repeat the test in triplicate.

3.7 Calculation for Formaldehyde Standard Solution.

3.7.1 The percent free-formaldehyde (% HCHO) is calculated as follows:

$$\%HCHO = \frac{(mL\ 0.1\ \mathrm{N\ HCl})(N\ \mathrm{Acid})(3.003)}{Weight\ \mathrm{of\ Formaldehyde\ Standard\ Solution}}$$

3.7.2 The range of the results of three tests should be no more than ±5 percent of the actual Formaldehyde Standard Solution concentration. Report results to two decimal places.

3.8 Reference.

West Coast Adhesive Manufacturers Trade Association Test 10.1.

Appendix B to Subpart HHHH of Part 63—Method for the Determination of Loss-on-Ignition

1.0 Purpose

The purpose of this test is to determine the loss-on-ignition (LOI) of wet-formed fiberglass mat.

2.0 Equipment

2.1 Scale sensitive to 0.001 gram (g).

2.2 Drying oven equipped with a means of constant temperature regulation and mechanical air convection.

2.3 Furnace designed to heat to at least 625 °C (1,157 °F) and controllable to ±25 °C (±45 °F).

2.4 Crucible, high form, 250 milliliter (mL).

2.5 Desiccator.

2.6 Pan balance (see Note 2 in 4.9)

3.0 Sample Collection Procedure

3.1 Obtain a sample of mat in accordance with Technical Association of the Pulp and Paper Industry (TAPPI) method 1007 "Sample Location."

3.2 Use a 5- to 10-g sample cut into pieces small enough to fit into the crucible.

3.3 Place the sample in the crucible. (NOTE 1: To test without the use of a crucible, see Note 2 after Section 4.8.)

3.4 Condition the sample in the furnace set at 105 ±3 °C (221 ±9 °F) for 5 minutes ±30 seconds.

4.0 Procedure

4.1 Condition each sample by drying for 5 minutes ±30 seconds at 105 ±3 °C (22 ±5 °F).

4.2 Remove the test sample from the furnace and cool in the desiccator for 30 minutes in the standard atmosphere for testing glass textiles.

4.3 Place the empty crucible in the furnace at 625 ±25 °C (1,157 ±45 °F). After 30 minutes, remove and cool the crucible in the standard atmosphere (TAPPI method 1008) for 30 minutes.

4.4 Identify each crucible with respect to each test sample of mat.

4.5 Weigh the empty crucible to the nearest 0.001 g. Record this weight as the tare mass, T.

4.6 Place the test sample in the crucible and weigh to the nearest 0.001 g. Record this weight as the initial mass, A.

4.7 Place the test sample and crucible in the furnace and ignite at 625 ±25 °C (1,157 ±45 °F).

4.8 After ignition for at least 30 minutes, remove the test sample and crucible from the furnace and cool in the desiccator for 30 minutes in the standard atmosphere (TAPPI method 1008).

4.9 Remove each crucible, and test each sample separately from the desiccator, and immediately weigh each sample to the nearest 0.001 g. Record this weight as the ignited mass, B. (NOTE 2: When it is known that no ash residue separates from the test sample during the weighing and igniting processes, you may weigh the sample separately without the crucible. When this occurs, the tare mass (T) equals zero. With appropriate care, you can dry and weigh a single piece of mat and place with tongs into the ignition oven on appropriate refractory supports. When the ignition time is over, remove the sample as an intact fragile web and weigh it directly on a pan balance.)

5.0 Calculation

5.1 Calculate the LOI for each sample as follows:

$$\% \text{ LOI} = 100 \times (A - B)/(A - T)$$

Where:

A = initial mass of crucible and sample before ignition (g);

B = mass of crucible and glass residue after ignition (g); and

T = tare mass of crucible, (g) (see Note 2).

5.2 Report the percent LOI of the glass mat to the nearest 0.1 percent.

6.0 Precision

The repeatability of this test method for measurements on adjacent specimens from the same sample of mat is better than 1 percent.

APPENDIX B

Compliance Assurance Monitoring (CAM) Plan

COMPLIANCE ASSURANCE MONITORING PLAN

The CAM rule (40 CFR Part 64) requires monitoring plans (CAM plans) for certain emissions units with control devices at Part 70 major sources. The Mat Line Oven Thermal Oxidizer is the only control device at the facility subject to CAM, due to uncontrolled VOC emissions potentially being greater than 100 tons/year.

Mat Line Oven with Thermal Oxidizer (SN-01)

The CAM Plan below addresses VOC emissions. Note that the HAP emissions are not required to be addressed by the CAM Plan since they are already addressed by the MACT rule (40 CFR Part 63, Subpart HHHH). The thermal oxidizer controls both VOC and organic HAP emissions. In effect, the monitoring requirements of the MACT regulation also act as CAM requirements for VOCs.

CAM Plan
SN-01 For VOC Control

I. Background

A. Emissions Unit

- Description: Mat Line Thermal Oxidizer (SN-01)

B. Applicable Regulation, Emission Limit, & Monitoring Requirements

- Applicable Regulation: ADEQ Permit 747-AOP-R4
- Proposed Emission Limits: 3.0 lb/hr VOC
- Proposed Monitoring Requirements: Continuous monitoring of thermal oxidizer temperature.

C. Control Technology

- Thermal oxidizer combusts organic compounds contained in exhausts from mat line oven.

II. Monitoring Approach

A. Indicator

- Thermal oxidizer temperature.

B. Measurement Approach

- Continuous monitoring of thermal oxidizer temperature.

C. Indicator Range

- Thermal oxidizer temperature no less than 1385 ºF, 3-hour block average.

D. QIP Threshold

- The QIP threshold is 5% duration of the process operating time over a 6-month period.

E. Performance Criteria

- Data Representativeness: Minimum thermal oxidizer temperature and compliance with VOC emission limit has been verified through stack testing.
- Verification of Operational Status: Thermal oxidizer temperature is continuously monitored electronically.
- QA/QC Practices: Thermal oxidizer is inspected periodically to ensure integrity.
- Monitoring Frequency and Data Collection Procedure: The thermal oxidizer is classified as a small PSEU, therefore the minimum required monitoring frequency is once per day (when process is in operation). Thermal oxidizer temperature is continuously monitored electronically as per the MACT regulation, so the daily monitoring requirement is automatically met.

III. Justification

A. Background

- The thermal oxidizer is a typical emissions control technology for the destruction of organic compounds.

B. Rationale for Selection of Performance Indicator

- Monitoring of thermal oxidizer temperature is a widely accepted method of verifying proper operation.

C. Rationale for Selection of Indicator Level

- Minimum thermal oxidizer temperature and compliance with VOC emission limit has been verified through stack testing.

PROPOSED MONITORING PLAN FOR SN-11 FOR VOC CONTROL

1. Background
    a. Emissions Unit
    i. Facility: Owens Corning Non-Woven Technology, LLC - Fort Smith, Arkansas
    ii. Description: Regenerative Thermal Oxidizer (SN-11)
    b. Applicable Regulation, Emission Limit, Monitoring Requirements
    i. Applicable Regulation: Regulation 19, Section 19.501
    ii. Proposed Emission Limit: 8.01 lb/hr VOC
    iii. Proposed Monitoring Requirements: Continuous monitoring of thermal oxidizer temperature
    c. Control Technology
    i. RTO combusts organic compounds contained in exhausts from drying oven

2. Monitoring Approach
    a. Indicator
    i. RTO temperature
    b. Measurement Approach
    i. Continuous monitoring of RTO temperature
    c. Indicator Range
    i. RTO temperature no less than the minimum for any three-hour block average during operation
    ii. Minimum temperature will be established using the most recent performance test required by MACT Subpart HHHH
    d. QIP Threshold
    i. The QIP threshold is 5% duration of the process operating time over a 6-month period
    e. Performance Criteria
    i. Data Representativeness: Minimum RTO temperature and compliance with VOC emission limit has been verified through stack testing.
    ii. Verification of Operational Status: RTO temperature is continuously monitored electronically.
    iii. QA/QC Practices: RTO is inspected periodically to ensure integrity.
    iv. Monitoring Frequency and Data Collection Procedure: The RTO is classified as a small pollutant-specific emission unit (PSEU), therefore the minimum required monitoring frequency is once per day (when process is in operation). RTO temperature is continuously monitored electronically as per the MACT regulation, so the daily monitoring requirement is automatically met.

PROPOSED MONITORING PLAN FOR SN-11 FOR VOC CONTROL

3. Justification

   a. Background

   i. The RTO is a typical emissions control technology for the destruction of organic compounds.

   b. Rationale for Selection of Performance Indicator

   i. Monitoring of RTO temperature is a widely accepted method of verifying proper operation.

   c. Rationale for Selection of Indicator Level

   i. Minimum RTO temperature and compliance with VOC emission limit will be verified through stack testing

Appendix C

40 C.F.R. Part 63 Subpart JJJJ

National Emissions Standards for Hazardous Air Pollutants: Paper and Other Web Coating

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(e)(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:

If you operate a web coating line, and have the following:	Then you must:
(1) Intermittently-controlled work stations	Record parameters related to possible exhaust flow bypass of control device and to coating use (§ 63.3350(c)).
(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 (§ 63.3350(d)).
(3) Control Device	Operate continuous parameter monitoring system (§ 63.3350(e)).
(4) Capture system	Monitor capture system operating parameter (§ 63.3350(f)).

(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 ±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 ±1 percent of the temperature being monitored in degrees Fahrenheit or ±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 ±1 percent of the temperature being monitored in degrees Fahrenheit or ±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:

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 § 63.3320 by:	You must:
(1) Limiting organic HAP or volatile matter content of coatings	Determine the organic HAP or volatile matter and coating solids content of coating materials according to procedures in paragraphs (c) and (d) of this section. If applicable, determine the mass of volatile matter retained in the coated web or otherwise not emitted to the atmosphere according to paragraph (g) of this section.
(2) Using a capture and control system	(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 § 63.3360(e), and the capture efficiency of each capture system according to § 63.3360(f). If applicable, determine the mass of volatile matter retained in the coated web or otherwise not emitted to the atmosphere according to § 63.3360(g). (ii) Perform a periodic test once every 5 years for each thermal oxidizer to determine the destruction or removal efficiency according to § 63.3360(e). If applicable, determine the mass of volatile matter retained in the coated web or otherwise not emitted to the atmosphere according to § 63.3360(g). (iii) Either perform a periodic test once every 5 years for each catalytic oxidizer to determine the destruction or removal efficiency according to § 63.3360(e) OR perform a catalyst activity test annually on each catalytic oxidizer to ensure that the catalyst is performing properly according to § 63.3360(e)(3)(ii)(D)(1). If applicable, determine the mass of volatile matter retained in the coated web or otherwise not emitted to the

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 § 63.3320 by:	You must:
	atmosphere according to § 63.3360(g).

(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)^{e}, (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 non-methane 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:

$$M_f = Q_{sd} C_c [12][0.0416][10^{-6}]$$

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 (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:

$$E = \frac{M_{fi} - M_{fo}}{M_{fi}} \times 100$$

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:

$$M_{vret} = \left(C_{vi}M_i + \sum_{j=1}^{q} C_{vij}M_{ij}\right) \times (1 - EF_i)$$

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]

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:

If you choose to demonstrate compliance by:	Then you must demonstrate that:	To accomplish this:
(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	Follow the procedures set out in § 63.3370(b).

If you choose to demonstrate compliance by:	Then you must demonstrate that:	To accomplish this:
	organic HAP per kg coating material as-purchased; or	
	(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 § 63.3370(b).
(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 § 63.3370(c)(1). Use either Equation 4 or 5 of § 63.3370 to determine compliance with § 63.3320(b)(2) in accordance with § 63.3370(c)(5)(i).
	(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-applied; or	Follow the procedures set out in § 63.3370(c)(2). Use Equations 6 and 7 of § 63.3370 to determine compliance with § 63.3320(b)(3) in accordance with § 63.3370(c)(5)(i).
	(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	Follow the procedures set out in § 63.3370(c)(3). Use Equation 8 of § 63.3370 to determine compliance with § 63.3320(b)(2) in accordance with § 63.3370(c)(5)(ii).

If you choose to demonstrate compliance by:	Then you must demonstrate that:	To accomplish this:
	0.016 kg organic HAP per kg coating material as-applied on a monthly average basis; or	
	(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 § 63.3370(c)(4). Use Equation 9 of § 63.3370 to determine compliance with § 63.3320(b)(3) in accordance with § 63.3370(c)(5)(ii).
(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 § 63.3370(d). Show that total monthly HAP applied (Equation 10 of § 63.3370) is less than the calculated equivalent allowable organic HAP (Equation 17 or 18 of § 63.3370).
(4) Accounting for volatile matter retained in the coated web or otherwise not emitted	A site- and product-specific emission factor was appropriately established for the group of products for which the site- and product-specific emission factor was used in the compliance calculations	Follow the procedures set out in § 63.3360(g) and § 63.3370(e)
(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	Follow the procedures set out in § 63.3370(f) to determine compliance with § 63.3320(b)(1) according to § 63.3370(j) if using a solvent recovery device, or § 63.3370(k) if using a control device and CPMS, or § 63.3370(l) if using an oxidizer.

If you choose to demonstrate compliance by:	Then you must demonstrate that:	To accomplish this:
	operating parameters are continuously monitored; or	
	(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 § 63.3370(g) to determine compliance with § 63.3320(b)(3) according to § 63.3370(j) if using a solvent recovery device, or § 63.3370(l) 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 § 63.3370(h) to determine compliance with § 63.3320(b)(2) according to § 63.3370(j) if using a solvent recovery device, or § 63.3370(l) 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 § 63.3370(i). Show that the monthly organic HAP emission rate is less than the calculated equivalent allowable organic HAP emission rate (Equation 17 or 18 of § 63.3370). Calculate the monthly organic HAP emission rate according to § 63.3370(j) if using a solvent recovery device, or § 63.3370(l) 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 § 63.3370(f) to determine compliance with § 63.3320(b)(1) according to § 63.3370(f)(1) or (2).

If you choose to demonstrate compliance by:	Then you must demonstrate that:	To accomplish this:
	(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 § 63.3370(g) to determine compliance with § 63.3320(b)(3) according to § 63.3370(o).
	(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 § 63.3370(h) to determine compliance with § 63.3320(b)(2) according to § 63.3370(o).
	(iv) Average equivalent organic HAP emission rate does not exceed the calculated limit based on emission limitations	Follow the procedures set out in § 63.3370(i). Show that the monthly organic HAP emission rate is less than the calculated equivalent allowable organic HAP emission rate (Equation 17 or 18 of § 63.3370) according to § 63.3370(o).
(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 § 63.3370(g) to determine compliance with § 63.3320(b)(3) according to § 63.3370(o).
	(ii) Average equivalent organic HAP emission rate does not exceed 0.04 kg organic HAP per kg coating	Follow the procedures set out in § 63.3370(h) to determine compliance with § 63.3320(b)(2) according to §

If you choose to demonstrate compliance by:	Then you must demonstrate that:	To accomplish this:
	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	63.3370(o).
	(iii) Average equivalent organic HAP emission rate does not exceed the calculated limit based on emission limitations	Follow the procedures set out in § 63.3370(i). Show that the monthly organic HAP emission rate is less than the calculated equivalent allowable organic HAP emission rate (Equation 17 or 18 of § 63.3370) according to § 63.3370(o).
(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 by mass for other organic HAP compounds	Follow the procedures set out in § 63.3370(s).

(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:

$$C_{ahi} = \frac{\left(C_{hi}M_i + \sum_{j=1}^{q} C_{hij}M_{ij}\right)}{M_i + \sum_{j=1}^{q} M_{ij}}$$

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:

$$C_{avi} = \frac{\left(C_{vi}M_i + \sum_{j=1}^{q} C_{vij}M_{ij}\right)}{M_i + \sum_{j=1}^{q} M_{ij}}$$

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:

$$C_{asi} = \frac{\left(C_{si}M_i + \sum_{j=1}^{q} C_{sij}M_{ij}\right)}{M_i + \sum_{j=1}^{q} M_{ij}}$$

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:

$$H_{si} = \frac{C_{ahi}}{C_{asi}}$$

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:

$$H_L = \frac{\sum_{i=1}^{p} C_{hi} M_i + \sum_{j=1}^{q} C_{hij} M_{ij} - M_{vret}}{\sum_{i=1}^{p} M_i + \sum_{j=1}^{q} M_{ij}}$$

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:

$$H_s = \frac{\sum_{i=1}^{p} C_{hi} M_i + \sum_{j=1}^{q} C_{hij} M_{ij} - M_{vret}}{\sum_{i=1}^{p} C_{si} M_i + \sum_{j=1}^{q} C_{sij} M_{ij}}$$

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:

$$H_m = \sum_{i=1}^{p} C_{hi} M_i + \sum_{j=1}^{q} C_{hij} M_{ij} - M_{vret}$$

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:

$$R_v = \frac{M_{vr} + M_{vret}}{\sum_{i=1}^{p} C_{vi} M_i + \sum_{i=1}^{q} C_{vij} M_{ij}} \times 100$$

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:

$$H_e = \left[1 - \frac{R_v}{100}\right]\left[\sum_{i=1}^{p} C_{hi}M_i + \sum_{j=1}^{q} C_{hij}M_{ij} - M_{vret}\right] \quad \text{E}$$

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:

$$L = \frac{H_e}{\sum_{i=1}^{p} C_{si} M_i + \sum_{j=1}^{q} C_{sij} M_{ij}}$$

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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:

$$S = \frac{H_e}{\sum_{i=1}^{p} M_i + \sum_{j=1}^{q} M_{ij}}$$

E

Where:

S = Mass organic HAP emitted per mass of material applied, kg/kg.

