6560-50-P

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 63

[EPA-HQ-OAR-2018-0416; FRL-]

RIN 2060-AU22

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

AGENCY: Environmental Protection Agency (EPA).

ACTION: Proposed rule.

SUMMARY: The U.S. Environmental Protection Agency (EPA) is conducting the residual risk and technology review (RTR) of the National Emission Standards for Hazardous Air Pollutants (NESHAP) for the Paper and Other Web Coating (POWC) source category that is required under the Clean Air Act (CAA). We are proposing to find the risks due to emissions of air toxics to be acceptable from this source category and that the current NESHAP provides an ample margin of safety to protect public health. Further, we identified no new cost-effective controls under the technology review that would achieve significant further emissions reductions, and, thus, are proposing to find that no revisions are necessary based on developments in practices, processes, or control technologies. In addition to performing the RTR, we are proposing certain amendments to the POWC NESHAP. Specifically, the EPA is proposing to add a compliance demonstration equation that accounts for retained volatiles in the web coating; to amend provisions addressing periods of startup, shutdown, and malfunction (SSM); to add repeat testing

and electronic reporting requirements; and to make technical and editorial changes. The EPA is proposing these amendments to improve the effectiveness of the NESHAP.

DATES: *Comments*. Comments must be received on or before **[INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER]**. Under the Paperwork Reduction Act (PRA), comments on the information collection provisions are best assured of consideration if the Office of Management and Budget (OMB) receives a copy of your comments on or before **[INSERT DATE 30 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER]**.

Public hearing. If anyone contacts us requesting a public hearing on or before **[INSERT DATE 5 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER]**, we will hold a hearing. Additional information about the hearing, if requested, will be published in a subsequent **Federal Register** document and posted at *https://www.epa.gov/stationary-sources-air-pollution/paper-and-other-web-coating-national-emission-standards-hazardous-0.* See **SUPPLEMENTARY INFORMATION** for information on requesting and registering for a public hearing.

ADDRESSES: You may send comments, identified by Docket ID No. EPA-HQ-OAR-2018-0416, by any of the following methods:

- Federal eRulemaking Portal: *https://www.regulations.gov/* (our preferred method). Follow the online instructions for submitting comments.
- Email: *a-and-r-docket@epa.gov*. Include Docket ID No. EPA-HQ-OAR-2018-0416 in the subject line of the message.
- Fax: (202) 566-9744. Attention Docket ID No. EPA-HQ-OAR-2018-0416.

- Mail: U.S. Environmental Protection Agency, EPA Docket Center, Docket ID No. EPA-HQ-OAR-2018-0416, Mail Code 28221T, 1200 Pennsylvania Avenue, NW, Washington, DC 20460.
- Hand/Courier Delivery: EPA Docket Center, WJC West Building, Room 3334, 1301 Constitution Avenue, NW, Washington, DC 20004. The Docket Center's hours of operation are 8:30 a.m. – 4:30 p.m., Monday – Friday (except federal holidays).

Instructions: All submissions received must include the Docket ID No. for this rulemaking. Comments received may be posted without change to *https://www.regulations.gov/*, including any personal information provided. For detailed instructions on sending comments and additional information on the rulemaking process, see the **SUPPLEMENTARY INFORMATION** section of this document.

FOR FURTHER INFORMATION CONTACT: For questions about this proposed action, contact Dr. Kelley Spence, Sector Policies and Programs Division (Mail Code 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 questions about monitoring and testing requirements, contact Mr. Barrett Parker, Sector Policies and Programs Division (Mail Code D243-05), Office of Air Quality Planning and Standards, U.S. Environmental Protection Agency, Research Triangle Park, North Carolina 27711; telephone number: (919) 541-5635; fax number: (919) 541-4991; and email address: *parker.barrett@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 Avenue, NW, Washington DC 20460; telephone number: (202) 564-1395; and email address: *cox.john@epa.gov*.

SUPPLEMENTARY INFORMATION:

Public hearing. Please contact Ms. Virginia Hunt at (919) 541-0832 or by email at *hunt.virginia@epa.gov* to request a public hearing, to register to speak at the public hearing, or to inquire as to whether a public hearing will be held.

Docket. The EPA has established a docket for this rulemaking under Docket ID No. EPA-HQ-OAR-2018-0416. All documents in the docket are listed in Regulations.gov. 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. Publicly available docket materials are available either electronically in Regulations.gov or in hard copy at the EPA Docket Center, Room 3334, WJC West Building, 1301 Constitution Avenue, NW, Washington, DC. The Public Reading Room is open from 8:30 a.m. to 4:30 p.m., Monday through Friday, excluding legal holidays. The telephone number for the Public Reading Room is (202) 566-1744, and the telephone number for the EPA Docket Center is (202) 566-1742.

Instructions. Direct your comments to Docket ID No. EPA-HQ-OAR-2018-0416. The EPA's policy is that all comments received will be included in the public docket without change and may be made available online at *https://www.regulations.gov/*, including any personal information provided, unless the comment includes information claimed to be CBI or other information whose disclosure is restricted by statute. Do not submit information that you consider to be CBI or otherwise protected through *https://www.regulations.gov/* or email. This type of information should be submitted by mail as discussed below.

The EPA may publish any comment received to its public docket. Multimedia submissions (audio, video, *etc.*) must be accompanied by a written comment. The written comment is considered the official comment and should include discussion of all points you wish to make. The EPA will generally not consider comments or comment contents located outside of the primary submission (*i.e.*, on the Web, cloud, or other file sharing system). For additional submission methods, the full EPA public comment policy, information about CBI or multimedia submissions, and general guidance on making effective comments, please visit *https://www.epa.gov/dockets/commenting-epa-dockets*.

The *https://www.regulations.gov/* website allows you to submit your comment anonymously, which means the EPA will not know your identity or contact information unless you provide it in the body of your comment. If you send an email comment directly to the EPA without going through *https://www.regulations.gov/*, your email address will be automatically captured and included as part of the comment that is placed in the public docket and made available on the Internet. If you submit an electronic comment, the EPA recommends that you include your name and other contact information in the body of your comment and with any digital storage media you submit. If the EPA cannot read your comment due to technical difficulties and cannot contact you for clarification, the EPA may not be able to consider your comment. Electronic files should not include special characters or any form of encryption and be free of any defects or viruses. For additional information about the EPA's public docket, visit the EPA Docket Center homepage at *https://www.epa.gov/dockets*.

Submitting CBI. Do not submit information containing CBI to the EPA through *https://www.regulations.gov/* or email. Clearly mark the part or all of the information that you claim to be CBI. For CBI information on any digital storage media that you mail to the EPA, mark the outside of the digital storage media as CBI and then identify electronically within the digital storage media the specific information that is claimed as CBI. In addition to one complete version of the comments that includes information claimed as CBI, you must submit a copy of the comments that does not contain the information claimed as CBI directly to the public docket through the procedures outlined in *Instructions* above. If you submit any digital storage media that does not contain CBI, mark the outside of the digital storage media clearly that it does not contain CBI. Information not marked as CBI will be included in the public docket and the EPA's electronic public docket without prior notice. Information marked as CBI will not be disclosed except in accordance with procedures set forth in 40 Code of Federal Regulations (CFR) part 2. Send or deliver information identified as CBI only to the following address: OAQPS Document Control Officer (C404-02), OAQPS, U.S. Environmental Protection Agency, Research Triangle Park, North Carolina 27711, Attention Docket ID No. EPA-HQ-OAR-2018-0416.

Preamble acronyms and abbreviations. We use 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:

AEGL	acute exposure guideline level
AERMOD	air dispersion model used by the HEM-3 model
ANSI	American National Standards Institute
ASME	American Society of Mechanical Engineers
ASTM	American Society for Testing and Materials

CAA	Clean Air Act
CalEPA	California EPA
CBI	Confidential Business Information
CDX	Central Data Exchange
CEDRI	Compliance and Emissions Data Reporting Interface
CFR	Code of Federal Regulations
DGME	diethylene glycol monoethyl ether
ECHO	Enforcement and Compliance History Online
EPA	Environmental Protection Agency
ERPG	emergency response planning guideline
ERT	Electronic Reporting Tool
GACT	generally available control technology
HAP	hazardous air pollutant(s)
HCl	hydrochloric acid
HEM-3	Human Exposure Model, Version 1.5.5
HF	hydrogen fluoride
HI	hazard index
HQ	hazard quotient
IBR	incorporation by reference
ICR	Information Collection Request
IRIS	Integrated Risk Information System
km	kilometer
MACT	maximum achievable control technology
MIR	maximum individual risk
NAAQS	National Ambient Air Quality Standards
NAICS	North American Industry Classification System
NEI	National Emissions Inventory
NESHAP	national emission standards for hazardous air pollutants
NRDC	Natural Resources Defense Council
NSPS	new source performance standards
NTTAA	National Technology Transfer and Advancement Act
OAQPS	Office of Air Quality Planning and Standards
OMB	Office of Management and Budget
PB-HAP	hazardous air pollutants known to be persistent and bioaccumulative in the environment
PDF	portable document format
POM	polycyclic organic matter
POWC	paper and other web coating

ppm	parts per million
ppmv	parts per million by volume
PRA	Paperwork Reduction Act
QA	quality assurance
RBLC	Reasonably Available Control Technology/Best Available Control Technology/Lowest Achievable Emission Rate Clearinghouse
REL	reference exposure level
RFA	Regulatory Flexibility Act
RfC	reference concentration
RTR	residual risk and technology review
SAB	Science Advisory Board
SSM	startup, shutdown, and malfunction
TCE	trichloroethylene
TOSHI	target organ-specific hazard index
tpy	tons per year
TRI	Toxics Release Inventory
TRIM.FaTE	Total Risk Integrated Methodology.Fate, Transport, and Ecological Exposure model
UF	uncertainty factor
UMRA	Unfunded Mandates Reform Act
URE	unit risk estimate
U.S.C.	United States Code
USGS	U.S. Geological Survey
VCS	voluntary consensus standards
VOC	volatile organic compound(s)

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

I. General Information

A. Does this action apply to me?

Table 1 of this preamble lists the NESHAP and associated regulated industrial source category that is the subject of this proposal. Table 1 is not intended to be exhaustive, but rather provides a guide for readers regarding the entities that this proposed action is likely to affect. The proposed standards, once promulgated, will be directly applicable to the affected sources. This proposed action will not affect federal, state, local, and tribal government entities. As defined in the *Initial List of Categories of Sources Under Section 112(c)(1) of the Clean Air Act*

Amendments of 1990 (see 57 FR 31576, July 16, 1992) and *Documentation for Developing the Initial Source Category List, Final Report* (*see* EPA-450/3-91-030, July 1992), the POWC source category is any facility engaged in the coating of paper, plastic film, metallic foil, and other web surfaces. The category may include, but is not limited to, decorative coatings on gift wraps or packaging. The source category does not include printing operations covered under the Printing and Publishing NESHAP (40 CFR part 63, subpart KK).

Table 1. NESHAP and Industrial Source Categories Affected By This Proposed Action

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

[1] North American Industry Classification System.

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 action is available on the Internet. Following signature by the EPA Administrator, the EPA will post a copy of this proposed 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 of the proposal and key technical documents at this same website. Information on the overall RTR program is available at *https://www3.epa.gov/ttn/atw/rrisk/rtrpg.html*.

A redline version of the regulatory language that incorporates the proposed changes in this action is available in the docket for this action (Docket ID No. EPA-HQ-OAR-2018-0416).

II. Background

A. What is the statutory authority for this action?

The statutory authority for this action is provided by sections 112 and 301 of the CAA, as amended (42 U.S.C. 7401 *et seq*.). Section 112 of the CAA establishes a two-stage regulatory process to develop standards for emissions of hazardous air pollutants (HAP) from stationary sources. Generally, the first stage involves establishing technology-based standards and the second stage involves evaluating those standards that are based on maximum achievable control technology (MACT) to determine whether additional standards are needed to address any remaining risk associated with HAP emissions. This second stage is commonly referred to as the "residual risk review." In addition to the residual risk review, the CAA also requires the EPA to review standards set under CAA section 112 every 8 years to determine if there are "developments in practices, processes, or control technologies" that may be appropriate to incorporate into the standards. This review is commonly referred to as the "technology review." When the two reviews are combined into a single rulemaking, it is commonly referred to as the "risk and technology review." The discussion that follows identifies the most relevant statutory sections and briefly explains the contours of the methodology used to implement these statutory requirements. A more comprehensive discussion appears in the document titled *CAA Section 112 Risk and Technology Reviews: Statutory Authority and Methodology,* in the docket for this rulemaking.

In the first stage of the CAA section 112 standard setting process, the EPA promulgates technology-based standards under CAA section 112(d) for categories of sources identified as emitting one or more of the HAP listed in CAA section 112(b). Sources of HAP emissions are either major sources or area sources, and CAA section 112 establishes different requirements for major source standards and area source standards. "Major sources" are those that emit or have the potential to emit 10 tons per year (tpy) or more of a single HAP or 25 tpy or more of any combination of HAP. All other sources are "area sources." For major sources, CAA section 112(d)(2) provides that the technology-based NESHAP must reflect the maximum degree of emission reductions of HAP achievable (after considering cost, energy requirements, and non-air quality health and environmental impacts). These standards are commonly referred to as MACT standards. CAA section 112(d)(3) also establishes a minimum control level for MACT standards, known as the MACT “floor.” The EPA must also consider control options that are more stringent than the floor. Standards more stringent than the floor are commonly referred to as beyond-the-floor standards. In certain instances, as provided in CAA section 112(h), the EPA may set work practice standards where it is not feasible to prescribe or enforce a numerical emission standard. For area sources, CAA section 112(d)(5) gives the EPA discretion to set standards based on generally available control technologies or management practices (GACT standards) in lieu of MACT standards.

