



ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 63

[EPA–HQ–OAR–2018–0416; FRL-10006-74-OAR]

RIN 20660-AU22

National Emission Standards for Hazardous Air Pollutants: Paper and Other Web Coating Residual Risk and Technology Review

AGENCY: Environmental Protection Agency (EPA).

ACTION: Final rule.

SUMMARY: This action finalizes the residual risk and technology review (RTR) conducted for the Paper and Other Web Coating (POWC) source category regulated under national emission standards for hazardous air pollutants (NESHAP). The Agency is finalizing the proposed determination that risks due to emissions of air toxics are acceptable from this source category and that the current NESHAP provides an ample margin of safety to protect public health. Further, the U.S. Environmental Protection Agency (EPA) identified no new cost-effective controls under the technology review that would achieve significant further emissions reductions, and, thus, is finalizing the proposed determination that no revisions to the standards are necessary based on developments in practices, processes, or control technologies. In addition, the Agency is taking final action addressing startup, shutdown, and malfunction (SSM). These final amendments address emissions during SSM events, add a compliance demonstration equation that accounts for retained volatiles in the coated web; add repeat testing and electronic reporting requirements; and make technical and editorial changes. The EPA is making these amendments to improve the effectiveness of the NESHAP, and although these amendments are not expected

to reduce emissions of hazardous air pollutants (HAP), they will improve monitoring, compliance, and implementation of the rule.

DATES: This final rule is effective on July 9, 2020. The incorporation by reference (IBR) of certain publications listed in the rule is approved by the Director of the **Federal Register** as of July 9, 2020. The IBR of certain other publications listed in the rule is approved by the Director of the **Federal Register** as of December 4, 2002.

ADDRESSES: The EPA has established a docket for this action under Docket ID No. EPA-HQ-OAR-2018-0416. All documents in the docket are listed on the <https://www.regulations.gov/> website. Although listed, some information is not publicly available, *e.g.*, Confidential Business Information (CBI) or other information whose disclosure is restricted by statute. Certain other material, such as copyrighted material, is not placed on the Internet and will be publicly available only in hard copy form. Publicly available docket materials are available either electronically through <https://www.regulations.gov/>, or in hard copy at the EPA Docket Center, WJC West Building, Room Number 3334, 1301 Constitution Ave., NW, Washington, DC. The Public Reading Room hours of operation are 8:30 a.m. to 4:30 p.m. Eastern Standard Time (EST), Monday through Friday. The telephone number for the Public Reading Room is (202) 566-1744, and the telephone number for the Docket Center is (202) 566-1742.

FOR FURTHER INFORMATION CONTACT: For questions about this final action, contact Dr. Kelley Spence, Sector Policies and Programs Division (E143-03), Office of Air Quality Planning and Standards, U.S. Environmental Protection Agency, Research Triangle Park, North Carolina 27711; telephone number: (919) 541-3158; fax number: (919) 541-0516; and email address: spence.kelley@epa.gov. For specific information regarding the risk modeling methodology, contact Mr. James Hirtz, Health and Environmental Impacts Division (C539-02),

Office of Air Quality Planning and Standards, U.S. Environmental Protection Agency, Research Triangle Park, North Carolina 27711; telephone number: (919) 541-0881; fax number: (919) 541-0840; and email address: *hirtz.james@epa.gov*. For information about the applicability of the NESHAP to a particular entity, contact Mr. John Cox, Office of Enforcement and Compliance Assurance, U.S. Environmental Protection Agency, WJC South Building (Mail Code 2221A), 1200 Pennsylvania Ave., NW, Washington, DC 20460; telephone number: (202) 564-1395; and email address: *cox.john@epa.gov*.

SUPPLEMENTARY INFORMATION:

Preamble acronyms and abbreviations. The EPA uses multiple acronyms and terms in this preamble. While this list may not be exhaustive, to ease the reading of this preamble and for reference purposes, the EPA defines the following terms and acronyms here:

ASME	American Society of Mechanical Engineers
ASTM	American Society for Testing and Materials
CAA	Clean Air Act
CDX	Central Data Exchange
CEDRI	Compliance and Emissions Data Reporting Interface
CFR	Code of Federal Regulations
EPA	Environmental Protection Agency
ERT	Electronic Reporting Tool
HAP	hazardous air pollutant(s)
HI	hazard index
IBR	incorporation by reference
ICR	Information Collection Request
km	kilometer
MACT	maximum achievable control technology
MIR	maximum individual risk
NESHAP	national emission standards for hazardous air pollutants
NSPS	new source performance standards
NTTAA	National Technology Transfer and Advancement Act
OMB	Office of Management and Budget
PDF	portable document format
POWC	paper and other web coating
ppm	parts per million
ppmv	parts per million by volume
PRA	Paperwork Reduction Act

RFA	Regulatory Flexibility Act
RTR	residual risk and technology review
SSM	startup, shutdown, and malfunction
the Court	United States Court of Appeals for the District of Columbia Circuit
TOSHI	target organ-specific hazard index
tpy	tons per year
UMRA	Unfunded Mandates Reform Act
URE	unit risk estimate
U.S.C.	United States Code
VCS	voluntary consensus standards
VOC	volatile organic compound(s)

Background information. On September 19, 2019, the EPA proposed determinations regarding the POWC NESHAP RTR and proposed revisions to the NESHAP to address emissions during SSM events and improve monitoring, compliance, and implementation. In this action, the EPA is finalizing the proposed RTR determinations and additional revisions for the rule. The Agency summarizes the more significant comments we received regarding the proposed rule and provide our responses in this preamble. A summary of all other public comments on the proposal and the EPA’s responses to those comments is available in the *National Emissions Standards for Hazardous Air Pollutants: Paper and Other Web Coating (40 CFR Part 63, Subpart JJJJ) Residual Risk and Technology Review, Final Amendments – Response to Public Comments on September 19, 2019 Proposal*, in Docket ID No. EPA-HQ-OAR-2018-0416. A “track changes” version of the regulatory language that incorporates the changes in this action is available in the docket.

Organization of this document. The information in this preamble is organized as follows:

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I. General Information

A. Does this action apply to me?

Regulated entities. Categories and entities potentially regulated by this action are shown in Table 1 of this preamble.

TABLE 1. NESHAP AND INDUSTRIAL SOURCE CATEGORIES AFFECTED BY THIS FINAL ACTION

NESHAP and Source Category	NAICS ¹ Code
Paper and Other Web Coating	322220, 322121, 326113, 326112, 325992, 327993

¹ North American Industry Classification System.

Table 1 of this preamble is not intended to be exhaustive, but rather to provide a guide for readers regarding entities likely to be affected by the final action for the source category listed. To determine whether your facility is affected, you should examine the applicability criteria in the appropriate NESHAP. If you have any questions regarding the applicability of any aspect of this NESHAP, please contact the appropriate person listed in the preceding **FOR FURTHER INFORMATION CONTACT** section of this preamble.

B. Where can I get a copy of this document and other related information?

In addition to being available in the docket, an electronic copy of this final action will also be available on the Internet. Following signature by the EPA Administrator, the EPA will post a copy of this final action at: <https://www.epa.gov/stationary-sources-air-pollution/paper-and-other-web-coating-national-emission-standards-hazardous-0>. Following publication in the **Federal Register**, the EPA will post the **Federal Register** version and key technical documents at this same website.

Additional information is available on the RTR website at <https://www.epa.gov/stationary-sources-air-pollution/risk-and-technology-review-national->

emissions-standards-hazardous. This information includes an overview of the RTR program and links to project websites for the RTR source categories.

C. Judicial Review and Administrative Reconsideration

Under Clean Air Act (CAA) section 307(b)(1), judicial review of this final action is available only by filing a petition for review in the United States Court of Appeals for the District of Columbia Circuit (the Court) by **[INSERT DATE 60 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER]**. Under CAA section 307(b)(2), the requirements established by this final rule may not be challenged separately in any civil or criminal proceedings brought by the EPA to enforce the requirements.

Section 307(d)(7)(B) of the CAA further provides that only an objection to a rule or procedure which was raised with reasonable specificity during the period for public comment (including any public hearing) may be raised during judicial review. This section also provides a mechanism for the EPA to reconsider the rule if the person raising an objection can demonstrate to the Administrator that it was impracticable to raise such objection within the period for public comment or if the grounds for such objection arose after the period for public comment (but within the time specified for judicial review) and if such objection is of central relevance to the outcome of the rule. Any person seeking to make such a demonstration should submit a Petition for Reconsideration to the Office of the Administrator, U.S. EPA, Room 3000, WJC South Building, 1200 Pennsylvania Ave., NW, Washington, DC 20460, with a copy to both the person(s) listed in the preceding **FOR FURTHER INFORMATION CONTACT** section, and the Associate General Counsel for the Air and Radiation Law Office, Office of General Counsel (Mail Code 2344A), U.S. EPA, 1200 Pennsylvania Ave., NW, Washington, DC 20460.

II. Background

A. What is the statutory authority for this action?

Section 112 of the CAA establishes a two-stage regulatory process to address emissions of HAP from stationary sources. In the first stage, the Agency must identify categories of sources emitting one or more of the HAP listed in CAA section 112(b) and then promulgate technology-based NESHAP for those sources. “Major sources” are those that emit, or have the potential to emit, any single HAP at a rate of 10 tons per year (tpy) or more, or 25 tpy or more of any combination of HAP. For major sources, these standards are commonly referred to as maximum achievable control technology (MACT) standards and must reflect the maximum degree of emission reductions of HAP achievable (after considering cost, energy requirements, and non-air quality health and environmental impacts). In developing MACT standards, CAA section 112(d)(2) directs the EPA to consider the application of measures, processes, methods, systems, or techniques, including, but not limited to, those that reduce the volume of or eliminate HAP emissions through process changes, substitution of materials, or other modifications; enclose systems or processes to eliminate emissions; collect, capture, or treat HAP when released from a process, stack, storage, or fugitive emissions point; are design, equipment, work practice, or operational standards; or any combination of the above.

For these MACT standards, the statute specifies certain minimum stringency requirements, which are referred to as MACT floor requirements, and which may not be based on cost considerations. See CAA section 112(d)(3). For new sources, the MACT floor cannot be less stringent than the emission control achieved in practice by the best-controlled similar source. The MACT standards for existing sources can be less stringent than floors for new sources, but they cannot be less stringent than the average emission limitation achieved by the best-

performing 12 percent of existing sources in the category or subcategory (or the best-performing five sources for categories or subcategories with fewer than 30 sources). In developing MACT standards, the Agency must also consider control options that are more stringent than the floor under CAA section 112(d)(2). The EPA may establish standards more stringent than the floor, based on the consideration of the cost of achieving the emissions reductions, any non-air quality health and environmental impacts, and energy requirements.

In the second stage of the regulatory process, the CAA requires the EPA to undertake two different analyses, which we refer to as the technology review and the residual risk review. Under the technology review, the EPA must review the technology-based standards and revise them “as necessary (taking into account developments in practices, processes, and control technologies)” no less frequently than every 8 years, pursuant to CAA section 112(d)(6). Under the residual risk review, the EPA must evaluate the risk to public health remaining after application of the technology-based standards and revise the standards, if necessary, to provide an ample margin of safety to protect public health or to prevent, taking into consideration costs, energy, safety, and other relevant factors, an adverse environmental effect. The residual risk review is required within 8 years after promulgation of the technology-based standards, pursuant to CAA section 112(f). In conducting the residual risk review, if the EPA determines that the current standards provide an ample margin of safety to protect public health, it is not necessary

to revise the MACT standards pursuant to CAA section 112(f).¹ For more information on the statutory authority for this rule, see 84 FR 49382 (September 19, 2019).

B. What is the POWC source category and how does the NESHAP regulate HAP emissions from the source category?

The EPA promulgated the POWC NESHAP on December 4, 2002 (67 FR 72330). The standards are codified at 40 CFR part 63, subpart JJJJ. The POWC source category includes new and existing facilities that coat paper and other web substrates that are major sources of HAP emissions. For purposes of the regulation, a web is defined as a continuous substrate that is capable of being rolled at any point during the coating process. Further, a web coating line is any number of work stations, of which one or more applies a continuous layer of coating material along the entire width of a continuous web substrate or any portion of the width of the web substrate, and any associated curing/drying equipment between an unwind (or feed) station and a rewind (or cutting) station. The source category covered by this NESHAP currently includes 168 facilities.

Web coating operations covered by other NESHAP (*i.e.*, Printing and Publishing, 40 CFR part 63, subpart KK; Magnetic Tape, 40 CFR part 63, subpart EE; Metal Coil Coating, 40 CFR part 63, subpart SSSS; Fabric Coating, 40 CFR part 63, subpart OOOO), and research and

¹ The Court has affirmed this approach of implementing CAA section 112(f)(2)(A): *NRDC v. EPA*, 529 F.3d 1077, 1083 (D.C. Cir. 2008) (“If EPA determines that the existing technology-based standards provide an ‘ample margin of safety,’ then the Agency is free to readopt those standards during the residual risk rulemaking.”).

development lines are excluded from the requirements of 40 CFR part 63, subpart JJJJ. In addition, specific process exclusions include lithography, screen printing, letterpress, and narrow web flexographic printing.

Facilities subject to the POWC NESHAP utilize low-solvent coatings, add-on controls, or a combination of both to meet the organic HAP emission limits, as described in the preamble to the proposed rule (84 FR 49385, September 19, 2019). The NESHAP also includes various operating limits, initial and continuous compliance requirements, and recordkeeping and reporting requirements for the POWC source category. The EPA reviewed these requirements and are updating them as part of this action in conjunction with finalizing the RTR for this source category

C. What changes did we propose for the POWC source category in our September 19, 2019, proposal?

On September 19, 2019, the EPA published a proposed rule in the **Federal Register** for the POWC NESHAP, 40 CFR part 63, subpart JJJJ, that took into consideration the RTR analyses. As discussed in the preamble to the proposed rule, the technology review did not identify any developments in practices, processes, or control technologies that were widely applicable to the industry that would significantly reduce HAP emissions, and, therefore, the Agency did not propose any changes to the NESHAP based on the technology review. Further, as discussed in the preamble to the proposed rule, the risk analysis indicated no changes to the NESHAP are necessary to reduce risk to an acceptable level, to provide an ample margin of safety to protect public health, or to prevent an adverse environmental effect. In addition to and separate from the proposed determinations based on our RTR analyses, the EPA proposed the following:

- revisions to the SSM provisions of the NESHAP to ensure that they are consistent with the Court decision in *Sierra Club v. EPA*, 551 F. 3d 1019 (D.C. Cir. 2008), which vacated two provisions that exempted sources from the requirement to comply with otherwise applicable CAA section 112(d) emission standards during periods of SSM;
- a new compliance calculation to account for retained volatile organic content retained in the coated web;
- new periodic air emissions testing requirements for facilities that use non-recovery control devices;
- new reporting provisions requiring affected sources to electronically submit initial notifications, notification of compliance status, semiannual compliance reports, performance test reports, and performance evaluation reports;
- new temperature sensor validation requirements;
- operating parameter clarifications;
- IBR of several test methods; and
- technical and editorial changes to remove the Occupational Safety and Health Administration (OSHA)-defined carcinogens reference, clarify compliance demonstration options, clarify the definition of coating materials, add a web coating line usage threshold, add a printing activity exemption, clarify testing requirements, change applicability of sources using only non-HAP coatings, clarify oxidizer temperature monitoring compliance, and revise compliance report content requirements.

III. What is included in this final rule?

This action is finalizing the EPA's determinations pursuant to the RTR provisions of CAA section 112 for the POWC source category. This action is also finalizing other changes to the NESHAP, including revisions to the SSM requirements; a compliance calculation to account for retained volatile organic content retained in the coated web; periodic testing requirements for add-on control devices; electronic submittal of initial notifications, notification of compliance status, semiannual compliance reports, performance test reports, and performance evaluation reports; temperature sensor validation requirements; operating parameter clarifications; IBR of several test methods; and various technical and editorial changes.

A. What are the final rule amendments based on the risk review for the POWC source category?

The EPA proposed no changes to the POWC NESHAP based on the risk review conducted pursuant to CAA section 112(f). The EPA is finalizing the proposed determination that risks from the source category are acceptable, considering all of the health information and factors evaluated, and also considering risk estimation uncertainty. The Agency is also finalizing the proposed determination that revisions to the current standards are not necessary to reduce risk to an acceptable level, to provide an ample margin of safety to protect public health, or to prevent an adverse environmental effect. The EPA received no new data or other information during the public comment period that affected the proposed determinations. Therefore, the EPA is finalizing the proposed determination and making no revisions to the NESHAP based on the analyses conducted under CAA section 112(f), and we are readopting the standards.

B. What are the final rule amendments based on the technology review for the POWC source category?

In the proposed rule, the EPA proposed to determine that there are no developments in practices, processes, and control technologies that warrant revisions to the MACT standards for this source category. The EPA received no new data or other information during the public comment period that affected our proposed determinations. Therefore, the EPA is finalizing the proposed determination and making no revisions to the MACT standards under CAA section 112(d)(6).

C. What are the final rule amendments addressing emissions during periods of SSM?

The EPA proposed amendments to the POWC NESHAP to remove and revise provisions related to SSM. The EPA is finalizing the amendments, as proposed, with minor clarifications with this rulemaking. In its 2008 decision in *Sierra Club v. EPA*, 551 F.3d 1019 (D.C. Cir. 2008), the Court vacated portions of two provisions in the EPA's CAA section 112 regulations governing the emissions of HAP during periods of SSM. Specifically, the Court vacated the SSM exemption contained in 40 CFR 63.6(f)(1) and 40 CFR 63.6(h)(1), holding that under section 302(k) of the CAA, emissions standards or limitations must be continuous in nature and that the SSM exemption violates the CAA's requirement that some CAA section 112 standards apply continuously. As detailed in section IV.D of the preamble to the proposed rule (84 FR 49382, September 19, 2019), the amended POWC NESHAP requires that the standards apply at all times (see 40 CFR 63.3320(b)), consistent with the Court decision in *Sierra Club v. EPA*, 551 F.3d 1019 (D.C. Cir. 2008). In addition to eliminating the SSM exemption, the EPA has removed the requirement for sources to develop and maintain an SSM plan, as well as certain recordkeeping and reporting provisions related to the SSM exemption.

The EPA is finalizing the SSM provisions as proposed without setting a separate standard for startup and shutdown as discussed in the preamble to the proposed rule in section IV.D.

Further, the EPA is not finalizing standards for malfunctions. As discussed in the September 19, 2019, proposal, the EPA interprets CAA section 112 as not requiring emissions that occur during periods of malfunction to be factored into development of CAA section 112 standards, although the EPA has the discretion to set standards for malfunctions where feasible. For this action, it is unlikely that a malfunction would result in a violation of the standards, and no comments were submitted that would suggest otherwise. Refer to section IV.D of the preamble to the proposed rule for further discussion of the EPA's rationale for the decision not to set standards for malfunctions, as well as a discussion of the actions a source could take in the unlikely event that a source fails to comply with the applicable CAA section 112(d) standards as a result of a malfunction event.

As explained in more detail below, the EPA is finalizing revisions to the General Provisions table to 40 CFR part 63, subpart JJJJ, to eliminate requirements that include rule language providing an exemption for periods of SSM. Additionally, the EPA is finalizing our proposal to eliminate language related to SSM that treats periods of startup and shutdown the same as periods of malfunction, as explained further below. Finally, the EPA is finalizing the proposed amendments to revise the reporting and recordkeeping requirements as they relate to malfunctions, as further described below. As discussed in the preamble to the proposed rule, these revisions are consistent with the requirement in 40 CFR 63.3320(b) that the standards apply at all times. Refer to sections IV.C of this preamble for a detailed discussion of these amendments.

D. What other changes have been made to the NESHAP?

Other changes that have been made to the regulation include incorporation of a compliance calculation to account for retained volatile organic content retained in the coated

web; periodic performance testing requirements; electronic submittal of initial notifications, notification of compliance status, semiannual compliance reports, performance test reports, and performance evaluation reports; temperature sensor validation requirements; operating parameter clarifications; IBR of several test methods; and various technical and editorial changes. The EPA's analyses and changes related to these issues are discussed below.