H_e = Total monthly organic HAP emitted, 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.

q = Number of different materials added to the coating material.

M_{ij} = 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:

$$R = \frac{(E)(CE)}{100}$$

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:

$$H_e = (1 - R)\left(\sum_{i=1}^{p} C_{ahi} M_i\right) - M_{vret}$$

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.

(l) ***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 (l)(1) of this section. Use the applicable equations specified in paragraph (l)(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 (l)(3) or (l)(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 (l)(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 (l)(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:

$$H_a = 0.20\left[\sum_{i=1}^{p} M_i G_i C_{si}\right] + 0.04\left[\sum_{i=1}^{p} M_i(1-G_i) + \sum_{j=1}^{q} M_{L_j}\right] \qquad \text{E}$$

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.

or Equation 18 for a new affected source:

$$H_a = 0.08\left[\sum_{i=1}^{p} M_i G_i C_{si}\right] + 0.016\left[\sum_{i=1}^{p} M_i(1-G_i) + \sum_{j=1}^{q} M_{L_j}\right] \qquad \text{E}$$

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:

$$H_e = \left[\sum_{i=1}^{p} M_{ci} C_{ahi}\right]\left[1 - \frac{R_v}{100}\right] + \left[\sum_{i=1}^{p} M_{Bi} C_{ahi}\right] - M_{vret}$$

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:

$$H_e = \left[\sum_{i=1}^{p} M_{ci} C_{ahi}\right]\left[1 - \frac{R}{100}\right] + \left[\sum_{i=1}^{p} M_{Bi} C_{ahi}\right] - M_{vret}$$

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:

For the following device:	You must meet the following operating limit:	And you must demonstrate continuous compliance with operating limits by:
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 § 63.3360(e)(3)(i)	i. Collecting the combustion temperature data according to § 63.3350(e)(10); 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 § 63.3360(e)(3)(ii)	i. Collecting the catalyst bed inlet temperature data according to § 63.3350(e)(10); 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.

For the following device:	You must meet the following operating limit:	And you must demonstrate continuous compliance with operating limits by:
	b. The temperature rise across the catalyst bed must not fall below 80 percent of the limit established according to § 63.3360(e)(3)(ii), 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 § 63.3350(e)(10); 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 § 63.3350(f)	Conduct monitoring according to the plan (§ 63.3350(f)(3)).

[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.

General provisions reference	Applicable to subpart JJJJ	Explanation
§ 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	
§ 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	

General provisions reference	Applicable to subpart JJJJ	Explanation
§ 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 § 63.3340(a) for general duty requirement. Yes, for all other affected sources before July 9, 2021, and No thereafter, see § 63.3340(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

General provisions reference	Applicable to subpart JJJJ	Explanation
		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 § 63.3360(e)(2).
§ 63.7(e)(2)-(3)	Yes	
§ 63.7(f)-(h)	Yes	

General provisions reference	Applicable to subpart JJJJ	Explanation
§ 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 § 63.8(c)(1)(i)	Depends, see explanation	No, for new or reconstructed sources which commenced construction or reconstruction after September 19, 2019, see § 63.3340(a) for general duty requirement. Yes, for all other affected sources before July 9, 2021, and No thereafter, see § 63.3340(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 § 63.3350(e)(10)(iv) 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 § 63.3350(e)(5) for CPMS quality control procedures to be included in the quality control program.
§ 63.8(d)(3)	No	§ 63.3350(e)(5) specifies the program of corrective action.

General provisions reference	Applicable to subpart JJJJ	Explanation
§ 63.8(e)-(f)	Yes	§ 63.8(e)(2) does not apply to CPMS. § 63.8(f)(6) 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 § 63.3400(b)(1) 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 § 63.9(j).
§ 63.10(a)	Yes	
§ 63.10(b)(1)	Yes	
§ 63.10(b)(2)(i)	Depends, see	No, for new or reconstructed sources which commenced

General provisions reference	Applicable to subpart JJJJ	Explanation
	explanation	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 § 63.3410 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

General provisions reference	Applicable to subpart JJJJ	Explanation
		observations.
§ 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 § 63.3400(c) 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 § 63.3400(c) 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]

Appendix D

40 C.F.R. Part 63 Subpart KK

National Emissions Standards for the Printing and Publishing Industry

Subpart KK - National Emission Standards for the Printing and Publishing Industry

Source: 61 FR 27140, May 30, 1996, unless otherwise noted.

§ 63.820 Applicability.

(a) The provisions of this subpart apply to:

(1) Each new and existing facility that is a major source of hazardous air pollutants (HAP), as defined in 40 CFR 63.2, at which publication rotogravure, product and packaging rotogravure, or wide-web flexographic printing presses are operated, and

(2) Each new and existing facility at which publication rotogravure, product and packaging rotogravure, or wide-web flexographic printing presses are operated for which the owner or operator chooses to commit to and meets the criteria of paragraphs (a)(2)(i) and (ii) of this section for purposes of establishing the facility to be an area source of HAP with respect to this subpart. A facility which establishes area source status through some other mechanism, as described in paragraph (a)(7) of this section, is not subject to the provisions of this subpart.

(i) Use less than 9.1 Mg (10 tons) per each rolling 12-month period of each HAP at the facility, including materials used for source categories or purposes other than printing and publishing, and

(ii) Use less than 22.7 Mg (25 tons) per each rolling 12-month period of any combination of HAP at the facility, including materials used for source categories or purposes other than printing and publishing.

(3) Each facility for which the owner or operator chooses to commit to and meets the criteria stated in paragraph (a)(2) of this section shall be considered an area source, and is subject only to the provisions of §§ 63.829(d) and 63.830(b)(1) of this subpart.

(4) Each facility for which the owner or operator commits to the conditions in paragraph (a)(2) of this section may exclude material used in routine janitorial or facility grounds maintenance, personal uses by employees or other persons, the use of products for the purpose of maintaining electric, propane, gasoline and diesel powered motor vehicles operated by the facility, and the use of HAP contained in intake water (used for processing or noncontact cooling) or intake air (used either as compressed air or for combustion).

(5) Each facility for which the owner or operator commits to the conditions in paragraph (a)(2) of this section to become an area source, but subsequently exceeds either of the thresholds in paragraph (a)(2) of this section for any rolling 12-month period (without first obtaining and complying with other limits that keep its potential to emit HAP below major source levels), shall be considered in violation of its commitment for that 12-month period

and shall be considered a major source of HAP beginning the first month after the end of the 12-month period in which either of the HAP-use thresholds was exceeded. As a major source of HAP, each such facility would be subject to the provisions of this subpart as noted in paragraph (a)(1) of this section and would no longer be eligible to use the provisions of paragraph (a)(2) of this section, even if in subsequent 12-month periods the facility uses less HAP than the thresholds in paragraph (a)(2) of this section.

(6) An owner or operator of an affected source subject to paragraph (a)(2) of this section who chooses to no longer be subject to paragraph (a)(2) of this section shall notify the Administrator of such change. If, by no longer being subject to paragraph (a)(2) of this section, the facility at which the affected source is located becomes a major source:

(i) The owner or operator of an existing source must continue to comply with the HAP usage provisions of paragraph (a)(2) of this section until the source is in compliance with all relevant requirements for existing affected sources under this subpart;

(ii) The owner or operator of a new source must continue to comply with the HAP usage provisions of paragraph (a)(2) of this section until the source is in compliance with all relevant requirements for new affected sources under this subpart.

(7) Nothing in this paragraph is intended to preclude a facility from establishing area source status by limiting its potential to emit through other appropriate mechanisms that may be available through the permitting authority.

(b) This subpart does not apply to research or laboratory equipment.

(c) In response to an action to enforce the standards set forth in this subpart, an owner or operator may assert an affirmative defense to a claim for civil penalties for exceedances of such standards that are caused by a malfunction, as defined in § 63.2. Appropriate penalties may be assessed, however, if the owner or operator fails to meet the burden of proving all the requirements in the affirmative defense. The affirmative defense shall not be available for claims for injunctive relief.

(1) To establish the affirmative defense in any action to enforce such a limit, the owners or operators of a facility must timely meet the notification requirements of paragraph (c)(2) of this section, and must prove by a preponderance of evidence that:

(i) The excess emissions were caused by a sudden, infrequent, and unavoidable failure of air pollution control and monitoring equipment, or a process to operate in a normal or usual manner; and could not have been prevented through careful planning, proper design or better operation and maintenance practices; and did not stem from any activity or event that could have been foreseen and avoided, or planned for; and were not part of a recurring pattern indicative of inadequate design, operation, or maintenance;

(ii) Repairs were made as expeditiously as possible when the applicable emission limitations were being exceeded. Off-shift and overtime labor were used, to the extent practicable to make these repairs;

(iii) The frequency, amount, and duration of the excess emissions (including any bypass) were minimized to the maximum extent practicable during periods of such emissions;

(iv) If the excess emissions resulted from a bypass of control equipment or a process, then the bypass was unavoidable to prevent loss of life, personal injury, or severe property damage;

(v) All possible steps were taken to minimize the impact of the excess emissions on ambient air quality, the environment, and human health;

(vi) All emissions monitoring and control systems were kept in operation, if at all possible, consistent with safety and good air pollution control practices;

(vii) All of the actions in response to the excess emissions were documented by properly signed, contemporaneous operating logs;

(viii) At all times, the facility was operated in a manner consistent with good practices for minimizing emissions; and

(ix) The owner or operator has prepared a written root cause analysis, the purpose of which is to determine, correct and eliminate the primary causes of the malfunction and the excess emissions resulting from the malfunction event at issue. The analysis shall also specify, using the best monitoring methods and engineering judgment, the amount of excess emissions that were the result of the malfunction.

(2) ***Notification.*** The owner or operator of the facility experiencing an exceedance of its emission limit(s) during a malfunction shall notify the Administrator by telephone or facsimile (FAX) transmission as soon as possible, but no later than 2 business days after the initial occurrence of the malfunction, if it wishes to avail itself of an affirmative defense to civil penalties for that malfunction. The owner or operator seeking to assert an affirmative defense shall also submit a written report to the Administrator within 45 days of the initial occurrence of the exceedance of the standard in this subpart to demonstrate, with all necessary supporting documentation, that it has met the requirements set forth in paragraph (c)(1) of this section. The owner or operator may seek an extension of this deadline for up to 30 additional days by submitting a written request to the Administrator before the expiration of the 45 day period. Until a request for an extension has been approved by the Administrator, the owner or operator is subject to the requirement to submit such report within 45 days of the initial occurrence of the exceedance.

[61 FR 27140, May 30, 1996, as amended at 71 FR 29799, May 24, 2006; 76 FR 22597, Apr. 21, 2011]

§ 63.821 Designation of affected sources.

(a) The affected sources subject to this subpart are:

(1) All of the publication rotogravure presses and all related equipment, including proof presses, cylinder and parts cleaners, ink and solvent mixing and storage equipment, and solvent recovery equipment at a facility.

(2) All of the product and packaging rotogravure or wide-web flexographic printing presses at a facility plus any other equipment at that facility which the owner or operator chooses to include in accordance with paragraphs (a)(3) or (a)(4) of this section, except

(i) Proof presses, unless the owner or operator chooses to include proof presses in the affected source in accordance with paragraph (a)(5) of this section.

(ii) Any product and packaging rotogravure or wide-web flexographic press which is used primarily for coating, laminating, or other operations which the owner or operator chooses to exclude, provided that

(A) the sum of the total mass of inks, coatings, varnishes, adhesives, primers, solvents, thinners, reducers, and other materials applied by the press using product and packaging rotogravure print stations and the total mass of inks, coatings, varnishes, adhesives, primers, solvents, thinners, reducers, and other materials applied by the press using wide-web flexographic print stations in each month never exceeds 5 percent of the total mass of inks, coatings, varnishes, adhesives, primers, solvents, thinners, reducers, and other materials applied by the press in that month, including all inboard and outboard stations; and

(B) The owner or operator maintains records as required in § 63.829(f).

(3) The owner or operator of an affected source, as defined in paragraph (a)(2) of this section, may elect to include in that affected source stand-alone equipment subject to the following provisions:

(i) Stand-alone equipment meeting any of the criteria specified in this subparagraph is eligible for inclusion:

(A) The stand-alone equipment and one or more product and packaging rotogravure or wide-web flexographic presses are used to apply solids-containing materials to the same web or substrate; or

(B) The stand-alone equipment and one or more product and packaging rotogravure or wide-web flexographic presses apply a common solids-containing material; or

(C) A common control device is used to control organic HAP emissions from the stand-alone equipment and from one or more product and packaging rotogravure or wide-web flexographic printing presses;

(ii) All eligible stand-alone equipment located at the facility is included in the affected source; and

(iii) No product and packaging rotogravure or wide-web flexographic presses are excluded from the affected source under the provisions of paragraph (a)(2)(ii) of this section.

(4) The owner or operator of an affected source, as defined in paragraph (a)(2) of this section, may elect to include in that affected source narrow-web flexographic presses subject to the following provisions:

(i) Each narrow-web flexographic press meeting any of the criteria specified in this subparagraph is eligible for inclusion:

(A) The narrow-web flexographic press and one or more product and packaging rotogravure or wide-web flexographic presses are used to apply solids containing material to the same web or substrate; or

(B) The narrow-web flexographic press and one or more product and packaging rotogravure or wide-web flexographic presses apply a common solids-containing material; or

(C) A common control device is used to control organic HAP emissions from the narrow-web flexographic press and from one or more product and packaging rotogravure or wide-web flexographic presses; and

(ii) All eligible narrow-web flexographic presses located at the facility are included in the affected source.

(5) The owner or operator of an affected source, as defined in paragraph (a)(2) of this section, may elect to include in that affected source rotogravure proof presses or flexographic proof presses subject to the following provisions:

(i) Each proof press meeting any of the criteria specified in this subparagraph is eligible for inclusion.

(A) The proof press and one or more product and packaging rotogravure or wide-web flexographic presses apply a common solids-containing material; or

(B) A common control device is used to control organic HAP emissions from the proof press and from one or more product and packaging rotogravure or wide-web flexographic presses; and

(ii) All eligible proof presses located at the facility are included in the affected source.

(6) Affiliated operations such as mixing or dissolving of ink or coating ingredients prior to application; ink or coating mixing for viscosity adjustment, color tint or additive blending, or pH adjustment; cleaning of ink or coating lines and line parts; handling and storage of inks, coatings, and solvents; and conveyance and treatment of wastewater are part of the printing and publishing industry source category, but are not part of the product and packaging rotogravure or wide-web flexographic printing affected source.

(7) Other presses are part of the printing and publishing industry source category, but are not part of the publication rotogravure affected source or the product and packaging rotogravure or wide-web flexographic printing affected source and are, therefore, exempt from the requirements of this subpart except as provided in paragraph (a)(3) of this section.

(8) Narrow web-flexographic presses are part of the printing and publishing industry source category, but are not part of the publication rotogravure affected source or the product and packaging rotogravure or wide-web flexographic printing affected source and are, therefore, exempt from the requirements of this subpart except as provided in paragraphs (a)(3) through (5) of this section.

(b) Each product and packaging rotogravure or wide-web flexographic printing affected source at a facility that is a major source of HAP, as defined in 40 CFR 63.2, that complies with the criteria of paragraphs (b)(1) or (b)(2) on and after the applicable compliance date as specified in § 63.826 of this subpart is subject only to the requirements of §§ 63.829(e) and 63.830(b)(1) of this subpart.

(1) The owner or operator of the affected source applies no more than 500 kilograms (kg) per month, for every month, of inks, coatings, varnishes, adhesives, primers, solvents, thinners, reducers, and other materials on product and packaging rotogravure or wide-web flexographic printing presses, or

(2) The owner or operator of the affected source applies no more than 400 kg per month, for every month, of organic HAP on product and packaging rotogravure or wide-web flexographic printing presses.