The second stage in standard-setting focuses on identifying and addressing any remaining (*i.e.,* “residual”) risk according to CAA section 112(f). For source categories subject to MACT standards, section 112(f)(2) of the CAA requires the EPA to determine whether promulgation of additional standards is needed to provide an ample margin of safety to protect public health or to prevent an adverse environmental effect. Section 112(d)(5) of the CAA provides that this residual risk review is not required for categories of area sources subject to GACT standards. Section 112(f)(2)(B) of the CAA further expressly preserves the EPA’s use of the two-step approach for developing standards to address any residual risk and the Agency’s interpretation of “ample margin of safety” developed in the *National Emissions Standards for Hazardous Air Pollutants: Benzene Emissions from Maleic Anhydride Plants, Ethylbenzene/Styrene Plants, Benzene Storage Vessels, Benzene Equipment Leaks, and Coke By-Product Recovery Plants* (Benzene NESHAP) (54 FR 38044, September 14, 1989). The EPA notified Congress in the Risk Report that the Agency intended to use the Benzene NESHAP approach in making CAA section 112(f) residual risk determinations (EPA–453/R–99–001, p. ES–11). The EPA subsequently adopted this approach in its residual risk determinations and the United States Court of Appeals for the District of Columbia Circuit (the Court) upheld the EPA's interpretation that CAA section 112(f)(2) incorporates the approach established in the Benzene NESHAP. See *Natural Resources Defense Council (NRDC) v. EPA*, 529 F.3d 1077, 1083 (D.C. Cir. 2008).

The approach incorporated into the CAA and used by the EPA to evaluate residual risk and to develop standards under CAA section 112(f)(2) is a two-step approach. In the first step, the EPA determines whether risks are acceptable. This determination "considers all health information, including risk estimation uncertainty, and includes a presumptive limit on maximum individual lifetime [cancer] risk (MIR)[1] of approximately 1 in 10 thousand." 54 FR 38045, September 14, 1989. If risks are unacceptable, the EPA must determine the emissions standards necessary to reduce risk to an acceptable level without considering costs. In the second step of the approach, the EPA considers whether the emissions standards provide an ample margin of safety to protect public health "in consideration of all health information, including the number of persons at risk levels higher than approximately 1 in 1 million, as well as other relevant factors, including costs and economic impacts, technological feasibility, and other factors relevant to each particular decision." *Id.* The EPA must promulgate emission standards necessary to provide an ample margin of safety to protect public health or determine that the standards being reviewed provide an ample margin of safety without any revisions. After conducting the ample margin of safety analysis, we consider whether a more stringent standard is

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[1] Although defined as "maximum individual risk," MIR refers only to cancer risk. MIR, one metric for assessing cancer risk, is the estimated risk if an individual were exposed to the maximum level of a pollutant for a lifetime.

necessary to prevent, taking into consideration costs, energy, safety, and other relevant factors, an adverse environmental effect.

CAA section 112(d)(6) separately requires the EPA to review standards promulgated under CAA section 112 and revise them "as necessary (taking into account developments in practices, processes, and control technologies)" no less often than every 8 years. In conducting this review, which we call the "technology review," the EPA is not required to recalculate the MACT floor. *NRDC v. EPA*, 529 F.3d 1077, 1084 (D.C. Cir. 2008). *Association of Battery Recyclers, Inc. v. EPA*, 716 F.3d 667 (D.C. Cir. 2013). The EPA may consider cost in deciding whether to revise the standards pursuant to CAA section 112(d)(6).

B. What is this source category and how does the current NESHAP regulate its HAP emissions?

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. Web coating operations covered by other MACT standards (*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 development lines are excluded. In addition, specific process exclusions include lithography, screen printing, letterpress, and narrow web flexographic printing.

All the coating lines at a subject facility are defined as one affected source. An existing source means any affected source of which the construction or reconstruction commenced on or before September 13, 2000, and has not since undergone reconstruction. 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. Affiliated operations such as coating formulation, mixing, handling, and storage of coatings and solvent, and conveyance and treatment of wastewater are defined as "affiliated equipment" and are part of the POWC source category but have no requirements in the existing rule.

This proposal includes both a residual risk assessment and a technology review of the emission sources subject to the POWC NESHAP. Facilities subject to the POWC NESHAP must utilize low-solvent coatings, add-on controls, or a combination of both to meet the organic HAP emission limits described below:

- No more than 5 percent of the organic HAP applied for each month (95-percent reduction) at existing affected sources, and no more than 2 percent of the organic HAP applied for each month (98-percent reduction) at new affected sources;

- No more than 4 percent of the mass of coating materials applied for each month at existing affected sources, and no more than 1.6 percent of the mass of coating materials applied for each month at new affected sources;

- No more than 20 percent of the mass of coating solids applied for each month at existing affected sources, and no more than 8 percent of the coating solids applied for each month at new affected sources; or

- If an oxidizer is used to control organic HAP emissions, the oxidizer must be operated such that an outlet organic HAP concentration of no greater than 20 parts per million by volume (ppmv) by compound on a dry basis is achieved and the efficiency of the capture system is 100 percent.

The NESHAP also includes various operating limits, initial and continuous compliance requirements, and recordkeeping and reporting requirements for the POWC source category. We reviewed these requirements and are proposing to update them as part of this action in conjunction with conducting the RTR for this source category.

C. What data collection activities were conducted to support this action?

The EPA collected data from several environmental databases that included information pertaining to POWC facilities in the United States. The primary databases were the EPA's Enforcement and Compliance History Online (ECHO) database, Toxics Release Inventory (TRI), and National Emissions Inventory (NEI) for 2011 and 2014 (versions 1 and 2). Title V operating permits were obtained from states that have facilities subject to 40 CFR part 63, subpart JJJJ. See the memorandums titled *Determination of Facilities Subject to 40 CFR Part 63, Subpart JJJJ, Paper and Other Web Coating* and *Preparation of POWC Risk Inputs File*, in the docket for this rulemaking for more information on the review of these databases (Docket ID No. EPA-HQ-OAR-2018-0416). Additionally, the EPA conducted several site visits to better understand POWC processes and how the NESHAP is implemented. Trip reports drafted from these site visits are available in the docket for this rulemaking (Docket ID No. EPA-HQ-OAR-2018-0416). EPA did not use its authority under CAA section 114 to request additional information from POWC facilities.

D. What other relevant background information and data are available?

In addition to the ECHO, TRI, and NEI databases, the EPA reviewed the additional information sources listed below and consulted with stakeholders regulated under the POWC

NESHAP to determine if there have been developments in practices, processes, or control technologies. These include:

- Permit limits and selected compliance options from permits collected from state agencies;
- Information on air pollution control options in the POWC industry from the Reasonably Available Control Technology/Best Available Control Technology/Lowest Achievable Emission Rate Clearinghouse (RBLC);
- Information on the most effective ways to control emissions of volatile organic compounds (VOC) and volatile organic HAP from sources in various industries, including the POWC industry;
- Communication with trade groups and associations representing industries in the affected NAICS categories and their members; and
- Review of on-line information on trade group and association sites and sites of relevant publications.

III. Analytical Procedures and Decision-Making

In this section, we describe the analyses performed to support the proposed decisions for the RTR and other issues addressed in this action.

A. How do we consider risk in our decision-making?

As discussed in section II.A of this preamble and in the Benzene NESHAP, in evaluating and developing standards under CAA section 112(f)(2), we apply a two-step approach to determine whether or not risks are acceptable and to determine if the standards provide an ample margin of safety to protect public health. As explained in the Benzene NESHAP, "the first step judgment on acceptability cannot be reduced to any single factor" and, thus, "[t]he Administrator believes that the acceptability of risk under section 112 is best judged on the basis of a broad set of health risk measures and information." 54 FR 38046, September 14, 1989. Similarly, with regard to the ample margin of safety determination, "the Agency again considers all of the health risk and other health information considered in the first step. Beyond that information, additional factors relating to the appropriate level of control will also be considered, including cost and economic impacts of controls, technological feasibility, uncertainties, and any other relevant factors." *Id.*

The Benzene NESHAP approach provides flexibility regarding factors the EPA may consider in making determinations and how the EPA may weigh those factors for each source category. The EPA conducts a risk assessment that provides estimates of the MIR posed by the HAP emissions from each source in the source category, the hazard index (HI) for chronic exposures to HAP with the potential to cause noncancer health effects, and the hazard quotient (HQ) for acute exposures to HAP with the potential to cause noncancer health effects.[2] The assessment also provides estimates of the distribution of cancer risk within the exposed populations, cancer incidence, and an evaluation of the potential for an adverse environmental effect. The scope of the EPA's risk analysis is consistent with the EPA's response to comments on our policy under the Benzene NESHAP where the EPA explained that:

> "[t]he policy chosen by the Administrator permits consideration of multiple measures of health risk. Not only can the MIR figure be considered, but also incidence, the presence of non-cancer health effects, and the uncertainties of the risk estimates. In this way, the effect on the most exposed individuals can be reviewed as well as the impact on the general public. These factors can then be weighed in each individual case. This approach

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[2] The MIR is defined as the cancer risk associated with a lifetime of exposure at the highest concentration of HAP where people are likely to live. The HQ is the ratio of the potential HAP exposure concentration to the noncancer dose-response value; the HI is the sum of HQs for HAP that affect the same target organ or organ system.

> complies with the *Vinyl Chloride* mandate that the Administrator ascertain an acceptable level of risk to the public by employing his expertise to assess available data. It also complies with the Congressional intent behind the CAA, which did not exclude the use of any particular measure of public health risk from the EPA's consideration with respect to CAA section 112 regulations, and thereby implicitly permits consideration of any and all measures of health risk which the Administrator, in his judgment, believes are appropriate to determining what will 'protect the public health'."

See 54 FR 38057, September 14, 1989. Thus, the level of the MIR is only one factor to be weighed in determining acceptability of risk. The Benzene NESHAP explained that "an MIR of approximately one in 10 thousand should ordinarily be the upper end of the range of acceptability. As risks increase above this benchmark, they become presumptively less acceptable under CAA section 112, and would be weighed with the other health risk measures and information in making an overall judgment on acceptability. Or, the Agency may find, in a particular case, that a risk that includes an MIR less than the presumptively acceptable level is unacceptable in the light of other health risk factors." *Id.* at 38045. In other words, risks that include an MIR above 100-in-1 million may be determined to be acceptable, and risks with an MIR below that level may be determined to be unacceptable, depending on all of the available health information. Similarly, with regard to the ample margin of safety analysis, the EPA stated in the Benzene NESHAP that: "EPA believes the relative weight of the many factors that can be considered in selecting an ample margin of safety can only be determined for each specific source category. This occurs mainly because technological and economic factors (along with the health-related factors) vary from source category to source category." *Id.* at 38061. We also consider the uncertainties associated with the various risk analyses, as discussed earlier in this preamble, in our determinations of acceptability and ample margin of safety.

The EPA notes that it has not considered certain health information to date in making residual risk determinations. At this time, we do not attempt to quantify the HAP risk that may be associated with emissions from other facilities that do not include the source category under review, mobile source emissions, natural source emissions, persistent environmental pollution, or atmospheric transformation in the vicinity of the sources in the category.

The EPA understands the potential importance of considering an individual's total exposure to HAP in addition to considering exposure to HAP emissions from the source category and facility. We recognize that such consideration may be particularly important when assessing noncancer risk, where pollutant-specific exposure health reference levels (*e.g.*, reference concentrations (RfCs)) are based on the assumption that thresholds exist for adverse health effects. For example, the EPA recognizes that, although exposures attributable to emissions from a source category or facility alone may not indicate the potential for increased risk of adverse noncancer health effects in a population, the exposures resulting from emissions from the facility in combination with emissions from all of the other sources (*e.g.*, other facilities) to which an individual is exposed may be sufficient to result in an increased risk of adverse noncancer health effects. In May 2010, the Science Advisory Board (SAB) advised the EPA "that RTR assessments will be most useful to decision makers and communities if results are presented in the broader context of aggregate and cumulative risks, including background concentrations and contributions from other sources in the area."[3]

In response to the SAB recommendations, the EPA incorporates cumulative risk analyses into its RTR risk assessments, including those reflected in this action. The Agency (1) conducts facility-wide assessments, which include source category emission points, as well as other

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[3] Recommendations of the SAB Risk and Technology Review Methods Panel are provided in their report, which is available at: *https://yosemite.epa.gov/sab/sabproduct.nsf/4AB3966E263D943A8525771F00668381/$File/EPA-SAB-10-007-unsigned.pdf.*

emission points within the facilities; (2) combines exposures from multiple sources in the same category that could affect the same individuals; and (3) for some persistent and bioaccumulative pollutants, analyzes the ingestion route of exposure. In addition, the RTR risk assessments consider aggregate cancer risk from all carcinogens and aggregated noncancer HQs for all noncarcinogens affecting the same target organ or target organ system.

Although we are interested in placing source category and facility-wide HAP risk in the context of total HAP risk from all sources combined in the vicinity of each source, we are concerned about the uncertainties of doing so. Estimates of total HAP risk from emission sources other than those that we have studied in depth during this RTR review would have significantly greater associated uncertainties than the source category or facility-wide estimates. Such aggregate or cumulative assessments would compound those uncertainties, making the assessments too unreliable.