Other changes to the NESHAP that do not fall into the categories in the previous section include:

- *Method for determining volatile organic matter retained in the coated web.* The EPA is finalizing the addition of an equation to account for volatile organic matter retained in the coated web as discussed in section IV.D of this preamble.
- *Periodic performance testing.* The EPA is finalizing a periodic testing requirement for non-recovery add-on control devices to ensure continued compliance, as discussed in section IV.E of this preamble.
- *Electronic reporting.* The EPA is finalizing amendments to the reporting requirements to require electronic reporting for initial notifications, notifications of compliance status, semiannual compliance reports, performance test reports, and performance evaluation reports, as discussed in section IV.F of this preamble.
- *Temperature sensor validation.* The EPA is finalizing amendments to remove the temperature sensor calibration requirement and replace it with validation requirements to ensure continued compliance, as discussed in section IV.G of this preamble.
- *Operating parameter clarification.* The EPA is finalizing, as proposed, an operating parameter clarification, as discussed in section IV.H of this preamble.

- *IBR under 1 CFR part 51.* The EPA is finalizing the IBR of several test methods, as discussed in section IV.I of this preamble.
- *Technical and editorial changes.* The EPA is finalizing technical and editorial changes, as discussed in section IV.J of this preamble.

E. What are the effective and compliance dates of the standards?

The revisions to the NESHAP being promulgated in this action are effective on July 9, 2020.² The compliance date for affected existing facilities is 365 days after the effective date of the final rule, with the exception of electronic reporting of semiannual reports. Affected source owners and operators that commence construction or reconstruction after September 19, 2019, must comply with all requirements of the subpart, including the amendments being finalized with this action (except for the electronic reporting of semiannual reports), no later than the effective date of the final rule or upon startup, whichever is later. All affected sources must use the Compliance and Emissions Data Reporting Interface (CEDRI) reporting template for semiannual reports for the subsequent semiannual reporting period after the form has been available in CEDRI for 1 year. All affected existing facilities must meet the current requirements of 40 CFR part 63, subpart JJJJ until the applicable compliance date of the amended rule.

As explained in the preamble to the proposed rule, the EPA proposed a compliance period of 180 days for existing sources because the amendments would impact ongoing compliance requirements (84 FR 79406, September 19, 2019). Two significant amendments, the

² This final action is not a “major rule” as defined by 5 U.S.C. 804(2), so the effective date of the final rule is the promulgation date as specified in CAA section 112(d)(10).

removal of the SSM exemption and the addition of electronic reporting, were determined to require additional time for changing reporting and recordkeeping systems. As stated in the preamble to the proposed rule, the EPA's experience with similar industries that are required to convert reporting mechanisms; install necessary hardware and software; become familiar with the process of submitting performance test results electronically through the EPA's CEDRI; test these new electronic submission capabilities; reliably employ electronic reporting; and convert logistics of reporting processes to different time-reporting parameters, shows that a time period of a minimum of 90 days, and more typically, 180 days, is generally necessary to successfully complete these changes. Our experience with similar industries further shows that owners or operators of this sort of regulated facility generally requires a time period of 180 days to read and understand the amended rule requirements; evaluate their operations to ensure that they can meet the standards during periods of startup and shutdown as defined in the rule, and make any necessary adjustments; adjust parameter monitoring and recording systems to accommodate revisions; and update their operations to reflect the revised requirements. The EPA recognizes the confusion that multiple compliance dates for individual requirements would create and the additional burden such an assortment of dates would impose.

In the preamble to the proposed rule, the EPA solicited comment on whether the 180-day compliance period was reasonable and specifically requested sources provide information regarding the specific actions they would need to undertake to comply with the amended rule. The EPA also noted that information provided in response to this request for comment could result in changes to the proposed compliance date (84 FR 49406, September 19, 2019). Comments were provided suggesting that 180 days was not enough time to comply with the proposed changes and that a minimum of 365 days was needed. Commenters noted that tasks

that would need to be completed during the compliance period were: develop site-specific implementation plan for changes to add-on control device requirements; review startup and shutdown procedures; reprogram electronic systems and automated alarms consistent with the removal of the SSM provisions; revise the oxidizer temperature operating limit; rework recordkeeping and reporting procedures and systems to match the new CEDRI form; develop and communicate guidance to ensure consistent implementation across a company's facilities; prepare permit applications; acquire new permits; and develop and provide training for facility staff on the amended requirements.

The EPA reviewed the information provided by commenters regarding tasks needed to be completed during the compliance period and agrees that 180 days is not sufficient time, particularly for implementing the changes to add-on control device requirements and for reworking recordkeeping and reporting procedures to comply with the amendments, including the removal of the SSM exemption. This source category needs additional time for these changes because of the complexity of the compliance calculations and the potential for a large variety of products to be produced on the same equipment (which requires multiple startup and shutdown events on a regular basis). From our assessment of the time frame needed for compliance with the entirety of the revised requirements and considering the public comments received, the EPA considers a period of 365 days to be the most expeditious compliance period practicable for the POWC source category, and, thus, the EPA is finalizing that existing affected sources must be in compliance with all of the POWC NESHAP amended requirements within 365 days of the effective date.

Additionally, comments were received from multiple commenters requesting more time to develop and train on the CEDRI semiannual reporting template. The Agency agrees with the

commenters that more time is needed to accurately develop the template and to train facility staff on its use. As such, the EPA is finalizing that the electronic reporting template is not required to be used for semiannual reports until it has been available in CEDRI for 1 year. To prevent two separate reports for one semiannual reporting period, the Agency is finalizing that the reporting template should be used for the first full semiannual reporting period after the template has been available in CEDRI for 1 year. For example, if the template becomes available in CEDRI on March 13, 2020, it would be used beginning with the report submitted for the July 2021 – December 2021 reporting period.

IV. What is the rationale for our final decisions and amendments for the POWC source category?

For each issue, this section provides a description of what the EPA proposed and what the EPA is finalizing for the issue, a summary of key comments and responses, and the EPA's rationale for the final decisions and amendments. For all comments not discussed in this preamble, comment summaries and the EPA's responses can be found in the comment summary and response document available in the docket (Docket ID No. EPA-HQ-OAR-2018-0416).

A. Residual Risk Review for the POWC Source Category

1. What did we propose pursuant to CAA section 112(f) for the POWC source category?

A residual risk analysis was conducted for the POWC source category. Details of the risk analysis can be found in section IV of the preamble to the proposed rule (84 FR 49382, September 19, 2019). The results of the risk analyses, and decisions on risk acceptability and ample margin of safety, as well as the results of the environmental risk screening assessment, are summarized here.

For the POWC source category risk assessment conducted prior to proposal, the EPA estimated risks based on actual and allowable emissions from POWC surface coating operations. The risk results for the POWC source category indicate that both the actual and allowable inhalation cancer risks to the individual most exposed are at least 14 times below the presumptive limit of acceptability of 100-in-1 million (*i.e.*, 1-in-10 thousand). The residual risk assessment for the POWC source category³ estimated cancer incidence rate at 0.005 cases per year based on actual emissions. Approximately 4,300 people are exposed to a cancer risk equal to or above 1-in-1 million from the source category based upon actual emissions from 11 facilities.

The maximum chronic noncancer target organ-specific hazard index (TOSHI) due to inhalation exposures is less than 1 for actual and allowable emissions. The results of the acute screening analysis show that acute risks are below a level of concern for the source category considering the conservative assumptions used that err on the side of overestimating acute risk.

Multipathway screen values are below a level of concern for both carcinogenic and non-carcinogenic persistent and bioaccumulative HAP as well as emissions of lead compounds. Maximum cancer and noncancer risks due to ingestion exposures using health-protective risk screening assumptions are below the presumptive limit of acceptability. The maximum estimated

³ *Residual Risk Assessment for the Paper and Other Web Coating Source Category in Support of the 2020 Risk and Technology Review Final Rule*, Docket ID No. EPA-HQ-OAR-2018-0416.

excess cancer risk is below 1-in-1 million and the maximum noncancer hazard quotient (HQ) for mercury is less than 1 based upon the Tier 1 farmer/fisher exposure scenario.

The risk assessment for the POWC source category is contained in the report titled *Residual Risk Assessment for the Paper and Other Web Coating Source Category in Support of the 2020 Risk and Technology Review Final Rule*, which can be found in the docket for this action (Docket ID No. EPA-HQ-OAR-2018-0416).

2. How did the risk review change for the POWC source category?

Neither the risk assessment nor the Agency's determinations regarding risk acceptability, ample margin of safety, or adverse environmental effects for the POWC source category have changed since the proposal was published on September 19, 2019. Therefore, the EPA is finalizing the risk review as proposed with no changes (84 FR 49398, September 19, 2019).

3. What key comments did we receive on the risk review, and what are our responses?

Comments were received regarding the risk assessment inputs the EPA used to conduct the POWC source category risk assessment. First, commenters noted that the acute emissions multipliers should be less than the value of 10 that the EPA used in its source category acute risk assessment. The EPA agrees with the commenters that an acute hourly multiplier of 10 likely over-estimates the emissions for this source category, however, we did not reanalyze acute risk for this final rulemaking because the risk values were already deemed acceptable using the multiplier of 10 for the proposal and would have been further reduced with a lower multiplier. Second, commenters noted that the EPA's risk assessment was "very conservative and likely overstates both annual and short-term HAP emission rates" because it used allowable emissions as actual emissions where no other data were available. The commenters are correct in their assessment that the EPA used allowable emissions as actual emissions when no other data were

available to ensure that the risk analysis did not underestimate the risk posed by the source category. Because risk was acceptable using this conservative approach and would have been reduced further if actual emissions data had been available, the results of this approach further supports the EPA's conclusion.

Additionally, comments were received regarding the risk assessment methods the EPA used to conduct the POWC source category risk assessment. Two commenters stated that the formaldehyde health value used in the risk assessment was not based on the best available science, and that the EPA should have used the value from the Chemical Industry Institute of Technology (CIIT) biologically-based dose-response model. We disagree with the commenters that the EPA should have used the CIIT formaldehyde value because the EPA has a tiered prioritized list of appropriate health benchmark values for use in the residual risk assessment, and in general, the hierarchy places greater weight on the EPA-derived health benchmarks than those from other organizations. Even though the commenters claim the Integrated Risk Information System (IRIS) value the EPA used was too high (*i.e.*, the value over-estimated risk), the EPA proposed, and is finalizing, that the risks from formaldehyde from this source category are acceptable.

Comments were also received supporting the EPA's use of the 99th percentile concentration for modeling acute risk. Overall, the EPA received no comments or new information demonstrating a need for the Agency to reanalyze risk for the final rulemaking, and, therefore, the risk assessment conducted for the proposed rule was used to support the Agency's conclusions for the final rule.

Additionally, the EPA received several comments supporting our conclusions relating to risk acceptability and that additional emissions reductions are not necessary to provide an ample

margin of safety. One commenter opposed our acceptability determination because the EPA did not consider risk from emission sources from other source categories. The EPA has the discretion to conduct a facility-wide risk assessment which factors in emissions from process equipment outside of the source category. The Agency examines facility-wide risks to provide additional context for the source category risks. The development of facility-wide risk estimates provides additional information about the potential cumulative risks in the vicinity of the source category emission units as one means of informing potential risk-based decisions about the source category in question. The Agency recognizes that, because these risk estimates were derived from facility-wide emission estimates which have not generally been subjected to the same level of engineering review as the source category emission estimates, they may be less certain than our risk estimates for the source category in question, but they remain important for providing context as long as their uncertainty is taken into consideration in the process.

For detailed comment summaries regarding the residual risk review and the corresponding responses, see the memorandum in the docket, *National Emission Standards for Hazardous Air Pollutants: Paper and Other Web Coating (40 CFR Part 63, Subpart JJJJ) Residual Risk and Technology Review, Final Amendments – Response to Public Comments on September 19, 2019 Proposal*.

4. What is the rationale for our final approach and final decisions for the risk review?

As noted in our proposal, the EPA sets standards under CAA section 112(f)(2) using “a two-step standard-setting approach, with an analytical first step to determine an ‘acceptable risk’ that considers all health information, including risk estimation uncertainty, and includes a presumptive limit on maximum individual risk (MIR) of ‘approximately 1-in-10 thousand’” (see 54 FR 38045, September 14, 1989). The EPA weighs all health risk factors in our risk

acceptability determination, including the cancer MIR, cancer incidence, the maximum TOSHI, the maximum acute noncancer HQ, the extent of noncancer risks, the distribution of cancer and noncancer risks in the exposed population, and the risk estimation uncertainties.

The EPA evaluated all of the comments on the risk review and determined that no changes to the review are needed. For the reasons explained in the proposal, the EPA determined that the risks from the POWC source category are acceptable, and the current standards provide an ample margin of safety to protect public health and prevent an adverse environmental effect. Therefore, pursuant to CAA section 112(f)(2), the EPA is finalizing the residual risk review as proposed.

B. Technology Review for the POWC Source Category

1. What did we propose pursuant to CAA section 112(d)(6) for the POWC source category?

Pursuant to CAA section 112(d)(6), the EPA proposed to conclude that no revisions to the current MACT standards for the POWC source category are necessary (84 FR 49382, September 19, 2019). As described in section III.B of the preamble to the proposed rule, the technology review focused on identifying developments in practices, processes, and control technologies for reduction of HAP emissions from POWC facilities. In conducting the technology review, the EPA searched for and reviewed information on practices, processes, and control technologies that were not considered during the development of the POWC NESHAP. The review included a search of the Reasonably Available Control Technology/Best Available Control Technology/Lowest Achievable Emission Rate (RACT/BACT/LAER) Clearinghouse database, reviews of title V permits for POWC facilities, site visits to facilities with POWC operations, and a review of relevant literature. We did not identify any developments in practices, processes, or control technologies that were widely applicable to the industry and

would significantly reduce HAP emissions, and, therefore, the EPA did not propose any changes to the NESHAP based on the technology review. For more details on the technology review, see the *Technology Review Analysis for the Paper and Other Web Coating Source Category* memorandum, in the docket for this rulemaking (Docket ID Item No. EPA-HQ-OAR-2018-0416-0086).

2. How did the technology review change for the POWC source category?

No new information was received to change the Agency's conclusions with respect to the technology review since the proposal was published on September 19, 2019. Therefore, the EPA is finalizing the proposed determination that no revisions to the NESHAP are necessary pursuant to CAA section 112(d)(6).

3. What key comments did we receive on the technology review, and what are our responses?

The EPA received no comments that identified improved control technology, work practices, operational procedures, process changes, or pollution prevention approaches to reduce emissions in the category since promulgation of the current NESHAP. The EPA received multiple supportive comments on the proposed technology review. For detailed comment summaries regarding the technology review and the corresponding responses, see the memorandum in the docket, *National Emission Standards for Hazardous Air Pollutants: Paper and Other Web Coating (40 CFR Part 63, Subpart JJJJ) Residual Risk and Technology Review, Final Amendments – Response to Public Comments on September 19, 2019 Proposal*.

4. What is the rationale for our final approach for the technology review?

The technology review did not identify any changes in practices, processes, or control technologies that would reduce emissions in this category. The EPA did not identify any control equipment not previously identified; improvements to existing controls; work practices, process

changes, or operational procedures not previously considered; or any new pollution prevention alternatives for this source category. We evaluated all of the comments on the technology review and determined that no changes to the review are needed, therefore, the EPA is finalizing the determination that no revisions to the NESHAP are necessary pursuant to CAA section 112(d)(6). Additional details of our technology review can be found in the memorandum titled *Technology Review Analysis for the Paper and Other Web Coating Source Category*, in the docket for this rulemaking (Docket ID Item No. EPA-HQ-OAR-2018-0416-0086).

C. Revisions to the SSM Provisions for the POWC Source Category

1. What did we propose pursuant to SSM provisions for the POWC source category?

The EPA proposed amendments to the POWC NESHAP to remove provisions related to SSM that are not consistent with the requirement that the standards apply at all times. More information concerning the elimination of SSM provisions is in the preamble to the proposed rule (84 FR 49399-49402, September 19, 2019).

2. How did the revisions to the SSM provisions change for the POWC source category?

The EPA is finalizing the SSM provisions as proposed with no changes.

3. What key comments did we receive on the SSM provisions, and what are our responses?

The EPA received several comments related to the proposed removal of the SSM provisions. One commenter believed that the EPA is not required to change the regulation to require sources to meet the emission standards at all times, including periods of SSM. The EPA disagrees with the commenter's assertion. The EPA believes the *Sierra Club* decision (*Sierra Club v. EPA*, 551 F.3d 1019) held that emission limitations under CAA section 112 must apply continuously and meet minimum stringency requirements, even during periods of SSM.

Consistent with this reading, the EPA proposed to remove the SSM exemption, and is finalizing

the removal with this action. Other commenters were generally supportive of the SSM exemption removal and noted that it would likely have minimal impacts on regulated facilities. For detailed comment summaries regarding the removal of the SSM exemption and the corresponding responses, see the memorandum in the docket, *National Emission Standards for Hazardous Air Pollutants: Paper and Other Web Coating (40 CFR Part 63, Subpart JJJJ) Residual Risk and Technology Review, Final Amendments – Response to Public Comments on September 19, 2019 Proposal*.

4. What is the rationale for our final approach and final decisions for the revisions to the SSM provisions?

The rationale for each of the amendments the EPA is finalizing to address SSM is in the preamble to the proposed rule (84 FR 49399-49402, September 19, 2019). After evaluation of the comments received, the EPA's rationale for revisions to the SSM provisions has not changed since proposal and we are finalizing the approach for removing the SSM provisions as proposed.

D. Method for Determining Volatile Organic Matter Retained in the Coated Web

1. What did we propose?

A portion of the HAP in coatings applied to paper and other web substrates may be retained in the web instead of being volatilized as air emissions. The existing NESHAP allows for the accounting of HAP retained in the coated web in 40 CFR 63.3360(g), but stakeholders indicated the requirement to “develop a testing protocol to determine the mass of volatile matter retained...and submit this protocol to the Administrator for approval” was vague and unworkable. As discussed in the preamble to the proposed rule (84 FR 49402, September 19, 2019), to provide clarity and reduce regulatory burden, the EPA proposed to incorporate the utilization of an emission factor to account for volatile organic matter retained in the coated web.

As discussed in the preamble to the proposed rule, the EPA proposed new language to allow facilities to account for retained volatile organics in their compliance demonstration calculations without requiring the submittal of an alternative monitoring request to the EPA under the provisions of 40 CFR 63.8(f).

2. What changed since proposal?

Two changes have been made to the proposed provisions for determining volatile organic matter retained in the coated web. First, the EPA has clarified that “retained in the web” means “retained in the coated web or otherwise not emitted.” Second, the EPA has added additional flexibility to allow any EPA-approved method, manufacturer’s emissions test data, or mass balance approach using modified EPA Method 24 to be used to develop the emission factor.

3. What are the key comments and what are our responses?

The EPA received comments from four commenters supporting the addition of the emission factor approach for determining the amount of volatile matter retained in the web. Commenters suggested that the EPA clarify that “retained in the web” means “retained in the coated web or otherwise not emitted.” The EPA agrees that this is an appropriate clarification and has revised the regulatory text accordingly.

The EPA also received comments suggesting that we allow other methods for developing the emission factor to determine the amount of volatile organic matter retained. Commenters specifically requested the ability to use other EPA-approved test methods, manufacturer’s emissions test data, or mass-balance type approaches using modified EPA Method 24. The EPA agrees that allowing the use of these methods would provide flexibility and still appropriately characterize emissions from the web coating process.

For detailed comment summaries regarding the methods used to determine the volatile organic matter retained in the coated web and the corresponding responses, see the memorandum in the docket, *National Emission Standards for Hazardous Air Pollutants: Paper and Other Web Coating (40 CFR Part 63, Subpart JJJJ) Residual Risk and Technology Review, Final Amendments – Response to Public Comments on September 19, 2019 Proposal*.

4. What is the rationale for our final approach to determining volatile matter retained in the coated web?

The EPA reviewed the public comments and are finalizing the proposed method of determining the volatile organic material retained in the coated web with two changes as a result of public comment. The EPA is clarifying that “retained in the web” means “retained in the coated web or otherwise not emitted” in the regulatory text and is allowing for additional test methods for use in the development of the emission factor. Both of these changes provide regulatory clarity and flexibility, but still appropriately characterize emissions from the web coating process. The amendments add compliance flexibility and reduce regulatory burden but do not alter the emission standard. This approach quantifies emissions in a way that is representative of the actual emissions from the coating operations instead of assuming that all coating-HAP is emitted.