(c) Each product and packaging rotogravure or wide-web flexographic printing affected source at a facility that is a major source of HAP, as defined in 40 CFR 63.2, that complies with neither the criterion of paragraph (b)(1) nor (b)(2) of this section in any month after the applicable compliance date as specified in § 63.826 of this subpart is, starting with that month, subject to all relevant requirements of this subpart and is no longer eligible to use the provisions of paragraph (b) of this section, even if in subsequent months the affected source does comply with the criteria of paragraphs (b)(1) or (b)(2) of this section.

[61 FR 27140, May 30, 1996, as amended at 71 FR 29799, May 24, 2006]

§ 63.822 Definitions.

(a) All terms used in this subpart that are not defined below have the meaning given to them in the CAA and in subpart A of this part.

Affirmative defense means, in the context of an enforcement proceeding, a response or a defense put forward by a defendant, regarding which the defendant has the burden of proof, and the merits of which are independently and objectively evaluated in a judicial or administrative proceeding.

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. Sampling lines for analyzers and relief valves needed for safety purposes are not considered bypass lines.

Capture efficiency means the fraction of all organic HAP emissions generated by a process that are 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.

Certified product data sheet (CPDS) means documentation furnished by suppliers of inks, coatings, varnishes, adhesives, primers, solvents, and other materials or by an independent third party that provides the organic HAP weight fraction of these materials determined in accordance with § 63.827(b), or the volatile matter weight fraction or solids weight fraction determined in accordance with § 63.827(c). A material safety data sheet (MSDS) may serve as a CPDS provided the MSDS meets the data requirements of § 63.827(b) and (c). The purpose of the CPDS is to assist the owner or operator in demonstrating compliance with the emission limitations presented in §§ 63.824-63.825.

Coating means material applied onto or impregnated into a substrate for decorative, protective, or functional purposes. Such materials include, but are not limited to, solvent-borne coatings, waterborne coatings, wax coatings, wax laminations, extrusion coatings, extrusion laminations, 100 percent solid adhesives, ultra-violet cured coatings, electron beam cured coatings, hot melt coatings, and cold seal coatings. Materials used to form unsupported substrates such as calendaring of vinyl, blown film, cast film, extruded film, and coextruded film are not considered coatings.

Control device means a device such as a carbon adsorber 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.

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.

Flexographic press means an unwind or feed section, which may include more than one unwind or feed station (such as on a laminator), a series of individual work stations, one or more of which is a flexographic print station, any dryers (including interstage dryers and overhead tunnel dryers) associated with the work stations, and a rewind, stack, or collection section. The work stations may be oriented vertically, horizontally, or around the circumference of a single large impression cylinder. Inboard and outboard work stations, including those employing any other technology, such as rotogravure, are included if they are capable of printing or coating on the same substrate. A publication rotogravure press with one or more flexographic imprinters is not a flexographic press.

Flexographic print station means a print station on which a flexographic printing operation is conducted. A flexographic print station includes an anilox roller that transfers material to a raised image (type or art) on a plate cylinder. The material is then transferred from the image on the plate cylinder to the web or sheet to be printed. A flexographic print station may include a fountain roller to transfer material from the reservoir to the anilox roller, or material may be transferred directly from the reservoir to the anilox roller. The materials applied are of a fluid, rather than paste, consistency.

HAP applied means the organic HAP content of all inks, coatings, varnishes, adhesives, primers, solvent, and other materials applied to a substrate by a product and packaging rotogravure or wide-web flexographic printing affected source.

HAP used means the organic HAP applied by a publication rotogravure printing affected source, including all organic HAP used for cleaning, parts washing, proof presses, and all organic HAP emitted during tank loading, ink mixing, and storage.

Intermittently-controllable 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 depending on the position of a valve or damper. Sampling lines for analyzers and relief valves needed for safety purposes are not considered bypass lines.

Month means a calendar month or a prespecified period of 28 days to 35 days.

Narrow-web flexographic press means a flexographic press that is not capable of printing substrates greater than 18 inches in width and that does not also meet the definition of rotogravure press (i.e., it has no rotogravure print stations).

Never-controlled work station means a work station which is not equipped with provisions by which any emissions, including those in the exhaust from any associated dryer, may be delivered to a control device.

Other press means a lithographic press, letterpress press, or screen printing press that does not meet the definition of rotogravure press or flexographic press (i.e., it has no rotogravure print stations and no flexographic print stations), and that does not print on fabric or other textiles as defined in the Printing, Coating, and Dyeing of Fabrics and Other Textiles NESHAP (40 CFR part 63, subpart OOOO), wood furniture components as defined in the Wood Furniture Manufacturing Operations NESHAP (40 CFR part 63, subpart JJ) or wood building products as defined in the Surface Coating of Wood Building Products NESHAP (40 CFR part 63, subpart QQQQ).

Overall Organic HAP control efficiency means the total efficiency of a control system, determined either by:

(1) The product of the capture efficiency and the control device efficiency or

(2) A liquid-liquid material balance.

Print station means a work station on which a printing operation is conducted.

Printing operation means the formation of words, designs, or pictures on a substrate other than wood furniture components as defined in the Wood Furniture Manufacturing Operations NESHAP (40 CFR part 63, subpart JJ), wood building products as defined in the Surface Coating of Wood Building Products NESHAP (40 CFR part 63, subpart QQQQ), and fabric or other textiles as defined in the Printing, Coating, and Dyeing of Fabric and Other Textiles NESHAP (40 CFR part 63, subpart OOOO), except for fabric or other textiles for use in flexible packaging.

Product and packaging rotogravure printing means the production, on a rotogravure press, of any printed substrate not otherwise defined as publication rotogravure printing. This includes, but is not limited to, folding cartons, flexible packaging, labels and wrappers, gift wraps, wall and floor coverings, upholstery, decorative laminates, and tissue products.

Proof press means any press which prints only non-saleable items used to check the quality of image formation of rotogravure cylinders or flexographic plates; substrates such as paper, plastic film, metal foil, or vinyl; or ink, coating varnish, adhesive, primer, or other solids-containing material.

Publication rotogravure press means a rotogravure press used for publication rotogravure printing. A publication rotogravure press may include one or more flexographic imprinters. A publication rotogravure press with one or more flexographic imprinters is not a flexographic press.

Publication rotogravure printing means the production, on a rotogravure press, of the following saleable paper products:

(1) Catalogues, including mail order and premium,

(2) Direct mail advertisements, including circulars, letters, pamphlets, cards, and printed envelopes,

(3) Display advertisements, including general posters, outdoor advertisements, car cards, window posters; counter and floor displays; point of purchase and other printed display material,

(4) Magazines,

(5) Miscellaneous advertisements, including brochures, pamphlets, catalog sheets, circular folders, announcements, package inserts, book jackets, market circulars, magazine inserts, and shopping news,

(6) Newspapers, magazine and comic supplements for newspapers, and preprinted newspaper inserts, including hi-fi and spectacolor rolls and sections,

(7) Periodicals, and

(8) Telephone and other directories, including business reference services.

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.

Rotogravure press means an unwind or feed section, which may include more than one unwind or feed station (such as on a laminator), a series of individual work stations, one or more of which is a rotogravure print station, any dryers associated with the work stations, and a rewind, stack, or collection section. Inboard and outboard work stations, including those employing any other technology, such as flexography, are included if they are capable of printing or coating on the same substrate.

Rotogravure print station means a print station on which a rotogravure printing operation is conducted. A rotogravure print station includes a rotogravure cylinder and supply for ink or other solids containing material. The image (type and art) to be printed is etched or engraved below the surface of the rotogravure cylinder. On a rotogravure cylinder the printing image consists of millions of minute cells.

Stand-alone equipment means an unwind or feed section, which may include more than one unwind or feed station (such as on a laminator); a series of one or more work stations and any associated dryers; and a rewind, stack, or collection section that is not part of a product and packaging rotogravure or wide-web flexographic press. Stand-alone equipment is sometimes referred to as "off-line" equipment.

Wide-web flexographic press means a flexographic press capable of printing substrates greater than 18 inches in width.

Work station means a unit on which material is deposited onto a substrate.

(b) The symbols used in equations in this subpart are defined as follows:

(1) C_{ahi} = the monthly average, as-applied, organic HAP content of solids-containing material, i, expressed as a weight-fraction, kg/kg.

(2) C_{asi} = the monthly average, as applied, solids content, of solids-containing material, i, expressed as a weight-fraction, kg/kg.

(3) C_{hi} = the organic HAP content of ink or other solids-containing material, i, expressed as a weight-fraction, kg/kg.

(4) C_{hij} = the organic HAP content of solvent j, added to solids-containing material i, expressed as a weight-fraction, kg/kg.

(5) C_{hj} = the organic HAP content of solvent j, expressed as a weight-fraction, kg/kg.

(6) [Reserved]

(7) C_{si} = the solids content of ink or other material, i, expressed as a weight-fraction, kg/kg.

(8) C_{vi} = the volatile matter content of ink or other material, i, expressed as a weight-fraction, kg/kg.

(9) E = the organic volatile matter control efficiency of the control device, percent.

(10) F = the organic volatile matter capture efficiency of the capture system, percent.

(11) G_i = the mass fraction of each solids containing material, i, which was applied at 20 weight-percent or greater solids content, on an as-applied basis, kg/kg.

(12) H = the monthly organic HAP emitted, kg.

(13) H_a = the monthly allowable organic HAP emissions, kg.

(14) H_L = the monthly average, as-applied, organic HAP content of all solids-containing materials applied at less than 0.04 kg organic HAP per kg of material applied, kg/kg.

(15) H_s = the monthly average, as-applied, organic HAP to solids ratio, kg organic HAP/kg solids applied.

(16) H_{si} = the as-applied, organic HAP to solids ratio of material i.

(17) L = the mass organic HAP emission rate per mass of solids applied, kg/kg.

(18) M_{Bi} = the sum of the mass of solids-containing material, i, applied on intermittently-controllable work stations operating in bypass mode and the mass of solids-containing material, i, applied on never-controlled work stations, in a month, kg.

(19) M_{Bj} = the sum of the mass of solvent, thinner, reducer, diluent, or other non-solids-containing material, j, applied on intermittently-controllable work stations operating in bypass mode and the mass of solvent, thinner, reducer, diluent, or other non-solids-containing material, j, applied on never-controlled work stations, in a month, kg.

(20) M_{ci} = the sum of the mass of solids-containing material, i, applied on intermittently-controllable work stations operating in controlled mode and the mass of solids-containing material, i, applied on always-controlled work stations, in a month, kg.

(21) M_{cj} = the sum of the mass of solvent, thinner, reducer, diluent, or other non-solids-containing material, j, applied on intermittently-controllable work stations operating in controlled mode and the mass of solvent, thinner, reducer, diluent, or other non-solids-containing material, j, applied on always-controlled work stations in a month, kg.

(22) [Reserved]

(23) M_{fi} = the organic volatile matter mass flow rate at the inlet to the control device, kg/h.

(24) M_{fo} = the organic volatile matter mass flow rate at the outlet of the control device, kg/h.

(25) M_{hu} = the mass of organic HAP used in a month, kg.

(26) M_i = the mass of ink or other material, i, applied in a month, kg.

(27) M_{ij} = the mass of solvent, thinner, reducer, diluent, or other non-solids-containing material, j, added to solids-containing material, i, in a month, kg.

(28) M_j = the mass of solvent, thinner, reducer, diluent, or other non-solids-containing material, j, applied in a month, kg.

(29) M_{Lj} = the mass of solvent, thinner, reducer, diluent, or other non-solids-containing material, j, added to solids-containing materials which were applied at less than 20 weight-percent solids content, on an as-applied basis, in a month, kg.

(30) M_{vr} = the mass of volatile matter recovered in a month, kg.

(31) M_{vu} = the mass of volatile matter, including water, used in a month, kg.

(32) [Reserved]

(33) n = the number of organic compounds in the vent gas.

(34) p = the number of different inks, coatings, varnishes, adhesives, primers, and other materials applied in a month.

(35) q = the number of different solvents, thinners, reducers, diluents, or other non-solids-containing materials applied in a month.

(36) [Reserved]

(37) R = the overall organic HAP control efficiency, percent.

(38) R_e = the overall effective organic HAP control efficiency for publication rotogravure, percent.

(39) R_v = the organic volatile matter collection and recovery efficiency, percent.

(40) S = the mass organic HAP emission rate per mass of material applied, kg/kg.

(41) 0.0416 = conversion factor for molar volume, kg-mol/m^3(@ 293 K and 760 mmHg).

[61 FR 27140, May 30, 1996, as amended at 71 FR 29800, May 24, 2006; 76 FR 22598, Apr. 21, 2011]

§ 63.823 Standards: General.

(a) Table 1 to this subpart provides cross references to the 40 CFR part 63, subpart A, general provisions, indicating the applicability of the general provisions requirements to this subpart KK.

(b) Each owner or operator of an affected source subject to this subpart must at all times operate and maintain that 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. 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.

[76 FR 22598, Apr. 21, 2011]

§ 63.824 Standards: Publication rotogravure printing.

(a) Each owner or operator of any publication rotogravure printing affected source that is subject to the requirements of this subpart shall comply with these requirements on and after the compliance dates as specified in § 63.826 of this subpart.

(b) Each publication rotogravure affected source shall limit emissions of organic HAP to no more than eight percent of the total volatile matter used each month. The emission limitation may be achieved by overall control of at least 92 percent of organic HAP used, by substitution of non-HAP materials for organic HAP, or by a combination of capture and control technologies and substitution of materials. To demonstrate compliance, each owner or operator shall follow the procedure in paragraph (b)(1) of this section when emissions from the affected source are controlled by a solvent recovery device, the procedure in paragraph (b)(2) of this section when emissions from the affected source are controlled by an oxidizer, and the procedure in paragraph (b)(3) of this section when no control device is used.

(1) Each owner or operator using a solvent recovery device to control emissions shall demonstrate compliance by showing that the HAP emission limitation is achieved by following the procedures in either paragraph (b)(1)(i) or (b)(1)(ii) of this section:

(i) Perform a liquid-liquid material balance for each month as follows:

(A) Measure the mass of each ink, coating, varnish, adhesive, primer, solvent, and other material used by the affected source during the month.

(B) Determine the organic HAP content of each ink, coating, varnish, adhesive, primer, solvent and other material used by the affected source during the month following the procedure in § 63.827(b)(1).

(C) Determine the volatile matter content, including water, of each ink, coating, varnish, adhesive, primer, solvent, and other material used by the affected source during the month following the procedure in § 63.827(c)(1).

(D) 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 shall be initially certified by the manufacturer to be accurate to within ±2.0 percent.

(E) Measure the amount of volatile matter recovered for the month.

(F) Calculate the overall effective organic HAP control efficiency (R_e) for the month using Equation 1:

$$R_e = (100)\frac{M_{vu} - M_{hu} + \left[(M_{vr})(M_{hu}/M_{vu})\right]}{M_{vu}} \qquad \text{Eq 1}$$

For the purposes of this calculation, the mass fraction of organic HAP present in the recovered volatile matter is assumed to be equal to the mass fraction of organic HAP present in the volatile matter used.

(G) The affected source is in compliance for the month, if R_e is at least 92 percent each month.

(ii) Use continuous emission monitors, conduct an initial performance test of capture efficiency, and continuously monitor a site specific operating parameter to assure capture efficiency as specified in paragraphs (b)(1)(ii)(A) through (b)(1)(ii)(E) of this section:

(A) Install continuous emission monitors to collect the data necessary to calculate the total organic volatile matter mass flow in the gas stream entering and the total organic volatile matter mass flow in the gas stream exiting the solvent recovery device for each month such that the percent control efficiency (E) of the solvent recovery device can be calculated for the month. This requires continuous emission monitoring of the total organic volatile matter concentration in the gas stream entering the solvent recovery device, the total organic volatile matter concentration in the gas stream exiting the solvent recovery device, and the volumetric gas flow rate through the solvent recovery device. A single continuous volumetric gas flow measurement should be sufficient for a solvent recovery device since the inlet and outlet volumetric gas flow rates for a solvent recovery device are essentially equal. Each month's individual inlet concentration values and corresponding individual gas flow rate values are multiplied and then summed to get the total organic volatile matter mass flow in the gas stream entering the solvent recovery device for the month. Each month's individual outlet concentration values and corresponding individual gas flow rate values are multiplied and then summed to get the total organic volatile matter mass flow in the gas stream exiting the solvent recovery device for the month.

(B) Determine the percent capture efficiency (F) of the capture system according to § 63.827(e).