B. How do we perform the technology review?

Our technology review focuses on the identification and evaluation of developments in practices, processes, and control technologies that have occurred since the MACT standards were promulgated. Where we identify such developments, we analyze their technical feasibility, estimated costs, energy implications, and non-air environmental impacts. We also consider the emission reductions associated with applying each development. This analysis informs our decision of whether it is "necessary" to revise the emissions standards. In addition, we consider the appropriateness of applying controls to new sources versus retrofitting existing sources. For this exercise, we consider any of the following to be a "development":

- Any add-on control technology or other equipment that was not identified and considered during development of the original MACT standards;

- Any improvements in add-on control technology or other equipment (that were identified and considered during development of the original MACT standards) that could result in additional emissions reduction;
- Any work practice or operational procedure that was not identified or considered during development of the original MACT standards;
- Any process change or pollution prevention alternative that could be broadly applied to the industry and that was not identified or considered during development of the original MACT standards; and
- Any significant changes in the cost (including cost effectiveness) of applying controls (including controls the EPA considered during the development of the original MACT standards).

In addition to reviewing the practices, processes, and control technologies that were considered at the time we originally developed the NESHAP, we review a variety of data sources in our investigation of potential practices, processes, or controls to consider. See sections II.C and II. D of this preamble for information on the specific data sources that were reviewed as part of the technology review.

C. How do we estimate post-MACT risk posed by the source category?

In this section, we provide a complete description of the types of analyses that we generally perform during the risk assessment process. In some cases, we do not perform a specific analysis because it is not relevant. For example, in the absence of emissions of HAP known to be persistent and bioaccumulative in the environment (PB-HAP), we would not perform a multipathway exposure assessment. Where we do not perform an analysis, we state that we do not and provide the reason. While we present all of our risk assessment methods, we only present risk assessment results for the analyses actually conducted (see section IV.B of this preamble).

The EPA conducts a risk assessment that provides estimates of the MIR for cancer posed by the HAP emissions from each source in the source category, the HI for chronic exposures to HAP with the potential to cause noncancer health effects, and the HQ for acute exposures to HAP with the potential to cause noncancer health effects. The assessment also provides estimates of the distribution of cancer risk within the exposed populations, cancer incidence, and an evaluation of the potential for an adverse environmental effect. The seven sections that follow this paragraph describe how we estimated emissions and conducted the risk assessment. The docket for this rulemaking contains the following document which provides more information on the risk assessment inputs and models: *Residual Risk Assessment for the Paper and Other Web Coating Source Category in Support of the 2019 Risk and Technology Review Proposed Rule*. The methods used to assess risk (as described in the seven primary steps below) are consistent with those described by the EPA in the document reviewed by a panel of the EPA's SAB in 2009;[4] and described in the SAB review report issued in 2010. They are also consistent with the key recommendations contained in that report.

1. How did we estimate actual emissions and identify the emissions release characteristics?

The facilities subject to the POWC NESHAP were identified primarily by using the ECHO and TRI databases. Review of title V permits and discussions with state agencies and stakeholders helped to refine the preliminary list to the final list of 168 facilities subject to the

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[4] U.S. EPA. *Risk and Technology Review (RTR) Risk Assessment Methodologies: For Review by the EPA's Science Advisory Board with Case Studies – MACT I Petroleum Refining Sources and Portland Cement Manufacturing*, June 2009. EPA-452/R-09-006. *https://www3.epa.gov/airtoxics/rrisk/rtrpg.html*.

regulation. The effort to identify facilities subject to the POWC NESHAP is described in detail in the memorandum titled *Determination of Facilities Subject to 40 CFR Part 63, Subpart JJJJ, Paper and Other Web Coating*, in the docket for this rulemaking (Docket ID No. EPA-HQ-OAR-2018-0416). As described in the memorandum, *Preparation of POWC Risk Inputs File*, eight of the identified facilities had source category HAP emissions of zero. These facilities are subject to the POWC NESHAP because they are major sources of HAP for another source category, even though their web coating operations do not utilize any HAP-containing coatings. For example, a paper towel core production line might use a glue the does not contain any HAP, but the operation is co-located at a pulp mill, which is a major source of HAP, therefore, the coating operations are subject to the POWC NESHAP. As a result of the eight facilities without HAP emissions, a total of 160 facilities were included in the source-category risk assessment modeling input file. The communications with state agencies and stakeholders regarding development of the facility list and the risk input file are documented in the memorandum titled *Communications Regarding the Development of the Subpart JJJJ Facility List and Risk Modeling File,* in the docket for this rulemaking (Docket ID No. EPA-HQ-OAR-2018-0416).

Emissions data for facilities subject to the POWC NESHAP were gathered primarily from the 2011 and 2014 NEI (versions 1 and 2), supplemented by the TRI. The NEI is a database that contains information about sources that emit criteria air pollutants, their precursors, and HAP. The NEI database includes estimates of actual annual air pollutant emissions from point and volume sources; emission rate characteristic data such as emission release height, temperature, stack diameter, exit gas velocity, and exit gas flow rate; and locational latitude/longitude coordinates. We compared the NEI data for each facility to title V permits to determine which emission points listed in the NEI were subject to the POWC NESHAP. We then performed quality assurance (QA) checks and made corrections when data were missing from the NEI or appeared to be incorrect. For example, if the exit gas flow rate for an emission point was missing, we calculated this release characteristic using the stack velocity and cross-sectional area of the stack. Each correction we made is discussed in the memorandum, *Preparation of POWC Risk Inputs File*, in the docket for this rulemaking (Docket ID No. EPA-HQ-OAR-2018-0416). The QA procedures and tools used are described in the memorandum titled *QA Procedures and Criteria Used in Residual Risk Modeling Input File Development*, in the docket for this rulemaking (Docket ID No. EPA-HQ-OAR-2018-0416).

2. How did we estimate MACT-allowable emissions?

The available emissions data in the RTR emissions dataset include estimates of the mass of HAP emitted during a specified annual time period. These “actual” emission levels are often lower than the emission levels allowed under the requirements of the current MACT standards. The emissions allowed under the MACT standards are referred to as the “MACT-allowable” emissions. We discussed the consideration of both MACT-allowable and actual emissions in the final Coke Oven Batteries RTR (70 FR 19998–19999, April 15, 2005) and in the proposed and final Hazardous Organic NESHAP RTR (71 FR 34428, June 14, 2006, and 71 FR 76609, December 21, 2006, respectively). In those actions, we noted that assessing the risk at the MACT-allowable level is inherently reasonable since that risk reflects the maximum level facilities could emit and still comply with national emission standards. We also explained that it is reasonable to consider actual emissions, where such data are available, in both steps of the risk analysis, in accordance with the Benzene NESHAP approach. (54 FR 38044, September 14, 1989.)

Initially, we reviewed permits for available allowable HAP emissions information, and two facilities were found to have allowable HAP emissions limits specified for POWC NESHAP emission sources. For these two facilities, MACT-allowable emissions were assumed to be equal to the allowable HAP emissions limits contained in the permits. Allowable emissions were not available for the remainder of the emission units in the POWC dataset. Although some permits listed overall plant HAP emission limits, most did not break down allowable HAP emissions by process. Therefore, we developed a POWC category allowable emissions multiplier to estimate allowable emissions based on actual emissions.

Allowable emissions are emissions that can be emitted from an emission unit and still comply with the POWC NESHAP. Because the format of the POWC NESHAP emission standards are in a HAP-percent of mass of coating applied, it is difficult to determine the allowable HAP emissions without production and coating HAP content information for each facility. Coatings sales information and industry capacity utilization were the only information readily available to estimate allowable emissions for this source category. A description of the methodology used to estimate allowable emissions follows.

According to chapter 18 of the *American Coatings Association 9th Edition Market Analysis (2014-2019)*, the volume of paper, paperboard, film, and foil coating shipments are forecast to increase at an annual rate of 2 percent per year. This implies that the demand for paper and other web coated products, as well as the capacity utilization at the facilities producing the materials, continues to increase. For the primary NAICS codes associated with the facilities in the risk input file, the capacity utilization rate was obtained from the U.S. Census Bureau's *Quarterly Survey of Plant Capacity Utilization* for 5 years (2013-2017). All POWC NAICS codes and years were utilized to determine a 5-year average plant capacity utilization rate (71.3

percent). Because the sector continues to grow, and additional production information is not available, we estimate that the maximum allowable emissions will occur at 100-percent production capacity utilization. A ratio of the maximum possible capacity utilization (100 percent) to the 5-year average capacity utilization (71.3 percent) results in an allowable multiplier of 1.4. Thus, allowable emissions for the majority of emission points in the risk input file were estimated by multiplying the actual emissions by 1.4. A more detailed description of the estimation of allowable emissions for the POWC source category is described in the memorandum, *Preparation of POWC Risk Inputs File*, in the docket for this rulemaking (Docket ID No. EPA-HQ-OAR-2018-0416).

3. How do we conduct dispersion modeling, determine inhalation exposures, and estimate individual and population inhalation risk?

Both long-term and short-term inhalation exposure concentrations and health risk from the source category addressed in this action were estimated using the Human Exposure Model (HEM-3).[5] The HEM-3 performs three primary risk assessment activities: (1) conducting dispersion modeling to estimate the concentrations of HAP in ambient air, (2) estimating long-term and short-term inhalation exposures to individuals residing within 50 kilometers (km) of the modeled sources, and (3) estimating individual and population-level inhalation risk using the exposure estimates and quantitative dose-response information.

a. Dispersion Modeling

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[5] For more information about HEM-3, go to *https://www.epa.gov/fera/risk-assessment-and-modeling-human-exposure-model-hem.*

The air dispersion model AERMOD, used by the HEM-3 model, is one of the EPA's preferred models for assessing air pollutant concentrations from industrial facilities.[6] To perform the dispersion modeling and to develop the preliminary risk estimates, HEM-3 draws on three data libraries. The first is a library of meteorological data, which is used for dispersion calculations. This library includes 1 year (2016) of hourly surface and upper air observations from 824 meteorological stations, selected to provide coverage of the United States and Puerto Rico. A second library of United States Census Bureau census block[7] internal point locations and populations provides the basis of human exposure calculations (U.S. Census, 2010). In addition, for each census block, the census library includes the elevation and controlling hill height, which are also used in dispersion calculations. A third library of pollutant-specific dose-response values is used to estimate health risk. These are discussed below.

b. Risk from Chronic Exposure to HAP

In developing the risk assessment for chronic exposures, we use the estimated annual average ambient air concentrations of each HAP emitted by each source in the source category. The HAP air concentrations at each nearby census block centroid located within 50 km of the facility are a surrogate for the chronic inhalation exposure concentration for all the people who reside in that census block. A distance of 50 km is consistent with both the analysis supporting the 1989 Benzene NESHAP (54 FR 38044, September 14, 1989) and the limitations of Gaussian dispersion models, including AERMOD.

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[6] U.S. EPA. Revision to the *Guideline on Air Quality Models: Adoption of a Preferred General Purpose (Flat and Complex Terrain) Dispersion Model and Other Revisions* (70 FR 68218, November 9, 2005).

[7] A census block is the smallest geographic area for which census statistics are tabulated.

For each facility, we calculate the MIR as the cancer risk associated with a continuous lifetime (24 hours per day, 7 days per week, 52 weeks per year, 70 years) exposure to the maximum concentration at the centroid of each inhabited census block. We calculate individual cancer risk by multiplying the estimated lifetime exposure to the ambient concentration of each HAP (in micrograms per cubic meter ($\mu g/m^3$)) by its unit risk estimate (URE). The URE is an upper-bound estimate of an individual's incremental risk of contracting cancer over a lifetime of exposure to a concentration of 1 microgram of the pollutant per cubic meter of air. For residual risk assessments, we generally use UREs from the EPA's Integrated Risk Information System (IRIS). For carcinogenic pollutants without IRIS values, we look to other reputable sources of cancer dose-response values, often using California EPA (CalEPA) UREs, where available. In cases where new, scientifically credible dose-response values have been developed in a manner consistent with EPA guidelines and have undergone a peer review process similar to that used by the EPA, we may use such dose-response values in place of, or in addition to, other values, if appropriate. The pollutant-specific dose-response values used to estimate health risk are available at *https://www.epa.gov/fera/dose-response-assessment-assessing-health-risks-associated-exposure-hazardous-air-pollutants*.

To estimate individual lifetime cancer risks associated with exposure to HAP emissions from each facility in the source category, we sum the risks for each of the carcinogenic HAP[8]

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[8] The EPA's 2005 *Guidelines for Carcinogen Risk Assessment* classifies carcinogens as: "carcinogenic to humans," "likely to be carcinogenic to humans," and "suggestive evidence of carcinogenic potential." These classifications also coincide with the terms "known carcinogen, probable carcinogen, and possible carcinogen," respectively, which are the terms advocated in the EPA's *Guidelines for Carcinogen Risk Assessment*, published in 1986 (51 FR 33992, September 24, 1986). In August 2000, the document, *Supplemental Guidance for Conducting Health Risk Assessment of Chemical Mixtures* (EPA/630/R-00/002), was published as a supplement to the 1986 document. Copies of both documents can be obtained from

emitted by the modeled facility. We estimate cancer risk at every census block within 50 km of every facility in the source category. The MIR is the highest individual lifetime cancer risk estimated for any of those census blocks. In addition to calculating the MIR, we estimate the distribution of individual cancer risks for the source category by summing the number of individuals within 50 km of the sources whose estimated risk falls within a specified risk range. We also estimate annual cancer incidence by multiplying the estimated lifetime cancer risk at each census block by the number of people residing in that block, summing results for all of the census blocks, and then dividing this result by a 70-year lifetime.