E. Periodic Performance Testing

1. What did we propose?

The EPA proposed that facilities that use non-recovery control devices (*e.g.*, thermal and catalytic oxidizers) must conduct periodic air emissions performance testing, with the first of the periodic performance tests to be conducted within 3 years of the effective date of the revised standards and thereafter every 5 years following the previous test. The EPA also proposed that

facilities using the emission factor approach to account for volatile matter retained in the web must conduct periodic performance testing every 5 years to re-establish the emission factor.

2. What changed since proposal?

The periodic performance testing requirements for catalytic oxidizers and those for emission factor development have changed since the September 2019 proposal in response to public comment. For catalytic oxidizers, commenters suggested that annual catalyst activity testing would be more indicative of oxidizer operation than 5-year inlet/outlet emissions testing. The EPA is therefore finalizing that catalytic oxidizers may do an annual catalyst activity test instead of the 5-year inlet/outlet emissions testing. The EPA is finalizing periodic performance testing requirements for thermal oxidizers as proposed (84 FR 49403, September 19, 2019). The EPA has clarified that the testing is only required for add-on control devices used to demonstrate compliance with the POWC NESHAP. The EPA is not finalizing the 5-year requirement to re-establish emission factors used in determining the amount of volatile organics retained in the coated web for 40 CFR 63.3360(g), but is finalizing a requirement that periodic performance testing be done if there is a change in coating formulation, operation conditions, or other change that could reasonably result in increased emissions since the time of the last test used to establish the emission factor.

3. What are the key comments and what are our responses?

Comments were received both opposing and supporting the proposed 5-year periodic emissions testing requirements. Commenters that opposed the requirements noted that oxidizers are not used continuously in the flexible packaging industry but only when compliant coatings are not used and stated that testing does not show any evidence of degradation in thermal oxidizers. Commenters noted that degradation may occur when a catalytic oxidizer is used to

control a process using silicon-containing coatings, but that a catalyst activity test would be more appropriate to determine performance. The EPA has reviewed these comments and is finalizing repeat emissions performance testing for catalytic oxidizers with the alternative to perform an annual catalyst activity test. The EPA is finalizing the periodic emissions performance test requirements for thermal oxidizers, as proposed. Both requirements can be found in 40 CFR 63.3360(a)(2).

Commenters suggested that periodic performance testing for re-establishment of emission factors, such as for reactive coatings, is not necessary in most cases and would be excessively burdensome and unnecessary, except if the product's formulation or its process conditions have changed in a way that would increase emissions. The EPA has reviewed the commenters concerns and agrees that repeat testing to re-establish emission factors for coatings used in the POWC industry every 5 years could be burdensome and is not finalizing this requirement in this action.

Commenters requested clarification that the first periodic emissions performance test can be conducted within either 3 years of promulgation of the final amendments or within 60 months of the previous test, whichever is later, to ensure that any facility that has recently conducted a performance test will have the full 5 years between tests. The EPA intended that performance tests recently performed (within 3 years of promulgation of the final amendments) can count towards the first periodic testing requirements. Commenters also requested clarification if state-required volatile organic compound (VOC) performance testing or HAP performance testing performed for another MACT can count towards this requirement. The EPA agrees that both testing for VOC destruction efficiency and HAP destruction efficiency for another subpart are appropriate substitutions for the periodic testing requirements in the POWC NESHAP because

these tests will demonstrate ongoing performance of the control device. Both of these issues have been clarified in 40 CFR 63.3330(a)(2).

Commenters requested clarification that only control devices used to demonstrate compliance with the POWC NESHAP would need to be tested, and that VOC tests required by the state permitting authority could be used to meet the proposed requirements. The EPA agrees with the commenters that add-on control devices not used to demonstrate compliance with the POWC NESHAP (*i.e.*, those used to demonstrate compliance with new source performance standards (NSPS) or state VOC requirements) are not required to be tested under the POWC NESHAP amendments. The EPA also agrees that VOC tests required by the state permitting authority could be used to meet the POWC repeat testing requirements. The EPA's proposal was not intended to impose duplicative testing requirements. Regulatory text has been amended throughout the NESHAP to state that the requirements for add-on control devices are only for those used to demonstrate compliance with 40 CFR 63.3320, and that VOC tests required by state permitting authorities can be used to meet the repeat performance testing requirements.

For detailed comment summaries regarding the repeat testing provisions and the corresponding responses, see the memorandum in the docket, *National Emission Standards for Hazardous Air Pollutants: Paper and Other Web Coating (40 CFR Part 63, Subpart JJJJ) Residual Risk and Technology Review, Final Amendments – Response to Public Comments on September 19, 2019 Proposal*.

4. What is the rationale for our final approach and final decisions for the periodic emissions testing requirement?

Although ongoing monitoring of operating parameters is required by the existing POWC NESHAP, as the control device ages over time, the destruction efficiency of the control device

can be compromised due to various factors. These factors are discussed in more detail in the memorandum titled *Revised Periodic Testing of Control Devices Used to Comply with the Paper and Other Web Coating NESHAP*, in the docket for this rulemaking (Docket ID No. EPA-HQ-OAR-2018-0416). After considering the comments discussed above and based on the need for vigilance in maintaining the control device equipment, the EPA is finalizing the requirement for periodic testing of thermal oxidizers once every 5 years and the alternative of annual catalyst activity tests for catalytic oxidizers.

F. Electronic Reporting

1. What did we propose?

The EPA proposed amendments to the POWC NESHAP to require owners and operators of POWC facilities to submit electronic copies of required performance test reports (40 CFR 63.3400(f)), performance evaluation reports (40 CFR 63.3400(g)), initial notifications (40 CFR 63.3400(b)), notification of compliance status (40 CFR 63.3400(e)), and semiannual compliance reports (40 CFR 63.3400(c)) through the EPA's Central Data Exchange (CDX) using CEDRI. A description of the electronic data submission process is provided in the proposal (at 84 FR 49403, September 19, 2019) and in the memorandum, *Electronic Reporting Requirements for New Source Performance Standards (NSPS) and National Emission Standards for Hazardous Air Pollutants (NESHAP) Rules*, Docket ID Item No. EPA-HQ-OAR-2018-0416-0091. The proposed amendment replaces the previous rule requirement to submit the notifications and reports to the Administrator at the appropriate address listed in 40 CFR 63.13. This rule requirement does not affect submittals required by state air agencies as required by 40 CFR 63.13.

For the performance test reports required in 40 CFR 63.3400(f), the amendments proposed required that performance test results collected using test methods that are supported by the EPA's Electronic Reporting Tool (ERT) as listed on the ERT website⁴ at the time of the test be submitted in the format generated through the use of the ERT and that other performance test results be submitted in portable document format (PDF) using the attachment module of the ERT. Similarly, performance evaluation results of continuous monitoring systems (CMS) measuring relative accuracy test audit pollutants that are supported by the ERT at the time of the test must be submitted in the format generated through the use of the ERT and other performance evaluation results be submitted in PDF using the attachment module of the ERT.

For the proposed electronic submittal of initial notifications required in 40 CFR 63.3400(b), no specific form is available at this time, therefore, these notifications are required to be submitted in PDF using the attachment module of the ERT. For electronic submittal of notifications of compliance status reports required in 40 CFR 63.3400(e), it was proposed that the final semiannual report template discussed above, would also contain the information required for the notification of compliance status report.

For semiannual compliance reports required in 40 CFR 63.3400(c), the amendment proposed required that owners and operators use the final semiannual report template to submit information to CEDRI. The template will reside in CEDRI and was proposed to be used on and

⁴ <https://www.epa.gov/electronic-reporting-air-emissions/electronic-reporting-tool-ert>.

after 180 days past finalization of the amendments. The proposed template for these reports was included in the docket for public comment.⁵

Additionally, in the proposal, the EPA identified two broad circumstances in which electronic reporting extensions may be provided. In both circumstances, the decision to accept the claim of needing additional time to report is within the discretion of the Administrator, and reporting should occur as soon as possible. The EPA provided these potential extensions to protect owners and operators from noncompliance in cases where they cannot successfully submit a report by the reporting deadline for reasons outside of their control.

2. What changed since proposal?

The EPA has changed the deadline to use the CEDRI semiannual reporting template to be 1 year after the template has been available in CEDRI, instead of the proposed 180 days after date of publication of the final rule. The EPA has also changed the electronic submittal of the notification of compliance status to be a PDF instead in the semiannual reporting template. No other changes have been made to the proposed requirement for owners and operators of POWC facilities to submit initial notifications, performance test reports, performance evaluation reports, and semiannual reports electronically using CEDRI.

⁵ See *POWC_Electronic_Reporting_Template.xlsx*, available at Docket ID Item No. EPA-HQ-2018-0416-0165.

3. What are the key comments and what are our responses?

The EPA received one comment supporting the proposed amendment to require electronic reporting. The commenter, however, believed that the proposed *force majeure* language in 40 CFR 63.3400(j) should be removed so there is no exemption from reporting due to *force majeure* events. As explained in detail in the response-to-comments document, 40 CFR 63.3400(j) does not provide an exemption to reporting, only a method for requesting an extension of the reporting deadline. The EPA has retained the proposed language in 40 CFR 63.3400(j) for the final rule.

Commenters expressed concern about potential inconsistencies between the POWC electronic reporting requirements and state requirements of paper copies of reports for VOC and title V compliance. Commenters asked for clarification that the electronic reporting requirements replace the POWC title V compliance reporting, including timing. The Agency does not agree with the commenter's suggestion concerning potential inconsistencies between state requirements for paper reporting and federal requirements for VOC and title V permit compliance. State requirements developed under the state's own authorities are separate and apart from federal requirements developed for this rule. As individual federal rules establish applicable requirements – including electronic reporting – title V programs bundle those individual requirements, except for adding appropriate periodic monitoring when necessary, without change. Therefore, title V and the individual rule's electronic reporting requirements are the same.

Commenters also asked for clarification that the transition to the new reporting methodology would apply to an entire reporting period instead of becoming effective in the middle of a reporting period, resulting in two different reports being prepared. The EPA's intent

was not to require two different reports to be prepared for one reporting period. The EPA has clarified in this action that the reporting template should be used at the beginning of the first full reporting period after the template has been available in CEDRI for 1 year.

Commenters expressed concern regarding the electronic reporting template and asked for more time to meet with the EPA to develop and understand the spreadsheet. Commenters also provided feedback on the spreadsheet. The EPA agrees that more time is needed to develop the template and to work with stakeholders to understand how to use the spreadsheet. As such, the EPA is changing the compliance date for using the spreadsheet template to be 1 year after the final template is available in CEDRI. The EPA will work with stakeholders to develop the spreadsheet and to provide training on CEDRI and how to complete the spreadsheet. Because the EPA intends to work with stakeholders to update the template in the future, it has not placed an updated version of the template in the docket for this rulemaking.

For detailed comment summaries regarding electronic reporting and the corresponding responses, see the memorandum in the docket, *National Emission Standards for Hazardous Air Pollutants: Paper and Other Web Coating (40 CFR Part 63, Subpart JJJJ) Residual Risk and Technology Review, Final Amendments – Response to Public Comments on September 19, 2019 Proposal*.

4. What is the rationale for our final approach and final decisions for the electronic reporting requirement?

The EPA is finalizing, as proposed, the requirement that owners or operators of POWC facilities submit electronic copies of initial notifications, notifications of compliance status, performance test reports, performance evaluation reports, and semiannual compliance reports using CEDRI. The EPA is finalizing that the deadline to use the CEDRI semiannual reporting

template is 1 year after the template has been available in CEDRI. The EPA is finalizing that the electronic submittal of the notice of compliance status should be in pdf form instead of the semiannual reporting template. The EPA is also finalizing, as proposed, provisions that allow facility owners or operators a process to request extensions for submitting electronic reports for circumstances beyond the control of the facility (*i.e.*, for a possible outage in the CDX or CEDRI or for a *force majeure* event). The amendments will increase the usefulness of the data contained in those reports; is in keeping with current trends in data availability and transparency; will further assist in the protection of public health and the environment; will improve compliance by facilitating the ability of regulated facilities to demonstrate compliance with requirements and by facilitating the ability of delegated state, local, tribal, and territorial air agencies and the EPA to assess and determine compliance; and will ultimately reduce burden on regulated facilities, delegated air agencies, and the EPA. For more information on the benefits of electronic reporting, see the memorandum, *Electronic Reporting Requirements for New Source Performance Standards (NSPS) and National Emission Standards for Hazardous Air Pollutants (NESHAP) Rules*, Docket ID Item No. EPA-HQ-OAR-2018-0416-0165.

G. Temperature Sensor Validation

1. What did we propose?

As discussed in the preamble to the proposed rule (84 FR 49382, September 19, 2019), at 40 CFR 63.3350(e)(9), the original POWC NESHAP required facilities to conduct an electronic calibration of the temperature monitoring device every 3 months or, if calibration could not be performed, replace the temperature sensor. Facilities subject to the standard have explained to the EPA that they are not aware of a temperature sensor manufacturer that provides procedures or protocols for conducting electronic calibration of temperature sensors. Facilities have reported

that because they cannot calibrate their temperature sensors, the alternative is to replace them every 3 months. Industry representatives explained that this is burdensome and requested that an alternative approach to the current requirement in 40 CFR 63.3350(e)(9) be considered.

The EPA proposed to modify 40 CFR 63.3350(e) to allow multiple alternative approaches to temperature sensor validation. The first alternative allows the use of a National Institute of Standards and Technology (NIST) traceable temperature measurement device or simulator to confirm the accuracy of any temperature sensor placed into use for at least one quarterly period, where the accuracy of the temperature measurement must be within 2.5 percent of the temperature measured by the NIST traceable device or 5 degrees Fahrenheit, whichever is greater. The second alternative allows the temperature sensor manufacturer to certify the electrical properties of the temperature sensor. The third alternative codifies the common practice of replacing temperature sensors quarterly. The fourth alternative allows for the permanent installation of a redundant temperature sensor as close as practicable to the process temperature sensor. The redundant sensors must read within 25 degrees Fahrenheit of each other for thermal and catalytic oxidizers.

2. What changed since proposal?

Comments were received on the temperature sensor validation amendments requesting clarification on the requirements. The EPA has clarified the requirements, as discussed below, in the final rulemaking.

3. What are the key comments and what are our responses?

Commenters identified inconsistencies between 40 CFR 63.8 and the POWC NESHAP. Specifically, the commenters noted that the proposed amendments require “validation” whereas 40 CFR 63.8 requires “calibration.” The EPA proposed to remove the term “calibration” from

the POWC NESHAP because temperature sensors such as thermocouples do not typically have calibration procedures. To fix this inconsistency, the EPA is finalizing changes to Table 2 for the 40 CFR 63.8(c)(3) entry to direct affected sources to 40 CFR 63.3350(e)(10)(iv) for temperature sensor validation procedures in lieu of calibration requirements. Additionally, the EPA is finalizing changes to Table 2 for the 40 CFR 63.8(d)(1)-(2) entry to direct affected sources to 40 CFR 63.3350(e)(5) for continuous parameter monitoring system (CPMS) quality control procedures and to the 40 CFR 63.8(d)(3) entry to state that it does not apply, because 40 CFR 63.3350(e)(5) specifies the program of corrective action. Commenters also questioned whether Table 2 requires a notification of performance evaluation for temperature sensors under 40 CFR 63.8(e)(2). The EPA is also finalizing changes to Table 2 to clarify notifications are not required for temperature sensor validations.

Commenters provided background information on thermocouple accuracy and calibrations and requested that the EPA adopt mechanical validations as an option to verify temperature sensor operation. These mechanical validations include visually inspecting the head and wiring of the device and monitoring the function/non-function of the device. Commenters explained that this type of validation is appropriate because thermocouples typically fail instead of drifting and becoming less accurate. In response to this comment, the EPA added mechanical validations as an option for verifying temperature sensor operation in the final rule.

Similarly, commenters requested that the requirement in 40 CFR 63.3350(e)(10)(vi) for quarterly inspection of all components for integrity and all electrical connections for continuity, oxidization, and galvanic corrosion be removed. Commenters noted that this requirement is redundant because electronic monitoring systems are designed to alert facility personnel if a signal from the temperature sensor is interrupted. The commenters suggested that the EPA

simplify the requirement to include only a quarterly inspection of thermocouple components for proper connection and integrity and clarify that any such inspection only applies to the temperature sensor and not the entire oxidation system. The EPA did not intend to create redundant burden with the proposed requirements. The Agency agrees with the commenter and is requiring in the final rule a quarterly inspection of the thermocouple components or to continuously operate an electronic monitoring system designed to notify personnel if the temperature sensor signal is interrupted at 40 CFR 63.3350(e)(10)(vi).

Commenters supported the proposed options for testing the accuracy of temperature sensors and requested clarification on whether the use of dual-sensor thermocouples or the use of multiple sensors in the oxidizer combustion chamber would meet the proposed requirements. The Agency has added a new subsection to clarify that these options would meet the finalized requirements. Additionally, the EPA reviewed the proposed temperature sensor validation regulatory text and determined that, as proposed, it was vague and sometimes inconsistent. For example, the proposed amendments said to validate the temperature sensor quarterly by following the applicable procedures in the manufacturer's owner's manual. The EPA received additional information and found that owner's manuals specified annual inspection procedures. Also as proposed, facilities would need to quarterly validate by permanently installing a redundant temperature sensor, which was vague and confusing to affected sources. The EPA has amended 40 CFR 63.3350(e)(10)(iv) to clarify each option for verifying that a temperature sensor is operating properly and how frequently to perform the verification. The EPA is finalizing the following verification options:

- semiannually compare the temperature sensor to a NIST traceable temperature measurement device;

- annually validate the temperature sensor by following applicable mechanical and electrical validation procedures in the manufacturer's owner's manual;
- annually request the temperature sensor manufacturer to certify or re-certify electromotive force;
- annually replace the temperature sensor with a new certified temperature sensor;
- permanently install a redundant temperature sensor as close as practicable to the process temperature sensor; or
- permanently install a temperature sensor with dual sensors to account for the possibility of failure.

One commenter requested that the required accuracy of 2.5 percent at 40 CFR part 63.3350(e)(10)(iv)(A) apply equally at 40 CFR part 63.3350(e)(10)(iv)(E) instead of 25 degrees Fahrenheit. The commenter was not aware of any reason to specify different levels of accuracy between the proposed validation methods. With this final action, the EPA has changed the 25 degrees Fahrenheit requirement in 40 CFR 63.3350(e)(10)(iv)(E) to be 2.5 percent to be consistent with the requirements of 40 CFR 63.3350(e)(10)(iv)(A).

Commenters also requested that the requirement to calibrate the chart recorder or data logger in section 40 CFR 63.3350(e)(10)(i) be removed because it is not feasible to calibrate either device, and most facilities now use an electronic signal to record temperature data for compliance purposes, not a chart recorder. The EPA agrees and has removed this statement from the regulatory text.

For detailed comment summaries regarding the temperature sensor validation requirements and corresponding responses, see the memorandum in the docket, *National Emission Standards for Hazardous Air Pollutants: Paper and Other Web Coating (40 CFR Part*

63, Subpart JJJJ) Residual Risk and Technology Review, Final Amendments – Response to Public Comments on September 19, 2019 Proposal.

4. What is the rationale for our final approach and final decisions for the temperature sensor calibration requirement?

The EPA proposed modifications to 40 CFR 63.3350(e) to allow multiple alternative approaches to temperature sensor calibration to address concerns raised by affected facilities prior to proposal. After reviewing the public comments received, the Agency is clarifying the requirements in this final rulemaking, as discussed above. These amendments ensure that the temperature sensors are operating properly to demonstrate continuous compliance with the emission standards.

H. Operating Parameter Clarification

1. What did we propose?

The EPA proposed to clarify language in 40 CFR 63.3370 which previously implied all deviations in operating parameters result in non-compliance with the standard. Specifically, the EPA proposed at 40 CFR 63.3370(k)(5) to clarify that each 3-hour average operating parameter that is outside of the operating limit range established during a performance test should be assumed to have zero control and all HAP must be assumed to be emitted for that period in the monthly compliance calculation.

2. What changed since proposal?

The EPA is finalizing the clarification that a deviation from a 3-hour average operating parameter is not a deviation of the standard, unless the emission limitations for the month in which the deviation occurred are exceeded. Based on public comment, the EPA has also added the option in 40 CFR 63.3370(k)(5) for a facility to develop a control destruction efficiency

curve for use in determining compliance instead of assuming zero control for all deviations. The EPA has also added minor clarifications as discussed below.