(C) Calculate the overall effective organic HAP control efficiency (R_e) achieved for each month using Equation 2.

$$R_e = (100)\frac{M_{vu} - M_{hu} + \left[(E/100)(F/100)M_{hu}\right]}{M_{vu}} \qquad \text{Eq 2}$$

(D) Install, calibrate, operate and maintain the instrumentation necessary to measure continuously the site-specific operating parameter established in accordance with § 63.828(a)(5) whenever a publication rotogravure printing press is operated.

(E) The affected source is in compliance with the requirement for the month if R_e is at least 92 percent, and the capture device is operated at an average value greater than, or less than (as appropriate) the operating parameter value established in accordance with § 63.828(a)(5) for each three-hour period.

(2) Each owner or operator using an oxidizer to control emissions shall demonstrate compliance by showing that the HAP emission limitation is achieved by following the procedure in either paragraph (b)(2)(i) or (b)(2)(ii) of this section:

(i) Demonstrate initial compliance through performance tests and continuing compliance through continuous monitoring as follows:

(A) Determine the oxidizer destruction efficiency (E) using the procedure in § 63.827(d).

(B) Determine the capture efficiency (F) using the procedure in § 63.827(e).

(C) [Reserved]

(D) Calculate the overall effective organic HAP control efficiency (R_e) achieved using Equation 2.

(E) The affected source is in initial compliance if R_e is at least 92 percent. Demonstration of continuing compliance is achieved by continuous monitoring of an appropriate oxidizer operating parameter in accordance with § 63.828(a)(4), and by continuous monitoring of an appropriate capture system monitoring parameter in accordance with § 63.828(a)(5). The affected source is in continuing compliance if the capture device is operated at an average value greater than or less than (as appropriate) the operating parameter value established in accordance with § 63.828(a)(5), and

(*1*) if an oxidizer other than a catalytic oxidizer is used, the average combustion temperature for all three-hour periods is greater than or equal to the average combustion temperature established under § 63.827(d), or

(*2*) if a catalytic oxidizer is used, the average catalyst bed inlet temperature for all three-hour periods is greater than or equal to the average catalyst bed inlet temperature established in accordance with § 63.827(d).

(ii) Use continuous emission monitors, conduct an initial performance test of capture efficiency, and continuously monitor a site specific operating parameter to assure capture efficiency. The percent control efficiency of the oxidizer shall be demonstrated in accordance with the requirements of paragraph (b)(1)(ii) of this section except that separate continuous measurements of the inlet volumetric gas flow rate and the outlet volumetric gas flow rate are required for an oxidizer.

(3) To demonstrate compliance without the use of a control device, each owner or operator shall compare the mass of organic HAP used to the mass of volatile matter used each month, as specified in paragraphs (b)(3)(i) through (b)(3)(iv) of this section:

(i) Measure the mass of each ink, coating, varnish, adhesive, primer, solvent, and other material used in the affected source during the month.

(ii) Determine the organic HAP content of each ink, coating, varnish, adhesive, primer, solvent, and other material used during the month following the procedure in § 63.827(b)(1), and

(iii) Determine the volatile matter content, including water, of each ink, coating, varnish, adhesive, primer, solvent, and other material used during the month following the procedure in § 63.827(c)(1).

(iv) The affected source is in compliance for the month if the mass of organic HAP used does not exceed eight percent of the mass of volatile matter used.

[61 FR 27140, May 30, 1996, as amended at 71 FR 29801, May 24, 2006]

§ 63.825 Standards: Product and packaging rotogravure and wide-web flexographic printing.

(a) Each owner or operator of any product and packaging rotogravure or wide-web flexographic printing affected source that is subject to the requirements of this subpart shall comply with these requirements on and after the compliance dates as specified in § 63.826 of this subpart.

(b) Each product and packaging rotogravure or wide-web flexographic printing affected source shall limit organic HAP emissions to no more than 5 percent of the organic HAP applied for the month; or to no more than 4 percent of the mass of inks, coatings, varnishes, adhesives, primers, solvents, reducers, thinners, and other materials applied for the month; or to no more than 20 percent of the mass of solids applied for the month; or to a calculated equivalent allowable mass based on the organic HAP and solids contents of the inks, coatings, varnishes, adhesives, primers, solvents, reducers, thinners, and other materials applied for the month. The owner or operator of each product and packaging rotogravure or wide-web flexographic printing affected source shall demonstrate compliance with this standard by following one of the procedures in paragraphs (b)(1) through (b)(10) of this section:

(1) Demonstrate that each ink, coating, varnish, adhesive, primer, solvent, diluent, reducer, thinner, and other material applied during the month contains no more than 0.04 weight-fraction organic HAP, on an as-purchased basis, as determined in accordance with § 63.827(b)(2).

(2) Demonstrate that each ink, coating, varnish, adhesive, primer, and other solids-containing material applied during the month contains no more than 0.04 weight-fraction organic HAP, on a monthly average as-applied basis as determined in accordance with paragraphs (b)(2)(i)-(ii) of this section. The owner or operator shall calculate the as-applied HAP content of materials which are reduced, thinned, or diluted prior to application, as follows:

(i) Determine the organic HAP content of each ink, coating, varnish, adhesive, primer, solvent, diluent, reducer, thinner, and other material applied on an as-purchased basis in accordance with § 63.827(b)(2).

(ii) Calculate the monthly average as-applied organic HAP content, C_{ahi} of each ink, coating, varnish, adhesive, primer, and other solids-containing material using Equation 3.

$$C_{ahi} = \frac{\left(C_{hi}M_i + \sum_{j=1}^{q} C_{hij}M_{ij}\right)}{M_i + \sum_{j=1}^{q} M_{ij}} \qquad \text{Eq 3}$$

(3)

(i) Demonstrate that each ink, coating, varnish, adhesive, primer, and other solids-containing material applied, either

(A) Contains no more than 0.04 weight-fraction organic HAP on a monthly average as-applied basis, or

(B) Contains no more than 0.20 kg of organic HAP per kg of solids applied, on a monthly average as-applied basis.

(ii) The owner or operator may demonstrate compliance in accordance with paragraphs (b)(3)(ii) (A)-(C) of this section.

(A) Use the procedures of paragraph (b)(2) of this section to determine which materials meet the requirements of paragraph (b)(3)(i)(A) of this section,

(B) Determine the as-applied solids content following the procedure in § 63.827(c)(2) of all materials which do not meet the requirements of paragraph (b)(3)(i)(A) of this section. The owner or operator may calculate the monthly average as-applied solids content of materials which are reduced, thinned, or diluted prior to application, using Equation 4, and

$$C_{asi} = \frac{C_{si}M_i}{M_i + \sum_{j=1}^{q} M_{ij}} \qquad \text{Eq 4}$$

(C) Calculate the as-applied organic HAP to solids ratio, H_{si}, for all materials which do not meet the requirements of paragraph (b)(3)(i)(A) of this section, using Equation 5.

$$H_{si} = \frac{C_{ahi}}{C_{asi}} \qquad \text{Eq 5}$$

(4) Demonstrate that the monthly average as-applied organic HAP content, H_L, of all materials applied is less than 0.04 kg HAP per kg of material applied, as determined by Equation 6.

$$H_L = \frac{\sum_{i=1}^{p} M_i C_{hi} + \sum_{j=1}^{q} M_j C_{hj}}{\sum_{i=1}^{p} M_i + \sum_{j=1}^{q} M_j} \qquad \text{Eq 6}$$

(5) Demonstrate that the monthly average as-applied organic HAP content on the basis of solids applied, H_s, is less than 0.20 kg HAP per kg solids applied as determined by Equation 7.

$$H_S = \frac{\sum_{i=1}^{p} M_i C_{hi} + \sum_{j=1}^{q} M_j C_{hj}}{\sum_{i=1}^{p} M_i C_{si}} \qquad \text{Eq 7}$$

(6) Demonstrate that the total monthly organic HAP applied, H_{app}, as determined by Equation 8, is less than the calculated equivalent allowable organic HAP, H_a, as determined by paragraph (e) of this section.

$$H_{app} = \sum_{i=1}^{p} M_i C_{hi} + \sum_{j=1}^{q} M_j C_{hj} \qquad \text{Eq. 8}$$

Where:

H_{app} = Total monthly organic HAP applied, kg.

(7) Operate a capture system and control device and demonstrate an overall organic HAP control efficiency of at least 95 percent for each month. If the affected source operates more than one capture system or more than one control device, and has only always-controlled work stations, then the owner or operator shall demonstrate compliance in accordance with the provisions of either paragraph (f) or (h) of this section. If the affected source operates one or more never-controlled work stations or one or more intermittently-controllable work stations, then the owner or operator shall demonstrate compliance in accordance with the provisions of paragraph (f) of this section. Otherwise, the owner or operator shall demonstrate compliance in accordance with the procedure in paragraph (c) of this section when emissions from the affected source are controlled by a solvent recovery device or the procedure in paragraph (d) of this section when emissions are controlled by an oxidizer.

(8) Operate a capture system and control device and limit the organic HAP emission rate to no more than 0.20 kg organic HAP emitted per kg 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-controllable work stations, then the owner or operator shall demonstrate compliance in accordance with the provisions of paragraph (f) of this section. Otherwise, the owner or operator shall demonstrate compliance following the procedure in paragraph (c) of this section when emissions from the affected source are controlled by a solvent recovery device or the procedure in paragraph (d) of this section when emissions are controlled by an oxidizer.

(9) 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 material 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-controllable work stations, then the owner or operator shall demonstrate compliance in accordance with the provisions of paragraph (f) of this section. Otherwise, the owner or operator shall demonstrate compliance following the procedure in paragraph (c) of this section when emissions from the affected source are controlled by a solvent recovery device or the procedure in paragraph (d) of this section when emissions are controlled by an oxidizer.

(10) 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 (e) 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-controllable work stations, then the owner or operator shall demonstrate compliance in accordance with the provisions of paragraph (f) of this section. Otherwise, the owner or operator shall demonstrate compliance following the procedure in paragraph (c) of this section when emissions from the affected source are controlled by a solvent recovery device or the procedure in paragraph (d) of this section when emissions are controlled by an oxidizer.

(c) To demonstrate compliance with the overall organic HAP control efficiency requirement in § 63.825(b)(7) or the organic HAP emissions limitation requirements in § 63.825(b)(8)-(10), each owner or operator using a solvent recovery device to control emissions shall show compliance by following the procedures in either paragraph (c)(1) or (c)(2) of this section:

(1) Perform a liquid-liquid material balance for each and every month as follows:

(i) Measure the mass of each ink, coating, varnish, adhesive, primer, solvent and other material applied on the press or group of presses controlled by a common solvent recovery device during the month.

(ii) If demonstrating compliance on the basis of organic HAP emission rate based on solids applied, organic HAP emission rate based on material applied or emission of less than the calculated allowable organic HAP, determine the organic HAP content of each ink, coating, varnish, adhesive, primer, solvent, and other material applied during the month following the procedure in § 63.827(b)(2).

(iii) Determine the volatile matter content of each ink, coating, varnish, adhesive, primer, solvent, and other material applied during the month following the procedure in § 63.827(c)(2).

(iv) If demonstrating compliance on the basis of organic HAP emission rate based on solids applied or emission of less than the calculated allowable organic HAP, determine the solids content of each ink, coating, varnish, adhesive, primer, solvent, and other material applied during the month following the procedure in § 63.827(c)(2).

(v) 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 shall be initially certified by the manufacturer to be accurate to within ±2.0 percent.

(vi) Measure the amount of volatile matter recovered for the month.

(vii) Calculate the volatile matter collection and recovery efficiency, R_v, using Equation 9.

$$R_v = 100 \frac{M_{vr}}{\sum_{i=1}^{p} M_i C_{vi} + \sum_{j=1}^{q} M_j} \qquad \text{Eq 9}$$

(viii) If demonstrating compliance on the basis of organic HAP emission rate based on solids applied, organic HAP emission rate based on material applied or emission of less than the calculated allowable organic HAP, calculate the organic HAP emitted during the month, H, using Equation 10.

$$H = \left[1 - \frac{R_v}{100}\right]\left[\sum_{i=1}^{p}\left(C_{hi}M_i + \sum_{j=1}^{q} C_{hij}M_{ij}\right)\right] \qquad \text{Eq 10}$$

(ix) If demonstrating compliance on the basis of organic HAP emission rate based on solids applied, calculate the organic HAP emission rate based on solids applied, L, using Equation 11.

$$L = \frac{H}{\sum_{i=1}^{p} C_{si}M_i} \qquad \text{Eq 11}$$

(x) If demonstrating compliance on the basis of organic HAP emission rate based on materials applied, calculate the organic HAP emission rate based on material applied, S, using Equation 12.

$$S = \frac{H}{\sum_{i=1}^{p}\left[M_i + \sum_{j=1}^{q} M_{ij}\right]} \qquad \text{Eq 12}$$

(xi) The affected source is in compliance if

(A) The organic volatile matter collection and recovery efficiency, R_v, is 95 percent or greater, or

(B) The organic HAP emission rate based on solids applied, L, is 0.20 kg organic HAP per kg solids applied or less, or

(C) the organic HAP emission rate based on material applied, S, is 0.04 kg organic HAP per kg material applied or less, or

(D) the organic HAP emitted during the month, H, is less than the calculated allowable organic HAP, H_a, as determined using paragraph (e) of this section.

(2) Use continuous emission monitors, conduct an initial performance test of capture efficiency, and continuously monitor a site specific operating parameter to assure capture efficiency following the procedures in paragraphs (c)(2)(i) through (c)(2)(xi) of this section:

(i) If demonstrating compliance on the basis of organic HAP emission rate based on solids applied, organic HAP emission rate based on materials applied, or emission of less than the calculated allowable organic HAP, measure the mass of each ink, coating, varnish, adhesive, primer, solvent, and other material applied on the press or group of presses controlled by a common control device during the month.

(ii) If demonstrating compliance on the basis of organic HAP emission rate based on solids applied, organic HAP emission rate based on material applied or emission of less than the calculated allowable organic HAP, determine the organic HAP content of each ink, coating, varnish, adhesive, primer, solvent, and other material applied during the month following the procedure in § 63.827(b)(2).

(iii) Install continuous emission monitors to collect the data necessary to calculate the total organic volatile matter mass flow in the gas stream entering and the total organic volatile mass flow in the gas stream exiting the solvent recovery device for each month such that the percent control efficiency (E) of the solvent recovery device can be calculated for the month. This requires continuous emission monitoring of the total organic volatile matter concentration in the gas stream entering the solvent recovery device, the total organic volatile matter concentration in the gas stream exiting the solvent recovery device, and the volumetric gas flow rate through the solvent recovery device. A single continuous volumetric gas flow measurement should be sufficient for a solvent recovery device since the inlet and outlet volumetric gas flow rates for a solvent recovery device are essentially equal. Each month's individual inlet concentration values and corresponding individual gas flow rate values are multiplied and then summed to get the total organic volatile matter mass flow in the gas stream entering the solvent recovery device for the month. Each month's individual outlet concentration values and corresponding individual gas flow rate values are multiplied and then summed to get the total organic volatile matter mass flow in the gas stream exiting the solvent recovery device for the month.

(iv) If demonstrating compliance on the basis of organic HAP emission rate based on solids applied or emission of less than the calculated allowable organic HAP, determine the solids content of each ink, coating, varnish, adhesive, primer, solvent, and other material applied during the month following the procedure in § 63.827(c)(2).

(v) Install, calibrate, operate and maintain the instrumentation necessary to measure continuously the site-specific operating parameter established in accordance with § 63.828(a)(5) whenever a product and packaging rotogravure or wide-web flexographic printing press is operated.

(vi) Determine the capture efficiency (F) in accordance with § 63.827(e)-(f).

(vii) Calculate the overall organic HAP control efficiency, (R), achieved for each month using Equation 13.

$$R = \frac{EF}{100} \qquad \text{Eq 13}$$

(viii) If demonstrating compliance on the basis of organic HAP emission rate based on solids applied, organic HAP emission rate based on material applied or emission of less than the calculated allowable organic HAP, calculate the organic HAP emitted during the month, H, for each month using Equation 14.

$$H = \left[1 - \left(\frac{E}{100}\,\frac{F}{100}\right)\right]\left[\sum_{i=1}^{p}\left(C_{hi}M_i + \sum_{j=1}^{q} C_{hij}M_{ij}\right)\right] \qquad \text{Eq 14}$$

(ix) If demonstrating compliance on the basis of organic HAP emission rate based on solids applied, calculate the organic HAP emission rate based on solids applied, L, using Equation 15.

$$L = \frac{H}{\sum_{i=1}^{p} C_{si}M_i} \qquad \text{Eq 15}$$

(x) If demonstrating compliance on the basis of organic HAP emission rate based on materials applied, calculate the organic HAP emission rate based on material applied, S, using Equation 16.

$$S = \frac{H}{\sum_{i=1}^{p}\left[M_i + \sum_{j=1}^{q} M_{ij}\right]} \qquad \text{Eq 16}$$

(xi) The affected source is in compliance if 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 § 63.828(a)(5) for each three hour period, and

(A) The organic volatile matter collection and recovery efficiency, R_v, is 95 percent or greater, or

(B) The organic HAP emission rate based on solids applied, L, is 0.20 kg organic HAP per kg solids applied or less, or

(C) The organic HAP emission rate based on material applied, S, is 0.04 kg organic HAP per kg material applied or less, or

(D) The organic HAP emitted during the month, H, is less than the calculated allowable organic HAP, H_a, as determined using paragraph (e) of this section.