To assess the risk of noncancer health effects from chronic exposure to HAP, we calculate either an HQ or a target organ-specific hazard index (TOSHI). We calculate an HQ when a single noncancer HAP is emitted. Where more than one noncancer HAP is emitted, we sum the HQ for each of the HAP that affects a common target organ or target organ system to obtain a TOSHI. The HQ is the estimated exposure divided by the chronic noncancer dose-response value, which is a value selected from one of several sources. The preferred chronic noncancer dose-response value is the EPA RfC, defined as "an estimate (with uncertainty spanning perhaps an order of magnitude) of a continuous inhalation exposure to the human population (including sensitive subgroups) that is likely to be without an appreciable risk of deleterious effects during a lifetime" (*https://iaspub.epa.gov/sor_internet/registry/termreg/searchandretrieve/glossariesandkeywordlis*

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https://cfpub.epa.gov/ncea/risk/recordisplay.cfm?deid=20533&CFID=70315376&CFTOKEN=71597944. Summing the risk of these individual compounds to obtain the cumulative cancer risk is an approach that was recommended by the EPA's SAB in their 2002 peer review of the EPA's National Air Toxics Assessment (NATA) titled *NATA - Evaluating the National-scale Air Toxics Assessment 1996 Data -- an SAB Advisory*, available at *https://yosemite.epa.gov/sab/sabproduct.nsf/214C6E915BB04E14852570CA007A682C/$File/ecadv02001.pdf*.

ts/search.do?details=&vocabName=IRIS%20Glossary). In cases where an RfC from the EPA's IRIS is not available or where the EPA determines that using a value other than the RfC is appropriate, the chronic noncancer dose-response value can be a value from the following prioritized sources, which define their dose-response values similarly to the EPA: (1) the Agency for Toxic Substances and Disease Registry (ATSDR) Minimum Risk Level (*https://www.atsdr.cdc.gov/mrls/index.asp*); (2) the CalEPA Chronic Reference Exposure Level (REL) (*https://oehha.ca.gov/air/crnr/notice-adoption-air-toxics-hot-spots-program-guidance-manual-preparation-health-risk-0*); or (3) as noted above, a scientifically credible dose-response value that has been developed in a manner consistent with the EPA guidelines and has undergone a peer review process similar to that used by the EPA. The pollutant-specific dose-response values used to estimate health risks are available at *https://www.epa.gov/fera/dose-response-assessment-assessing-health-risks-associated-exposure-hazardous-air-pollutants*.

c. Risk from Acute Exposure to HAP that May Cause Health Effects Other Than Cancer

For each HAP for which appropriate acute inhalation dose-response values are available, the EPA also assesses the potential health risks due to acute exposure. For these assessments, the EPA makes conservative assumptions about emission rates, meteorology, and exposure location. In this proposed rulemaking, as part of our efforts to continually improve our methodologies to evaluate the risks that HAP emitted from categories of industrial sources pose to human health and the environment,[9] we are revising our treatment of meteorological data to use reasonable worst-case air dispersion conditions in our acute risk screening assessments instead of worst-case air dispersion conditions. This revised treatment of meteorological data and the supporting

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[9] See, *e.g.*, U.S. EPA. *Screening Methodologies to Support Risk and Technology Reviews (RTR): A Case Study Analysis* (Draft Report, May 2017. *https://www3.epa.gov/ttn/atw/rrisk/rtrpg.html*).

rationale are described in more detail in *Residual Risk Assessment for Paper and Other Web Coating Source Category in Support of the 2019 Risk and Technology Review Proposed Rule* and in Appendix 5 of the report: *Technical Support Document for Acute Risk Screening Assessment.* We will be applying this revision in RTR rulemakings proposed on or after June 3, 2019.

To assess the potential acute risk to the maximally exposed individual, we use the peak hourly emission rate for each emission point,[10] reasonable worst-case air dispersion conditions (*i.e.*, 99th percentile), and the point of highest off-site exposure. Specifically, we assume that peak emissions from the source category and reasonable worst-case air dispersion conditions co-occur and that a person is present at the point of maximum exposure.

To characterize the potential health risks associated with estimated acute inhalation exposures to a HAP, we generally use multiple acute dose-response values, including acute RELs, acute exposure guideline levels (AEGLs), and emergency response planning guidelines (ERPG) for 1-hour exposure durations, if available, to calculate acute HQs. The acute HQ is calculated by dividing the estimated acute exposure concentration by the acute dose-response value. For each HAP for which acute dose-response values are available, the EPA calculates acute HQs.

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[10] In the absence of hourly emission data, we develop estimates of maximum hourly emission rates by multiplying the average actual annual emissions rates by a factor (either a category-specific factor or a default factor of 10) to account for variability. This is documented in *Residual Risk Assessment for Paper and Other Web Coating Source Category in Support of the 2019 Risk and Technology Review Proposed Rule* and in Appendix 5 of the report: *Technical Support Document for Acute Risk Screening Assessment*. Both are available in the docket for this rulemaking.

An acute REL is defined as "the concentration level at or below which no adverse health effects are anticipated for a specified exposure duration."[11] Acute RELs are based on the most sensitive, relevant, adverse health effect reported in the peer-reviewed medical and toxicological literature. They are designed to protect the most sensitive individuals in the population through the inclusion of margins of safety. Because margins of safety are incorporated to address data gaps and uncertainties, exceeding the REL does not automatically indicate an adverse health impact. AEGLs represent threshold exposure limits for the general public and are applicable to emergency exposures ranging from 10 minutes to 8 hours.[12] They are guideline levels for "once-in-a-lifetime, short-term exposures to airborne concentrations of acutely toxic, high-priority chemicals." *Id.* at 21. The AEGL–1 is specifically defined as "the airborne concentration (expressed as ppm (parts per million) or mg/m^3 (milligrams per cubic meter)) of a substance above which it is predicted that the general population, including susceptible individuals, could experience notable discomfort, irritation, or certain asymptomatic nonsensory effects. However, the effects are not disabling and are transient and reversible upon cessation of exposure." The document also notes that "Airborne concentrations below AEGL–1 represent exposure levels that can produce mild and progressively increasing but transient and nondisabling odor, taste,

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[11] CalEPA issues acute RELs as part of its Air Toxics Hot Spots Program, and the 1-hour and 8-hour values are documented in *Air Toxics Hot Spots Program Risk Assessment Guidelines, Part I, The Determination of Acute Reference Exposure Levels for Airborne Toxicants*, which is available at *https://oehha.ca.gov/air/general-info/oehha-acute-8-hour-and-chronic-reference-exposure-level-rel-summary*.

[12] National Academy of Sciences, 2001. *Standing Operating Procedures for Developing Acute Exposure Levels for Hazardous Chemicals*, page 2. Available at *https://www.epa.gov/sites/production/files/2015-09/documents/sop_final_standing_operating_procedures_2001.pdf*. Note that the National Advisory Committee for Acute Exposure Guideline Levels for Hazardous Substances ended in October 2011, but the AEGL program continues to operate at the EPA and works with the National Academies to publish final AEGLs (*https://www.epa.gov/aegl*).

and sensory irritation or certain asymptomatic, nonsensory effects." *Id.* AEGL–2 are defined as "the airborne concentration (expressed as parts per million or milligrams per cubic meter) of a substance above which it is predicted that the general population, including susceptible individuals, could experience irreversible or other serious, long-lasting adverse health effects or an impaired ability to escape." *Id.*

ERPGs are "developed for emergency planning and are intended as health-based guideline concentrations for single exposures to chemicals."[13] *Id.* at 1. The ERPG–1 is defined as "the maximum airborne concentration below which it is believed that nearly all individuals could be exposed for up to 1 hour without experiencing other than mild transient adverse health effects or without perceiving a clearly defined, objectionable odor." *Id.* at 2. Similarly, the ERPG–2 is defined as "the maximum airborne concentration below which it is believed that nearly all individuals could be exposed for up to one hour without experiencing or developing irreversible or other serious health effects or symptoms which could impair an individual's ability to take protective action." *Id.* at 1.

An acute REL for 1-hour exposure durations is typically lower than its corresponding AEGL–1 and ERPG–1. Even though their definitions are slightly different, AEGL–1s are often the same as the corresponding ERPG–1s, and AEGL–2s are often equal to ERPG–2s. The maximum HQs from our acute inhalation screening risk assessment typically result when we use the acute REL for a HAP. In cases where the maximum acute HQ exceeds 1, we also report the

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[13] *ERPGs Procedures and Responsibilities*. March 2014. American Industrial Hygiene Association. Available at: *https://www.aiha.org/get-involved/AIHAGuidelineFoundation/EmergencyResponsePlanningGuidelines/Documents/ERPG%20Committee%20Standard%20Operating%20Procedures%20%20-%20March%202014%20Revision%20%28Updated%2010-2-2014%29.pdf.*

HQ based on the next highest acute dose-response value (usually the AEGL–1 and/or the ERPG–1).

For this source category, no short-term emissions data were readily available for the majority of the sources subject to the POWC NESHAP. The EPA assumed that a facility's peak 1-hour emission rate could exceed its annual average hourly emission rate by as much as a factor of 10, under worst-case meteorological conditions and the presence of a person at the facility boundary. This peak-to-mean emissions ratio was used as an acute multiplier for all facilities except one. The permit for one facility contained allowable short-term VOC emission rates for POWC NESHAP sources. The acute emissions for this facility were determined using the allowable short-term VOC emission rate using the assumption that the VOC emission rate is equal to the HAP emission rate. For more details, see the memorandum, *Preparation of the POWC Risk Inputs File*, in the docket for this rulemaking (Docket ID No. EPA-HQ-OAR-2018-0416).

In our acute inhalation screening risk assessment, acute impacts are deemed negligible for HAP for which acute HQs are less than or equal to 1, and no further analysis is performed for these HAP. In cases where an acute HQ from the screening step is greater than 1, we assess the site-specific data to ensure that the acute HQ is at an off-site location. For this source category, the data refinements employed consisted of ensuring that the locations where the maximum HQ occurred were off facility property and where the public could potentially be exposed. These refinements are discussed more fully in the *Residual Risk Assessment for the Paper and Other Web Coating Source Category in Support of the 2019 Risk and Technology Review Proposed Rule*, which is available in the docket for this source category (Docket ID No. EPA-HQ-OAR-2018-0416).

4. How do we conduct the multipathway exposure and risk screening assessment?

The EPA conducts a tiered screening assessment examining the potential for significant human health risks due to exposures via routes other than inhalation (*i.e.*, ingestion). We first determine whether any sources in the source category emit any HAP known to be persistent and bioaccumulative in the environment, as identified in the EPA's Air Toxics Risk Assessment Library (see Volume 1, Appendix D, at *https://www.epa.gov/fera/risk-assessment-and-modeling-air-toxics-risk-assessment-reference-library*).

For the POWC source category, we identified PB-HAP emissions of arsenic, cadmium compounds, mercury compounds, polycyclic organic matter (POM), and lead, so we proceeded to the next step of the evaluation. Except for lead, the human health risk screening assessment for PB-HAP consists of three progressive tiers. The POWC source category only required the completion of Tier 1 for the multipathway screening assessment. For Tier 1, we determine whether the magnitude of the facility-specific emissions of PB-HAP warrants further evaluation to characterize human health risk through ingestion exposure. To facilitate this step, we evaluate emissions against previously developed screening threshold emission rates for several PB-HAP that are based on a hypothetical upper-end screening exposure scenario developed for use in conjunction with the EPA's Total Risk Integrated Methodology.Fate, Transport, and Ecological Exposure (TRIM.FaTE) model. The PB-HAP with screening threshold emission rates are arsenic compounds, cadmium compounds, chlorinated dibenzodioxins and furans, mercury compounds, and POM. Based on the EPA estimates of toxicity and bioaccumulation potential, these pollutants represent a conservative list for inclusion in multipathway risk assessments for RTR rules. (See Volume 1, Appendix D at *https://www.epa.gov/sites/production/files/2013-08/documents/volume_1_reflibrary.pdf.*) In this assessment, we compare the facility-specific emission rates of these PB-HAP to the screening threshold emission rates for each PB-HAP to assess the potential for significant human health risks via the ingestion pathway. We call this application of the TRIM.FaTE model the Tier 1 screening assessment. The ratio of a facility's actual emission rate to the Tier 1 screening threshold emission rate is a "screening value."

We derive the Tier 1 screening threshold emission rates for these PB-HAP (other than lead compounds) to correspond to a maximum excess lifetime cancer risk of 1-in-1 million (*i.e.*, for arsenic compounds, polychlorinated dibenzodioxins and furans and POM) or, for HAP that cause noncancer health effects (*i.e.*, cadmium compounds and mercury compounds), a maximum HQ of 1. If the emission rate of any one PB-HAP or combination of carcinogenic PB-HAP in the Tier 1 screening assessment exceeds the Tier 1 screening threshold emission rate for any facility (*i.e.*, the screening value is greater than 1), we conduct a second screening assessment, which we call the Tier 2 screening assessment. The Tier 2 screening assessment separates the Tier 1 combined fisher and farmer exposure scenario into fisher, farmer, and gardener scenarios that retain upper-bound ingestion rates.

In the Tier 2 screening assessment, the location of each facility that exceeds a Tier 1 screening threshold emission rate is used to refine the assumptions associated with the Tier 1 fisher and farmer exposure scenarios at that facility. A key assumption in the Tier 1 screening assessment is that a lake and/or farm is located near the facility. As part of the Tier 2 screening assessment, we use a U.S. Geological Survey (USGS) database to identify actual waterbodies within 50 km of each facility and assume the fisher only consumes fish from lakes within that 50 km zone. We also examine the differences between local meteorology near the facility and the meteorology used in the Tier 1 screening assessment. We then adjust the previously-developed Tier 1 screening threshold emission rates for each PB-HAP for each facility based on an understanding of how exposure concentrations estimated for the screening scenario change with the use of local meteorology and USGS lakes database.