3. What are the key comments and what are our responses?

Commenters supported the EPA's proposed clarification that deviations in operating parameters are not automatically indicative of non-compliance with the POWC standard. Commenters also stated that a deviation from a 3-hour operating limit does not indicate non-compliance because the standard is based on a monthly average. The EPA agrees that the intent of the clarification was for operating parameters of add-on control devices only, as the requirement was placed in 40 CFR 63.3370(k)(5) which only applies to add-on control devices and not coating lines using compliant coatings.

Several commenters disagreed with the EPA's proposal that each 3-hour average operating parameter that is outside of the operating limit range established during a performance test should be assumed to have "zero control." Commenters asserted that there was no scientific basis for this assumption and indicated that if a performance test performed well above the minimum required destruction efficiency, dropping below the established temperature may have no effect on the destruction efficiency. Commenters recommended that the EPA allow facilities to develop a control curve based on test data or engineering data that documents the level of control achieved at temperatures lower than the performance test established temperature. The EPA has considered the commenters' suggestion and have added the option to develop a control curve for add-on control devices at 40 CFR 63.3360(e)(4). Facilities must work with their permitting authority to develop the control curve.

For detailed comment summaries regarding the operating parameter clarification and responses, see the memorandum in the docket, *National Emission Standards for Hazardous Air*

Pollutants: Paper and Other Web Coating (40 CFR Part 63, Subpart JJJJ) Residual Risk and Technology Review, Final Amendments – Response to Public Comments on September 19, 2019 Proposal.

4. What is the rationale for our final approach and final decisions for the operating parameter clarification?

Operating parameters were established in the original POWC NESHAP to aid in determining compliance, but operating parameters were not intended to constitute a violation of the emission standard. For example, one 3-hour average regenerative thermal oxidizer firebox temperature below the setpoint established during the stack test would not necessarily indicate a violation of the POWC emission standard for the month, but it is a deviation of the operating parameter limit. The EPA is finalizing, as proposed, language to clarify this distinction with minor changes based on public comment.

I. IBR Under 1 CFR Part 51 for the POWC NESHAP

1. What did we propose?

In accordance with requirements of 1 CFR 51.5, the EPA proposed to incorporate by reference the following voluntary consensus standards (VCS) into 40 CFR 63.14:

- ASTM D2369-10 (Reapproved 2015)^e, Standard Test Method for Volatile Content of Coatings, IBR approved for 40 CFR 63.3360(c).
- ASTM D2697-03 (Reapproved 2014), Standard Test Method for Volume Nonvolatile Matter in Clear or Pigmented Coatings, IBR approved for 40 CFR 63.3360(c).
- ASTM 3960-98, Standard Practice for Determining Volatile Organic Compound (VOC) Content of Paints and Related Coatings, IBR approved for 40 CFR 63.3360(d).

- ASTM D6093-97, (Reapproved 2016), Standard Test Method for Percent Volume Nonvolatile Matter in Clear or Pigmented Coatings Using a Helium Gas Pycnometer, IBR approved for 40 CFR 63.3360(c).
- ASTM D2111-10 (Reapproved 2015), Standard Test Methods for Specific Gravity of Halogenated Organic Solvents and Their Admixtures, IBR approved for 40 CFR 63.3360(c).
- ASTM D1963-85 (Reapproved 1996), Standard Test Method for Specific Gravity of Drying Oils, Varnishes, Resins, and Related Materials at 25/25°C (Withdrawn 2004), IBR approved for 40 CFR 63.3360(c).

2. What changed since proposal?

No changes to the proposed IBR were made since publication of the proposal (84 FR 49405, September 19, 2019).

3. What are the key comments and what are our responses?

No comments were received on the proposed IBR of the standards into 40 CFR 63.14.

4. What is the rationale for our final approach and final decisions for the IBR under 1 CFR part 51?

In accordance with requirements of 1 CFR 51.5, the EPA is finalizing, as proposed, the IBR of the documents listed in section IV.I.1 of this preamble.

J. Technical and Editorial Changes

1. Removal of OSHA-Defined Carcinogens Reference

a. What did we propose?

The EPA proposed to amend sections 40 CFR 63.3360(c)(1)(i) and (3), which describe how to demonstrate initial compliance with the emission limitations using the compliant material

option, to remove references to OSHA-defined carcinogens as specified in 29 CFR 1910.1200(d)(4). The reference to OSHA-defined carcinogens as specified in 29 CFR 1910.1200(d)(4) is intended to specify which compounds must be included in calculating total organic HAP content of a coating material if they are present at 0.1 percent or greater by mass. The Agency proposed to remove this reference because 29 CFR 1910.1200(d)(4) has been amended and no longer readily defines which compounds are carcinogens. The EPA proposed to replace the references to OSHA-defined carcinogens and 29 CFR 1910.1200(d)(4) with a list (in proposed new Table 3 to Subpart JJJJ of Part 63 – List of Hazardous Air Pollutants That Must Be Counted Relative to Determining Coating HAP Content if Present at 0.1 Percent or More By Mass) of those organic HAP that must be included in calculating total organic HAP content of a coating material if they are present at 0.1 percent or greater by mass.

b. What changed since proposal?

The EPA has changed the approach for the removal of the reference to 29 CFR 1910.1200(d)(4) based on public comment. The EPA is not finalizing the proposed Table 3 to 40 CFR part 63, subpart JJJJ, and is finalizing a reference to appendix A to 29 CFR 1910.1200 where 29 CFR 1910.1200(d)(4) was previously referenced.

c. What are the key comments and what are our responses?

Multiple commenters asked that the EPA delete the proposed Table 3 to 40 CFR part 63, subpart JJJJ, and modify the proposed methodology for determining the HAP content of coatings. Commenters pointed out that 29 CFR 1910.1200(d)(4) was not a list, but a list of references for manufacturers and importers to use to classify chemicals. Commenters asked that the POWC NESHAP reference the current OSHA Safety Data Sheets (SDS) rule (29 CFR 1910.1200) instead of adding a static list in the form of the proposed Table 3 to 40 CFR part 63,

subpart JJJJ. The EPA agrees the commenters' suggestion is a more-streamlined solution for updating the OSHA reference and is not finalizing the table in the final rule and has added the reference to appendix A to 29 CFR 1910.1200.

For detailed comment summaries regarding the OSHA-defined carcinogens reference and the corresponding responses, see the memorandum in the docket, *National Emission Standards for Hazardous Air Pollutants: Paper and Other Web Coating (40 CFR Part 63, Subpart JJJJ) Residual Risk and Technology Review, Final Amendments – Response to Public Comments on September 19, 2019 Proposal*.

d. What is the rationale for our final approach?

The EPA has reviewed the comments received regarding the removal of the OSHA-defined carcinogens language and agrees that appendix A to 29 CFR 1910.1200 is an appropriate replacement for the outdated 29 CFR 1910.1200(d)(4) reference. Given that the OSHA language that the POWC proposal sought to replace is in appendix A, for the final POWC amendment the EPA is finalizing the regulatory text at 40 CFR 63.3360(c)(1)(i) to be as follows:

(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.

2. Clarification of Compliance Demonstration Options

a. What did we propose?

The EPA proposed an introductory paragraph and a new subsection to clarify the compliance demonstration requirements in 40 CFR 63.3370. As originally promulgated, it was not clear that compliance can be demonstrated based on individual web coating lines, groups of

web coating lines, or all of the web coating lines located at an affected facility. An introductory paragraph to 40 CFR 63.3370 was proposed to clarify the intent that compliance can be demonstrated across the web coating lines in a facility by grouping them or treating them individually or a combination of both. Additionally, a new subsection 40 CFR 63.3370(r) was proposed to clarify that compliance with the subpart can be demonstrated using a mass-balance approach. While the compliance calculations included in 40 CFR 63.3370(b)-(p) are thorough, there are instances where variables in the equations are not needed, resulting in confusion by the regulated facilities and the regulating agencies as to what is required to demonstrate compliance. The mass-balance approach proposed in 40 CFR 63.3370(r) clarifies the original intent of the rule.

b. What changed since proposal?

The EPA received comments suggesting minor edits to the proposed language regarding the mass-balance compliance demonstration approach and has incorporated these edits, as appropriate, as discussed below. No changes were made to the introductory paragraph to 40 CFR 63.3370 and the EPA is finalizing this section, as proposed, in this action.

c. What are the key comments and what are our responses?

Commenters expressed support for the proposed clarification that compliance can be demonstrated across multiple lines. Commenters also felt that this clarification reduces the potential for inconsistent regulatory interpretations by sources and permitting agencies and makes the POWC NESHAP consistent with other coating rules. The EPA acknowledges the commenters' support and is finalizing the clarification, as proposed.

Commenters noted that the EPA incorrectly stated procedures for demonstrating compliance by mass-balance at 40 CFR 63.3370(r)(1) – the mass of HAP emitted during the

month should be divided by the mass applied according to any of the procedures listed in 40 CFR 63.3320(b)(1)-(3). Commenters also suggested additional regulatory text revisions to be consistent with proposed edits to other sections. The EPA has reviewed these comments and agrees with the commenters suggested edits to correct the mass-balance calculation and has done so in this rulemaking.

For detailed comment summaries regarding the clarification of the compliance demonstration options and the corresponding responses, see the memorandum in the docket, *National Emission Standards for Hazardous Air Pollutants: Paper and Other Web Coating (40 CFR Part 63, Subpart JJJJ) Residual Risk and Technology Review, Final Amendments – Response to Public Comments on September 19, 2019 Proposal*.

d. What is the rationale for our final approach?

The EPA proposed, and is finalizing, amendments to the regulatory text to clarify that compliance can be demonstrated based on individual web coating lines, groups of web coating lines, or all of the web coating lines located at an affected facility. The EPA is finalizing corrections to the mass balance calculation. Additionally, the EPA proposed, and is finalizing, a new subsection in 40 CFR 63.3370(r) to clarify the intent of the rule as a mass-balance approach of demonstrating compliance. The clarification to the compliance demonstration options were made to help reduce confusion among regulated entities and regulating authorities.

3. Clarification of Coating Materials Definition

a. What did we propose?

The EPA proposed to revise the coating material definition in 40 CFR 63.3310 to clarify that coating materials are liquid or semi-liquid materials. Additionally, the EPA proposed to revise the web coating line definition to clarify that coating materials are liquid or semi-liquid.

b. What changed since proposal?

The EPA has clarified in the definition of coating materials to include hot melt adhesives and other hot melt materials.

c. What are the key comments and what are our responses?

Commenters supported the EPA's proposed clarifications to the definition of coating materials and further suggested that the EPA revise the definition to ensure that it is not incorrectly interpreted to exclude hot melt adhesives or coatings. The EPA agrees with the commenters and hot melt materials are included in the revised regulatory text in 40 CFR 63.3310 to reflect this.

For detailed comment summaries regarding the coating materials definition and the corresponding responses, see the memorandum in the docket, *National Emission Standards for Hazardous Air Pollutants: Paper and Other Web Coating (40 CFR Part 63, Subpart JJJJ) Residual Risk and Technology Review, Final Amendments – Response to Public Comments on September 19, 2019 Proposal*.

d. What is the rationale for our final approach?

The EPA is finalizing, as proposed, revisions to the coating material definition in 40 CFR 63.3310 to clarify that coating materials are liquid or semi-liquid materials and revisions to the web coating line definition to clarify that coating materials are liquid or semi-liquid. The EPA is also finalizing the clarification that hot melt materials are included in the definition and that vapor deposition and dry abrasive materials deposited onto a coated surface area are excluded from the definition. These revisions will improve regulatory clarity by confirming that the weight of solid materials should not be accounted for in the compliance demonstration calculations, and that vapor-deposition coating is not covered by this subpart.

4. Addition of Web Coating Line Usage Threshold

a. What did we propose?

The EPA proposed to add a usage threshold to 40 CFR 63.3300(h), similar to that in 40 CFR part 63, subpart OOOO, that requires a web coating line that coats both paper and another substrate, such as fabric, to comply with the subpart that corresponds to the predominate activity conducted. The EPA proposed to define predominant activity to be 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 substrate, would be subject to this subpart and not 40 CFR part 63, subpart OOOO.

b. What changed since proposal?

Since proposal, the EPA has clarified that the predominant activity should be determined on a calendar year basis.

c. What are the key comments and what are our responses?

Commenters supported usage thresholds for converting lines that coat both paper and another substrate. Commenters noted that the usage of the term “affected source” in the proposal appears to be inconsistent with the example because the POWC NESHAP is the collection of all web coating lines. Additionally, commenters thought the term compliance period could be interpreted to require a facility performing different types of coating to determine which NESHAP applies on a monthly basis. Commenters requested that the EPA clarify these issues. The EPA agrees with the commenters and have edited the regulatory text to clarify that predominant activity must be determined on a calendar year basis.

For detailed comment summaries regarding the web coating line threshold and the corresponding responses, see the memorandum in the docket, *National Emission Standards for*

*Hazardous Air Pollutants: Paper and Other Web Coating (40 CFR Part 63, Subpart JJJJ)
Residual Risk and Technology Review, Final Amendments – Response to Public Comments on
September 19, 2019 Proposal.*

d. What is the rationale for our final approach?

The EPA reviewed the public comments and added clarifying language to the proposed usage threshold. This language was added to promote regulatory certainty and reduce burden from sources that could be subject to multiple NESHAP.

5. Addition of Printing Activity Exemption

a. What did we propose?

The EPA proposed to add a printing activity exemption to 40 CFR 63.3300(i) which allows for modified web coating lines already subject to this subpart to continue to demonstrate compliance with this subpart, in lieu of demonstrating compliance with 40 CFR part 63, subpart KK (Printing and Publishing NESHAP).

b. What changed since proposal?

The EPA has clarified the language in the printing activity exemption to allow for existing and modified lines to be subject to the POWC NESHAP in lieu of 40 CFR part 63, subpart KK.

c. What are the key comments and what are our responses?

Multiple commenters supported the EPA's proposed printing activity exemption to allow for modified POWC lines already subject to the POWC NESHAP to continue to demonstrate compliance with 40 CFR part 63, subpart JJJJ in lieu of demonstrating compliance with 40 CFR part 63, subpart KK. Commenters suggested that this exemption also apply to existing sources as well as modified sources (*e.g.*, for POWC web coating lines that already have a product and

packaging rotogravure print station and/or a wide-web flexographic print station). The commenter noted that, as written, if during a single month the line exceeds 5 percent of the total mass of materials applied at the print station, the line applicability would permanently change to the Printing and Publishing NESHAP. The EPA agrees with the commenters and has clarified the regulatory text in this action, as appropriate.

For detailed comment summaries regarding the printing activity exemption and the corresponding responses, see the memorandum in the docket, *National Emission Standards for Hazardous Air Pollutants: Paper and Other Web Coating (40 CFR Part 63, Subpart JJJJ) Residual Risk and Technology Review, Final Amendments – Response to Public Comments on September 19, 2019 Proposal*.

d. What is the rationale for our final approach?

In this rulemaking, the EPA is finalizing a printing activity exemption to 40 CFR 63.3300(i) which allows for modified and existing web coating lines already subject to this subpart to continue to demonstrate compliance with this subpart, in lieu of demonstrating compliance with 40 CFR part 63, subpart KK (*i.e.*, the Printing and Publishing NESHAP). This exemption will reduce regulatory burden without resulting in increased emissions.

6. Clarification of Testing Requirements

a. What did we propose?

The EPA proposed to remove the “by compound” statement in 40 CFR 63.3320(b)(4) to clarify that the standard is 20 parts per million by volume (ppmv) for the total of organic HAP emitted, not 20 ppmv for each individual HAP emitted. This is consistent with the test methods used in this subpart, which test for total HAP concentration.

b. What changed since proposal?

The EPA is finalizing the removal of “by compound” in 40 CFR 63.3220(b)(4) to clarify that the 20 ppmv standard applies to the total of organic HAP emitted, not to each individual HAP. As part of our review, the EPA found four additional instances of “by compound” in 40 CFR 63.3370(a)(5), (f), (f)(3), and (f)(3)(iii) that also needed to be removed.

c. What are the key comments and what are our responses?

Commenters supported the EPA’s proposal to remove “by compound” in 40 CFR 63.3220(b)(4) to clarify that the 20 ppmv standard applies to the total of organic HAP emitted, not to each individual HAP.

d. What is the rationale for our final approach?

The removal of “by compound” makes the POWC NESHAP consistent with the test methods referenced in the subpart, as they test for total HAP concentration, not individual HAP compounds.

7. Applicability to Sources Using Only Non-HAP Coatings

a. What did we propose?

The EPA requested comment on changing the applicability of the POWC NESHAP to exclude sources that only use non-HAP coatings but are located at a major source to reduce regulatory burden. As identified during the development of the risk modeling input file and discussed in section III.C of the preamble to the proposed rule (84 FR 49406, September 19, 2019), some facilities that utilize only non-HAP coatings are subject to the POWC NESHAP because they perform web coating operations and are a major source because of non-POWC source category emissions. For example, a non-HAP coating line used to produce paper towel cores may be located at an integrated pulp and paper facility that is a major source because of

emissions from the pulping operations. This facility would be required to comply with the requirements of 40 CFR part 63, subpart JJJJ, even though the coatings used contain no HAP, and, therefore, no HAP are emitted from the web coating lines.

b. What changed since proposal?

The EPA received supportive comments regarding the change of applicability to sources using only non-HAP coatings. The Agency has reviewed the public comments and, instead of changing the applicability of the subpart, is finalizing an exemption for reporting requirements for these sources.

c. What are the key comments and what are our responses?

Commenters supported the EPA's proposal to reduce regulatory burden by excluding sources that are located at a major source of HAP but do not use coatings that contain HAP for the POWC emission sources. Commenters stated that the change will reduce regulatory burden without increasing emissions and could incentivize sources to convert to non-HAP coatings to avoid applicability of the POWC NESHAP, resulting in emissions reductions. Commenters further suggested that the exclusion is a logical step under the EPA's efforts to reduce regulatory burden and is similar in key aspects to the rulemaking to rescind the EPA's "once in, always in" policy. Commenters suggested that the EPA clarify that all of the subject coating lines at the facility must use non-HAP coatings to qualify for the exclusion. The EPA has reviewed these comments and has added regulatory text exempting sources that only use non-HAP coatings on all of the subject web coating lines at the facility from on-going compliance reporting requirements.

For detailed comment summaries regarding applicability to sources only using non-HAP coatings and the corresponding responses, see the memorandum in the docket, *National Emission*

Standards for Hazardous Air Pollutants: Paper and Other Web Coating (40 CFR Part 63, Subpart JJJJ) Residual Risk and Technology Review, Final Amendments – Response to Public Comments on September 19, 2019 Proposal.

d. What is the rationale for our final approach?

The EPA requested comment on changing the applicability of sources using only non-HAP coatings and received comments supporting the change. The EPA is finalizing an exemption to on-going reporting requirements for these sources as it will reduce regulatory burden without increasing emissions.

8. Oxidizer Temperature Monitoring

a. What did we propose?

The EPA proposed to add language to recognize that thermal oxidizers can demonstrate compliance with the standard as long as the 3-hour average firebox temperature does not drop lower than 50 degrees Fahrenheit below the average combustion temperature established during the performance test to promote consistency between the Pressure Sensitive Tape and Label Surface Coating Operations NSPS (40 CFR part 60, subpart RR) and the POWC NESHAP, as well as to account for temperature swings due to startup and/or shutdown of web coating lines.

b. What changed since proposal?

The EPA has made minor clarifications to the regulatory text to promote consistency throughout the subpart and has added similar language for catalytic oxidizers.

c. What are the key comments and what are our responses?

Commenters were supportive of the EPA's proposed language for thermal oxidizers and requested that it be included for catalytic oxidizers as well. Additionally, commenters noted that the Pressure Sensitive Tape and Label Surface Coating Operations NSPS allows for setting the

minimum temperature drop across the catalyst bed at 80 percent of the average temperature difference during the most recent performance test and requested that this language be added to promote consistency between the two rules. The Agency has reviewed the commenters suggestions and agree that it is appropriate to add the temperature language for catalytic oxidizers. To ensure complete combustion, the EPA also added a requirement that the catalyst's minimum temperature must always be 50 degrees Fahrenheit above the catalyst's ignition temperature.

Commenters also suggested edits to promote consistency throughout the subpart as it relates to the temperature language. The EPA has reviewed these suggestions and made edits to the regulatory text in this action, as appropriate.