(d) To demonstrate compliance with the overall organic HAP control efficiency requirement in § 63.825(b)(7) or the overall organic HAP emission rate limitation requirements in § 63.825(b)(8)-(10), each owner or operator using an oxidizer to control emissions shall show compliance by following the procedures in either paragraph (d)(1) or (d)(2) 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 following the procedures in paragraph (d)(1)(i) through (d)(1)(xi) of this section:

(i) Determine the oxidizer destruction efficiency (E) using the procedure in § 63.827(d).

(ii) Determine the capture system capture efficiency (F) in accordance with § 63.827(e)-(f).

(iii) Calculate the overall organic HAP control efficiency, (R), achieved using Equation 13.

(iv) If demonstrating compliance on the basis of organic HAP emission rate based on solids applied, organic HAP emission rate based on materials applied, or emission of less than the calculated allowable organic HAP, measure the mass of each ink, coating, varnish, adhesive, primer, solvent, and other material applied on the press or group of presses controlled by a common control device during the month.

(v) If demonstrating compliance on the basis of organic HAP emission rate based on solids applied, organic HAP emission rate based on material applied or emission of less than the calculated allowable organic HAP, determine the organic HAP content of each ink, coating, varnish, adhesive, primer, solvent, and other material applied during the month following the procedure in § 63.827(b)(2).

(vi) If demonstrating compliance on the basis of organic HAP emission rate based on solids applied or emission of less than the calculated allowable organic HAP, determine the solids content of each ink, coating, varnish, adhesive, primer, solvent, and other material applied during the month following the procedure in § 63.827(c)(2).

(vii) If demonstrating compliance on the basis of organic HAP emission rate based on solids applied, organic HAP emission rate based on material applied or emission of less than the calculated allowable organic HAP, calculate the organic HAP emitted during the month, H, for each month using Equation 14.

(viii) If demonstrating compliance on the basis of organic HAP emission rate based on solids applied, calculate the organic HAP emission rate based on solids applied, L, for each month using Equation 15.

(ix) If demonstrating compliance on the basis of organic HAP emission rate based on materials applied, calculate the organic HAP emission rate based on material applied, S, using Equation 16.

(x) Install, calibrate, operate and maintain the instrumentation necessary to measure continuously the site-specific operating parameters established in accordance with § 63.828(a)(4)-(5) whenever a product and packaging rotogravure or wide-web flexographic press is operating.

(xi) The affected source is in compliance, if the oxidizer is operated such that the average operating parameter value is greater than the operating parameter value established in accordance with § 63.828(a)(4) for each three-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 § 63.828(a)(5) for each three hour period, and

(A) The overall organic HAP control efficiency, R, is 95 percent or greater, or

(B) The organic HAP emission rate based on solids applied, L, is 0.20 kg organic HAP per kg solids applied or less, or

(C) The organic HAP emission rate based on material applied, S, is 0.04 kg organic HAP per kg material applied or less, or

(D) The organic HAP emitted during the month, H, is less than the calculated allowable organic HAP, H_a, as determined using paragraph (e) of this section.

(2) Use continuous emission monitors, conduct an initial performance test of capture efficiency, and continuously monitor a site specific operating parameter to assure capture efficiency. The percent control efficiency of the oxidizer shall be demonstrated in accordance with the requirements of paragraph (c)(2) of this section except that separate continuous volumetric gas flow measurements of the inlet and outlet volumetric gas flow rates are required for an oxidizer.

(e) Owners or operators may calculate the monthly allowable HAP emissions, H_a, for demonstrating compliance in accordance with paragraph (b)(6), (c)(1)(xi)(D), (c)(2)(xi)(D), or (d)(1)(xi)(D) of this section as follows:

(1) Determine the as-purchased mass of each ink, coating, varnish, adhesive, primer, and other solids-containing material applied each month, M_i.

(2) Determine the as-purchased solids content of each ink, coating, varnish, adhesive, primer, and other solids-containing material applied each month, in accordance with § 63.827(c)(2), C_{si}.

(3) Determine the as-purchased mass fraction of each ink, coating, varnish, adhesive, primer, and other solids-containing material which was applied at 20 weight-percent or greater solids content, on an as-applied basis, G_i.

(4) Determine the total mass of each solvent, diluent, thinner, or reducer added to materials which were applied at less than 20 weight-percent solids content, on an as-applied basis, each month, M_{Lj}.

(5) Calculate the monthly allowable HAP emissions, H_a, using Equation 17.

$$H_a = 0.20\left[\sum_{i=1}^{p} M_i G_i C_{si}\right] + 0.04\left[\sum_{i=1}^{p} M_i\left(1-G_i\right) + \sum_{j=1}^{q} M_{Lj}\right] \qquad \text{Eq 17}$$

(f) Owners or operators of product and packaging rotogravure or wide-web flexographic printing presses shall demonstrate compliance according to the procedures in paragraphs (f)(1) through (f)(7) 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-controllable work stations.

(1) The owner or operator of each solvent recovery system used to control one or more product and packaging rotogravure or wide-web flexographic presses for which the owner or operator chooses to comply by means of a liquid-liquid mass balance shall determine the organic HAP emissions for those presses controlled by that solvent recovery system either

(i) in accordance with paragraphs (c)(1)(i)-(iii) and (c)(1)(v)-(viii) of this section if the presses controlled by that solvent recovery system have only always-controlled work stations, or

(ii) in accordance with paragraphs (c)(1)(ii)-(iii), (c)(1)(v)-(vi), and (g) of this section if the presses controlled by that solvent recovery system have one or more never-controlled or intermittently-controllable work stations.

(2) The owner or operator of each solvent recovery system used to control one or more product and packaging rotogravure or wide-web flexographic presses, for which the owner or operator chooses to comply by means of an initial test of capture efficiency, continuous emission monitoring of the control device, and continuous monitoring of a capture system operating parameter, shall

(i) For each capture system delivering emissions to that solvent recovery system, monitor an operating parameter established in accordance with § 63.828(a)(5) to assure capture system efficiency, and

(ii) Determine the organic HAP emissions for those presses served by each capture system delivering emissions to that solvent recovery system either

(A) In accordance with paragraphs (c)(2)(i)-(iii) and (c)(2)(v)-(viii) of this section if the presses served by that capture system have only always-controlled work stations, or

(B) In accordance with paragraphs (c)(2)(ii)-(iii), (c)(2)(v)-(vii), and (g) of this section if the presses served by that capture system have one or more never-controlled or intermittently-controllable work stations.

(3) The owner or operator of each oxidizer used to control emissions from one or more product and packaging rotogravure or wide-web flexographic presses choosing to demonstrate 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, shall

(i) Monitor an operating parameter established in accordance with § 63.828(a)(4) to assure control device efficiency, and

(ii) For each capture system delivering emissions to that oxidizer, monitor an operating parameter established in accordance with § 63.828(a)(5) to assure capture efficiency, and

(iii) Determine the organic HAP emissions for those presses served by each capture system delivering emissions to that oxidizer either

(A) In accordance with paragraphs (d)(1)(i)-(v) and (d)(1)(vii) of this section if the presses served by that capture system have only always-controlled work stations, or

(B) In accordance with paragraphs (d)(1)(i)-(iii), (d)(1)(v), and (g) of this section if the presses served by that capture system have one or more never-controlled or intermittently-controllable work stations.

(4) The owner or operator of each oxidizer used to control emissions from one or more product and packaging rotogravure or wide-web flexographic presses choosing to demonstrate compliance through an initial capture efficiency test, continuous emission monitoring of the control device and continuous monitoring of a capture system operating parameter, shall

(i) For each capture system delivering emissions to that oxidizer, monitor an operating parameter established in accordance with § 63.828(a)(5) to assure capture efficiency, and

(ii) Determine the organic HAP emissions for those presses served by each capture system delivering emissions to that oxidizer either

(A) In accordance with paragraphs (c)(2)(i)-(iii) and (c)(2)(v)-(viii) of this section if the presses served by that capture system have only always-controlled work stations, or

(B) In accordance with paragraphs (c)(2)(ii)-(iii), (c)(2)(v)-(vii), and (g) of this section if the presses served by that capture system have one or more never-controlled or intermittently-controllable work stations.

(5) The owner or operator of one or more uncontrolled product and packaging rotogravure or wide-web flexographic printing presses shall determine the organic HAP applied on those presses using Equation 8. The organic HAP emitted from an uncontrolled press is equal to the organic HAP applied on that press.

(6) If demonstrating compliance on the basis of organic HAP emission rate based on solids applied or emission of less than the calculated allowable organic HAP, the owner or operator shall determine the solids content of each ink, coating, varnish, adhesive, primer, solvent and other material applied during the month following the procedure in § 63.827(c)(2).

(7) The owner or operator shall determine the organic HAP emissions for the affected source for the month by summing all organic HAP emissions calculated according to paragraphs (f)(1), (f)(2)(ii), (f)(3)(iii), (f)(4)(ii), and (f)(5) of this section. The affected source is in compliance for the month, if all operating parameters required to be monitored under paragraphs (f)(2)-(4) of this section were maintained at the appropriate values, and

(i) The total mass of organic HAP emitted by the affected source was not more than four percent of the total mass of inks, coatings, varnishes, adhesives, primers, solvents, diluents, reducers, thinners and other materials applied by the affected source, or

(ii) The total mass of organic HAP emitted by the affected source was not more than 20 percent of the total mass of solids applied by the affected source, or

(iii) The total mass of organic HAP emitted by the affected source was not more than the equivalent allowable organic HAP emissions for the affected source, H_a, calculated in accordance with paragraph (e) of this section, or

(iv) The total mass of organic HAP emitted by the affected source was not more than five percent of the total mass of organic HAP applied by the affected source. The total mass of organic HAP applied by the affected source in the month shall be determined by the owner or operator using Equation 8.

(g) Owners or operators determining organic HAP emissions from a press or group of presses having one or more never-controlled or intermittently-controllable work stations and using the procedures specified in paragraphs (f)(1)(ii), (f)(2)(ii)(B), (f)(3)(iii)(B), or (f)(4)(ii)(B) of this section shall for that press or group of presses:

(1) Determine the sum of the mass of all inks, coatings, varnishes, adhesives, primers, and other solids-containing materials which are applied on intermittently-controllable work stations in bypass mode and the mass of all inks, coatings, varnishes, adhesives, primers, and other solids-containing materials which are applied on never-controlled work stations during the month, M_{Bi}.

(2) Determine the sum of the mass of all solvents, reducers, thinners, and other diluents which are applied on intermittently-controllable work stations in bypass mode and the mass of all solvents, reducers, thinners, and other diluents which are applied on never-controlled work stations during the month, M_{Bj}.

(3) Determine the sum of the mass of all inks, coatings, varnishes, adhesives, primers, and other solids-containing materials which are applied on intermittently-controllable work stations in controlled mode and the mass of all inks, coatings, varnishes, adhesives, primers, and other solids-containing materials which are applied on always-controlled work stations during the month, M_{Bj}.

(4) Determine the sum of the mass of all solvents, reducers, thinners, and other diluents which are applied on intermittently-controllable work stations in controlled mode and the mass of all solvents, reducers, thinners, and other diluents which are applied on always-controlled work stations during the month, M_{Cj}.

(5) For each press or group of presses for which the owner or operator uses the provisions of paragraph (f)(1)(ii) of this section, the owner or operator shall calculate the organic HAP emitted during the month using Equation 18.

$$H = \left[\sum_{i=1}^{p} M_{Ci} C_{hi} + \sum_{j=1}^{q} M_{Cj} C_{hj}\right]\left[1 - \frac{M_{vr}}{\sum_{i=1}^{p} M_{Ci} C_{vi} + \sum_{j=1}^{q} M_{Cj}}\right] + \left[\sum_{i=1}^{p} M_{Bi} C_{hi} + \sum_{j=1}^{q} M_{Bj} C_{hj}\right.$$

(6) For each press or group of presses for which the owner or operator uses the provisions of paragraphs (f)(2)(ii)(B), (f)(3)(iii)(B), or (f)(4)(ii)(B) of this section, the owner or operator shall calculate the organic HAP emitted during the month using Equation (19).

$$H = \left[\sum_{i=1}^{p} M_{Ci} C_{hi} + \sum_{j=1}^{q} M_{Cj} C_{hj}\right]\left[1 - \left(\frac{E}{100}\,\frac{F}{100}\right)\right] + \left[\sum_{i=1}^{p} M_{Bi} C_{hi} + \sum_{j=1}^{q} M_{Bj} C_{hj}\right]$$

(h) If the affected source operates more than one capture system or more than one control device, and has no never-controlled work stations and no intermittently-controllable work stations, then the affected source is in compliance with the 95 percent overall organic HAP control efficiency requirement for the month if for each press or group of presses controlled by a common control device:

(1) The volatile matter collection and recovery efficiency, R_v, as determined by paragraphs (c)(1)(i), (c)(1)(iii), and (c)(1)(v)-(vii) of this section is equal to or greater than 95 percent, or

(2) The overall organic HAP control efficiency as determined by paragraphs (c)(2)(iii) and (c)(2)(v)-(vii) of this section for each press or group of presses served by that control device and a common capture system is equal to or greater than 95 percent and the average capture system operating parameter value for each capture system serving that control device is greater than or less than (as appropriate) the operating parameter value established for that capture system in accordance with § 63.828(a)(5) for each three hour period, or

(3) The overall organic HAP control efficiency as determined by paragraphs (d)(1)(i)-(iii) and (d)(1)(x) of this section for each press or group of presses served by that control device and a common capture system is equal to or greater than 95 percent, the oxidizer is operated such that the average operating parameter value is greater than the operating parameter value established in accordance with § 63.828(a)(4) for each three hour period, and the average capture system operating parameter value for each capture system serving that control device is greater than or less than (as appropriate) the operating parameter value established for that capture system in accordance with § 63.828(a)(5) for each three hour period.

[61 FR 27140, May 30, 1996, as amended at 71 FR 29801, May 24, 2006]

§ 63.826 Compliance dates.

(a) The compliance date for an owner or operator of an existing affected source subject to the provisions of this subpart is May 30, 1999.

(b) The compliance date for an owner or operator of a new affected source subject to the provisions of this subpart is immediately upon start-up of the affected source, or May 30, 1996, whichever is later.

(c) Affected sources which have undergone reconstruction 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 affected source has been reconstructed. Additionally, the costs of retrofitting and replacement of equipment that is installed specifically to comply with this subpart are not considered reconstruction costs.

§ 63.827 Performance test methods.

Performance tests shall be conducted under such conditions as the Administrator specifies to the owner or operator based on representative performance of the affected source for the period being tested. Upon request, the owner or operator shall make available to the Administrator such records as may be necessary to determine the conditions of performance tests.

(a) An owner or operator using a control device to comply with the requirements of §§ 63.824-63.825 is not required to conduct an initial performance test to demonstrate compliance if one or more of the criteria in paragraphs (a)(1) through (a)(3) of this section are met:

(1) A control device that is in operation prior to May 30, 1996, does not need to be tested if

(i) It is equipped with continuous emission monitors for determining total organic volatile matter concentration and the volumetric gas flow rate, 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

(ii) The continuous emission monitors are used to demonstrate continuous compliance in accordance with § 63.824(b)(1)(ii), § 63.825(b)(2)(ii), § 63.825(c)(2), or § 63.825(d)(2), as applicable, and § 63.828, or

(2) The owner or operator has met the requirements of either § 63.7(e)(2)(iv) or § 63.7(h), or

(3) The control device is a solvent recovery system and the owner or operator chooses to comply by means of a monthly liquid-liquid material balance.