In the Tier 2 farmer scenario, we maintain an assumption that the farm is located within 0.5 km of the facility and that the farmer consumes meat, eggs, dairy, vegetables, and fruit produced near the facility. We may further refine the Tier 2 screening analysis by assessing a gardener scenario to characterize a range of exposures, with the gardener scenario being more plausible in RTR evaluations. Under the gardener scenario, we assume the gardener consumes home-produced eggs, vegetables, and fruit products at the same ingestion rate as the farmer. The Tier 2 screen continues to rely on the high-end food intake assumptions that were applied in Tier 1 for local fish (adult female angler at 99th percentile fish consumption of fish[14]) and locally grown or raised foods (90th percentile consumption of locally grown or raised foods for the farmer and gardener scenarios[15]). If PB-HAP emission rates do not result in a Tier 2 screening value greater than 1, we consider those PB-HAP emissions to pose risks below a level of concern. If the PB-HAP emission rates for a facility exceed the Tier 2 screening threshold emission rates, we may conduct a Tier 3 screening assessment.

There are several analyses that can be included in a Tier 3 screening assessment, depending upon the extent of refinement warranted, including validating that the lakes are fishable, locating residential/garden locations for urban and/or rural settings, considering plume-rise to estimate emissions lost above the mixing layer, and considering hourly effects of

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[14] Burger, J. 2002. Daily consumption of wild fish and game: Exposures of high end recreationists. *International Journal of Environmental Health Research* 12:343–354.

[15] U.S. EPA. *Exposure Factors Handbook 2011 Edition (Final)*. U.S. Environmental Protection Agency, Washington, DC, EPA/600/R–09/052F, 2011.

meteorology and plume rise on chemical fate and transport (a time-series analysis). If necessary, the EPA may further refine the screening assessment through a site-specific assessment.

In evaluating the potential multipathway risk from emissions of lead compounds, rather than developing a screening threshold emission rate, we compare maximum estimated chronic inhalation exposure concentrations to the level of the current National Ambient Air Quality Standard (NAAQS) for lead.[16] Values below the level of the primary (health-based) lead NAAQS are considered to have a low potential for multipathway risk.

For further information on the multipathway assessment approach, see the *Residual Risk Assessment for the Paper and Other Web Coating Source Category in Support of the 2019 Risk and Technology Review Proposed Rule*, which is available in the docket for this action (Docket ID No. EPA-HQ-OAR-2018-0416).

5. How do we conduct the environmental risk screening assessment?

a. Adverse Environmental Effect, Environmental HAP, and Ecological Benchmarks

The EPA conducts a screening assessment to examine the potential for an adverse environmental effect as required under section 112(f)(2)(A) of the CAA. Section 112(a)(7) of the CAA defines “adverse environmental effect” as “any significant and widespread adverse effect, which may reasonably be anticipated, to wildlife, aquatic life, or other natural resources,

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[16] In doing so, the EPA notes that the legal standard for a primary NAAQS – that a standard is requisite to protect public health and provide an adequate margin of safety (CAA section 109(b)) – differs from the CAA section 112(f) standard (requiring, among other things, that the standard provide an “ample margin of safety to protect public health”). However, the primary lead NAAQS is a reasonable measure of determining risk acceptability (*i.e.*, the first step of the Benzene NESHAP analysis) since it is designed to protect the most susceptible group in the human population – children, including children living near major lead emitting sources. 73 FR 67002/3; 73 FR 67000/3; 73 FR 67005/1. In addition, applying the level of the primary lead NAAQS at the risk acceptability step is conservative, since that primary lead NAAQS reflects an adequate margin of safety.

including adverse impacts on populations of endangered or threatened species or significant degradation of environmental quality over broad areas."

The EPA focuses on eight HAP, which are referred to as "environmental HAP," in its screening assessment: six PB-HAP and two acid gases. The PB-HAP included in the screening assessment are arsenic compounds, cadmium compounds, dioxins/furans, POM, mercury (both inorganic mercury and methyl mercury), and lead compounds. The acid gases included in the screening assessment are hydrochloric acid (HCl) and hydrogen fluoride (HF).

HAP that persist and bioaccumulate are of particular environmental concern because they accumulate in the soil, sediment, and water. The acid gases, HCl and HF, are included due to their well-documented potential to cause direct damage to terrestrial plants. In the environmental risk screening assessment, we evaluate the following four exposure media: terrestrial soils, surface water bodies (includes water-column and benthic sediments), fish consumed by wildlife, and air. Within these four exposure media, we evaluate nine ecological assessment endpoints, which are defined by the ecological entity and its attributes. For PB-HAP (other than lead), both community-level and population-level endpoints are included. For acid gases, the ecological assessment evaluated is terrestrial plant communities.

An ecological benchmark represents a concentration of HAP that has been linked to a particular environmental effect level. For each environmental HAP, we identified the available ecological benchmarks for each assessment endpoint. We identified, where possible, ecological benchmarks at the following effect levels: probable effect levels, lowest-observed-adverse-effect level, and no-observed-adverse-effect level. In cases where multiple effect levels were available for a particular PB-HAP and assessment endpoint, we use all of the available effect levels to help us to determine whether ecological risks exist and, if so, whether the risks could be considered significant and widespread.

For further information on how the environmental risk screening assessment was conducted, including a discussion of the risk metrics used, how the environmental HAP were identified, and how the ecological benchmarks were selected, see appendix 9 of the *Residual Risk Assessment for the Paper and Other Web Coating Source Category in Support of the 2019 Risk and Technology Review Proposed Rule*, which is available in the docket for this action (Docket ID No. EPA-HQ-OAR-2018-0416).

b. Environmental Risk Screening Methodology

For the environmental risk screening assessment, the EPA first determined whether any facilities in the POWC source category emitted any of the environmental HAP. For the POWC source category, we identified emissions of arsenic, cadmium compounds, mercury compounds, POM, and lead. Because one or more of the environmental HAP evaluated are emitted by at least one facility in the source category, we proceeded to the second step of the evaluation.

c. PB-HAP Methodology

The environmental screening assessment includes six PB-HAP, arsenic compounds, cadmium compounds, dioxins/furans, POM, mercury (both inorganic mercury and methyl mercury), and lead compounds. With the exception of lead, the environmental risk screening assessment for PB-HAP consists of three tiers. The first tier of the environmental risk screening assessment uses the same health-protective conceptual model that is used for the Tier 1 human health screening assessment. The POWC source category only required the completion of Tier 1 for the multipathway ecological screening assessment. TRIM.FaTE model simulations were used to back-calculate Tier 1 screening threshold emission rates. The screening threshold emission rates represent the emission rate in tons of pollutant per year that results in media concentrations at the facility that equal the relevant ecological benchmark. To assess emissions from each facility in the category, the reported emission rate for each PB-HAP was compared to the Tier 1 screening threshold emission rate for that PB-HAP for each assessment endpoint and effect level. If emissions from a facility do not exceed the Tier 1 screening threshold emission rate, the facility "passes" the screening assessment, and, therefore, is not evaluated further under the screening approach. If emissions from a facility exceed the Tier 1 screening threshold emission rate, we evaluate the facility further in Tier 2.

In Tier 2 of the environmental screening assessment, the screening threshold emission rates are adjusted to account for local meteorology and the actual location of lakes in the vicinity of facilities that did not pass the Tier 1 screening assessment. For soils, we evaluate the average soil concentration for all soil parcels within a 7.5-km radius for each facility and PB-HAP. For the water, sediment, and fish tissue concentrations, the highest value for each facility for each pollutant is used. If emission concentrations from a facility do not exceed the Tier 2 screening threshold emission rate, the facility "passes" the screening assessment and typically is not evaluated further. If emissions from a facility exceed the Tier 2 screening threshold emission rate, we evaluate the facility further in Tier 3.

As in the multipathway human health risk assessment, in Tier 3 of the environmental screening assessment, we examine the suitability of the lakes around the facilities to support life and remove those that are not suitable (*e.g.*, lakes that have been filled in or are industrial ponds), adjust emissions for plume-rise, and conduct hour-by-hour time-series assessments. If these Tier 3 adjustments to the screening threshold emission rates still indicate the potential for an adverse environmental effect (*i.e.*, facility emission rate exceeds the screening threshold emission rate), we may elect to conduct a more refined assessment using more site-specific information. If, after additional refinement, the facility emission rate still exceeds the screening threshold emission rate, the facility may have the potential to cause an adverse environmental effect.

To evaluate the potential for an adverse environmental effect from lead, we compared the average modeled air concentrations (from HEM-3) of lead around each facility in the source category to the level of the secondary NAAQS for lead. The secondary lead NAAQS is a reasonable means of evaluating environmental risk because it is set to provide substantial protection against adverse welfare effects which can include "effects on soils, water, crops, vegetation, man-made materials, animals, wildlife, weather, visibility and climate, damage to and deterioration of property, and hazards to transportation, as well as effects on economic values and on personal comfort and well-being."

d. Acid Gas Environmental Risk Methodology

The environmental screening assessment for acid gases evaluates the potential phytotoxicity and reduced productivity of plants due to chronic exposure to HF and HCl. The environmental risk screening methodology for acid gases is a single-tier screening assessment that compares modeled ambient air concentrations (from AERMOD) to the ecological benchmarks for each acid gas. To identify a potential adverse environmental effect (as defined in section 112(a)(7) of the CAA) from emissions of HF and HCl, we evaluate the following metrics: the size of the modeled area around each facility that exceeds the ecological benchmark for each acid gas, in acres and km^2; the percentage of the modeled area around each facility that exceeds the ecological benchmark for each acid gas; and the area-weighted average screening value around each facility (calculated by dividing the area-weighted average concentration over the 50-km modeling domain by the ecological benchmark for each acid gas). For further information on the environmental screening assessment approach, see Appendix 9 of the *Residual Risk Assessment for the Paper and Other Web Coating Source Category in Support of the Risk and Technology Review 2019 Proposed Rule*, which is available in the docket for this action (Docket ID No. EPA-HQ-OAR-2018-0416).

6. How do we conduct facility-wide assessments?

To put the source category risks in context, we typically examine the risks from the entire "facility," where the facility includes all HAP-emitting operations within a contiguous area and under common control. In other words, we examine the HAP emissions not only from the source category emission points of interest, but also emissions of HAP from all other emission sources at the facility for which we have data. For this source category, we conducted the facility-wide assessment using a dataset compiled from the 2014 NEI. The source category records of that NEI dataset were removed, evaluated, and updated as described in section II.C of this preamble: What data collection activities were conducted to support this action? Once a quality assured source category dataset was available, it was placed back with the remaining records from the NEI for that facility. The facility-wide file was then used to analyze risks due to the inhalation of HAP that are emitted "facility-wide" for the populations residing within 50 km of each facility, consistent with the methods used for the source category analysis described above. For these facility-wide risk analyses, the modeled source category risks were compared to the facility-wide risks to determine the portion of the facility-wide risks that could be attributed to the source category addressed in this action. We also specifically examined the facility that was associated with the highest estimate of risk and determined the percentage of that risk attributable to the source category of interest. The *Residual Risk Assessment for the Paper and Other Web Coating Source Category in Support of the 2019 Risk and Technology Review Proposed Rule*, available through the docket for this action (Docket ID No. EPA-HQ-OAR-2018-0416), provides the methodology and results of the facility-wide analyses, including all facility-wide risks and the percentage of source category contribution to facility-wide risks.