For detailed comment summaries regarding the oxidizer temperature monitoring requirements and the corresponding responses, see the memorandum in the docket, *National Emission Standards for Hazardous Air Pollutants: Paper and Other Web Coating (40 CFR Part 63, Subpart JJJJ) Residual Risk and Technology Review, Final Amendments – Response to Public Comments on September 19, 2019 Proposal*.

d. What is the rationale for our final approach?

The EPA proposed to add language to recognize that thermal oxidizers can demonstrate compliance with the standard as long as the 3-hour average firebox temperature does not drop lower than 50 degrees Fahrenheit below the average combustion temperature established during the performance test to promote consistency between the Pressure Sensitive Tape and Label Surface Coating Operations NSPS and the POWC NESHAP, as well as to account for temperature swings due to startup and/or shutdown of web coating lines. After reviewing the public comments, the EPA has added the same requirements to catalytic oxidizers. In addition,

the EPA has added language similar to that in the Pressure Sensitive Tape and Label Surface Coating Operations NSPS to allow for setting the minimum temperature drop across the catalyst bed at 80 percent of the average temperature difference during the most recent performance test. To ensure complete combustion, the EPA also added a requirement that the catalyst's minimum temperature must always be 50 degrees Fahrenheit above the catalyst's ignition temperature.

9. Compliance Report Content

a. What did we propose?

The EPA proposed new reporting requirements at 40 CFR 63.3400(c)(2) that would require facilities to record data for failures to meet an applicable standard, estimate the quantity of each regulated pollutant over any emission limit and a description of the method used, and document any actions taken to minimize emissions.

b. What changed since proposal?

The EPA has revised the compliance report content requirements in 40 CFR 63.3400(c)(2) to clarify what should be reported.

c. What are the key comments and what are our responses?

Commenters noted that the new reporting requirements should be eliminated because they go beyond the General Provisions at 40 CFR 63.10 and, because compliance is determined monthly, short deviations are not likely to cause excess emissions. Commenters further noted that the proposed additions are not relevant to a rule where compliance is not demonstrated on a short-term basis. The EPA has reviewed the commenters concerns and agree that the language is not appropriate for 40 CFR part 63, subpart JJJJ. The EPA has revised the requirements in 40 CFR 63.3400(c)(2) to clarify what is required to be reported and has also revised the requirements in 40 CFR 63.3410(c) to clarify what records should be maintained.

Additionally, while the EPA was reviewing the report content requirements, it became clear that the requirements were confusing as to what should be reported for facilities using compliant coatings versus facilities using add-on controls. The EPA has clarified that 40 CFR 63.3400(c)(2)(v) applies to facilities using only compliant coatings (*i.e.*, those that do not use a CMS). The EPA also clarified that 40 CFR 63.3400(c)(2)(vi) applies to facilities that have add-on control devices (*i.e.*, those that use a CPMS or a continuous emission monitoring system). These amendments should improve regulatory clarity.

For detailed comment summaries regarding compliance report content and the corresponding responses, see the memorandum in the docket, *National Emission Standards for Hazardous Air Pollutants: Paper and Other Web Coating (40 CFR Part 63, Subpart JJJJ) Residual Risk and Technology Review, Final Amendments – Response to Public Comments on September 19, 2019 Proposal*.

d. What is the rationale for our final approach?

The EPA proposed new reporting requirements at 40 CFR 63.3400(c)(2) that would require facilities to record data for failures to meet an applicable standard, estimate the quantity of each regulated pollutant over any emission limit and a description of the method used, and document any actions taken to minimize emissions to be consistent with recent RTR rulemakings. After reviewing the comments received during the public comment period, as well as the regulatory language, it was determined that these requirements were not appropriate for 40 CFR part 63, subpart JJJJ because compliance is demonstrated on a monthly basis and therefore these requirements are not being finalized. In response to comments, amendments were added to the compliance report contents section to clarify what should be reported and by whom.

10. Other Amendments

The following additional changes were proposed that address technical and editorial corrections:

- revised the references to the other NESHAP in 40 CFR 63.3300 to clarify the appropriate subparts;
- revised 40 CFR 3350(c) to clarify that bypass valves on always-controlled work stations should be monitored;
- revised 40 CFR 63.3350(e)(4) to clarify 3-hour averages should be block averages, consistent with the requirements in Table 1 to Subpart JJJJ of Part 63;
- revised the monitoring requirements section in 40 CFR 63.3360 to clarify what constitutes representative conditions;
- revised the recordkeeping requirements section in 40 CFR 63.3410 to include the requirement to show continuous compliance after effective date of regulation;
- revised the terminology in the delegation of authority section in 40 CFR 63.3420 to match the definitions in 40 CFR 63.90;
- revised the General Provisions applicability table (Table 2 to Subpart JJJJ of Part 63) to provide more detail and to make it align with those sections of the General Provisions that have been amended or reserved over time; and
- renumbered the equations throughout the subpart for regulatory clarity.

No comments were received on these other amendments and, therefore, the EPA is finalizing them as proposed.

V. Summary of Cost, Environmental, and Economic Impacts and Additional Analyses Conducted

A. What are the affected facilities?

The POWC source category includes any facility that is located at a major source and is engaged in the coating of paper, plastic film, metallic foil, and other web surfaces. All the coating lines at a subject facility are defined as one affected source. Any new source means any affected source for which construction or reconstruction was commenced after the date the EPA first proposed regulations establishing a NESHAP applicable to the source (*i.e.*, for the POWC source category, September 13, 2000). An existing source means any source other than a new source. Generally, an additional line at an existing facility is considered part of the existing affected source. New affected sources are new lines installed at new facilities or at a facility with no prior POWC operations.

There are currently 168 facilities in the United States that are subject to the POWC NESHAP. The EPA is aware of one new affected source that is under construction that will be subject to the POWC NESHAP in the future. The EPA is not aware of any other facilities that are under construction or are planned to be constructed which would be considered “new facilities” under the POWC NESHAP.

B. What are the air quality impacts?

At the current level of control, estimated emissions of total HAP are approximately 3,870 tpy. Compared to pre-MACT levels, this represents a significant reduction of HAP for the category. When the POWC NESHAP was finalized in 2002, the EPA estimated the annual baseline HAP emissions from the source category to be approximately 42,000 tpy (67 FR 72331, December 4, 2002).

The amendments will require all 168 major sources with equipment subject to the POWC NESHAP to operate without the SSM exemption. Eliminating the SSM exemption will reduce emissions by requiring facilities to meet the applicable standard during SSM periods; however, the EPA is unable to quantify the specific emission reductions associated with eliminating the exemption. The requirement for repeat performance testing once every 5 years for thermal oxidizers and the alternative of annual catalyst activity testing for catalytic oxidizers will ensure that the control device is operating correctly and may reduce emissions, but no method for accurately estimating such emissions reduction is available.

Indirect or secondary air emissions impacts are impacts that would result from the increased electricity usage associated with the operation of control devices (*i.e.*, increased secondary emissions of criteria pollutants from power plants). Energy impacts consist of the electricity and steam needed to operate control devices and other equipment that would be required under this final rule. The EPA expects no secondary air emissions impacts or energy impacts from this rulemaking.

For further information, see the memorandum titled *Revised Cost, Environmental, and Energy Impacts of Regulatory Options for the Paper and Other Web Coatings Risk and Technology Review*, in the docket for this action (Docket ID No. EPA-HQ-OAR-2018-0416).

C. What are the cost impacts?

Startup and shutdown are considered normal operations for most facilities subject to the POWC NESHAP. The EPA does not believe removing the SSM exemption will result in additional incurred costs.

As discussed in detail in the memorandum titled *Revised Cost, Environmental, and Energy Impacts of Regulatory Options for the Paper and Other Web Coatings Risk and*

Technology Review, it is estimated that 65 oxidizers will have to perform repeat performance testing. Fifty eight of these 65 are thermal oxidizers, and 3 are catalytic oxidizers. For costing purposes, it was assumed that repeat emissions performance testing will be performed every 5 years on the thermal oxidizers, and annual catalyst activity testing will be conducted on the catalytic oxidizers. The estimated cost for an inlet-outlet EPA Method 25A performance test (with electronic reporting of results) is \$28,000 per test and the estimated cost for annual catalyst activity testing is \$1,000, for an estimated nationwide cost of \$1,750,000 (2018\$) every 5 years. The electronic reporting requirement is not expected to require any additional labor hours to prepare, compared to the paper semi-annual compliance reports that are already prepared. Therefore, the costs associated with the electronic reporting requirement are zero.

D. What are the economic impacts?

The economic impact analysis is designed to inform decision makers about the potential economic consequences of a regulatory action. To assess the potential impact, the largest cost expected to be experienced in any one year is compared to the total sales for the ultimate owner of the affected facilities to estimate the total burden for each facility.

For the final revisions to the POWC NESHAP, the 168 affected facilities are owned by 91 different parent companies, and the total costs associated with the final requirements range from less than 0.000001 to 3 percent of annual sales revenue per ultimate owner. These costs are not expected to result in a significant market impact, regardless of whether they are passed on to the purchaser or absorbed by the firms.

The EPA also prepared a small business screening assessment to determine whether any of the identified affected entities are small entities, as defined by the U.S. Small Business Administration. Twenty-nine of the facilities potentially affected by the final revisions to the

POWC NESHAP are small entities. However, the costs associated with the final requirements for the affected small entities range from 0.0003 to 3 percent of annual sales revenues per ultimate owner; there is one facility with costs of 1.4 percent and one facility with costs of 3 percent of annual sales revenues per ultimate owner. Therefore, there are no significant economic impacts on a substantial number of small entities from these final amendments.

E. What are the benefits?

Because these final amendments are not considered economically significant, as defined by Executive Order 12866, and because we did not estimate emission reductions associated with the final revisions, the EPA did not estimate any benefits from reducing emissions.

F. What analysis of environmental justice did we conduct?

Executive Order 12898 (59 FR 7629, February 16, 1994) establishes federal executive policy on environmental justice. Its main provision directs federal agencies, to the greatest extent practicable and permitted by law, to make environmental justice part of their mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of their programs, policies, and activities on minority populations and low-income populations in the United States.

To examine the potential for any environmental justice issues that might be associated with the source category, the EPA performed a demographic analysis, which is an assessment of risk to individual demographic groups of the populations living within 5 kilometers (km) and

within 50 km of the facilities. In the analysis, the EPA evaluated the distribution of HAP-related cancer and noncancer risk from the POWC source category across different social, demographic, and economic groups within the populations living near facilities identified as having the highest risks.⁶ The methodology and the results of the demographic analysis are presented in a technical report, *Risk and Technology Review – Analysis of Demographic Factors for Populations Living Near Paper and Other Web Coating Facilities*, available in the docket for this action (Docket ID Item No. EPA-HQ-OAR-2018-0416-0088). These results, for various demographic groups, are based on the estimated risk from actual emissions levels for the population living within 50 km of the facilities.

The results of the POWC source category demographic analysis indicate that emissions from the source category expose approximately 4,300 people to a cancer risk at or above 1-in-1 million and no one is exposed to a chronic noncancer TOSHI greater than 1. The specific demographic results indicate that the percentage of the population potentially impacted by emissions is greater than its corresponding national percentage for the white population (86 percent for the source category compared to 62 percent nationwide) and for the below-poverty-level population (17 percent compared to 14 percent nationwide).

⁶ Demographic groups included in the analysis are: White, African American, Native American, other races and multiracial, Hispanic or Latino, children 17 years of age and under, adults 18 to 64 years of age, adults 65 years of age and over, adults without a high school diploma, people living below the poverty level, people living 2 times the poverty level, and linguistically isolated people.

The risks due to HAP emissions from this source category are low for all populations. Furthermore, the EPA does not expect this final rule to achieve significant reductions in HAP emissions. Therefore, the EPA concludes that this final rule will not have disproportionately high and adverse human health or environmental effects on minority or low-income populations because it does not affect the level of protection provided to human health or the environment. However, this final rule will provide additional benefits to these demographic groups by improving the monitoring, compliance, and implementation of the NESHAP.

G. What analysis of children's environmental health did we conduct?

The EPA does not believe the environmental health or safety risks addressed by this action present a disproportionate risk to children. The results of the POWC source category demographic analysis indicate that emissions from the source category expose approximately 4,300 people to a cancer risk at or above 1-in-1 million and no one is exposed to a chronic noncancer TOSHI greater than 1. The distribution of the population with risks above 1-in-1 million is 20 percent for ages 0 to 17, 62 percent for ages 18 to 64, and 17 percent for ages 65 and up. Children ages 0 to 17 constitute 23 percent of the population nationwide. Therefore, the analysis shows that actual emissions from 40 CFR part 63, subpart JJJJ facilities have a slightly smaller impact on children ages 0 to 17. This action's health and risk assessments are contained in sections III and IV of the preamble to the proposed rule and further documented in the risk report titled *Residual Risk Assessment for the Paper and Other Web Source Category in Support of the 2020 Risk and Technology Review Final Rule*, which can be found in the docket for this action (Docket ID No. EPA-HQ-OAR-2018-0416).

VI. Statutory and Executive Order Reviews

Additional information about these statutes and Executive Orders can be found at <https://www.epa.gov/laws-regulations/laws-and-executive-orders>.

A. Executive Order 12866: Regulatory Planning and Review and Executive Order 13563: Improving Regulation and Regulatory Review

This action is not a significant regulatory action and was, therefore, not submitted to the Office of Management and Budget (OMB) for review.

B. Executive Order 13771: Reducing Regulations and Controlling Regulatory Costs

This action is not an Executive Order 13771 regulatory action because this action is not significant under Executive Order 12866.

C. Paperwork Reduction Act (PRA)

The information collection activities in this proposed rule have been submitted for approval to OMB under the PRA. The Information Collection Request (ICR) document that the EPA prepared has been assigned EPA ICR number 1951.09, OMB Control No. 2060-0511. You can find a copy of the ICR in the docket for this rule, and it is briefly summarized here. The information collection requirements are not enforceable until OMB approves them.

The POWC NESHAP applies to existing facilities and new POWC facilities. In general, all NESHAP standards require initial notifications, notifications of compliance status, performance tests, performance evaluation reports, and periodic reports by the owners/operators of the affected facilities. They are also required to maintain records of the occurrence and duration of any malfunction in the operation of an affected facility, or any period during which the monitoring system is inoperative. These notifications, reports, and records are essential in

determining compliance, and are required of all affected facilities subject to NESHAP. This information is being collected to assure compliance with 40 CFR part 63, subpart JJJJ.

Respondents/affected entities: POWC facilities.

Respondent's obligation to respond: Mandatory (40 CFR part 63, subpart JJJJ).

Estimated number of respondents: 170.

Frequency of response: Initially, occasionally, and semiannually.

Total estimated burden: 17,300 hours (per year). Burden is defined at 5 CFR 1320.3(b).

Total estimated cost: \$2,735,000 (per year), includes \$765,000 annualized capital and operation and maintenance costs.

An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number. The OMB control numbers for the EPA's regulations in 40 CFR are listed in 40 CFR part 9. When OMB approves this ICR, the Agency will announce that approval in the **Federal Register** and publish a technical amendment to 40 CFR part 9 to display the OMB control number for the approved information collection activities contained in this final rule.

D. Regulatory Flexibility Act (RFA)

I certify that this action will not have a significant economic impact on a substantial number of small entities under the RFA. The small entities subject to the requirements of this action and the annualized costs associated with the final requirements in this action for the affected small entities are described in section V.D above.

E. Unfunded Mandates Reform Act (UMRA)

This action does not contain any unfunded mandate of \$100 million or more as described in UMRA, 2 U.S.C. 1531–1538. The action imposes no enforceable duty on any state, local, or tribal governments or the private sector.

F. Executive Order 13132: Federalism

This action does not have federalism implications. It will not have substantial direct effects on the states, on the relationship between the national government and the states, or on the distribution of power and responsibilities among the various levels of government.

G. Executive Order 13175: Consultation and Coordination with Indian Tribal Governments

This action does not have tribal implications as specified in Executive Order 13175. It will not have substantial direct effects on tribal governments, on the relationship between the federal government and Indian tribes, or on the distribution of power and responsibilities between the federal government and Indian tribes. No tribal governments own facilities subject to the NESHAP. Thus, Executive Order 13175 does not apply to this action.

H. Executive Order 13045: Protection of Children from Environmental Health Risks and Safety Risks

This action is not subject to Executive Order 13045 because it is not economically significant as defined in Executive Order 12866, and because the EPA does not believe the environmental health risks or safety risks addressed by this action present a disproportionate risk to children. This action's health and risk assessments are contained in sections III and IV of this preamble and further documented in the risk report titled *Residual Risk Assessment for the Paper and Other Web Source Category in Support of the 2020 Risk and Technology Review Final Rule*, which can be found in the docket for this action (Docket ID No. EPA-HQ-OAR-2018-0416).

I. Executive Order 13211: Actions Concerning Regulations That Significantly Affect Energy Supply, Distribution, or Use

This action is not subject to Executive Order 13211 because it is not a significant regulatory action under Executive Order 12866.

J. National Technology Transfer and Advancement Act (NTTAA) and 1 CFR Part 51

This action involves technical standards. The EPA is finalizing the following six VCS as alternatives to EPA Method 24 and is incorporating them by reference for the first time in the finalized amendments:

- ASTM D2369-10 (Reapproved 2015)^e, “Standard Test Method for Volatile Content of Coatings.” This test method describes a procedure used for the determination of the weight percent volatile content of solvent-borne and waterborne coatings.
- ASTM D2697-03 (Reapproved 2014), “Standard Test Method for Volume Nonvolatile Matter in Clear or Pigmented Coatings.” This test method is applicable to the determination of the volume of nonvolatile matter in coatings.
- ASTM D3960-98, “Standard Practice for Determining Volatile Organic Compound (VOC) Content of Paints and Related Coatings.” This test method is used for the measurement of the VOC content of solvent borne and waterborne paints and related coatings. This method is an acceptable alternative to EPA Method 24 because the regulation allows for the use of VOC content as a surrogate for HAP.
- ASTM D6093-97 (Reapproved 2016), “Standard Test Method for Percent Volume Nonvolatile Matter in Clear or Pigmented Coatings Using a Helium Gas Pycnometer.” This test method is used for the determination of the percent volume nonvolatile matter in clear and pigmented coatings.

- ASTM D2111-10 (Reapproved 2015), “Standard Test Methods for Specific Gravity of Halogenated Organic Solvents and Their Admixtures.” This test method is used for the determination of the specific gravity of halogenated organic solvents and solvent admixtures.
- ASTM D1963-85 (Reapproved 1996), “Standard Test Method for Specific Gravity of Drying Oils, Varnishes, Resins, and Related Materials at 25° C.” This test method is used for the determination of the specific gravity of drying oils, varnishes, alkyd resins, fatty acids, and related materials. This method is an acceptable alternative to EPA Method 24 for density only and may not be valid for all coatings and is valid at the designated temperature (25 degrees Celsius). This standard was withdrawn in 2004 with no replacement; there is no later version.

These standards are reasonably available from the American Society for Testing and Materials (ASTM), 100 Barr Harbor Drive, Post Office Box C700, West Conshohocken, PA 19428-2959. See <https://www.astm.org/>.

While the EPA has identified another 19 VCS as being potentially applicable to this NESHAP, we have decided not to use these VCS in this rulemaking. The use of these VCS would not be practical due to lack of equivalency, documentation, validation date, and other important technical and policy considerations. See the memorandum titled *Voluntary Consensus Standard Results for National Emission Standards for Hazardous Air Pollutants: Paper and Other Web Coating*, in the docket for this rule for the reasons for these determinations (Docket ID Item No. EPA-HQ-OAR-2018-0416-0068).

The revised regulatory text references ANSI/ASME PTC 19.10-1981 (40 CFR 63.3360) and ASTM D5087-02 (40 CFR 63.3165). These standards were previously approved for this section. That approval continues without change.

Under 40 CFR 63.7(f) and 40 CFR 63.8(f) of subpart A of the General Provisions, a source may apply to the EPA for permission to use alternative test methods or alternative monitoring requirements in place of any required testing methods, performance specifications, or procedures in the final rule or any amendments.

K. Executive Order 12898: Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations

The EPA believes that this action does not have disproportionately high and adverse human health or environmental effects on minority populations, low income populations, and/or indigenous peoples, as specified in Executive Order 12898 (59 FR 7629, February 16, 1994). The documentation for this decision is contained in section V.F of this preamble and the technical report, *Risk and Technology Review – Analysis of Demographic Factors for Populations Living Near Paper and Other Web Coating Facilities*, which is available in the docket for this action (Docket ID No. EPA-HQ-OAR-2018-0416).