(b) Determination of the weight fraction organic HAP of inks, coatings, varnishes, adhesives, primers, solvents, thinners, reducers, diluents, and other materials used by a publication rotogravure affected source shall be conducted according to paragraph (b)(1) of this section. Determination of the weight fraction organic HAP of inks, coatings, varnishes, adhesives, primers, solvents, thinners, reducers, diluents, and other materials applied by a product and packaging rotogravure or wide-web flexographic printing affected source shall be conducted according to paragraph (b)(2) of this section. If the weight fraction organic HAP values are not determined using the procedures in paragraphs (b)(1) or (b)(2) 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) Each owner or operator of a publication rotogravure affected source shall determine the weight fraction organic HAP of each ink, coating, varnish, adhesive, primer, solvent, and other material used by following one of the procedures in paragraphs (b)(1)(i) through (iii) of this section:

(i) The owner or operator may test the material in accordance with Method 311 of appendix A of this part. The Method 311 determination may be performed by the owner or operator of the affected source, the supplier of the material, or an independent third party. The organic HAP content determined by Method 311 must be calculated according to the criteria and procedures in paragraphs (b)(1)(i)(A) through (C) of this section.

(A) Include each organic HAP determined to be present at greater than or equal to 0.1 weight percent for Occupational Safety and Health Administration (OSHA)-defined carcinogens as specified in 29 CFR 1910.1200(d)(4) and greater than or equal to 1.0 weight percent for other organic HAP compounds.

(B) Express the weight fraction of each organic HAP included according to paragraph (b)(1)(i)(A) of this section as a value truncated to four places after the decimal point (for example, 0.3791).

(C) Calculate the total weight fraction of organic HAP in the tested material by summing the weight fraction of each organic HAP included according to paragraph (b)(1)(i)(A) of this section and truncating the result to three places after the decimal point (for example, 0.763).

(ii) The owner or operator may determine the weight fraction volatile matter of the material in accordance with § 63.827(c)(1) and use this value for the weight fraction organic HAP for all compliance purposes.

(iii) The owner or operator may use formulation data to determine the weight fraction organic HAP of a material. Formulation data may be provided to the owner or operator on a CPDS by the supplier of the material or an independent third party. Formulation data may be used provided that the weight fraction organic HAP is calculated according to the criteria and procedures in paragraphs (b)(1)(iii)(A) through (D) of this section. In the event of an inconsistency between the formulation data and the result of Method 311 of appendix A of this part, where the test result is higher, the Method 311 data will take precedence unless, after consultation, the owner or operator can demonstrate to the satisfaction of the enforcement agency that the formulation data are correct.

(A) For each raw material used in making the material, include each organic HAP present in that raw material at greater than or equal to 0.1 weight percent for OSHA-defined carcinogens as specified in 29 CFR 1910.1200(d)(4) and greater than or equal to 1.0 weight percent for other organic HAP compounds. The weight fraction of each such organic HAP in each raw material must be determined by Method 311 of appendix A of this part, by an alternate method approved by the Administrator, or from a CPDS provided by the raw material supplier or an independent third party. The weight fraction of each such organic HAP in each raw material must be expressed as a value truncated to four places after the decimal point (for example, 0.1291).

(B) For each raw material used in making the material, the weight fraction contribution of each organic HAP, which is included according to paragraph (b)(1)(iii)(A) of this section, in that raw material to the weight fraction organic HAP of the material is calculated by multiplying the weight fraction, truncated to four places after the decimal point (for example, 0.1291), of that organic HAP in that raw material times the weight fraction of that raw material, truncated to four places after the decimal point (for example, 0.2246), in the material. The product of each such multiplication is to be truncated to four places after the decimal point (for example, 0.1291 times 0.2246 yields 0.02899586 which truncates to 0.0289).

(C) For each organic HAP which is included according to paragraph (b)(1)(iii)(A) of this section, the total weight fraction of that organic HAP in the material is calculated by adding the weight fraction contribution of that organic HAP from each raw material in which that organic HAP is included according to paragraph (b)(1)(iii)(A) of this section. The sum of each such addition must be expressed to four places after the decimal point.

(D) The total weight fraction of organic HAP in the material is the sum of the counted individual organic HAP weight fractions. This sum must be truncated to three places after the decimal point (for example, 0.763).

(2) Each owner or operator of a product and packaging rotogravure or wide-web flexographic printing affected source shall determine the organic HAP weight fraction of each ink, coating, varnish, adhesive, primer, solvent, and other material applied by following one of the procedures in paragraphs (b)(2)(i) through (iii) of this section:

(i) The owner or operator may test the material in accordance with Method 311 of appendix A of this part. The Method 311 determination may be performed by the owner or operator of the affected source, the supplier of the material, or an independent third party. The organic HAP content determined by Method 311 must be calculated according to the criteria and procedures in paragraphs (b)(2)(i)(A) through (C) of this section.

(A) Include each organic HAP determined to be present at greater than or equal to 0.1 weight percent for OSHA-defined carcinogens as specified in 29 CFR 1910.1200(d)(4) and greater than or equal to 1.0 weight percent for other organic HAP compounds.

(B) Express the weight fraction of each organic HAP included according to paragraph (b)(2)(i)(A) of this section as a value truncated to four places after the decimal point (for example, 0.3791).

(C) Calculate the total weight fraction of organic HAP in the tested material by summing the weight fraction of each organic HAP included according to paragraph (b)(2)(i)(A) of this section and truncating the result to three places after the decimal point (for example, 0.763).

(ii) The owner or operator may determine the weight fraction volatile matter of the material in accordance with § 63.827(c)(2) and use this value for the weight fraction organic HAP for all compliance purposes.

(iii) The owner or operator may use formulation data to determine the weight fraction organic HAP of a material. Formulation data may be provided to the owner or operator on a CPDS by the supplier of the material or an independent third party. Formulation data may be used provided that the weight fraction organic HAP is calculated according to the criteria and procedures in paragraphs (b)(2)(iii)(A) through (D) of this section. In the event of an inconsistency between the formulation data and the result of Method 311 of appendix A of this part, where the test result is higher, the Method 311 data will take precedence unless, after consultation, the owner or operator can demonstrate to the satisfaction of the enforcement agency that the formulation data are correct.

(A) For each raw material used in making the material, include each organic HAP present in that raw material at greater than or equal to 0.1 weight percent for OSHA-defined carcinogens as specified in 29 CFR 1910.1200(d)(4) and greater than or equal to 1.0 weight percent for other organic HAP compounds. The weight fraction of each such organic HAP in each raw material must be determined by Method 311 of appendix A of this part, by an alternate method approved by the Administrator, or from a CPDS provided by the raw material supplier or an independent third party. The weight fraction of each such organic HAP in each raw material must be expressed as a value truncated to four places after the decimal point (for example, 0.1291).

(B) For each raw material used in making the material, the weight fraction contribution of each organic HAP, which is included according to paragraph (b)(2)(iii)(A) of this section, in that raw material to the weight fraction organic HAP of the material is calculated by multiplying the weight fraction, truncated to four places after the decimal point (for example, 0.1291), of that organic HAP in that raw material times the weight fraction of that raw material, truncated to four places after the decimal point (for example, 0.2246), in the material. The product of each such multiplication is truncated to four places after the decimal point (for example, 0.1291 times 0.2246 yields 0.02899586 which truncates to 0.0289).

(C) For each organic HAP which is included according to paragraph (b)(2)(iii)(A) of this section, the total weight fraction of that organic HAP in the material is calculated by adding the weight fraction contribution of that organic HAP from each raw material in which that organic HAP is included according to paragraph (b)(2)(iii)(A) of this section. The sum of each such addition must be expressed to four places after the decimal point.

(D) The total weight fraction of organic HAP in the material is the sum of the counted individual organic HAP weight fractions. This sum is to be truncated to three places after the decimal point (for example, 0.763).

(c) Determination of the weight fraction volatile matter content of inks, coatings, varnishes, adhesives, primers, solvents, reducers, thinners, diluents, and other materials used by a publication rotogravure affected source shall be conducted according to paragraph (c)(1) of this section. Determination of the weight fraction volatile matter content and weight fraction solids content of inks, coatings, varnishes, adhesives, primers, solvents, reducers, thinners, diluents, and other materials applied by a product and packaging rotogravure or wide-web flexographic printing affected source shall be conducted according to paragraph (c)(2) of this section.

(1) Each owner or operator of a publication rotogravure affected source shall determine the volatile matter weight fraction of each ink, coating, varnish, adhesive, primer, solvent, reducer, thinner, diluent, and other material used by following the procedures in paragraph (b)(1)(i) of this section, or by using formulation data as described in paragraph (c)(3) of this section.

(i) Determine the volatile matter weight fraction of the material using Method 24A of 40 CFR part 60, appendix A. The Method 24A determination may be performed by the owner or operator of the affected source, the supplier of the material, or an independent third party. The Method 24A result shall be truncated to three places after the decimal point (for example, 0.763). If these values cannot be determined using Method 24A, the owner or operator shall submit an alternative technique for determining their values for approval by the Administrator.

(2) Each owner or operator of a product and packaging rotogravure or wide-web flexographic printing affected source shall determine the volatile matter weight fraction and solids weight fraction of each ink, coating, varnish, adhesive, primer, solvent, reducer, thinner, diluent, and other material applied by following the procedures in paragraphs (b)(2)(i) and (ii) of this section, or by using formulation data as described in paragraph (c)(3) of this section.

(i) Determine the volatile matter weight fraction of the material using Method 24 of 40 CFR part 60, appendix A. The Method 24 determination may be performed by the owner or operator of the affected source, the supplier of the material, or an independent third party. The Method 24 result shall be truncated to three places after the decimal point (for example, 0.763). If these values cannot be determined using Method 24, the owner or operator shall submit an alternative technique for determining their values for approval by the Administrator.

(ii) Calculate the solids weight fraction Method 24 result by subtracting the volatile matter weight fraction Method 24 result from 1.000. This calculation may be performed by the owner or operator, the supplier of the material, or an independent third party.

(3) The owner or operator may use formulation data to determine the volatile matter weight fraction or solids weight fraction of a material. Formulation data may be provided to the owner or operator on a CPDS by the supplier of the material or an independent third party. The volatile matter weight fraction and solids weight fraction shall be truncated to three places after the decimal point (for example, 0.763). In the event of any inconsistency between the formulation data and the result of Method 24 or Method 24A of 40 CFR part 60, appendix A, where the test result for volatile matter weight fraction is higher or the test result for solids weight fraction is lower, the applicable test method data will take precedence unless, after consultation, the owner or operator can demonstrate to the satisfaction of the enforcement agency that the formulation data are correct.

(d) A performance test of a control device to determine destruction efficiency for the purpose of meeting the requirements of §§ 63.824-63.825 shall be conducted by the owner or operator in accordance with the following:

(1) An initial performance test to establish the destruction efficiency of an oxidizer and the associated combustion zone temperature for a thermal oxidizer and the associated catalyst bed inlet temperature for a catalytic oxidizer shall be conducted and the data reduced in accordance with the following reference methods and procedures:

(i) Method 1 or 1A of 40 CFR part 60, appendix A is used for sample and velocity traverses to determine sampling locations.

(ii) Method 2, 2A, 2C, or 2D of 40 CFR part 60, appendix A is used to determine gas volumetric flow rate.

(iii) Method 3 of 40 CFR part 60, appendix A is used for gas analysis to determine dry molecular weight.

(iv) Method 4 of 40 CFR part 60, appendix A is used to determine stack gas moisture.

(v) Methods 2, 2A, 3, and 4 of 40 CFR part 60, appendix A shall be performed, as applicable, at least twice during each test period.

(vi) Method 25 of 40 CFR part 60, appendix A, shall be used to determine organic volatile matter concentration, except as provided in paragraphs (d)(1)(vi)(A) through (D) of this section. The owner or operator shall submit notice of the intended test method to the Administrator for approval along with notice of the performance test required under § 63.7(c). The same method must be used for both the inlet and outlet measurements. The owner or operator may use Method 25A of 40 CFR part 60, appendix A, if

(A) An exhaust gas organic volatile matter concentration of 50 parts per million by volume (ppmv) or less as carbon is required to comply with the standards of §§ 63.824-63.825, or

(B) The organic volatile matter concentration at the inlet to the control system and the required level of control are such to result in exhaust gas organic volatile matter concentrations of 50 ppmv or less as carbon, or

(C) Because of the high efficiency of the control device, the anticipated organic volatile matter concentration at the control device exhaust is 50 ppmv or less as carbon, regardless of inlet concentration, or

(D) The control device is not an oxidizer.

(vii) Each performance test shall consist of three separate runs; each run conducted for at least one hour under the conditions that exist when the affected source is operating under normal operating conditions. For the purpose of determining organic volatile matter concentrations and mass flow rates, the average of results of all runs shall apply.

(viii) Organic volatile matter mass flow rates shall be determined using Equation 20:

$$M_f = Q_{sd} C_c [12.0] [0.0416] [10^{-6}] \qquad \text{Eq. 20}$$

Where:

M_f = Total organic volatile matter mass flow rate, kg/hour (h).

Q_{sd} = Volumetric flow rate of gases entering or exiting the control device, as determined according to § 63.827(d)(1)(ii), 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 (mol/m3) (@ 293 Kelvin (K) and 760 millimeters of mercury (mmHg)).

(ix) Emission control device efficiency shall be determined using Equation 21:

$$E = \frac{M_{fi} - M_{fo}}{M_{fi}} \qquad \text{Eq 21}$$

(2) The owner or operator shall record such process information as may be necessary to determine the conditions of the performance test. Operations during periods of start-up, shutdown, and malfunction shall not constitute representative conditions for the purpose of a performance test.

(3) For the purpose of determining the value of the oxidizer operating parameter that will demonstrate continuing compliance, the time-weighted average of the values recorded during the performance test shall be computed. For an oxidizer other than catalytic oxidizer, the owner or operator shall establish as the operating parameter the minimum combustion temperature. For a catalytic oxidizer, the owner or operator shall establish as the operating parameter the minimum gas temperature upstream of the catalyst bed. These minimum temperatures are the operating parameter values that demonstrate continuing compliance with the requirements of §§ 63.824-63.825.

(e) A performance test to determine the capture efficiency of each capture system venting organic emissions to a control device for the purpose of meeting the requirements of § 63.824(b)(1)(ii), § 63.824(b)(2), § 63.825(c)(2), § 63.825(d)(1)-(2), § 63.825(f)(2)-(4), or § 63.825(h)(2)-(3) shall be conducted by the owner or operator in accordance with the following:

(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 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.

(f) As an alternative to the procedures specified in § 63.827(e) an owner or operator required to conduct a capture efficiency test may use any capture efficiency protocol and test methods that satisfy the criteria of either the Data Quality Objective (DQO) or the Lower Confidence Limit (LCL) approach as described in Appendix A of this subpart. The owner or operator may exclude never-controlled work stations from such capture efficiency determinations.

[61 FR 27140, May 30, 1996, as amended at 71 FR 29802, May 24, 2006; 76 FR 22598, Apr. 21, 2011]

§ 63.828 Monitoring requirements.

(a) Following the date on which the initial performance test of a control device is completed, to demonstrate continuing compliance with the standard, the owner or operator shall monitor and inspect each control device required to comply with §§ 63.824-63.825 to ensure proper operation and maintenance by implementing the applicable requirements in paragraph (a)(1) through (a)(5) of this section.

(1) Owners or operators of product and packaging rotogravure or wide-web flexographic presses with intermittently-controllable work stations shall follow one of the procedures in paragraphs (a)(1)(i) through (a)(1)(iv) of this section for each dryer associated with such a work station:

(i) 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. The flow control position indicator shall be installed at the entrance to any bypass line that could divert the exhaust stream away from the control device to the atmosphere.

(ii) 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 shall be performed at least once every month to ensure that the valve or damper is maintained in the closed position and the exhaust stream is not diverted through the bypass line.

(iii) Ensure that any bypass line valve or damper is in the closed position through continuous monitoring of valve position. The monitoring system shall be inspected at least once every month to ensure that it is functioning properly.

(iv) Use an automatic shutdown system in which the press is stopped when flow is diverted away from the control device to any bypass line. The automatic system shall be inspected at least once every month to ensure that it is functioning properly.

(2) Compliance monitoring shall be subject to the provisions of paragraphs (a)(2)(i) and (a)(2)(ii) of this section, as applicable.

(i) All continuous emission monitors shall comply with performance specifications (PS) 8 or 9 of 40 CFR part 60, appendix B, as appropriate. The requirements of appendix F of 40 CFR part 60 shall also be followed. In conducting the quarterly audits required by appendix F, owners or operators must challenge the monitors with compounds representative of the gaseous emission stream being controlled.

(ii) All temperature monitoring equipment shall be installed, calibrated, maintained, and operated according to manufacturers specifications. The calibration of the chart recorder, data logger, or temperature indicator shall be verified every three months; or the chart recorder, data logger, or temperature indicator shall be replaced. The replacement shall be done either if the owner or operator chooses not to perform the calibration, or if the equipment cannot be calibrated properly.