7. How do we consider uncertainties in risk assessment?

Uncertainty and the potential for bias are inherent in all risk assessments, including those performed for this proposal. Although uncertainty exists, we believe that our approach, which used conservative tools and assumptions, ensures that our decisions are health and environmentally protective. A brief discussion of the uncertainties in the RTR emissions dataset, dispersion modeling, inhalation exposure estimates, and dose-response relationships follows below. Also included are those uncertainties specific to our acute screening assessments, multipathway screening assessments, and our environmental risk screening assessments. A more thorough discussion of these uncertainties is included in the *Residual Risk Assessment for the Paper and Other Web Coating Source Category in Support of the 2019 Risk and Technology Review Proposed Rule*, which is available in the docket for this action (Docket ID No. EPA-HQ-OAR-2018-0416). If a multipathway site-specific assessment was performed for this source category, a full discussion of the uncertainties associated with that assessment can be found in Appendix 11 of that document, *Site-Specific Human Health Multipathway Residual Risk Assessment Report*.

a. Uncertainties in the RTR Emissions Dataset

Although the development of the RTR emissions dataset involved QA/quality control processes, the accuracy of emissions values will vary depending on the source of the data, the degree to which data are incomplete or missing, the degree to which assumptions made to complete the datasets are accurate, errors in emission estimates, and other factors. The emission estimates considered in this analysis generally are annual totals for certain years, and they do not reflect short-term fluctuations during the course of a year or variations from year to year. The estimates of peak hourly emission rates for the acute effects screening assessment were based on an emission adjustment factor applied to the average annual hourly emission rates, which are intended to account for emission fluctuations due to normal facility operations.

b. Uncertainties in Dispersion Modeling

We recognize there is uncertainty in ambient concentration estimates associated with any model, including the EPA's recommended regulatory dispersion model, AERMOD. In using a model to estimate ambient pollutant concentrations, the user chooses certain options to apply. For RTR assessments, we select some model options that have the potential to overestimate ambient air concentrations (*e.g.*, not including plume depletion or pollutant transformation). We select other model options that have the potential to underestimate ambient impacts (*e.g.*, not including building downwash). Other options that we select have the potential to either under- or overestimate ambient levels (*e.g.*, meteorology and receptor locations). On balance, considering the directional nature of the uncertainties commonly present in ambient concentrations estimated by dispersion models, the approach we apply in the RTR assessments should yield unbiased estimates of ambient HAP concentrations. We also note that the selection of meteorology dataset location could have an impact on the risk estimates. As we continue to update and expand our library of meteorological station data used in our risk assessments, we expect to reduce this variability.

c. Uncertainties in Inhalation Exposure Assessment

Although every effort is made to identify all of the relevant facilities and emission points, as well as to develop accurate estimates of the annual emission rates for all relevant HAP, the uncertainties in our emission inventory likely dominate the uncertainties in the exposure assessment. Some uncertainties in our exposure assessment include human mobility, using the centroid of each census block, assuming lifetime exposure, and assuming only outdoor exposures. For most of these factors, there is neither an under nor overestimate when looking at the maximum individual risk or the incidence, but the shape of the distribution of risks may be affected. With respect to outdoor exposures, actual exposures may not be as high if people spend time indoors, especially for very reactive pollutants or larger particles. For all factors, we reduce uncertainty when possible. For example, with respect to census-block centroids, we analyze large blocks using aerial imagery and adjust locations of the block centroids to better represent the population in the blocks. We also add additional receptor locations where the population of a block is not well represented by a single location.

d. Uncertainties in Dose-Response Relationships

There are uncertainties inherent in the development of the dose-response values used in our risk assessments for cancer effects from chronic exposures and noncancer effects from both chronic and acute exposures. Some uncertainties are generally expressed quantitatively, and others are generally expressed in qualitative terms. We note, as a preface to this discussion, a point on dose-response uncertainty that is stated in the EPA’s *2005 Guidelines for Carcinogen Risk Assessment*; namely, that “the primary goal of EPA actions is protection of human health; accordingly, as an Agency policy, risk assessment procedures, including default options that are used in the absence of scientific data to the contrary, should be health protective” (the EPA's *2005 Guidelines for Carcinogen Risk Assessment*, page 1-7). This is the approach followed here as summarized in the next paragraphs.

Cancer UREs used in our risk assessments are those that have been developed to generally provide an upper bound estimate of risk.[17] That is, they represent a "plausible upper limit to the true value of a quantity" (although this is usually not a true statistical confidence limit). In some circumstances, the true risk could be as low as zero; however, in other circumstances the risk could be greater.[18] Chronic noncancer RfC and reference dose (RfD) values represent chronic exposure levels that are intended to be health-protective levels. To derive dose-response values that are intended to be "without appreciable risk," the methodology relies upon an uncertainty factor (UF) approach,[19] which considers uncertainty, variability, and gaps in the available data. The UFs are applied to derive dose-response values that are intended to protect against appreciable risk of deleterious effects.

Many of the UFs used to account for variability and uncertainty in the development of acute dose-response values are quite similar to those developed for chronic durations. Additional adjustments are often applied to account for uncertainty in extrapolation from observations at one exposure duration (*e.g.*, 4 hours) to derive an acute dose-response value at another exposure duration (*e.g.*, 1 hour). Not all acute dose-response values are developed for the same purpose, and care must be taken when interpreting the results of an acute assessment of human health effects relative to the dose-response value or values being exceeded. Where relevant to the

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[17] IRIS glossary (*https://ofmpub.epa.gov/sor_internet/registry/termreg/searchandretrieve/glossariesandkeywordlists/search.do?details=&glossaryName=IRIS%20Glossary*).

[18] An exception to this is the URE for benzene, which is considered to cover a range of values, each end of which is considered to be equally plausible, and which is based on maximum likelihood estimates.

[19] See *A Review of the Reference Dose and Reference Concentration Processes*, U.S. EPA, December 2002, and *Methods for Derivation of Inhalation Reference Concentrations and Application of Inhalation Dosimetry*, U.S. EPA, 1994.

estimated exposures, the lack of acute dose-response values at different levels of severity should be factored into the risk characterization as potential uncertainties.

Uncertainty also exists in the selection of ecological benchmarks for the environmental risk screening assessment. We established a hierarchy of preferred benchmark sources to allow selection of benchmarks for each environmental HAP at each ecological assessment endpoint. We searched for benchmarks for three effect levels (*i.e.*, no-effects level, threshold-effect level, and probable effect level), but not all combinations of ecological assessment/environmental HAP had benchmarks for all three effect levels. Where multiple effect levels were available for a particular HAP and assessment endpoint, we used all of the available effect levels to help us determine whether risk exists and whether the risk could be considered significant and widespread.

Although we make every effort to identify appropriate human health effect dose-response values for all pollutants emitted by the sources in this risk assessment, some HAP emitted by this source category are lacking dose-response assessments. Accordingly, these pollutants cannot be included in the quantitative risk assessment, which could result in quantitative estimates understating HAP risk. To help to alleviate this potential underestimate, where we conclude similarity with a HAP for which a dose-response value is available, we use that value as a surrogate for the assessment of the HAP for which no value is available. To the extent use of surrogates indicates appreciable risk, we may identify a need to increase priority for an IRIS assessment for that substance. We additionally note that, generally speaking, HAP of greatest concern due to environmental exposures and hazard are those for which dose-response assessments have been performed, reducing the likelihood of understating risk. Further, HAP not included in the quantitative assessment are assessed qualitatively and considered in the risk characterization that informs the risk management decisions, including consideration of HAP reductions achieved by various control options.

For a group of compounds that are unspeciated (*e.g.*, glycol ethers), we conservatively use the most protective dose-response value of an individual compound in that group to estimate risk. Similarly, for an individual compound in a group (*e.g.*, ethylene glycol diethyl ether) that does not have a specified dose-response value, we also apply the most protective dose-response value from the other compounds in the group to estimate risk.

e. Uncertainties in Acute Inhalation Screening Assessments

In addition to the uncertainties highlighted above, there are several factors specific to the acute exposure assessment that the EPA conducts as part of the risk review under section 112 of the CAA. The accuracy of an acute inhalation exposure assessment depends on the simultaneous occurrence of independent factors that may vary greatly, such as hourly emissions rates, meteorology, and the presence of a person. In the acute screening assessment that we conduct under the RTR program, we assume that peak emissions from the source category and reasonable worst-case air dispersion conditions (*i.e.*, 99th percentile) co-occur. We then include the additional assumption that a person is located at this point at the same time. Together, these assumptions represent a reasonable worst-case actual exposure scenario. In most cases, it is unlikely that a person would be located at the point of maximum exposure during the time when peak emissions and reasonable worst-case air dispersion conditions occur simultaneously.

f. Uncertainties in the Multipathway and Environmental Risk Screening Assessments

For each source category, we generally rely on site-specific levels of PB-HAP or environmental HAP emissions to determine whether a refined assessment of the impacts from multipathway exposures is necessary or whether it is necessary to perform an environmental screening assessment. This determination is based on the results of a three-tiered screening assessment that relies on the outputs from models – TRIM.FaTE and AERMOD – that estimate environmental pollutant concentrations and human exposures for five PB-HAP (dioxins, POM, mercury, cadmium, and arsenic) and two acid gases (HF and HCl). For lead, we use AERMOD to determine ambient air concentrations, which are then compared to the secondary NAAQS standard for lead. Two important types of uncertainty associated with the use of these models in RTR risk assessments and inherent to any assessment that relies on environmental modeling are model uncertainty and input uncertainty.[20]

Model uncertainty concerns whether the model adequately represents the actual processes (*e.g.*, movement and accumulation) that might occur in the environment. For example, does the model adequately describe the movement of a pollutant through the soil? This type of uncertainty is difficult to quantify. However, based on feedback received from previous EPA SAB reviews and other reviews, we are confident that the models used in the screening assessments are appropriate and state-of-the-art for the multipathway and environmental screening risk assessments conducted in support of RTR.

Input uncertainty is concerned with how accurately the models have been configured and parameterized for the assessment at hand. For Tier 1 of the multipathway and environmental screening assessments, we configured the models to avoid underestimating exposure and risk. This was accomplished by selecting upper-end values from nationally representative datasets for the more influential parameters in the environmental model, including selection and spatial

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[20] In the context of this discussion, the term “uncertainty” as it pertains to exposure and risk encompasses both ***variability*** in the range of expected inputs and screening results due to existing spatial, temporal, and other factors, as well as ***uncertainty*** in being able to accurately estimate the true result.

configuration of the area of interest, lake location and size, meteorology, surface water, soil characteristics, and structure of the aquatic food web. We also assume an ingestion exposure scenario and values for human exposure factors that represent reasonable maximum exposures.

In Tier 2 of the multipathway and environmental screening assessments, we refine the model inputs to account for meteorological patterns in the vicinity of the facility versus using upper-end national values, and we identify the actual location of lakes near the facility rather than the default lake location that we apply in Tier 1. By refining the screening approach in Tier 2 to account for local geographical and meteorological data, we decrease the likelihood that concentrations in environmental media are overestimated, thereby increasing the usefulness of the screening assessment. In Tier 3 of the screening assessments, we refine the model inputs again to account for hour-by-hour plume rise and the height of the mixing layer. We can also use those hour-by-hour meteorological data in a TRIM.FaTE run using the screening configuration corresponding to the lake location. These refinements produce a more accurate estimate of chemical concentrations in the media of interest, thereby reducing the uncertainty with those estimates. The assumptions and the associated uncertainties regarding the selected ingestion exposure scenario are the same for all three tiers.

For the environmental screening assessment for acid gases, we employ a single-tiered approach. We use the modeled air concentrations and compare those with ecological benchmarks.

For all tiers of the multipathway and environmental screening assessments, our approach to addressing model input uncertainty is generally cautious. We choose model inputs from the upper end of the range of possible values for the influential parameters used in the models, and we assume that the exposed individual exhibits ingestion behavior that would lead to a high total exposure. This approach reduces the likelihood of not identifying high risks for adverse impacts.

Despite the uncertainties, when individual pollutants or facilities do not exceed screening threshold emission rates (*i.e.*, screen out), we are confident that the potential for adverse multipathway impacts on human health is very low. On the other hand, when individual pollutants or facilities do exceed screening threshold emission rates, it does not mean that impacts are significant, only that we cannot rule out that possibility and that a refined assessment for the site might be necessary to obtain a more accurate risk characterization for the source category.

The EPA evaluates the following HAP in the multipathway and/or environmental risk screening assessments, where applicable: arsenic, cadmium, dioxins/furans, lead, mercury (both inorganic and methyl mercury), POM, HCl, and HF. These HAP represent pollutants that can cause adverse impacts either through direct exposure to HAP in the air or through exposure to HAP that are deposited from the air onto soils and surface waters and then through the environment into the food web. These HAP represent those HAP for which we can conduct a meaningful multipathway or environmental screening risk assessment. For other HAP not included in our screening assessments, the model has not been parameterized such that it can be used for that purpose. In some cases, depending on the HAP, we may not have appropriate multipathway models that allow us to predict the concentration of that pollutant. The EPA acknowledges that other HAP beyond these that we are evaluating may have the potential to cause adverse effects and, therefore, the EPA may evaluate other relevant HAP in the future, as modeling science and resources allow.

IV. Analytical Results and Proposed Decisions

A. What are the results of the risk assessment and analyses?

1. Chronic Inhalation Risk Assessment Results

Table 2 of this preamble provides an overall summary of the inhalation risk results. The results of the chronic baseline inhalation cancer risk assessment indicate the maximum individual lifetime cancer risk (MIR) posed by the POWC source category was estimated to be 6-in-1 million based on actual emissions and 7-in-1 million based on allowable emissions. The risk driver is formaldehyde emissions from web coating processes. The total estimated cancer incidence from POWC emission sources based on actual emission levels is 0.005 excess cancer cases per year, or one case in every 200 years, with emissions from web coating operations representing 80 percent of the modeled cancer incidence. Emissions of formaldehyde contributed 90 percent to this cancer incidence. Based upon actual emissions, 4,300 people were exposed to cancer risks greater than or equal to 1-in-1 million compared to 9,900 people from allowable emissions.

The maximum chronic noncancer HI (TOSHI) values for the source category, based on actual and allowable emissions, were estimated to be less than 1 (0.8 based on allowable emissions). Based on actual and allowable emissions, respiratory risks were driven by acrylic acid emissions from web coating processes.

Table 2. POWC Inhalation Risk Assessment Results[1]

Risk Assessment	**Number of Facilities[2]**	**Maximum Individual Cancer Risk (in 1 million)[3]**	**Estimated Population at Increased Risk of Cancer ≥ 1-in-1 Million**	**Estimated Annual Cancer Incidence (cases per year)**	**Maximum Chronic Noncancer TOSHI[4]**	**Maximum Screening Acute Noncancer HQ[5]**
Baseline Actual Emissions						
Source Category	160	6	4,300	0.005	0.6	3 (REL)
Facility-Wide[6]	168	300	161,000	0.03	30	-

Baseline Allowable Emissions						
Source Category	160	7	9,900	0.007	0.8	-

[1] Based on actual and allowable emissions.

[2] As discussed in section III.C.1 of this preamble, 168 facilities were identified as subject to the POWC NESHAP. Additionally, eight facilities did not emit any HAP from their POWC processes, resulting in 160 facilities being modeled for the source-category risk assessment and 168 modeled for the facility-wide risk assessment.