L. Congressional Review Act (CRA)

This action is subject to the CRA, and the EPA will submit a rule report to each House of the Congress and to the Comptroller General of the United States. This action is not a “major rule” as defined by 5 U.S.C. 804(2).

List of Subjects in 40 CFR Part 63

Environmental protection, Administrative practice and procedures, Air pollution control, Hazardous substances, Incorporation by reference, Intergovernmental relations, Reporting and recordkeeping requirements.

Dated: March 11, 2020.

Andrew R. Wheeler,
Administrator.

For the reasons set out in the preamble, 40 CFR part 63 is amended as follows:

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

1. The authority citation for part 63 continues to read as follows:

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

Subpart A—General Provisions

2. Section 63.14 is amended by:

- a. Redesignating paragraphs (h)(49) through (114) as (h)(51) through (116) and paragraphs (h)(18) through (48) as (h)(19) through (49), respectively;
- b. Adding new paragraphs (h)(18) and (50); and
- c. Revising newly redesignated paragraphs (h)(21), (26), (30), and (80).

The additions and revisions read as follows:

§63.14 Incorporations by reference.

* * * * *

(h) * * *

(18) ASTM D1963-85 (Reapproved 1996), Standard Test Method for Specific Gravity of Drying Oils, Varnishes, Resins, and Related Materials at 25/25°C, approved November 29, 1985, IBR approved for §63.3360(c).

* * * * *

(21) ASTM D2111-10 (Reapproved 2015), Standard Test Methods for Specific Gravity and Density of Halogenated Organic Solvents and Their Admixtures, approved June 1, 2015, IBR approved for §§63.3360(c), 63.3951(c), 63.4141(b) and (c), 63.4551(c), and 63.4741(a).

* * * * *

(26) ASTM D2369-10 (Reapproved 2015)^c, Standard Test Method for Volatile Content of Coatings, approved June 1, 2015, IBR approved for §§63.3151(a), 63.3360(c), 63.3961(j), 63.4141(a) and (b), 63.4161(h), 63.4321(e), 63.4341(e), 63.4351(d), 63.4541(a), 63.4561(j), appendix A to subpart PPPP, 63.4741(a), 63.4941(a) and (b), and 63.4961(j).

* * * * *

(30) ASTM D2697-03 (Reapproved 2014), Standard Test Method for Volume Nonvolatile Matter in Clear or Pigmented Coatings, approved July 1, 2014, IBR approved for §§63.3161(f), 63.3360(c), 63.3941(b), 63.4141(b), 63.4741(a) and (b), and 63.4941(b).

* * * * *

(50) ASTM 3960-98, Standard Practice for Determining Volatile Organic Compound (VOC) Content of Paints and Related Coatings, approved November 10, 1998, IBR approved for §63.3360(c).

* * * * *

(80) ASTM D6093-97 (Reapproved 2016), Standard Test Method for Percent Volume Nonvolatile Matter in Clear or Pigmented Coatings Using a Helium Gas Pycnometer, approved December 1, 2016, IBR approved for §§63.3161(f), 63.3360(c), 63.3941(b), 63.4141(b), 63.4741(a) and (b), and 63.4941(b).

* * * * *

Subpart JJJJ—National Emission Standards for Hazardous Air Pollutants: Paper and Other Web Coating

3. Section 63.3300 is amended by:

- a. Revising the introductory text and paragraphs (a), (b), (d), (e) and (f); and
- b. Adding paragraphs (h) through (j).

The revisions and additions read as follows:

§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.

* * * * *

(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.

* * * * *

(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.

4. Section 63.3310 is amended by revising the definitions of "coating material(s)" and "web coating line" to read as follows:

§63.3310 What definitions are used in this subpart?

* * * * *

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.

* * * * *

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.

* * * * *

5. Section 63.3320 is amended by revising paragraphs (b) introductory text and (b)(4) to read as follows:

The revisions read as follows:

§63.3320 What emission standards must I meet?

* * * * *

(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).

* * * * *

(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.

* * * * *

6. Section 63.3321 is amended by revising paragraph (a) to read as follows:

§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.

* * * * *

7. Section 63.3330 is revised to read as follows:

§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.

8. Section 63.3340 is revised to read as follows:

§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.

9. Section 63.3350 is amended by:

a. Revising paragraphs (b), (c) introductory text, (d)(1)(iii), (e) introductory text, and (e)(2) and (4);

b. Redesignating paragraphs (e)(5) through (10) as paragraphs (e)(6) through (11);

c. Adding new paragraph (e)(5); and

d. Revising newly redesignated paragraph (e)(10).

The revisions and addition read as follows:

§63.3350 If I use a control device to comply with the emission standards, what monitoring must I do?

* * * * *

(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.

* * * * *

(d) * * *

(1) * * *

(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.

* * * * *

(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.

* * * * *

(2) You must have valid data from at least 90 percent of the hours when the process operated.

* * * * *

(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.

* * * * *

(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.

* * * * *

10. Section 63.3360 is amended by:

a. Revising paragraphs (a), (b), (c)(1)(i), and (c)(2) through (4), (d)(1) through (3), and (e)(1) through (3);

b. Adding paragraph (e)(4); and

c. Revising the paragraphs (f) introductory text and (g).

The revisions and addition read as follows:

§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 atmosphere according to §63.3360(g).
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(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) * * *

(1) * * *

(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.

* * * * *

(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) * * *

(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) * * *

(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:

$$M_f = Q_{sd} C_c [12][0.0416][10^{-6}] \quad \text{Equation 1}$$

Where:

M_f = Total organic volatile matter mass flow rate, kilograms (kg)/hour (h).

Q_{sd} = Volumetric flow rate of gases entering or exiting the control device, as determined according to paragraph (e)(1)(ii) of this section, dry standard cubic meters (dscm)/h.

C_c = Concentration of organic compounds as carbon, ppmv.

12.0 = Molecular weight of carbon.

0.0416 = Conversion factor for molar volume, kg-moles per cubic meter (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:

$$E = \frac{M_{fi} - M_{fo}}{M_{fi}} \times 100 \quad \text{Equation 2}$$

Where:

E = Organic volatile matter control efficiency of the control device, percent.

M_{fi} = Organic volatile matter mass flow rate at the inlet to the control device, kg/h.

M_{fo} = Organic volatile matter mass flow rate at the outlet of the control device, kg/h.

(x) The control device destruction or removal efficiency is determined as the average of the efficiencies determined in the test runs and calculated in Equation 2.

(2) *Process information.* You must record such process information as may be necessary to determine the conditions in existence at the time of the performance test. Representative conditions exclude periods of startup and shutdown. You may not conduct performance tests during periods of malfunction. You must record the process information that is necessary to document operating conditions during the test and include in such record an explanation to support that such conditions represent normal operation. Upon request, you shall make available to the Administrator such records as may be necessary to determine the conditions of performance tests.

(3) *Operating limits.* If you are using one or more add-on control device other than a solvent recovery system for which you conduct a liquid-liquid material balance to comply with the emission standards in §63.3320, you must establish the applicable operating limits required by §63.3321. These operating limits apply to each add-on emission control device, and you must

establish the operating limits during the performance test required by paragraph (e) of this section according to the requirements in paragraphs (e)(3)(i) and (ii) of this section.

(i) Thermal oxidizer. If your add-on control device is a thermal oxidizer, establish the operating limits according to paragraphs (e)(3)(i)(A) and (B) of this section.

(A) During the performance test, you must monitor and record the combustion temperature at least once every 15 minutes during each of the three test runs. You must monitor the temperature in the firebox of the thermal oxidizer or immediately downstream of the firebox before any substantial heat exchange occurs.

(B) Use the data collected during the performance test to calculate and record the average combustion temperature maintained during the performance test. Maintain the 3-hour average combustion temperature no more than 50 degrees Fahrenheit lower than this average combustion temperature.

(ii) Catalytic oxidizer. If your add-on control device is a catalytic oxidizer, establish the operating limits according to paragraphs (e)(3)(ii)(A) and (B) or paragraphs (e)(3)(ii)(C) and (D) of this section.

(A) During the performance test, you must monitor and record the temperature just before the catalyst bed and the temperature difference across the catalyst bed at least once every 15 minutes during each of the three test runs.

(B) Use the data collected during the performance test to calculate and record the average temperature just before the catalyst bed and the average temperature difference across the catalyst bed maintained during the performance test. Maintain the 3-hour average combustion temperature no more than 50 degrees Fahrenheit lower than this average combustion temperature or maintain the 3-hour average temperature difference across the catalyst bed at no less than 80

percent of this average temperature differential, provided that the minimum temperature is always 50 degrees Fahrenheit above the catalyst's ignition temperature.

(C) As an alternative to monitoring the temperature difference across the catalyst bed, you may monitor the temperature at the inlet to the catalyst bed and implement a site-specific inspection and maintenance plan for your catalytic oxidizer as specified in paragraph (e)(3)(ii)(D) of this section. During the performance test, you must monitor and record the temperature just before the catalyst bed at least once every 15 minutes during each of the three test runs. Use the data collected during the performance test to calculate and record the average temperature just before the catalyst bed during the performance test. Maintain the 3-hour average combustion temperature no more than 50 degrees Fahrenheit lower than this average combustion temperature.

(D) You must develop and implement an inspection and maintenance plan for your catalytic oxidizer(s) for which you elect to monitor according to paragraph (e)(3)(ii)(C) of this section. The plan must address, at a minimum, the elements specified in paragraphs (e)(3)(ii)(D)(1) through (3) of this section.

(1) Annual sampling and analysis of the catalyst activity (*i.e.*, conversion efficiency) following the manufacturer's or catalyst supplier's recommended procedures,

(2) Monthly inspection of the oxidizer system including the burner assembly and fuel supply lines for problems, and

(3) Annual internal and monthly external visual inspection of the catalyst bed to check for channeling, abrasion, and settling. If problems are found, you must take corrective action consistent with the manufacturer's recommendations and conduct a new performance test to determine destruction efficiency in accordance with this section.

(4) *Control Destruction Efficiency Curve Development.* If you are using one or more add-on control devices other than a solvent recovery system for which you conduct a liquid-liquid material balance to comply with the emission standards in §63.3320, you may establish a control destruction efficiency curve for use in estimating emissions that occur during deviations of the 3-hour operating parameters. This curve can be generated using test data or manufacturer's data that specifically documents the level of control at varying temperatures for your control device.

(f) *Capture efficiency.* If you demonstrate compliance by meeting the requirements of §63.3370(f), (g), (h), (i), (j)(2), (l), (o)(2) or (3), or (q), you must determine capture efficiency using the procedures in paragraph (f)(1), (2), or (3) of this section, as applicable.

* * * * *

(g) *Volatile matter retained in the coated web or otherwise not emitted to the atmosphere.* You may choose to take into account the mass of volatile matter retained in the coated web after curing or drying or otherwise not emitted to the atmosphere when determining compliance with the emission standards in §63.3320. If you choose this option, you must develop a site- and product-specific emission factor (EF) and determine the amount of volatile matter retained in the coated web or otherwise not emitted using Equation 3 to §63.3360(g)(1). The EF must be developed by conducting a performance test using an approved EPA test method, or alternative approved by the Administrator by obtaining the average of a three-run test. You may additionally use manufacturer's emissions test data (as long as it replicates the facility's coating formulation and operating conditions), or a mass-balance type approach using a modified Method 24 (including ASTM D5403-93 for radiation-cureable coatings). The EF should equal the proportion of the mass of volatile organics emitted to the mass of volatile organics in the coating materials evaluated. You may use the EF in your compliance calculations

only for periods that the work station(s) was (were) used to make the product, or a similar product, corresponding to that produced during the performance test. You must develop a separate EF for each group of different products that you choose to utilize an EF for calculating emissions by conducting a separate performance test for that group of products. You must conduct a periodic performance test to re-establish the EF if there is a change in coating formulation, operating conditions, or other change that could reasonably be expected to increase emissions since the time of the last test that was used to establish the EF.

(1) Calculate the mass of volatile organics retained in the coated web or otherwise not emitted for the month from each group of similar products using Equation 3:

$$M_{vret} = (C_{vi}M_i + \sum_{j=1}^q C_{vij}M_{ij}) \times (1 - EF_i) \quad \text{Equation 3}$$

Where:

M_{vret} = Mass of volatile matter retained in the coated web after curing or drying, or otherwise not emitted to the atmosphere, kg.

C_{vi} = Volatile organic content of coating material, i, expressed as a mass fraction, kg/kg.

M_i = Mass of as-purchased coating material, i, applied in a month, kg.

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

C_{vij} = Volatile organic content of material, j, added to as-purchased coating material, i, expressed as a mass fraction, kg/kg.

M_{ij} = Mass of material, j, added to as-purchased coating material, i, in a month, kg.

EF_i = Volatile organic matter site- and product-specific emission factor (three-run average determined from performance testing, evaluated as proportion of mass

volatile organics emitted to mass of volatile organics in the coatings used during the performance test).

(2) [Reserved]

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11. Section 63.3370 is amended by:

- a. Adding introductory text;
- b. Revising paragraphs (a), (c)(1)(ii), (c)(2)(i) and (ii), (c)(3) and (4), and (d);
- c. Redesignating paragraphs (e) through (p) as paragraphs (f) through (q);
- d. Adding new paragraph (e);
- e. Revising newly redesignated paragraphs (f) through (m) and (o) though (q); and
- f. Adding paragraphs (r) and (s).

The additions and revisions read as follows:

§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 organic HAP per kg coating material as-purchased; or	Follow the procedures set out in §63.3370(b).
	(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 0.016 kg organic HAP per kg	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).

	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 operating parameters are continuously monitored; 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.
	(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	Follow the procedures set out in

	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	§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).
	(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 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).
	(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).

* * * * *

(c) * * *

(1) * * *

(ii) Calculate the as-applied organic HAP content of each coating material using Equation

4:

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

Equation 4

Where:

C_{ahi} = Monthly average, as-applied, organic HAP content of coating material, i, expressed as a mass fraction, kg/kg.

C_{hi} = Organic HAP content of coating material, i, as-purchased, expressed as a mass fraction, kg/kg.

M_i = Mass of as-purchased coating material, i, applied in a month, kg.

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

C_{hij} = Organic HAP content of material, j, added to as-purchased coating material, i, expressed as a mass fraction, kg/kg.

M_j = 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:

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

Equation 5

Where:

C_{avi} = Monthly average, as-applied, volatile organic content of coating material, i, expressed as a mass fraction, kg/kg.

C_{vi} = Volatile organic content of coating material, i, expressed as a mass fraction, kg/kg.

M_i = Mass of as-purchased coating material, i, applied in a month, kg.

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

C_{vij} = Volatile organic content of material, j, added to as-purchased coating material, i, expressed as a mass fraction, kg/kg.

M_{ij} = Mass of material, j, added to as-purchased coating material, i, in a month, kg.

(2) * * *

(i) Determine the as-applied coating solids content of each coating material following the procedure in §63.3360(d). You must calculate the as-applied coating solids content of coating materials which are reduced, thinned, or diluted prior to application, using Equation 6:

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

Equation 6

Where:

C_{si} = Coating solids content of coating material, i, expressed as a mass fraction, kg/kg.

M_i = Mass of as-purchased coating material, i, applied in a month, kg.

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

C_{sij} = Coating solids content of material, j, added to as-purchased coating material, i, expressed as a mass-fraction, kg/kg.

M_{ij} = Mass of material, j, added to as-purchased coating material, i, in a month, kg.

(ii) Calculate the as-applied organic HAP to coating solids ratio using Equation 7:

$$H_{si} = \frac{C_{ahi}}{C_{asi}} \quad \text{Equation 7}$$

Where:

H_{si} = As-applied, organic HAP to coating solids ratio of coating material, i.

C_{ahi} = Monthly average, as-applied, organic HAP content of coating material, i, expressed as a mass fraction, kg/kg.

C_{asi} = Monthly average, as-applied, coating solids content of coating material, i, expressed as a mass fraction, kg/kg.

(3) *Monthly average organic HAP content of all coating materials as-applied is less than the mass percent limit (§63.3320(b)(2)).* Demonstrate that the monthly average as-applied organic HAP content of all coating materials applied at an existing affected source is less than 0.04 kg organic HAP per kg of coating material applied, and all coating materials applied at a new affected source are less than 0.016 kg organic HAP per kg of coating material applied, as determined by Equation 8:

$$H_L = \frac{\sum_{i=1}^p C_{hi} M_i + \sum_{j=1}^q C_{hij} M_j - M_{\text{ret}}}{\sum_{i=1}^p M_i + \sum_{j=1}^q M_j} \quad \text{Equation 8}$$

Where:

H_L = Monthly average, as-applied, organic HAP content of all coating materials applied, expressed as kg organic HAP per kg of coating material applied, kg/kg.

p = Number of different coating materials applied in a month.

C_{hi} = Organic HAP content of coating material, i, as-purchased, expressed as a mass fraction, kg/kg.

M_i = Mass of as-purchased coating material, i, applied in a month, kg.

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

C_{hij} = Organic HAP content of material, j, added to as-purchased coating material, i, expressed as a mass fraction, kg/kg.

M_{ij} = Mass of material, j, added to as-purchased coating material, i, in a month, kg.

M_{vret} = Mass of volatile matter retained in the coated web after curing or drying, or otherwise not emitted to the atmosphere, kg. The value of this term will be zero in all cases except where you choose to take into account the volatile matter retained in the coated web or otherwise not emitted to the atmosphere for the compliance demonstration procedures in §63.3370.

(4) *Monthly average organic HAP content of all coating materials as-applied is less than the mass fraction of coating solids limit (§63.3320(b)(3)).* Demonstrate that the monthly average as-applied organic HAP content on the basis of coating solids applied of all coating materials applied at an existing affected source is less than 0.20 kg organic HAP per kg coating solids applied, and all coating materials applied at a new affected source are less than 0.08 kg organic HAP per kg coating solids applied, as determined by Equation 9:

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

Equation 9

Where:

H_s = Monthly average, as-applied, organic HAP to coating solids ratio, kg organic HAP/kg coating solids applied.

p = Number of different coating materials applied in a month.

C_{hi} = Organic HAP content of coating material, i, as-purchased, expressed as a mass fraction, kg/kg.

M_i = Mass of as-purchased coating material, i, applied in a month, kg.

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

C_{hij} = Organic HAP content of material, j , added to as-purchased coating material, i , expressed as a mass fraction, kg/kg.

M_{ij} = Mass of material, j , added to as-purchased coating material, i , in a month, kg.

M_{vret} = Mass of volatile matter retained in the coated web after curing or drying, or otherwise not emitted to the atmosphere, kg. The value of this term will be zero in all cases except where you choose to take into account the volatile matter retained in the coated web or otherwise not emitted to the atmosphere for the compliance demonstration procedures in §63.3370.

C_{si} = Coating solids content of coating material, i , expressed as a mass fraction, kg/kg.

C_{sij} = Coating solids content of material, j , added to as-purchased coating material, i , expressed as a mass-fraction, kg/kg.

* * * * *

(d) *Monthly allowable organic HAP applied.* Demonstrate that the total monthly organic HAP applied as determined by Equation 10 is less than the calculated equivalent allowable organic HAP as determined by Equation 17 or 18 in paragraph (m) of this section:

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

Equation 10

Where:

H_m = Total monthly organic HAP applied, kg.

p = Number of different coating materials applied in a month.

C_{hi} = Organic HAP content of coating material, i , as-purchased, expressed as a mass fraction, kg/kg.

M_i = Mass of as-purchased coating material, i , applied in a month, kg.

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

C_{hij} = Organic HAP content of material, j , added to as-purchased coating material, i , expressed as a mass fraction, kg/kg.

M_{ij} = Mass of material, j , added to as-purchased coating material, i , in a month, kg.

M_{vret} = Mass of volatile matter retained in the coated web after curing or drying, or otherwise not emitted to the atmosphere, kg. The value of this term will be zero in all cases except where you choose to take into account the volatile matter retained in the coated web or otherwise not emitted to the atmosphere for the compliance demonstration procedures in §63.3370.

(e) *Accounting for volatile matter retained in the coated web or otherwise not emitted.* If you choose to use the equation in §63.3360(g) to take into account volatile organic matter that is retained in the coated web or otherwise not emitted, you must identify each group of similar products that can utilize each site- and product-specific emission factor. Details regarding the test methods and calculations are provided in §63.3360(g).