(3) An owner or operator complying with §§ 63.824-63.825 through continuous emission monitoring of a control device shall install, calibrate, operate, and maintain continuous emission monitors to measure total organic volatile matter concentration and volumetric gas flow rate in accordance with § 63.824(b)(1)(ii), § 63.825(b)(2)(ii), § 63.825(c)(2), or § 63.825(d)(2), as applicable.

(4) An owner or operator complying with the requirements of §§ 63.824-63.825 through the use of an oxidizer and demonstrating continuous compliance through monitoring of an oxidizer operating parameter shall:

(i) For an oxidizer other than a catalytic oxidizer, install, calibrate, operate, and maintain a temperature monitoring device equipped with a continuous recorder. The device shall have an accuracy of ±1 percent of the temperature being monitored in °C or ±1 °C, whichever is greater. The thermocouple or temperature sensor shall be installed in the combustion chamber at a location in the combustion zone.

(ii) For a catalytic oxidizer, install, calibrate, operate, and maintain a temperature monitoring device equipped with a continuous recorder. The device shall be capable of monitoring temperature with an accuracy of ±1 percent of the temperature being monitored in °C or ±1 °C, whichever is greater. The thermocouple or temperature sensor shall be installed in the vent stream at the nearest feasible point to the catalyst bed inlet.

(5) An owner or operator complying with the requirements of §§ 63.824-63.825 through the use of a control device and demonstrating continuous compliance by monitoring an operating parameter to ensure that the capture efficiency measured during the initial compliance test is maintained, shall:

(i) Submit to the Administrator with the compliance status report required by § 63.9(h) of the General Provisions, a plan that

(A) Identifies the operating parameter to be monitored to ensure that the capture efficiency measured during the initial compliance test is maintained,

(B) Discusses why this parameter is appropriate for demonstrating ongoing compliance, and

(C) Identifies the specific monitoring procedures;

(ii) Set the operating parameter value, or range of values, that demonstrate compliance with §§ 63.824-63.825, and

(iii) Conduct monitoring in accordance with the plan submitted to the Administrator unless comments received from the Administrator require an alternate monitoring scheme.

(b) Any excursion from the required operating parameters which are monitored in accordance with paragraphs (a)(4) and (a)(5) of this section, unless otherwise excused, shall be considered a violation of the emission standard.

[61 FR 27140, May 30, 1996, as amended at 71 FR 29804, May 24, 2006]

§ 63.829 Recordkeeping requirements.

(a) The recordkeeping provisions of 40 CFR part 63 subpart A of this part that apply and those that do not apply to owners and operators of affected sources subject to this subpart are listed in Table 1 of this subpart.

(b) Each owner or operator of an affected source subject to this subpart shall maintain the records specified in paragraphs (b)(1) through (b)(3) of this section on a monthly basis in accordance with the requirements of § 63.10(b)(1) of this part:

(1) Records specified in § 63.10(b)(2) of this part, of all measurements needed to demonstrate compliance with this standard, such as continuous emission monitor data, control device and capture system operating parameter data, material usage, HAP usage, volatile matter usage, and solids usage that support data that the source is required to report.

(2) Records specified in § 63.10(b)(3) of this part for each applicability determination performed by the owner or operator in accordance with the requirements of § 63.820(a) of this subpart, and

(3) Records specified in § 63.10(c) of this part for each continuous monitoring system operated by the owner or operator in accordance with the requirements of § 63.828(a) of this subpart.

(c) Each owner or operator of an affected source subject to this subpart shall maintain records of all liquid-liquid material balances performed in accordance with the requirements of §§ 63.824-63.825 of this subpart. The records shall be maintained in accordance with the requirements of § 63.10(b) of this part.

(d) The owner or operator of each facility which commits to the criteria of § 63.820(a)(2) shall maintain records of all required measurements and calculations needed to demonstrate compliance with these criteria, including the mass of all HAP containing materials used and the mass fraction of HAP present in each HAP containing material used, on a monthly basis.

(e) The owner or operator of each facility which meets the limits and criteria of § 63.821(b)(1) shall maintain records as required in paragraph (e)(1) of this section. The owner or operator of each facility which meets the limits and criteria of § 63.821(b)(2) shall maintain records as required in paragraph (e)(2) of this section. Owners or operators shall maintain these records for five years, and upon request, submit them to the Administrator.

(1) For each facility which meets the criteria of § 63.821(b)(1), the owner or operator shall maintain records of the total mass of each material applied on product and packaging rotogravure or wide-web flexographic printing presses during each month.

(2) For each facility which meets the criteria of § 63.821(b)(2), the owner or operator shall maintain records of the total mass and organic HAP content of each material applied on product and packaging rotogravure or wide-web flexographic printing presses during each month.

(f) The owner or operator choosing to exclude from an affected source, a product and packaging rotogravure or wide-web flexographic press which meets the limits and criteria of § 63.821(a)(2)(ii)(A) shall maintain the records specified in paragraphs (f)(1) and (f)(2) of this section for five years and submit them to the Administrator upon request:

(1) The total mass of each material applied each month on the press, including all inboard and outboard stations, and

(2) The total mass of each material applied each month on the press by product and packaging rotogravure or wide-web flexographic printing operations.

(g) Each owner or operator of an affected source subject to this subpart shall maintain records of the occurrence and duration of each malfunction of operation (*i.e.,* process equipment), air pollution control equipment, or monitoring equipment.

(h) Each owner or operator of an affected source subject to this subpart shall maintain records of actions taken during periods of malfunction to minimize emissions in accordance with § 63.823(b), including corrective actions to restore malfunctioning process and air pollution control and monitoring equipment to its normal or usual manner of operation.

[61 FR 27140, May 30, 1996, as amended at 71 FR 29804, May 24, 2006; 76 FR 22598, Apr. 21, 2011]

§ 63.830 Reporting requirements.

(a) The reporting provisions of 40 CFR part 63 subpart A of this part that apply and those that do not apply to owners and operators of affected sources subject to this subpart are listed in Table 1 of this subpart.

(b) Each owner or operator of an affected source subject to this subpart shall submit the reports specified in paragraphs (b)(1) through (b)(6) of this section to the Administrator:

(1) An initial notification required in § 63.9(b).

(i) Initial notifications for existing sources shall be submitted no later than one year before the compliance date specified in § 63.826(a), or no later than 120 days after the source becomes subject to this subpart, whichever is later.

(ii) Initial notifications for new and reconstructed sources shall be submitted as required by § 63.9(b).

(iii) 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.

(iv) Permit applications shall be submitted by the same due dates as those specified for the initial notifications.

(2) A Notification of Performance Tests specified in §§ 63.7 and 63.9(e) of this part. This notification, and the site-specific test plan required under § 63.7(c)(2) shall identify the operating parameter to be monitored to ensure that the capture efficiency measured during the performance test is maintained. The operating parameter identified in the site-specific test plan shall be considered to be approved unless explicitly disapproved, or unless comments received from the Administrator require monitoring of an alternate parameter.

(3) A Notification of Compliance Status specified in § 63.9(h) of this part.

(4) Performance test reports specified in § 63.10(d)(2) of this part.

(5) [Reserved]

(6) A summary report specified in § 63.10(e)(3) of this part shall be submitted on a semi-annual basis (i.e., once every 6-month period). These summary reports are required even if the affected source does not have any control devices or does not take the performance of any

control devices into account in demonstrating compliance with the emission limitations in § 63.824 or § 63.825. In addition to a report of operating parameter exceedances as required by § 63.10(e)(3)(i), the summary report shall include, as applicable:

(i) Exceedances of the standards in §§ 63.824-63.825.

(ii) Exceedances of either of the criteria of § 63.820(a)(2).

(iii) Exceedances of the criterion of § 63.821(b)(1) and the criterion of § 63.821(b)(2) in the same month.

(iv) Exceedances of the criterion of § 63.821(a)(2)(ii)(A).

(v) The number, duration, and a brief description for each type of malfunction which occurred during the reporting period and which caused or may have caused any applicable emission limitation to be exceeded. 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 § 63.823(b), including actions taken to correct a malfunction.

(c)

(1) As of January 1, 2012, and within 60 days after the date of completing each performance test, as defined in § 63.2 and as required in this subpart, you must submit performance test data, except opacity data, electronically to EPA's Central Data Exchange by using the ERT (see *http://www.epa.gov/ttn/chief/ert/ert tool.html/*) or other compatible electronic spreadsheet. Only data collected using test methods compatible with ERT are subject to this requirement to be submitted electronically into EPA's WebFIRE database.

(2) All reports required by this subpart not subject to the requirements in paragraph (c)(1) of this section must be sent to the Administrator at the appropriate address listed in § 63.13. If acceptable to both the Administrator and the owner or operator of a source, these reports may be submitted on electronic media. The Administrator retains the right to require submittal of reports subject to paragraph (c)(1) of this section in paper format.

[61 FR 27140, May 30, 1996, as amended at 71 FR 29804, May 24, 2006; 76 FR 22598, Apr. 21, 2011; 85 FR 73895, Nov. 19, 2020]

§ 63.831 Implementation and enforcement.

(a) This subpart can be implemented and enforced by the U.S. EPA, or a delegated authority such as the applicable State, local, or Tribal agency. If the U.S. EPA Administrator has delegated authority to a State, local, or Tribal agency, then that agency, in addition to the U.S. EPA, has the authority to implement and enforce this subpart. Contact the applicable U.S. EPA Regional Office to find out if this subpart is delegated to a State, local, or Tribal agency.

(b) In delegating implementation and enforcement authority of this subpart to a State, local, or Tribal agency under subpart E of this part, the authorities contained in paragraph (c) of this section are retained by the Administrator of U.S. EPA and cannot be transferred to the State, local, or Tribal agency.

(c) The authorities that cannot be delegated to State, local, or Tribal agencies are as specified in paragraphs (c)(1) through (4) of this section.

(1) Approval of alternatives to the requirements in §§ 63.820 through 63.821 and 63.823 through 63.826.

(2) Approval of alternatives to the test method for organic HAP content determination in § 63.827(b) and alternatives to the test method for volatile matter in § 63.827(c), and major alternatives to other test methods under § 63.7(e)(2)(ii) and (f), as defined in § 63.90, and as required in this subpart.

(3) Approval of major alternatives to monitoring under § 63.8(f), as defined in § 63.90, and as required in this subpart.

(4) Approval of major alternatives to recordkeeping and reporting under § 63.10(f), as defined in § 63.90, and as required in this subpart.

[68 FR 37354, June 23, 2003]

§§ 63.832-63.839 [Reserved]

Table 1 to Subpart KK of Part 63 - Applicability of General Provisions to Subpart KK

General provisions reference	Applicable to subpart KK	Comment
§ 63.1(a)(1)-(a)(4)	Yes.	
§ 63.1(a)(5)	No	Section reserved.
§ 63.1(a)(6)-(a)(8)	No.	
§ 63.1(a)(9)	No	Section reserved.

General provisions reference	Applicable to subpart KK	Comment
§ 63.1(a)(10)-(a)(14)	Yes.	
§ 63.1(b)(1)	No	Subpart KK specifies applicability.
§ 63.1(b)(2)-(b)(3)	Yes.	
§ 63.1(c)(1)	Yes.	
§ 63.1(c)(2)	No	Area sources are not subject to subpart KK.
§ 63.1(c)(3)	No	Section reserved.
§ 63.1(c)(4)	Yes.	
§ 63.1(c)(5)	No.	
§ 63.1(c)(6)	Yes	
§ 63.1(d)	No	Section reserved.
§ 63.1(e)	Yes.	
§ 63.2	Yes	Additional definitions in subpart KK.
§ 63.3(a)-(c)	Yes.	
§ 63.4(a)(1)-(a)(3)	Yes.	
§ 63.4(a)(4)	No	Section reserved.
§ 63.4(a)(5)	Yes.	
§ 63.4(b)-(c)	Yes.	
§ 63.5(a)(1)-(a)(2)	Yes.	

General provisions reference	Applicable to subpart KK	Comment
§ 63.5(b)(1)	Yes.	
§ 63.5(b)(2)	No	Section reserved.
§ 63.5(b)(3)-(b)(6)	Yes.	
§ 63.5(c)	No	Section reserved.
§ 63.5(d)	Yes.	
§ 63.5(e)	Yes.	
§ 63.5(f)	Yes.	
§ 63.6(a)	Yes.	
§ 63.6(b)(1)-(b)(5)	Yes.	
§ 63.6(b)(6)	No	Section reserved.
§ 63.6(b)(7)	Yes.	
§ 63.6(c)(1)-(c)(2)	Yes.	
§ 63.6(c)(3)-(c)(4)	No	Sections reserved.
§ 63.6(c)(5)	Yes.	
§ 63.6(d)	No	Section reserved.
§ 63.6(e)(1)(i)	No	See 63.823(b) for general duty requirement. Any cross-reference to 63.6(e)(1)(i) in any other general provision incorporated by reference shall be treated as a cross-reference to 63.823(b).

General provisions reference	Applicable to subpart KK	Comment
§ 63.6(e)(1)(ii)	No	
§ 63.6(e)(1)(iii)	Yes.	
§ 63.6(e)(2)	No	Section reserved.
§ 63.6(e)(3)	No	
§ 63.6(f)(1)	No	
§ 63.6(f)(2)-(f)(3)	Yes.	
§ 63.6(g)	Yes.	
§ 63.6(h)	No	Subpart KK does not require COMS.
§ 63.6(i)(1)-(i)(14)	Yes.	
§ 63.6(i)(15)	No	Section reserved.
§ 63.6(i)(16)	Yes.	
§ 63.6(j)	Yes.	
§ 63.7(a)-(d)	Yes.	
§ 63.7(e)(1)	No	See 63.827 introductory text. Any cross-reference to 63.7(e)(1) in any other general provision incorporated by reference shall be treated as a cross-reference to 63.827 introductory text.
§ 63.7(e)(2)-(e)(4)	Yes.	
§ 63.8(a)(1)-(a)(2)	Yes.	
§ 63.8(a)(3)	No	Section reserved.

General provisions reference	Applicable to subpart KK	Comment
§ 63.8(a)(4)	No	Subpart KK specifies the use of solvent recovery devices or oxidizers.
§ 63.8(b)	Yes.	
§ 63.8(c)(1)-(3)	Yes.	
§ 63.8(c)(4)	No	Subpart KK specifies CMS sampling requirements.
§ 63.8(c)(5)	No	Subpart KK does not require COMS.
§ 63.8(c)(6)-(c)(8)	Yes	Provisions for COMS are not applicable.
§ 63.8(d)(1)-(2)	Yes.	
§ 63.8(d)(3)	Yes, except for last sentence.	
§ 63.8(e)-(f)	Yes.	
§ 63.8(g)	No	Subpart KK specifies CMS data reduction requirements.
§ 63.9(a)	Yes.	
§ 63.9(b)(1)	Yes.	
§ 63.9(b)(2)	Yes	Initial notification submission date extended.
§ 63.9(b)(3)-(b)(5)	Yes.	
§ 63.9(c)-(e)	Yes.	
§ 63.9(f)	No	Subpart KK does not require opacity and visible emissions observations.
§ 63.9(g)	Yes	Provisions for COMS are not applicable.

General provisions reference	Applicable to subpart KK	Comment
§ 63.9(h)(1)-(h)(3)	Yes.	
§ 63.9(h)(4)	No	Section reserved.
§ 63.9(h)(5)-(h)(6)	Yes.	
§ 63.9(i)	Yes.	
§ 63.9(j)	Yes.	
§ 63.9(k)	Yes	Only as specified in 63.9(j).
§ 63.10(a)	Yes.	
§ 63.10(b)(1)	Yes.	
§ 63.10(b)(2)(i)	No.	
§ 63.10(b)(2)(ii)	No	See 63.829(g) for recordkeeping of occurrence and duration of malfunctions. See 63.829(h) for recordkeeping of actions taken during malfunction. Any cross-reference to 63.10(b)(2)(ii) in any other general provision incorporated by reference shall be treated as a cross-reference to 63.829(g).
§ 63.10(b)(2)(iii)	Yes.	
§ 63.10(b)(2)(iv)-(b)(2)(v)	No.	
§ 63.10(b)(2)(vi)-(b)(2)(xiv)	Yes.	
§ 63.10(b)(3)	Yes.	
§ 63.10(c)(1)	Yes.	