[3] Maximum individual excess lifetime cancer risk due to HAP emissions from the source category except for risks from facility-wide emissions.

[4] Maximum TOSHI. The target organ with the highest TOSHI for the POWC source category is the respiratory system.

[5] The maximum estimated acute exposure concentration was divided by available short-term threshold values to develop an array of HQ values. HQ values shown use the lowest available acute threshold value, which in most cases is the REL. The risk driver for acute risks were emissions of formaldehyde from web coating processes and affiliated operations.

[6] The facility-wide risk value estimate of 300-in-1 million and the HI equal to 30 was from trichloroethylene (TCE) emissions from a production process outside the source category.

2. Screening Level Acute Risk Assessment Results

Reasonable worst-case acute HQs were calculated for every HAP for which there is an acute health benchmark using actual emissions. The maximum refined off-site acute noncancer HQ values for the source category were equal to 3 from formaldehyde emissions and 3 from diethylene glycol monoethyl ether (DGME) emissions based on the acute (1-hour) REL for these pollutants. The formaldehyde and DGME maximum HQ values were at separate facilities and no facilities have an HQ based on AEGL or ERPG greater than 1. No other acute health benchmarks were exceeded for this source category. For DGME, no other acute dose benchmark was available besides the 1-hour REL. The acute risks for these pollutants were from web coating processes with an acute hourly multiplier of 10 times the annual average hourly emissions rate.

3. Multipathway Risk Screening Results

Results of the worst-case Tier 1 screening analysis indicate that PB-HAP emissions (based on estimates of actual emissions) from the source category did not exceed the screening value of 1 for any carcinogenic PB-HAP (arsenic and POM compounds). Emissions of dioxins were not reported by any facilities within the source category.

The Tier 1 screening analysis for the noncarcinogenic PB-HAP (cadmium and mercury) was below a screening value of 1. Further screening or multipathway analysis was not required for any of the reported PB-HAP based upon our Analytical Procedures discussed in section III.C.4 of this preamble. Based on this upperbound Tier 1 screening assessment for carcinogens (arsenic and POM) and non-carcinogens (cadmium and mercury), the emission rates for all facilities and scenarios were below levels of concern.

In evaluating the potential for multipathway effects from emissions of lead, we compared modeled annual lead concentrations to the secondary NAAQS for lead (0.15 $\mu g/m^3$). The highest annual average lead concentration, of 0.001 $\mu g/m^3$, is below the NAAQS for lead, indicating a low potential for multipathway impacts of concern due to lead.

4. Environmental Risk Screening Results

We conducted an environmental risk screening assessment for the POWC source category for the following pollutants: arsenic, cadmium, lead, mercury (methyl mercury and mercuric chloride) and POM.

In the Tier 1 screening analysis for PB-HAP (other than lead, which was evaluated differently), arsenic, cadmium, mercury (methyl mercury and mercuric chloride), and POM emissions had no Tier 1 exceedances for any ecological benchmark.

For lead, we did not estimate any exceedances of the secondary lead NAAQS. Based on the results of the environmental risk screening analysis, we do not expect an adverse environmental effect as a result of HAP emissions from this source category.

5. Facility-Wide Risk Results

Results of the assessment of facility-wide emissions indicate that of the 168 facilities, 42 facilities have a facility-wide MIR cancer risk greater than 1-in-1 million. The maximum facility-wide cancer risk is 300-in-1 million, driven by TCE emissions from emissions outside the source category. The total estimated cancer incidence from the whole facility is 0.03 excess cancer cases per year, or one case in every 33 years. Approximately 161,000 people are estimated to have cancer risks greater than or equal to 1-in-1 million with approximately 30 people with excess cancer risks greater than or equal to 100-in-1 million. The maximum facility-wide chronic noncancer TOSHI is estimated to be equal to 30, driven by emissions of TCE from non-category emission sources.

6. What demographic groups might benefit from this regulation?

To examine the potential for any environmental justice issues that might be associated with the source category, we performed a demographic analysis, which is an assessment of risk to individual demographic groups of the populations living within 5 km and within 50 km of the facilities. In the analysis, we evaluated the distribution of HAP-related cancer and noncancer risk from the POWC source category across different demographic groups within the populations living near facilities. [21]

The results of the demographic analysis are summarized in Table 3 below. 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.

Table 3. POWC Demographic Risk Analysis Results

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[21] 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 two times the poverty level, and linguistically isolated people.

POWC: Demographic Assessment Results - 50 km Study Area Radius			
		Population with Cancer Risk Greater than or Equal to 1-in-1 Million	**Population with HI Greater than 1**
	Nationwide	**Source Category**	
Total Population	317,746,049	4,331	0
	White and Minority by Percent		
White	62%	86%	0%
Minority	38%	14%	0%
	Minority by Percent		
African American	12%	8%	0%
Native American	0.8%	0.2%	0%
Hispanic or Latino (includes white and nonwhite)	18%	3%	0%
Other and Multiracial	7%	3%	0%
	Income by Percent		
Below Poverty Level	14%	17%	0%
Above Poverty Level	86%	83%	0%
	Education by Percent		
Over 25 and without a High School Diploma	14%	14%	0%
Over 25 and with a High School Diploma	86%	86%	0%
	Linguistically Isolated by Percent		
Linguistically Isolated	6%	1%	0%

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 zero people to a chronic noncancer TOSHI greater than 1. The percentages of the at-risk population in the demographic groups, White and people below poverty level, are greater than their respective nationwide percentages.

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 No. EPA-HQ-OAR-2018-0416).

B. What are our proposed decisions regarding risk acceptability, ample margin of safety, and adverse environmental effect?

1. Risk Acceptability

As noted in section II.A of this preamble, 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 MIR of 'approximately 1-in-10 thousand.'" See 54 FR 38045, September 14, 1989.

In this proposal, the EPA estimated risks based on actual and allowable emissions for 160 facilities in the POWC source category (*i.e.*, as discussed in section III.C.1 of this preamble, 168 facilities were determined to be subject to the POWC NESHAP, however eight facilities did not have POWC source category emissions, therefore, 160 facilities were modeled for source-category risks) In determining whether risks are acceptable, the EPA considered all available health information and risk estimation uncertainty, as described above. Table 2 summarizes the risk assessment results from the POWC source category. 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 category[22] estimated cancer incidence rate at 0.005 cases per year based on actual emissions. Approximately 4,300

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[22] *Residual Risk Assessment for the Paper and Other Web Coating Source Category in Support of the 2019 Risk and Technology Review Proposed Rule,* EPA-HQ-OAR-2018-0416.

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 TOSHI due to inhalation exposures is less than 1 for actual and allowable emissions. The results of the acute screening analysis showed that acute risks were below a level of concern for the source category considering the conservative assumptions used that err on the side of overestimating acute risk (as discussed in section III.C.7.e of this preamble). Multipathway screen values were below a level of concern for both carcinogenic and non-carcinogenic PB-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 excess cancer risk is below 1-in-1 million and the maximum noncancer HQ for mercury is less than 1 based upon the Tier 1 farmer/fisher exposure scenario.

Taking into account all of this information, the EPA proposes that the risks remaining after implementation of the existing MACT standard for the POWC source category are acceptable.

2. Ample Margin of Safety Analysis

Although the EPA is proposing that the risks from this source category are acceptable for both inhalation and multipathway, risk estimates for approximately 4,300 people in the exposed population are above 1-in-1 million, caused primarily by formaldehyde and acetaldehyde emissions from 11 POWC facilities. The maximum acute risk is an HQ of 3 from two facilities, one based on DGME emissions and the second, formaldehyde emissions. As a result, we further considered whether the MACT standards applicable to these specific emission points, as well as the current MACT standards applicable to this source category, provide an ample margin of safety to protect public health.

As directed by CAA section 112(f)(2), we conducted an analysis to determine if the current emissions standards provide an ample margin of safety to protect public health. Under the ample margin of safety analysis, the EPA considers all health factors evaluated in the risk assessment and evaluates the cost and feasibility of available control technologies and other measures (including the controls, measures, and costs reviewed under the technology review) that could be applied to this source category to further reduce the risks (or potential risks) due to emissions of HAP identified in our risk assessment. In this analysis, we considered the results of the technology review, risk assessment, and other aspects of our MACT rule review to determine whether there are any cost-effective controls or other measures that would reduce emissions further and are needed to provide an ample margin of safety to protect public health.

As discussed in section IV.C of this preamble and in the memorandum titled *Technology Review Analysis for the Paper and Other Web Coating Source Category*, in the docket for this rulemaking (Docket ID No. EPA-HQ-OAR-2018-0416), we did not identify any development in practices, processes, or control technologies that could be applied industry-wide and would be expected to result in significant HAP emissions reductions. Although some facilities are using coatings with HAP formulations more stringent than MACT, we only have limited data and the data do not indicate where/when such coatings are most applicable. In addition, although some existing facilities using capture and control are achieving greater than 95-percent control, the available data are limited and do not clearly indicate that any one industry sector can readily achieve such control levels. Some POWC facilities use permanent total enclosures to capture emissions even though they are not required to do so, but conversion of an application area with a permanent total enclosure is site specific and would be prohibitively complicated and expensive in most cases.

Although some facilities are subject to permit conditions more stringent than the MACT requirements, the applicability of these coating reformulations and emission controls for the POWC industry as a whole is expected to be limited, and the associated potential risk reductions would be expected to be small because baseline risks are low. Because no cost-effective controls, technologies, processes, or work practices were identified that were widely applicable to the industry that would significantly reduce HAP emissions and the associated risk, and the risk assessment determined that the health risks associated with HAP emissions remaining after implementation of the POWC MACT were well below levels that we consider acceptable, we are proposing that the current standards protect public health with an ample margin of safety, and revision of the standards is not required.

3. Adverse Environmental Effect

The emissions data for this source category indicate the presence of several environmental HAP: arsenic, cadmium compounds, mercury compounds, POM, and lead. Based on the results of our environmental risk screening assessment, we conclude that there is not an adverse environmental effect as a result of HAP emissions from the POWC source category. Thus, we are proposing that it is not necessary to set a more stringent standard to prevent an adverse environmental effect. For more details on the environmental risk screening assessment, see the *Residual Risk Assessment for the Paper and Other Web Coating Source Category in Support of the 2019 Risk and Technology Review Proposed Rule*, which is available in the docket for this action (Docket ID No. EPA-HQ-OAR-2018-0416).

C. What are the results and proposed decisions based on our technology review?

As described in section III.B of this preamble, our technology review focused on identifying developments in practices, processes, and control technologies for control of HAP emissions from POWC facilities. In conducting the technology review, we reviewed information on practices, processes, and control technologies that were not considered during the development of the POWC NESHAP, as well as searched for information on improvements in practices, processes, and control technologies that have occurred since the development of the POWC NESHAP. The review included a search of the RBLC database and 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 that would significantly reduce HAP emissions, and, therefore, we are not proposing any changes to the NESHAP based on our 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 No. EPA-HQ-OAR-2018-0416).

D. What other actions are we proposing?

In addition to the proposed actions described above as part of the RTR, we are proposing certain revisions to the NESHAP. We are proposing revisions to the SSM provisions of the MACT rule in order 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. We also are proposing various other changes, including a compliance calculation to account for retained volatile organic content in the coated web; periodic emissions testing requirements; electronic submittal of initial notifications, notification of compliance status, semiannual compliance reports, performance test reports, and performance evaluation reports; temperature sensor calibration requirements, incorporation by reference (IBR) of several test methods; and various technical and editorial changes. Our analyses and proposed changes related to these issues are discussed below.

1. SSM

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 section 112 standards apply continuously.

We are proposing the elimination of the SSM exemption in this rule, which is established by cross-reference to the General Provisions exemption in Table 2 (40 CFR 63.6(f)). Consistent with *Sierra Club v. EPA,* we are proposing that the current standards in the NESHAP apply at all times. We are also proposing several revisions to Table 2 (the General Provisions Applicability Table) as is explained in more detail below. For example, we are proposing to eliminate the incorporation of the General Provisions' requirement that the source develop an SSM plan. We also are proposing to eliminate and revise certain recordkeeping and reporting requirements related to the SSM exemption as further described below.

The EPA has attempted to ensure that the provisions we are proposing to eliminate are inappropriate, unnecessary, or redundant in the absence of the SSM exemption. We are specifically seeking comment on whether we have successfully done so.

In proposing the standards in this rule, the EPA has taken into account startup and shutdown periods and, for the reasons explained below, has not proposed alternate emission standards for those periods.

As discussed in the memorandum titled *Startup, Shutdown, and Malfunction Review of the National Emission Standards for Hazardous Air Pollutants for Paper and Other Web Coating*, we collected data regarding these periods to determine if separate standards for startup and shutdown were needed. It was determined that startups and shutdowns occur frequently at many of these facilities. It was also noted that 40 CFR part 60, subpart RR (Standards of Performance for Pressure Sensitive Tape and Label Surface Coating Operations (Tape NSPS)), to which many POWC facilities are also subject, states that startup and shutdown are normal operations and emissions should be included when determining compliance. Because these events are considered to be normal operations, the EPA is not proposing alternative emission limits for these periods. As part of the data collection, it was found that thermal oxidizer temperature decreases were likely to happen during emission unit startup for a short period of time. To account for these swings and promote consistency between the POWC NESHAP and the Tape NSPS, we are proposing to add language to recognize that sources can demonstrate compliance with the standard as long as the 3-hour average firebox temperature does not drop lower than 50-degree Fahrenheit (°F) below the average combustion temperature established during the performance test.