(f) *Capture and control to reduce emissions to no more than allowable limit* (§63.3320(b)(1)). Operate a capture system and control device and demonstrate an overall organic HAP control efficiency of at least 95 percent at an existing affected source and at least 98 percent at a new affected source for each month, or operate a capture system and oxidizer so that an outlet organic HAP concentration of no greater than 20 ppmv on a dry basis is achieved as long as the capture efficiency is 100 percent as detailed in §63.3320(b)(4). Unless one of the cases described in paragraph (f)(1), (2), or (3) of this section applies to the affected source, you must either demonstrate compliance in accordance with the procedure in paragraph (i) of this

section when emissions from the affected source are controlled by a solvent recovery device, or the procedure in paragraph (l) of this section when emissions are controlled by an oxidizer or demonstrate compliance for a web coating line by operating each capture system and each control device and continuous parameter monitoring according to the procedures in paragraph (k) of this section.

(1) If the affected source has only always-controlled work stations and operates more than one capture system or more than one control device, you must demonstrate compliance in accordance with the provisions of either paragraph (o) or (q) of this section.

(2) If the affected source operates one or more never-controlled work stations or one or more intermittently-controlled work stations, you must demonstrate compliance in accordance with the provisions of paragraph (o) of this section.

(3) An alternative method of demonstrating compliance with §63.3320(b)(1) is the installation of a PTE around the web coating line that achieves 100 percent capture efficiency and ventilation of all organic HAP emissions from the total enclosure to an oxidizer with an outlet organic HAP concentration of no greater than 20 ppmv on a dry basis. If this method is selected, you must demonstrate compliance by following the procedures in paragraphs (f)(3)(i) and (ii) of this section. Compliance is determined according to paragraph (f)(3)(iii) of this section.

(i) Demonstrate that a total enclosure is installed. An enclosure that meets the requirements in §63.3360(f)(1) will be considered a total enclosure.

(ii) Determine the organic HAP concentration at the outlet of your total enclosure using the procedures in paragraph (f)(3)(ii)(A) or (B) of this section.

(A) Determine the control device efficiency using Equation 2 of §63.3360 and the applicable test methods and procedures specified in §63.3360(e).

(B) Use a CEMS to determine the organic HAP emission rate according to paragraphs (j)(2)(i) through (x) of this section.

(iii) You are in compliance if the installation of a total enclosure is demonstrated and the organic HAP concentration at the outlet of the incinerator is demonstrated to be no greater than 20 ppmv on a dry basis.

(g) *Capture and control to achieve mass fraction of coating solids applied limit (§63.3320(b)(3)).* Operate a capture system and control device and limit the organic HAP emission rate from an existing affected source to no more than 0.20 kg organic HAP emitted per kg coating solids applied, and from a new affected source to no more than 0.08 kg organic HAP emitted per kg coating solids applied as determined on a monthly average as-applied basis. If the affected source operates more than one capture system, more than one control device, one or more never-controlled work stations, or one or more intermittently-controlled work stations, then you must demonstrate compliance in accordance with the provisions of paragraph (o) of this section. Otherwise, you must demonstrate compliance following the procedure in paragraph (j) of this section when emissions from the affected source are controlled by a solvent recovery device or the procedure in paragraph (l) of this section when emissions are controlled by an oxidizer.

(h) *Capture and control to achieve mass fraction limit (§63.3320(b)(2)).* Operate a capture system and control device and limit the organic HAP emission rate to no more than 0.04 kg organic HAP emitted per kg coating material applied at an existing affected source, and no more than 0.016 kg organic HAP emitted per kg coating material applied at a new affected

source as determined on a monthly average as-applied basis. If the affected source operates more than one capture system, more than one control device, one or more never-controlled work stations, or one or more intermittently-controlled work stations, then you must demonstrate compliance in accordance with the provisions of paragraph (o) of this section. Otherwise, you must demonstrate compliance following the procedure in paragraph (j) of this section when emissions from the affected source are controlled by a solvent recovery device or the procedure in paragraph (l) of this section when emissions are controlled by an oxidizer.

(i) *Capture and control to achieve allowable emission rate.* Operate a capture system and control device and limit the monthly organic HAP emissions to less than the allowable emissions as calculated in accordance with paragraph (m) of this section. If the affected source operates more than one capture system, more than one control device, one or more never-controlled work stations, or one or more intermittently-controlled work stations, then you must demonstrate compliance in accordance with the provisions of paragraph (o) of this section. Otherwise, the owner or operator must demonstrate compliance following the procedure in paragraph (j) of this section when emissions from the affected source are controlled by a solvent recovery device or the procedure in paragraph (l) of this section when emissions are controlled by an oxidizer.

(j) *Solvent recovery device compliance demonstration.* If you use a solvent recovery device to control emissions, you must show compliance by following the procedures in either paragraph (j)(1) or (2) of this section:

(1) *Liquid-liquid material balance.* Perform a monthly liquid-liquid material balance as specified in paragraphs (j)(1)(i) through (v) of this section and use the applicable equations in paragraphs (j)(1)(vi) through (ix) of this section to convert the data to units of the selected

compliance option in paragraphs (f) through (i) of this section. Compliance is determined in accordance with paragraph (j)(1)(x) of this section.

(i) Determine the mass of each coating material applied on the web coating line or group of web coating lines controlled by a common solvent recovery device during the month.

(ii) If demonstrating compliance on the basis of organic HAP emission rate based on coating solids applied, organic HAP emission rate based on coating material applied, or emission of less than the calculated allowable organic HAP, determine the organic HAP content of each coating material as-applied during the month following the procedure in §63.3360(c).

(iii) Determine the volatile organic content of each coating material as-applied during the month following the procedure in §63.3360(d).

(iv) If demonstrating compliance on the basis of organic HAP emission rate based on coating solids applied or emission of less than the calculated allowable organic HAP, determine the coating solids content of each coating material applied during the month following the procedure in §63.3360(d).

(v) Determine and monitor the amount of volatile organic matter recovered for the month according to the procedures in §63.3350(d).

(vi) *Recovery efficiency.* Calculate the volatile organic matter collection and recovery efficiency using Equation 11:

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

Equation 11

Where:

R_v = Organic volatile matter collection and recovery efficiency, percent.

M_{vr} = Mass of volatile matter recovered in a month, kg.

M_{vret} = Mass of volatile matter retained in the coated web after curing or drying, or otherwise not emitted to the atmosphere, kg. The value of this term will be zero in all cases except where you choose to take into account the volatile matter retained in the coated web or otherwise not emitted to the atmosphere for the compliance demonstration procedures in this section.

p = Number of different coating materials applied in a month.

C_{vi} = Volatile organic content of coating material, i , expressed as a mass fraction, kg/kg.

M_i = Mass of as-purchased coating material, i , applied in a month, kg.

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

C_{vij} = Volatile organic content of material, j , added to as-purchased coating material, i , expressed as a mass fraction, kg/kg.

M_{ij} = Mass of material, j , added to as-purchased coating material, i , in a month, kg.

(vii) *Organic HAP emitted.* Calculate the organic HAP emitted during the month using

Equation 12:

$$H_e = \left[1 - \frac{R_v}{100} \right] \left[\sum_{i=1}^p C_{hi} M_i + \sum_{j=1}^q C_{hij} M_{ij} - M_{\text{vret}} \right] \quad \text{Equation 12}$$

Where:

H_e = Total monthly organic HAP emitted, kg.

R_v = Organic volatile matter collection and recovery efficiency, percent.

p = Number of different coating materials applied in a month.

C_{hi} = Organic HAP content of coating material, i , as-purchased, expressed as a mass fraction, kg/kg.

M_i = Mass of as-purchased coating material, i , applied in a month, kg.

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

C_{hij} = Organic HAP content of material, j , added to as-purchased coating material, i , expressed as a mass fraction, kg/kg.

M_{ij} = Mass of material, j , added to as-purchased coating material, i , in a month, kg.

M_{vret} = Mass of volatile matter retained in the coated web after curing or drying, or otherwise not emitted to the atmosphere, kg. The value of this term will be zero in all cases except where you choose to take into account the volatile matter retained in the coated web or otherwise not emitted to the atmosphere for the compliance demonstration procedures in this section.

(viii) *Organic HAP emission rate based on coating solids applied.* Calculate the organic HAP emission rate based on coating solids applied using Equation 13:

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

Equation 13

Where:

L = Mass organic HAP emitted per mass of coating solids applied, kg/kg.

H_e = Total monthly organic HAP emitted, kg.

p = Number of different coating materials applied in a month.

C_{si} = Coating solids content of coating material, i , expressed as a mass fraction, kg/kg.

M_i = Mass of as-purchased coating material, i , applied in a month, kg.

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

C_{sij} = Coating solids content of material, j , added to as-purchased coating material, i , expressed as a mass-fraction, kg/kg.

M_{ij} = Mass of material, j , added to as-purchased coating material, i , in a month, kg.

(ix) *Organic HAP emission rate based on coating materials applied.* Calculate the organic HAP emission rate based on coating material applied using Equation 14:

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

Equation 14

Where:

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

H_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:

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

Equation 15

Where:

R = Overall organic HAP control efficiency, percent.

E = Organic volatile matter control efficiency of the control device, percent.

CE = Organic volatile matter capture efficiency of the capture system, percent.

(v) If demonstrating compliance on the basis of organic HAP emission rate based on coating solids applied, organic HAP emission rate based on coating materials applied, or emission of less than the calculated allowable organic HAP, determine the mass of each coating material applied on the web coating line or group of web coating lines controlled by a common control device during the month.

(vi) If demonstrating compliance on the basis of organic HAP emission rate based on coating solids applied, organic HAP emission rate based on coating material applied, or emission of less than the calculated allowable organic HAP, determine the organic HAP content of each coating material as-applied during the month following the procedure in §63.3360(c).

(vii) If demonstrating compliance on the basis of organic HAP emission rate based on coating solids applied or emission of less than the calculated allowable organic HAP, determine the coating solids content of each coating material as-applied during the month following the procedure in §63.3360(d).

(viii) *Organic HAP emitted.* Calculate the organic HAP emitted during the month for each month using Equation 16:

$$H_e = (1 - R) \left(\sum_{i=1}^p C_{ahi} M_i \right) - M_{wet} \quad \text{Equation 16}$$

Where:

H_e = Total monthly organic HAP emitted, kg.

R = Overall organic HAP control efficiency, percent.

p = Number of different coating materials applied in a month.

C_{ahi} = Monthly average, as-applied, organic HAP content of coating material, i , expressed as a mass fraction, kg/kg.

M_i = Mass of as-purchased coating material, i , applied in a month, kg.

M_{vret} = Mass of volatile matter retained in the coated web after curing or drying, or otherwise not emitted to the atmosphere, kg. The value of this term will be zero in all cases except where you choose to take into account the volatile matter retained in the coated web or otherwise not emitted to the atmosphere for the compliance demonstration procedures in this section.

(ix) *Organic HAP emission rate based on coating solids applied.* Calculate the organic HAP emission rate based on coating solids applied using Equation 13 of this section.

(x) *Organic HAP emission rate based on coating materials applied.* Calculate the organic HAP emission rate based on coating material applied using Equation 14 of this section.

(xi) *Compare actual performance to the performance required by compliance option.* The affected source is in compliance with the emission standards in §63.3320(b) for each month if the capture system is operated such that the average capture system operating parameter is greater than or less than (as appropriate) the operating parameter value established in accordance with §63.3350(f); and

(A) The organic volatile matter collection and recovery efficiency is 95 percent or greater at an existing affected source and 98 percent or greater at a new affected source; or

(B) The organic HAP emission rate based on coating solids applied is no more than 0.20 kg organic HAP per kg coating solids applied at an existing affected source and no more than 0.08 kg organic HAP per kg coating solids applied at a new affected source; or

(C) The organic HAP emission rate based on coating material applied is no more than 0.04 kg organic HAP per kg coating material applied at an existing affected source and no more than 0.016 kg organic HAP per kg coating material applied at a new affected source; or

(D) The organic HAP emitted during the month is less than the calculated allowable organic HAP as determined using paragraph (m) of this section.

(k) *Capture and control system compliance demonstration procedures using a CPMS.* If you use an add-on control device, you must demonstrate initial compliance for each capture system and each control device through performance tests and demonstrate continuing compliance through continuous monitoring of capture system and control device operating parameters as specified in paragraphs (k)(1) through (3) of this section. Compliance is determined in accordance with paragraph (k)(4) or (k)(5) of this section.

(1) Determine the control device destruction or removal efficiency using the applicable test methods and procedures in §63.3360(e).

(2) Determine the emission capture efficiency in accordance with §63.3360(f).

(3) Whenever a web coating line is operated, continuously monitor the operating parameters established according to §63.3350(e) and (f).

(4) *No operating limit deviations.* You are in compliance with the emission standards in §63.3320(b) if the thermal oxidizer is operated such that the average combustion temperature does not fall more than 50 degrees Fahrenheit below the temperature established in accordance with §63.3360(e)(3)(i) for each 3-hour period or if the catalytic oxidizer is operating such that the three-hour average temperature difference across the bed does not fall more than 80 percent of the average temperature established in accordance with §63.3360(e)(3)(ii) and the minimum temperature is always 50 degrees Fahrenheit above the catalyst's ignition temperature, or the catalytic oxidizer average combustion temperature does not fall more than 50°F below the temperature established in accordance with §63.3360(e)(3)(ii) for each 3-hour period, and the

capture system operating parameter is operated at an average value greater than or less than (as appropriate) the operating parameter value established in accordance with §63.3350(f); and

(i) The overall organic HAP control efficiency is 95 percent or greater at an existing affected source and 98 percent or greater at a new affected source; or

(ii) The organic HAP emission rate based on coating solids applied is no more than 0.20 kg organic HAP per kg coating solids applied at an existing affected source and no more than 0.08 kg organic HAP per kg coating solids applied at a new affected source; or

(iii) The organic HAP emission rate based on coating material applied is no more than 0.04 kg organic HAP per kg coating material applied at an existing affected source and no more than 0.016 kg organic HAP per kg coating material applied at a new affected source; or

(iv) The organic HAP emitted during the month is less than the calculated allowable organic HAP as determined using paragraph (m) of this section.

(5) *Operating limit deviations.* If one or more operating limit deviations occurred during the monthly averaging period, compliance with the emission standards in §63.3320(b) is determined by either assuming no control of emissions or by estimating the emissions using a control destruction efficiency curve during each 3-hour period that was a deviation. You are in compliance with the emission standards in §63.3320(b) if, including the periods of deviations:

(i) The overall organic HAP control efficiency is 95 percent or greater at an existing affected source and 98 percent or greater at a new affected source; or

(ii) The organic HAP emission rate based on coating solids applied is no more than 0.20 kg organic HAP per kg coating solids applied at an existing affected source and no more than 0.08 kg organic HAP per kg coating solids applied at a new affected source; or

(iii) The organic HAP emission rate based on coating material applied is no more than 0.04 kg organic HAP per kg coating material applied at an existing affected source and no more than 0.016 kg organic HAP per kg coating material applied at a new affected source; or

(iv) The organic HAP emitted during the month is less than the calculated allowable organic HAP as determined using paragraph (m) of this section.

(1) *Oxidizer compliance demonstration procedures.* If you use an oxidizer to control emissions to comply with this subpart, you must show compliance by following the procedures in paragraph (1)(1) of this section. Use the applicable equations specified in paragraph (1)(2) of this section to convert the monitoring and other data into units of the selected compliance option in paragraph (f) through (i) of this section. Compliance is determined in accordance with paragraph (1)(3) or (1)(4) of this section.

(1) Demonstrate initial compliance through performance tests of capture efficiency and control device efficiency and continuing compliance through continuous monitoring of capture system and control device operating parameters as specified in paragraphs (1)(1)(i) through (vi) of this section:

(i) Determine the oxidizer destruction efficiency using the procedure in §63.3360(e).

(ii) Determine the capture system capture efficiency in accordance with §63.3360(f).

(iii) *Capture and control efficiency monitoring.* Whenever a web coating line is operated, continuously monitor the operating parameters established in accordance with §63.3350(e) and (f) to ensure capture and control efficiency.

(iv) If demonstrating compliance on the basis of organic HAP emission rate based on coating solids applied, organic HAP emission rate based on coating materials applied, or emission of less than the calculated allowable organic HAP, determine the mass of each coating

material applied on the web coating line or group of web coating lines controlled by a common oxidizer during the month.

(v) If demonstrating compliance on the basis of organic HAP emission rate based on coating solids applied, organic HAP emission rate based on coating material applied, or emission of less than the calculated allowable organic HAP, determine the organic HAP content of each coating material as-applied during the month following the procedure in §63.3360(c).

(vi) If demonstrating compliance on the basis of organic HAP emission rate based on coating solids applied or emission of less than the calculated allowable organic HAP, determine the coating solids content of each coating material applied during the month following the procedure in §63.3360(d).

(2) Convert the information obtained under paragraph (q)(1) of this section into the units of the selected compliance option using the calculation procedures specified in paragraphs (1)(2)(i) through (iv) of this section.

(i) *Control efficiency.* Calculate the overall organic HAP control efficiency achieved using Equation 15.

(ii) *Organic HAP emitted.* Calculate the organic HAP emitted during the month using Equation 16.

(iii) *Organic HAP emission rate based on coating solids applied.* Calculate the organic HAP emission rate based on coating solids applied for each month using Equation 13.

(iv) *Organic HAP emission rate based on coating materials applied.* Calculate the organic HAP emission rate based on coating material applied using Equation 14.

(3) *No operating limit deviations.* You are in compliance with the emission standards in §63.3320(b) if the oxidizer is operated such that the average combustion temperature does not

fall more than 50 degrees Fahrenheit below the temperature established in accordance with §63.3360(e)(3)(i) for each 3-hour period, or the catalytic oxidizer average combustion temperature does not fall more than 50 degrees Fahrenheit below the temperature established in accordance with §63.3360(e)(3)(ii) for each 3-hour period or the temperature difference across the bed does not fall more than 80 percent of the average temperature established in accordance with §63.3360(e)(3)(ii) and the minimum temperature is always 50 degrees Fahrenheit above the catalyst's ignition temperature, and the capture system operating parameter is operated at an average value greater than or less than (as appropriate) the operating parameter value established in accordance with §63.3350(f); and

(i) The overall organic HAP control efficiency is 95 percent or greater at an existing affected source and 98 percent or greater at a new affected source; or

(ii) The organic HAP emission rate based on coating solids applied is no more than 0.20 kg organic HAP per kg coating solids applied at an existing affected source and no more than 0.08 kg organic HAP per kg coating solids applied at a new affected source; or

(iii) The organic HAP emission rate based on coating material applied is no more than 0.04 kg organic HAP per kg coating material applied at an existing affected source and no more than 0.016 kg organic HAP per kg coating material applied at a new affected source; or

(iv) The organic HAP emitted during the month is less than the calculated allowable organic HAP as determined using paragraph (m) of this section.

(4) *Operating limit deviations.* If one or more operating limit deviations occurred during the monthly averaging period, compliance with the emission standards in §63.3320(b) is determined by assuming no control of emissions or by estimating the emissions using a control

destruction efficiency curve during each 3-hour period that was a deviation. You are in compliance with the emission standards in §63.3320(b) if, including the periods of deviation:

(i) The overall organic HAP control efficiency is 95 percent or greater at an existing affected source and 98 percent or greater at a new affected source; or

(ii) The organic HAP emission rate based on coating solids applied is no more than 0.20 kg organic HAP per kg coating solids applied at an existing affected source and no more than 0.08 kg organic HAP per kg coating solids applied at a new affected source; or

(iii) The organic HAP emission rate based on coating material applied is no more than 0.04 kg organic HAP per kg coating material applied at an existing affected source and no more than 0.016 kg organic HAP per kg coating material applied at a new affected source; or

(iv) The organic HAP emitted during the month is less than the calculated allowable organic HAP as determined using paragraph (m) of this section.

(m) *Monthly allowable organic HAP emissions.* This paragraph provides the procedures and calculations for determining monthly allowable organic HAP emissions for use in demonstrating compliance in accordance with paragraph (d), (i), (j)(1)(x)(D), (j)(2)(xi)(D), or (l)(3)(iv) of this section. You will need to determine the amount of coating material applied at greater than or equal to 20 mass percent coating solids and the amount of coating material applied at less than 20 mass percent coating solids. The allowable organic HAP limit is then calculated based on coating material applied at greater than or equal to 20 mass percent coating solids complying with 0.2 kg organic HAP per kg coating solids at an existing affected source or 0.08 kg organic HAP per kg coating solids at a new affected source, and coating material applied at less than 20 mass percent coating solids complying with 4 mass percent organic HAP at an existing affected source and 1.6 mass-percent organic HAP at a new affected source as follows:

(1) Determine the as-purchased mass of each coating material applied each month.