General provisions reference	Applicable to subpart KK	Comment
§ 63.10(c)(2)-(c)(4)	No	Sections reserved.
§ 63.10(c)(5)-(c)(8)	Yes.	
§ 63.10(c)(9)	No	Section reserved.
§ 63.10(c)(10)	No	See 63.830(b)(6)(v) for reporting malfunctions. Any cross-reference to 63.10(c)(10) in any other general provision incorporated by reference shall be treated as a cross-reference to 63.830(b)(6)(v).
§ 63.10(c)(11)	No	See 63.830(b)(6)(v) for reporting malfunctions. Any cross-reference to 63.10(c)(11) in any other general provision incorporated by reference shall be treated as a cross-reference to 63.830(b)(6)(v).
§ 63.10(c)(12)-(c)(14)	Yes.	
§ 63.10(c)(15)	No.	
§ 63.10(d)(1)-(d)(2)	Yes.	
§ 63.10(d)(3)	No	Subpart KK does not require opacity and visible emissions observations.
§ 63.10(d)(4)	Yes.	
§ 63.10(d)(5)	No.	
§ 63.10(e)	Yes	Provisions for COMS are not applicable.
§ 63.10(f)	Yes.	
§ 63.11	No	Subpart KK specifies the use of solvent recovery devices or

General provisions reference	Applicable to subpart KK	Comment
		oxidizers.
§ 63.12	Yes.	
§ 63.13	Yes.	
§ 63.14	Yes.	
§ 63.15	Yes.	

[61 FR 27140, May 30, 1996, as amended at 76 FR 22598, Apr. 21, 2011; 85 FR 73895, Nov. 19, 2020]

Appendix A to Subpart KK of Part 63 - Data Quality Objective and Lower Confidence Limit Approaches for Alternative Capture Efficiency Protocols and Test Methods

1. Introduction

1.1 Alternative capture efficiency (CE) protocols and test methods that satisfy the criteria of either the data quality objective (DQO) approach or the lower confidence limit (LCL) approach are acceptable under § 63.827(f). The general criteria for alternative CE protocols and test methods to qualify under either the DQO or LCL approach are described in section 2. The DQO approach and criteria specific to the DQO approach are described in section 3. The LCL approach and criteria specific to the LCL approach are described in section 4. The recommended reporting for alternative CE protocols and test methods are presented in section 5. The recommended recordkeeping for alternative CE protocols and test methods are presented in section 6.

1.2 Although the Procedures L, G.1, G.2, F.1, and F.2 in § 52.741 of part 52 were developed for TTE and BE testing, the same procedures can also be used in an alternative CE protocol. For example, a traditional liquid/gas mass balance CE protocol could employ Procedure L to measure liquid VOC input and Procedure G.1 to measure captured VOC.

2. General Criteria for DQO and LCL Approaches

2.1 The following general criteria must be met for an alternative capture efficiency protocol and test methods to qualify under the DQO or LCL approach.

2.2 An alternative CE protocol must consist of at least three valid test runs. Each test run must be at least 20 minutes long. No test run can be longer than 24 hours.

2.3 All test runs must be separate and independent. For example, liquid VOC input and output must be determined independently for each run. The final liquid VOC sample from one run cannot be the initial sample for another run. In addition, liquid input for an entire day cannot be apportioned among test runs based on production.

2.4 Composite liquid samples cannot be used to obtain an "average composition" for a test run. For example, separate initial and final coating samples must be taken and analyzed for each run; initial and final samples cannot be combined prior to analysis to derive an "average composition" for the test run.

2.5 All individual test runs that result in a CE of greater than 105 percent are invalid and must be discarded.

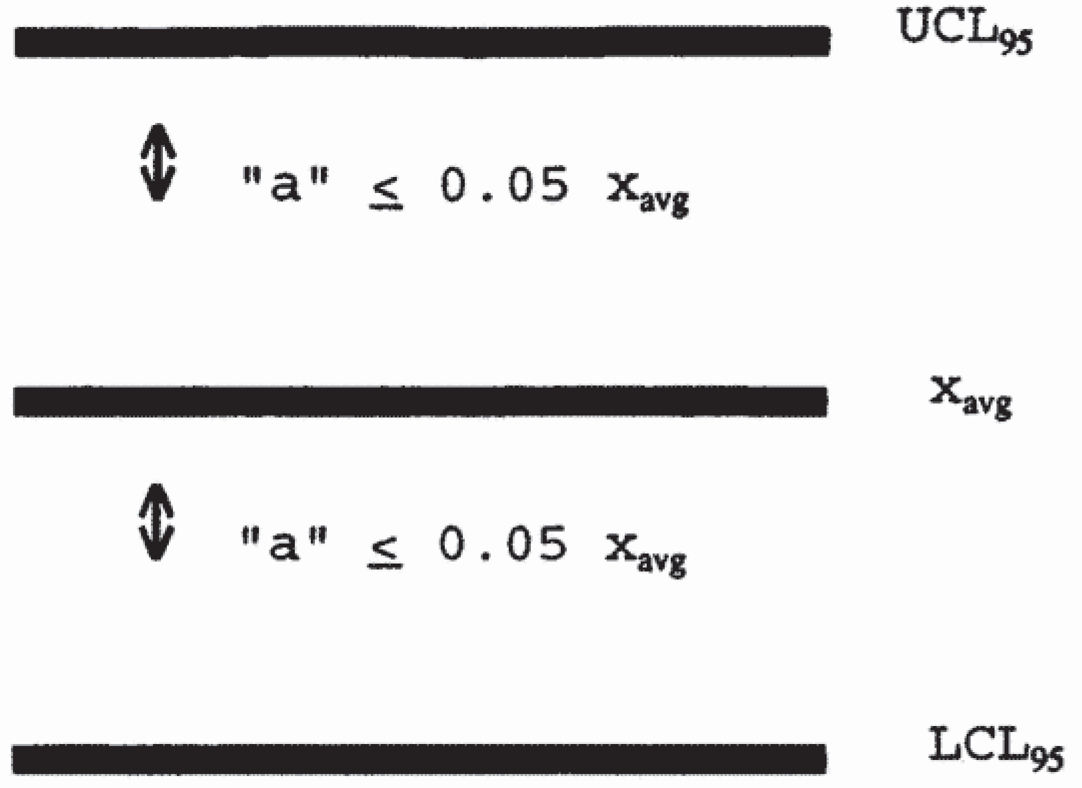
2.6 If the source can demonstrate to the regulatory agency that a test run should not be considered due to an identified testing or analysis error such as spillage of part of the sample during shipping or an upset or improper operating conditions that is not considered part of normal operation then the test result for that individual test run may be discarded. This limited exception allows sources to discard as "outliers" certain individual test runs without replacing them with a valid test run as long as the facility has at least three valid test runs to use when calculating its DQO or LCL. This exception is limited solely to test runs involving the types of errors identified above.

2.7 All valid test runs that are conducted must be included in the average CE determination. The individual test run CE results and average CE results cannot be truncated (i.e., 105 percent cannot be reported as 100 + percent) for purposes of meeting general or specific criteria for either the DQO or the LCL. If the DQO is satisfied and the average CE is greater than 100, then 100 percent CE must be considered the result of the test.

2.8 Alternative test methods for measuring VOC concentration must include a three-point calibration of the gas analysis instrument in the expected concentration range.

3. Data Quality Objective Approach

3.1 The purpose of the DQO is to allow sources to use alternative CE protocols and test methods while ensuring reasonable precision consistent with pertinent requirements of the Clean Air Act. In addition to the general criteria described in section 2, the specific DQO criterion is that the width of the two-sided 95 percent confidence interval of the mean measured value must be less than or equal to 10 percent of the mean measured value (see Figure 1). This ensures that 95 percent of the time, when the DQO is met, the actual CE value will be ±5 percent of the mean measured value (assuming that the test protocol is unbiased).



3.2 The DQO calculation is made as follows using Equations 1 and 2:

$$P = \left[\frac{a}{x_{avg}} \right] 100 \qquad \text{Eq. 1} \qquad a = \frac{t_{0.975} s}{\sqrt{n}} \qquad \text{Eq. 2}$$

Where:

a = Distance from the average measured CE value to the endpoints of the 95-percent (two-sided) confidence interval for the measured value.

n = Number of valid test runs.

P = DQO indicator statistic, distance from the average measured CE value to the endpoints of the 95-percent (two-sided) confidence interval, expressed as a percent of the average measured CE value.

s = Sample standard deviation.

$t_{0.975}$ = t-value at the 95-percent (two-sided) confidence level (see Table A-1).

x_{avg} = Average measured CE value (calculated from all valid test runs).

x_i = The CE value calculated from the ith test run.

Table A-1 - t-Values

Number of valid test runs, n	$t_{0.975}$	$t_{0.90}$
1 or 2	N/A	N/A
3	4.303	1.886
4	3.182	1.638
5	2.776	1.533
6	2.571	1.476
7	2.447	1.440
8	2.365	1.415
9	2.306	1.397
10	2.262	1.383
11	2.228	1.372
12	2.201	1.363
13	2.179	1.356
14	2.160	1.350
15	2.145	1.345
16	2.131	1.341
17	2.120	1.337
18	2.110	1.333
19	2.101	1.330
20	2.093	1.328

Number of valid test runs, n	$t_{0.975}$	$t_{0.90}$
21	2.086	1.325

3.3 The sample standard deviation and average CE value are calculated using Equations 3 and 4 as follows:

$$s = \left[\frac{\sum_{i=1}^{n} \left(x_i - x_{avg} \right)^2}{n-1} \right]^{0.5} \quad \text{Eq 3}$$

$$x_{avg} = \frac{\sum_{i=1}^{n} x_i}{n} \quad \text{Eq 4}$$

3.4 The DQO criteria are achieved when all of the general criteria in section 2 are achieved and P ≤5 percent (i.e., the specific DQO criterion is achieved). In order to meet this objective, facilities may have to conduct more than three test runs. Examples of calculating P, given a finite number of test runs, are shown below. (For purposes of this example it is assumed that all of the general criteria are met.)

3.5 Facility A conducted a CE test using a traditional liquid/gas mass balance and submitted the following results and the calculations shown in Equations 5 and 6:

Run	**CE**
1	96.1
2	105.0
3	101.2

Therefore:

$n = 3$

$t_{0.975} = 4.30$

$x_{avg} = 100.8$

$s = 4.51$

$$a = \frac{(4.30)(4.51)}{\sqrt{n}} = 11.20 \qquad \text{Eq 5}$$

$$P = \frac{11.2}{100.8}100 = 11.11 \qquad \text{Eq 6}$$

3.6 Since the facility did not meet the specific DQO criterion, they ran three more test runs.

Run	CE
4	93.2
5	96.2
6	87.6

3.7 The calculations for Runs 1-6 are made as follows using Equations 7 and 8:

$n = 6$

$t_{0.975} = 2.57$

$x_{avg} = 96.6$

$s = 6.11$

$$a = \frac{(2.57)(6.11)}{\sqrt{6}} = 6.41 \qquad \text{Eq 7} \; P = \frac{6.41}{96.6}100 = 6.64 \qquad \text{Eq 8}$$

3.8 The facility still did not meet the specific DQO criterion. They ran three more test runs with the following results:

Run	CE
7	92.9
8	98.3
9	91.0

3.9 The calculations for Runs 1-9 are made as follows using Equations 9 and 10:

$n = 9$

$t_{0.975} = 2.31$

$x_{avg} = 95.7$

$s = 5.33$

$$a = \frac{(2.31)(5.33)}{\sqrt{9}} = 4.10 \qquad \text{Eq 9} \qquad P = \frac{4.10}{95.7}100 = 4.28 \qquad \text{Eq 10}$$

3.10 Based on these results, the specific DQO criterion is satisfied. Since all of the general criteria were also satisfied, the average CE from the nine test runs can be used to determine compliance.

4. Lower Confidence Limit Approach

4.1 The purpose of the LCL approach is to provide sources, that may be performing much better than their applicable regulatory requirement, a screening option by which they can demonstrate compliance. The approach uses less precise methods and avoids additional test runs which might otherwise be needed to meet the specific DQO criterion while still being assured of correctly demonstrating compliance. It is designed to reduce “false positive” or so called “Type II errors” which may erroneously indicate compliance where more variable test methods are employed. Because it encourages CE performance greater than that required in exchange for reduced compliance demonstration burden, the sources that successfully use the LCL approach could produce emission reductions beyond allowable emissions. Thus, it could provide additional benefits to the environment as well.

4.2 The LCL approach compares the 80 percent (two-sided) LCL for the mean measured CE value to the applicable CE regulatory requirement. In addition to the general criteria described in section 2, the specific LCL criteria are that either the LCL be greater than or equal to the applicable CE regulatory requirement or that the specific DQO criterion is met. A more detailed description of the LCL approach follows:

4.3 A source conducts an initial series of at least three runs. The owner or operator may choose to conduct additional test runs during the initial test if desired.

4.4 If all of the general criteria are met and the specific DQO criterion is met, then the average CE value is used to determine compliance.

4.5 If the data meet all of the general criteria, but do not meet the specific DQO criterion; and the average CE, using all valid test runs, is above 100 percent then the test sequence cannot be used to calculate the LCL. At this point the facility has the option of

(a) conducting more test runs in hopes of meeting the DQO or of bringing the average CE for all test runs below 100 percent so the LCL can be used or

(b) discarding all previous test data and retesting.

4.6 The purpose of the requirement in Section 4.5 is to protect against protocols and test methods which may be inherently biased high. This is important because it is impossible to have an actual CE greater than 100 percent and the LCL approach only looks at the lower end variability of the test results. This is different from the DQO which allows average CE values up to 105 percent because the DQO sets both upper and lower limits on test variability.

4.7 If at any point during testing the results meet the DQO, the average CE can be used for demonstrating compliance with the applicable regulatory requirement. Similarly, if the average CE is below 100 percent then the LCL can be used for demonstrating compliance with the applicable regulatory requirement without regard to the DQO.

4.8 The LCL is calculated at an 80 percent (two-sided) confidence level as follows using Equation 11:

$$LC_1 = x_{avg} - \frac{t_{0.90}s}{\sqrt{n}} \qquad \text{Eq. 11}$$

Where:

LC_1 = LCL at an 80-percent (two-sided) confidence level.

n = Number of valid test runs.

s = Sample standard deviation.

$t_{0.90}$ = t-value at the 80-percent (two-sided) confidence level (see Table A-1).

x_{avg} = Average measured CE value (calculated from all valid test runs).

4.9 The resulting LC_1 is compared to the applicable CE regulatory requirement. If LC_1 exceeds (i.e., is higher than) the applicable regulatory requirement, then a facility is in initial compliance. However, if the LC_1 is below the CE requirement, then the facility must conduct additional test runs. After this point the test results will be evaluated not only looking at the LCL, but also the DQO of ±5 percent of the mean at a 95 percent confidence level. If the test results with the additional test runs meet the DQO before the LCL exceeds the applicable CE regulatory requirement, then the average CE value will be compared to the applicable CE regulatory requirement for determination of compliance.

4.10 If there is no specific CE requirement in the applicable regulation, then the applicable CE regulatory requirement is determined based on the applicable regulation and an acceptable destruction efficiency test. If the applicable regulation requires daily compliance and the latest CE compliance demonstration was made using the LCL approach, then the calculated LC_1 will be the highest CE value which a facility is allowed to claim until another CE demonstration test is conducted. This last requirement is necessary to assure both sufficiently reliable test results in all circumstances and the potential environmental benefits referenced above.

4.11 An example of calculating the LCL is shown below. Facility B's applicable regulatory requirement is 85 percent CE. Facility B conducted a CE test using a traditional liquid/gas mass balance and submitted the following results and the calculation shown in Equation 12:

Run	CE
1	94.2
2	97.6
3	90.5

Therefore:

$n = 3$

$t_{0.90} = 1.886$

$x_{avg} = 94.1$

$s = 3.55$

$$LC_1 = 94.1 - \frac{(1.886)\,(3.55)}{\sqrt{3}} = 90.23 \qquad \text{Eq 12}$$

4.12 Since the LC_1 of 90.23 percent is above the applicable regulatory requirement of 85 percent then the facility is in compliance. The facility must continue to accept the LC_1 of 90.23 percent as its CE value until a new series of valid tests is conducted. (The data generated by Facility B do not meet the specific DQO criterion.)

5. Recommended Reporting for Alternative CE Protocols

5.1 If a facility chooses to use alternative CE protocols and test methods that satisfy either the DQO or LCL and the additional criteria in section 4., the following information should be submitted with each test report to the appropriate regulatory agency:

1. A copy of all alternative test methods, including any changes to the EPA reference methods, QA/QC procedures and calibration procedures.

2. A table with information on each liquid sample, including the sample identification, where and when the sample was taken, and the VOC content of the sample;

3. The coating usage for each test run (for protocols in which the liquid VOC input is to be determined);

4. The quantity of captured VOC measured for each test run;

5. The CE calculations and results for each test run;

6. The DQO or LCL calculations and results; and

7. The QA/QC results, including information on calibrations (e.g., how often the instruments were calibrated, the calibration results, and information on calibration gases, if applicable).

6. Recommended Recordkeeping for Alternative CE Protocols.

6.1 A record should be kept at the facility of all raw data recorded during the test in a suitable form for submittal to the appropriate regulatory authority upon request.

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