(2) Determine the as-purchased coating solids content of each coating material applied each month in accordance with §63.3360(d)(1).

(3) Determine the as-purchased mass fraction of each coating material which was applied at 20 mass percent or greater coating solids content on an as-applied basis.

(4) Determine the total mass of each solvent, diluent, thinner, or reducer added to coating materials which were applied at less than 20 mass percent coating solids content on an as-applied basis each month.

(5) Calculate the monthly allowable organic HAP emissions using Equation 17 for an existing affected source:

$$H_a = 0.20 \left[\sum_{i=1}^p M_i G_i C_{si} \right] + 0.04 \left[\sum_{i=1}^p M_i (1 - G_i) + \sum_{j=1}^q M_{L_j} \right] \quad \text{Equation 17}$$

Where:

H_a = Monthly allowable organic HAP emissions, kg.

p = Number of different coating materials applied in a month.

M_i = mass of as-purchased coating material, i , applied in a month, kg.

G_i = Mass fraction of each coating material, i , which was applied at 20 mass percent or greater coating solids content, on an as-applied basis, kg/kg.

C_{si} = Coating solids content of coating material, i , expressed as a mass fraction, kg/kg.

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

M_{L_j} = Mass of non-coating-solids-containing coating material, j , added to coating-solids-containing coating materials which were applied at less than 20 mass percent coating solids content, on an as-applied basis, in a month, kg.

or Equation 18 for a new affected source:

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

Equation 18

Where:

H_a = Monthly allowable organic HAP emissions, kg.

p = Number of different coating materials applied in a month.

M_i = Mass of as-purchased coating material, i , applied in a month, kg.

G_i = Mass fraction of each coating material, i , which was applied at 20 mass percent or greater coating solids content, on an as-applied basis, kg/kg.

C_{si} = Coating solids content of coating material, i , expressed as a mass fraction, kg/kg.

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

M_{Lj} = Mass of non-coating-solids-containing coating material, j , added to coating-solids-containing coating materials which were applied at less than 20 mass percent coating solids content, on an as-applied basis, in a month, kg.

* * * * *

(o) *Combinations of capture and control.* If you operate more than one capture system, more than one control device, one or more never-controlled work stations, or one or more intermittently-controlled work stations, you must calculate organic HAP emissions according to the procedures in paragraphs (o)(1) through (4) of this section, and use the calculation procedures specified in paragraph (o)(5) of this section to convert the monitoring and other data into units of the selected control option in paragraphs (f) through (i) of this section. Use the procedures specified in paragraph (o)(6) of this section to demonstrate compliance.

(1) Solvent recovery system using liquid-liquid material balance compliance

demonstration. If you choose to comply by means of a liquid-liquid material balance for each solvent recovery system used to control one or more web coating lines, you must determine the organic HAP emissions for those web coating lines controlled by that solvent recovery system either:

(i) In accordance with paragraphs (j)(1)(i) through (iii) and (v) through (vii) of this section, if the web coating lines controlled by that solvent recovery system have only always-controlled work stations; or

(ii) In accordance with paragraphs (j)(1)(ii), (iii), (v), and (vi) and (p) of this section, if the web coating lines controlled by that solvent recovery system have one or more never-controlled or intermittently-controlled work stations.

(2) Solvent recovery system using performance test compliance demonstration and CEMS. To demonstrate compliance through an initial test of capture efficiency, continuous monitoring of a capture system operating parameter, and a CEMS on each solvent recovery system used to control one or more web coating lines, you must:

(i) For each capture system delivering emissions to that solvent recovery system, monitor the operating parameter established in accordance with §63.3350(f) to ensure capture system efficiency; and

(ii) Determine the organic HAP emissions for those web coating lines served by each capture system delivering emissions to that solvent recovery system either:

(A) In accordance with paragraphs (j)(2)(i) through (iii), (v), (vi), and (viii) of this section, if the web coating lines served by that capture and control system have only always-controlled work stations; or

(B) In accordance with paragraphs (j)(2)(i) through (iii), (vi), and (p) of this section, if the web coating lines served by that capture and control system have one or more never-controlled or intermittently-controlled work stations.

(3) *Oxidizer.* To demonstrate compliance through performance tests of capture efficiency and control device efficiency, continuous monitoring of capture system, and CPMS for control device operating parameters for each oxidizer used to control emissions from one or more web coating lines, you must:

(i) Monitor the operating parameter in accordance with §63.3350(e) to ensure control device efficiency; and

(ii) For each capture system delivering emissions to that oxidizer, monitor the operating parameter established in accordance with §63.3350(f) to ensure capture efficiency; and

(iii) Determine the organic HAP emissions for those web coating lines served by each capture system delivering emissions to that oxidizer either:

(A) In accordance with paragraphs (l)(1)(i) through (vi) of this section, if the web coating lines served by that capture and control system have only always-controlled work stations; or

(B) In accordance with paragraphs (l)(1)(i) through (iii), (v), and (p) of this section, if the web coating lines served by that capture and control system have one or more never-controlled or intermittently-controlled work stations.

(4) *Uncontrolled coating lines.* If you own or operate one or more uncontrolled web coating lines, you must determine the organic HAP applied on those web coating lines using Equation 10. The organic HAP emitted from an uncontrolled web coating line is equal to the organic HAP applied on that web coating line.

(5) Convert the information obtained under paragraphs (o)(1) through (4) of this section into the units of the selected compliance option using the calculation procedures specified in paragraphs (o)(5)(i) through (iv) of this section.

(i) *Organic HAP emitted.* Calculate the organic HAP emissions for the affected source for the month by summing all organic HAP emissions calculated according to paragraphs (o)(1), (o)(2)(ii), (o)(3)(iii), and (o)(4) of this section.

(ii) *Coating solids applied.* If demonstrating compliance on the basis of organic HAP emission rate based on coating solids applied or emission of less than the calculated allowable organic HAP, the owner or operator must determine the coating solids content of each coating material applied during the month following the procedure in §63.3360(d).

(iii) *Organic HAP emission rate based on coating solids applied.* Calculate the organic HAP emission rate based on coating solids applied for each month using Equation 13.

(iv) *Organic HAP based on materials applied.* Calculate the organic HAP emission rate based on material applied using Equation 14.

(6) *Compliance.* The affected source is in compliance with the emission standards in §63.3320(b) for the month if all operating parameters required to be monitored under paragraphs (o)(1) through (3) of this section were maintained at the values established under §§63.3350 and 63.3360 and one of the standards in paragraphs (o)(6)(i) through (iv) of this section were met. If operating parameter deviations occurred, the affected source is in compliance with the emission standards in §63.3320(b) for the month if, assuming no control of emissions or by estimating the emissions using a control destruction efficiency curve for each 3-hour deviation period, one of the standards in paragraphs (6)(i) through (iv) of this section were met.

(i) The total mass of organic HAP emitted by the affected source based on coating solids applied is no more than 0.20 kg organic HAP per kg coating solids applied at an existing affected source and no more than 0.08 kg organic HAP per kg coating solids applied at a new affected source; or

(ii) The total mass of organic HAP emitted by the affected source based on material applied is no more than 0.04 kg organic HAP per kg material applied at an existing affected source and no more than 0.016 kg organic HAP per kg material applied at a new affected source; or

(iii) The total mass of organic HAP emitted by the affected source during the month is less than the calculated allowable organic HAP as determined using paragraph (m) of this section; or

(iv) The total mass of organic HAP emitted by the affected source was not more than 5 percent of the total mass of organic HAP applied for the month at an existing affected source and no more than 2 percent of the total mass of organic HAP applied for the month at a new affected source. The total mass of organic HAP applied by the affected source in the month must be determined using Equation 10.

(p) *Intermittently-controlled and never-controlled work stations.* If you have been expressly referenced to this paragraph by paragraph (o)(1)(ii), (o)(2)(ii)(B), or (o)(3)(iii)(B) of this section for calculation procedures to determine organic HAP emissions for your intermittently-controlled and never-controlled work stations, you must:

(1) Determine the sum of the mass of all coating materials as-applied on intermittently-controlled work stations operating in bypass mode and the mass of all coating materials as-applied on never-controlled work stations during the month.

(2) Determine the sum of the mass of all coating materials as-applied on intermittently-controlled work stations operating in a controlled mode and the mass of all coating materials applied on always-controlled work stations during the month.

(3) *Liquid-liquid material balance compliance demonstration.* For each web coating line or group of web coating lines for which you use the provisions of paragraph (o)(1)(ii) of this section, you must calculate the organic HAP emitted during the month using Equation 19 of this section:

$$H_e = \left[\sum_{i=1}^P M_{Ci} C_{ahi} \right] \left[1 - \frac{R_v}{100} \right] + \left[\sum_{i=1}^P M_{Bi} C_{ahi} \right] - M_{vret} \quad \text{Equation 19}$$

Where:

H_e = Total monthly organic HAP emitted, kg.

p = Number of different coating materials applied in a month.

M_{Ci} = Sum of the mass of coating material, i , as-applied on intermittently-controlled work stations operating in controlled mode and the mass of coating material, i , as-applied on always-controlled work stations, in a month, kg.

C_{ahi} = Monthly average, as-applied, organic HAP content of coating material, i , expressed as a mass fraction, kg/kg.

R_v = Organic volatile matter collection and recovery efficiency, percent.

M_{Bi} = Sum of the mass of coating material, i , as-applied on intermittently-controlled work stations operating in bypass mode and the mass of coating material, i , as-applied on never-controlled work stations, in a month, kg.

C_{ahi} = Monthly average, as-applied, organic HAP content of coating material, i , expressed as a mass fraction, kg/kg.

M_{vret} = Mass of volatile matter retained in the coated web after curing or drying, or otherwise not emitted to the atmosphere, kg. The value of this term will be zero in all cases except where you choose to take into account the volatile matter retained in the coated web or otherwise not emitted to the atmosphere for the compliance demonstration procedures in this section.

(4) *Performance test to determine capture efficiency and control device efficiency.* For each web coating line or group of web coating lines for which you use the provisions of paragraph (o)(2)(ii)(B) or (o)(3)(iii)(B) of this section, you must calculate the organic HAP emitted during the month using Equation 20:

$$H_e = \left[\sum_{i=1}^p M_{Ci} C_{ahi} \right] \left[1 - \frac{R}{100} \right] + \left[\sum_{i=1}^p M_{Bi} C_{ahi} \right] - M_{\text{vret}} \quad \text{Equation 20}$$

Where:

H_e = Total monthly organic HAP emitted, kg.

p = Number of different coating materials applied in a month.

M_{Ci} = Sum of the mass of coating material, i , as-applied on intermittently-controlled work stations operating in controlled mode and the mass of coating material, i , as-applied on always-controlled work stations, in a month, kg.

C_{ahi} = Monthly average, as-applied, organic HAP content of coating material, i , expressed as a mass fraction, kg/kg.

R = Overall organic HAP control efficiency, percent.

M_{Bi} = Sum of the mass of coating material, i , as-applied on intermittently-controlled work stations operating in bypass mode and the mass of coating material, i , as-applied on never-controlled work stations, in a month, kg.

C_{ahi} = Monthly average, as-applied, organic HAP content of coating material, i, expressed as a mass fraction, kg/kg.

M_{vret} = Mass of volatile matter retained in the coated web after curing or drying, or otherwise not emitted to the atmosphere, kg. The value of this term will be zero in all cases except where you choose to take into account the volatile matter retained in the coated web or otherwise not emitted to the atmosphere for the compliance demonstration procedures in this section.

(q) *Always-controlled work stations with more than one capture and control system.* If you operate more than one capture system or more than one control device and only have always-controlled work stations, then you are in compliance with the emission standards in §63.3320(b)(1) for the month if for each web coating line or group of web coating lines controlled by a common control device:

(1) The volatile matter collection and recovery efficiency as determined by paragraphs (j)(1)(i), (iii), (v), and (vi) of this section is at least 95 percent at an existing affected source and at least 98 percent at a new affected source; or

(2) The overall organic HAP control efficiency as determined by paragraphs (j)(2)(i) through (iv) of this section for each web coating line or group of web coating lines served by that control device and a common capture system is at least 95 percent at an existing affected source and at least 98 percent at a new affected source; or

(3) The overall organic HAP control efficiency as determined by paragraphs (l)(1)(i) through (iii) and (l)(2)(i) of this section for each web coating line or group of web coating lines served by that control device and a common capture system is at least 95 percent at an existing affected source and at least 98 percent at a new affected source.

(r) *Mass-balance approach.* As an alternative to §63.3370(b) through (p), you may demonstrate monthly compliance using a mass-balance approach in accordance with this section, except for any month that you elect to meet the emission limitation in §63.3320(b)(4). The mass-balance approach should be performed as follows:

(1) Separately for each individual/grouping(s) of lines, you must sum the mass of organic HAP emitted during the month and divide by the corresponding total mass of all organic HAP applied on the lines, or total mass of coating materials applied on the lines, or total mass of coating solids applied on the lines, for the same period, in accordance with the emission limitation that you have elected at §63.3320(b)(1) through (3) for the month's demonstration. You may also choose to use volatile organic content as a surrogate for organic HAP for the compliance demonstration in accordance with §63.3360(d). You are required to include all emissions and inputs that occur during periods that each line or grouping of lines operates in accordance with the applicability criteria in §63.3300.

(2) You must include all of the organic HAP emitted by your individual/grouping(s) of lines, as follows.

(i) You must record the mass of organic HAP or volatile organic content utilized at all work stations of all of your individually/grouping(s) of lines. You must additionally record the mass of all coating materials applied at these work stations if you are demonstrating compliance for the month with the emission limitation at §63.3320(b)(2) (the "coating materials" option). You must additionally record the mass of all coating solids applied at these work stations if you are demonstrating compliance for the month with the emission limitation at § 63.3320(b)(3) (the "coating solids" option).

(ii) You must assume that all of the organic HAP input to all never-controlled work stations is emitted, unless you have determined an emission factor in accordance with §63.3360(g).

(iii) For all always-controlled work stations, you must assume that all of the organic HAP or volatile organic content is emitted, less the reductions provided by the corresponding capture system and control device, in accordance with the most recently measured capture and destruction efficiencies, or in accordance with the measured mass of volatile organic compounds (VOC) recovered for the month (*e.g.*, carbon control or condensers). You may account for organic HAP or volatile organic content retained in the coated web or otherwise not emitted if you have determined an emission factor in accordance with §63.3360(g).

(iv) For all intermittently-controlled work stations, you must assume that all of the organic HAP or volatile organic content is emitted during periods of no control. During periods of control, you must assume that all of the organic HAP or volatile organic content is emitted, less the reductions provided by the corresponding capture system and control device, in accordance with the most recently measured capture and destruction efficiencies, or in accordance with the measured mass of VOC recovered for the month (*e.g.*, carbon control or condensers). You may account for organic HAP or volatile organic content retained in the coated web or otherwise not emitted if you have determined an emission factor in accordance with §63.3360(g).

(v) You must record the organic HAP or volatile organic content input to all work stations of your individual/grouping(s) of lines and the mass of coating materials and/or solids applied, if applicable, and determine corresponding emissions during all periods of operation, including malfunctions or startups and shutdowns of any web coating line or control device.

(3) You are in compliance with the emission standards in §63.3320(b) if each of your individual/grouping(s) of lines, meets one of the requirements in paragraphs (r)(3)(i) through (iii) of this section, as applicable. If operating parameter limit deviations occurred, including periods that the oxidizer control device(s), if any, operated at an average combustion temperature more than 50 degrees Fahrenheit below the temperature established in accordance with §63.3360(e), or the 3-hour average temperature difference across the catalyst bed at no less than 80 percent of this average temperature differential and the catalytic oxidizer maintained a minimum temperature 50 degrees Fahrenheit above the catalyst's ignition temperature, you are in compliance with the emission standards in §63.3320(b) for the month, if assuming no control of emissions for each 3-hour deviation period (or in accordance with an alternate approved method), one of the requirements in paragraphs (r)(3)(i) through (iii) of this section was met.

(i) The total mass of organic HAP emitted by the affected source based on HAP applied is no more than 0.05 kg organic HAP per kg HAP applied at an existing affected source and no more than 0.02 kg organic HAP per kg HAP applied at a new affected source; or

(ii) The total mass of organic HAP emitted by the affected source based on coating solids applied is no more than 0.20 kg organic HAP per kg coating solids applied at an existing affected source and no more than 0.08 kg organic HAP per kg coating solids applied at a new affected source; or

(iii) The total mass of organic HAP emitted by the affected source based on material applied is no more than 0.04 kg organic HAP per kg material applied at an existing affected source and no more than 0.016 kg organic HAP per kg material applied at a new affected source.

(s) *Non-HAP coating.* You must demonstrate that all of the coatings applied at all of the web coating lines at the affected source have organic HAP contents below 0.1 percent by mass

for OSHA-defined carcinogens as specified in section A.6.4 of appendix A to 29 CFR 1910.1200, and below 1.0 percent by mass for other organic HAP compounds using the procedures in §63.3370(s)(1) through (3).

(1) Determine the organic HAP mass fraction of each coating material “as purchased” by following one of the procedures in paragraphs §63.3360(c)(1) through (3) and determine the organic HAP mass fraction of each coating material “as applied” by following the procedures in paragraph §63.3360(c)(4).

(2) Submit to your permitting authority a report certifying that all coatings applied at all of the web coating lines at your effected source are non-HAP coatings.

(3) Maintain records of coating formulations used as required in §63.3410(a)(1)(iii).

(4) Resume reporting requirements if any of the coating formulations are modified to exceed the thresholds in §63.3370(s) or new coatings which exceed the thresholds in paragraph (s) of this section are used.

12. Section 63.3400 is amended by:

- a. Revising paragraph (a) and paragraph (b) introductory text;
- b. Revising paragraphs (c)(1)(ii) and (iv), (c)(2) introductory text, (c)(2)(v) and (vi), (e), and (f);
- c. Redesignating paragraph (g) as paragraph (k) and revising newly redesignated (k) introductory text; and
- d. Adding new paragraph (g) and paragraphs (h), (i), and (j).

The revisions and additions read as follows:

§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).

* * * * *

(c) * * *

(1) * * *

(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.

* * * * *

(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.

* * * * *

(2) *Compliance report contents.* The compliance report must contain the information in paragraphs (c)(2)(i) through (viii) of this section:

* * * * *

(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.

* * * * *

(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.

* * * * *

13. Section 63.3410 is revised to read as follows:

§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.

14. Section 63.3420 is revised to read as follows:

§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).

15. Table 1 to subpart JJJJ is revised to read as follows:

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.
	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)).

16. Table 2 to subpart JJJJ is revised to read as follows:

Table 2 to Subpart JJJJ of Part 63—Applicability of 40 CFR Part 63 General Provisions to Subpart JJJJ

You must comply with the applicable General Provisions requirements according to the following table:

General provisions reference	Applicable to subpart JJJJ	Explanation
§63.1(a)(1)-(4)	Yes.	
§63.1(a)(5)	No	Reserved.
§63.1(a)(6)-(8)	Yes.	
§63.1(a)(9)	No	Reserved.
§63.1(a)(10)-(14)	Yes.	
§63.1(b)(1)	No	Subpart JJJJ specifies applicability.
§63.1(b)(2)-(3)	Yes.	
§63.1(c)(1)	Yes.	
§63.1(c)(2)	No	Area sources are not subject to emission standards of subpart JJJJ.
§63.1(c)(3)	No	Reserved.
§63.1(c)(4)	Yes.	
§63.1(c)(5)	Yes.	
§63.1(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.	

§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 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.	
§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.
§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.	
§63.10(a)	Yes.	
§63.10(b)(1)	Yes.	
§63.10(b)(2)(i)	Depends, see explanation	No, for new or reconstructed sources which commenced construction or reconstruction after September 19, 2019. Yes, for all other affected sources before July 9, 2021, and No thereafter.
§63.10(b)(2)(ii)	No	See §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 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 JJJ does not specify use of flares for compliance.
§63.12	Yes.	
§63.13	Yes.	
§63.14	Yes	Subpart JJJ includes provisions for alternative ASME and ASTM test methods that are incorporated by reference.
§63.15	Yes.	
§63.16	Yes.	

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