Periods of startup, normal operations, and shutdown are all predictable and routine aspects of a source's operations. Malfunctions, in contrast, are neither predictable nor routine. Instead they are, by definition, sudden, infrequent, and not reasonably preventable failures of emissions control, process, or monitoring equipment. (40 CFR 63.2) (definition of malfunction).

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 and this reading has been upheld as reasonable by the Court in *U.S. Sugar Corp. v. EPA*, 830 F.3d 579, 606-610 (D.C. Cir. 2016). Under CAA section 112, emissions standards for new sources must be no less stringent than the level "achieved" by the best controlled similar source and for existing sources generally must be no less stringent than the average emission limitation "achieved" by the best performing 12 percent of sources in the category. There is nothing in CAA section 112 that directs the Agency to consider malfunctions in determining the level "achieved" by the best performing sources when setting emission standards. As the Court has recognized, the phrase "average emissions limitation achieved by the best performing 12 percent of" sources "says nothing about how the performance of the best units is to be calculated." *Nat'l Ass'n of Clean Water Agencies v. EPA*, 734 F.3d 1115, 1141 (D.C. Cir. 2013). While the EPA accounts for variability in setting emissions standards, nothing in CAA section 112 requires the Agency to consider malfunctions as part of that analysis. The EPA is not required to treat a malfunction in the same manner as the type of variation in performance that occurs during routine operations of a source. A malfunction is a failure of the source to perform in a "normal or usual manner" and no statutory language compels the EPA to consider such events in setting CAA section 112 standards.

As the Court recognized in *U.S. Sugar Corp*, accounting for malfunctions in setting standards would be difficult, if not impossible, given the myriad different types of malfunctions that can occur across all sources in the category and given the difficulties associated with predicting or accounting for the frequency, degree, and duration of various malfunctions that might occur. *Id*. at 608 ("the EPA would have to conceive of a standard that could apply equally to the wide range of possible boiler malfunctions, ranging from an explosion to minor mechanical defects. Any possible standard is likely to be hopelessly generic to govern such a wide array of circumstances.") As such, the performance of units that are malfunctioning is not "reasonably" foreseeable. See, *e.g.*, *Sierra Club v. EPA*, 167 F.3d 658, 662 (D.C. Cir. 1999) ("The EPA typically has wide latitude in determining the extent of data-gathering necessary to solve a problem. We generally defer to an agency's decision to proceed on the basis of imperfect scientific information, rather than to 'invest the resources to conduct the perfect study.'"). See also, *Weyerhaeuser v. Costle*, 590 F.2d 1011, 1058 (D.C. Cir. 1978) ("In the nature of things, no general limit, individual permit, or even any upset provision can anticipate all upset situations. After a certain point, the transgression of regulatory limits caused by 'uncontrollable acts of third parties,' such as strikes, sabotage, operator intoxication or insanity, and a variety of other eventualities, must be a matter for the administrative exercise of case-by-case enforcement discretion, not for specification in advance by regulation."). In addition, emissions during a malfunction event can be significantly higher than emissions at any other time of source operation. For example, if an air pollution control device with 99-percent removal goes off-line as a result of a malfunction (as might happen if, for example, the bags in a baghouse catch fire) and the emission unit is a steady state type unit that would take days to shut down, the source could go from 99-percent control to zero control until the control device was repaired. The source's emissions during the malfunction could be 100 times higher than during normal operations. As such, the emissions over a 4-day malfunction period would exceed the annual emissions of the source during normal operations. As this example illustrates, accounting for malfunctions could lead to standards that are not reflective of (and significantly less stringent than) levels that are achieved by a well-performing non-malfunctioning source. It is reasonable to interpret CAA section 112 to avoid such a result. The EPA's approach to malfunctions is consistent with CAA section 112 and is a reasonable interpretation of the statute.

Although no statutory language compels the EPA to set standards for malfunctions, the EPA has the discretion to do so where feasible. For example, in the Petroleum Refinery Sector RTR, the EPA established a work practice standard for unique types of malfunction that result in releases from pressure relief devices or emergency flaring events because the EPA had information to determine that such work practices reflected the level of control that applies to the best performers. 80 FR 75178, 75211-14 (December 1, 2015). The EPA will consider whether circumstances warrant setting standards for a particular type of malfunction and, if so, whether the EPA has sufficient information to identify the relevant best performing sources and establish a standard for such malfunctions. We also encourage commenters to provide any such information.

The EPA anticipates that it is unlikely that a malfunction of a POWC emission unit would result in a violation of the standard. For example, some facilities using thermal oxidizers as pollution control equipment indicated during the EPA site visits that interlocks would shut the process down if an oxidizer malfunction occurred, and facilities may also have back-up oxidizers that could be used to treat the emissions. The MACT standards are based on a monthly average for each web coating line or grouping of lines, therefore, a malfunction on a single piece of equipment for a short period of time is unlikely to result in an exceedance of the standard.

The American Coatings Association provided a letter to the EPA on April 19, 2018, requesting that the EPA consider provisions covering periods of malfunctions at the same time as we conduct the RTR, and suggested two options. The first option would require a facility to discontinue the coating operation during periods of malfunctions, but the facility could continue the oven curing of any coating materials already applied onto the web without the control device for the period of the malfunction, so long as it continues to meet the emission limits for the compliance period. The second option would require a facility to initiate repairs immediately during the malfunction and complete them as expeditiously as possible, without ceasing operations, until it becomes apparent that the repairs will not be completed before exceeding the emission limit. Neither of these alternatives would allow the facility to exceed the emission limit.[23] We are requesting comment regarding the need to promulgate a special provision covering periods of malfunctions of a control device or capture system that is used to meet the emission limits for the POWC NESHAP. Specifically, we are requesting comment on best practices and the best level of emission control during malfunction events, and additionally, potential cost savings associated with potential malfunction work practices.

In the unlikely event that a source owner or operator fails to comply with the applicable CAA section 112(d) standards as a result of a malfunction event, the EPA would determine an appropriate response based on, among other things, the good faith efforts of the source to minimize emissions during malfunction periods, including preventative and corrective actions, as well as root cause analyses to ascertain and rectify excess emissions. The EPA would also consider whether the source owner or operator’s failure to comply with the CAA section 112(d) standard was, in fact, sudden, infrequent, not reasonably preventable, and was not instead caused, in part, by poor maintenance or careless operation. 40 CFR 63.2 (definition of malfunction).

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[23] Letter to the U.S. EPA from David Darling, American Coatings Association regarding *Start-up, Shut-down and Malfunction; American Coatings Association (ACA) Concerns*, dated April 19, 2018.

If the EPA determines in a particular case that an enforcement action against a source owner or operator for violation of an emission standard is warranted, the source owner or operator can raise any and all defenses in that enforcement action and the federal district court will determine what, if any, relief is appropriate. The same is true for citizen enforcement actions. Similarly, the presiding officer in an administrative proceeding can consider any defense raised and determine whether administrative penalties are appropriate.

In summary, the EPA interpretation of the CAA and, in particular, section 112, is reasonable and encourages practices that will avoid malfunctions. Administrative and judicial procedures for addressing exceedances of the standards fully recognize that violations may occur despite good faith efforts to comply and can accommodate those situations. *U.S. Sugar Corp. v. EPA*, 830 F.3d 579, 606-610 (2016).

a. General Duty

We are proposing to add an entry to the General Provisions table (Table 2) for 40 CFR 63.6(e)(1)(i) and include a “no” in the applicability column. Section 63.6(e)(1)(i) describes the general duty to minimize emissions. Some of the language in that section is no longer necessary or appropriate in light of the elimination of the SSM exemption. We are proposing instead to add general duty regulatory text at 40 CFR 63.3340(b) that reflects the general duty to minimize emissions while eliminating the reference to periods covered by an SSM exemption. The current language in 40 CFR 63.6(e)(1)(i) characterizes what the general duty entails during periods of SSM. With the elimination of the SSM exemption, there is no need to differentiate between normal operations, startup and shutdown, and malfunction events in describing the general duty. Therefore, the language the EPA is proposing for 40 CFR 63.3340(b) does not include that language from 40 CFR 63.6(e)(1).

We are also proposing to add an entry to the General Provisions table (Table 2) for 40 CFR 63.6(e)(1)(ii) and include a "no" in the applicability column. Section 63.6(e)(1)(ii) imposes requirements that are not necessary with the elimination of the SSM exemption or are redundant with the general duty requirement being added at 40 CFR 63.3340(b).

b. SSM Plan

We are proposing to add an entry to the General Provisions table (Table 2) for 40 CFR 63.6(e)(3) and include a "no" in the applicability column. Generally, these paragraphs require development of an SSM plan and specify SSM recordkeeping and reporting requirements related to the SSM plan. As noted, the EPA is proposing to remove the SSM exemptions. Therefore, affected units will be subject to an emission standard during such events. The applicability of a standard during such events will ensure that sources have ample incentive to plan for and achieve compliance and, thus, the SSM plan requirements are no longer necessary.

c. Compliance with Standards

We are proposing to add an entry to the General Provisions table (Table 2) for 40 CFR 63.6(f)(1) and include a "no" in the applicability column. The current language of 40 CFR 63.6(f)(1) exempts sources from non-opacity standards during periods of SSM. As discussed above, the Court in *Sierra Club* vacated the exemptions contained in this provision and held that the CAA requires that some section 112 standard apply continuously. Consistent with *Sierra Club*, the EPA is proposing to revise standards in this rule to apply at all times.

d. Performance Testing

We are proposing to add an entry to the General Provisions table (Table 2) for 40 CFR 63.7(e)(1) and include a "no" in the applicability column. Section 63.7(e)(1) describes performance testing requirements. The EPA is instead proposing to add a performance testing requirement at 40 CFR 63.3360(e)(2). The performance testing requirements we are proposing to add differ from the General Provisions performance testing provisions in several respects. The regulatory text does not include the language in 40 CFR 63.7(e)(1) that restated the SSM exemption and language that precluded startup and shutdown periods from being considered "representative" for purposes of performance testing. The proposed performance testing provisions do not allow performance testing during startup or shutdown. As in 40 CFR 63.7(e)(1), performance tests conducted under this subpart should not be conducted during malfunctions because conditions during malfunctions are often not representative of normal operating conditions. The EPA is proposing to add language that requires the owner or operator to 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. Section 63.7(e) requires that the owner or operator make available to the Administrator such records "as may be necessary to determine the condition of the performance test" available to the Administrator upon request but does not specifically require the information to be recorded. The regulatory text the EPA is proposing to add to this provision builds on that requirement and makes explicit the requirement to record the information.

e. Monitoring

We are proposing to re-designate the entry to the General Provisions table (Table 2) for 40 CFR 63.8(c)(1)-(3) to be 40 CFR 63.8(c)(2)-(3) and remove the text in the explanation column. We are proposing to add an entry to the General Provisions table (Table 2) for 40 CFR 63.8(c)(1) and 63.8(c)(1)(i) and (iii), and include a "no" in the applicability column. The cross-references to the general duty and SSM plan requirements in those subparagraphs are not necessary in light of other requirements of 40 CFR 63.8 that require good air pollution control practices (40 CFR 63.8(c)(1)) and that set out the requirements of a quality control program for monitoring equipment (40 CFR 63.8(d)). We are also proposing to add an entry to the General Provisions table (Table 2) for 40 CFR 63.8(c)(1)(ii) and include a "yes" in the applicability column and to clarify in the explanation column that 40 CFR 63.8(c)(1)(ii) only applies if a capture and control system is in use.

We are proposing to add an entry to the General Provisions table (Table 2) for 40 CFR 63.8(d)(3) and include a "no" in the applicability column. The final sentence in 40 CFR 63.8(d)(3) refers to the General Provisions' SSM plan requirement which is no longer applicable. The EPA is proposing to add to the rule at 40 CFR 63.3350(e)(5) text that is identical to 40 CFR 63.8(d)(3) except that the final sentence is replaced with the following sentence: "The program of corrective action should be included in the plan required under §63.8(d)(2)."

f. Recordkeeping

We are proposing to add an entry to the General Provisions table (Table 2) for 40 CFR 63.10(b)(2)(i) and include a "no" in the applicability column. Section 63.10(b)(2)(i) describes the recordkeeping requirements during startup and shutdown. These recording provisions are no longer necessary because the EPA is proposing that recordkeeping and reporting applicable to normal operations will apply to startup and shutdown. In the absence of special provisions applicable to startup and shutdown, such as a startup and shutdown plan, there is no reason to retain additional recordkeeping for startup and shutdown periods.

We are proposing to add an entry to the General Provisions table (Table 2) for 40 CFR 63.10(b)(2)(ii) and enter a "no" in the applicability column. Section 63.10(b)(2)(ii) describes the recordkeeping requirements during a malfunction. The EPA is proposing to add such requirements to 40 CFR 63.3410(c)(2) and (3). The regulatory text we are proposing to add differs from the General Provisions it is replacing in that the General Provisions require the creation and retention of a record of the occurrence and duration of each malfunction of process, air pollution control, and monitoring equipment. The EPA is proposing that this requirement apply to any failure to meet an applicable standard and is requiring that the source record the date, time, and duration of the failure rather than the "occurrence." The EPA is also proposing to add to 40 CFR 63.3410(c)(2) and (3) a requirement that source owners or operators keep records that include a list of the affected source or equipment and actions taken to minimize emissions, an estimate of the quantity of each regulated pollutant emitted over the standard for which the source owner or operator failed to meet the standard, and a description of the method used to determine the emissions. Examples of such methods would include product-loss calculations, mass balance calculations, measurements when available, or engineering judgment based on known process parameters. The EPA is proposing to require that sources keep records of this information to ensure that there is adequate information to allow the EPA to determine the severity of any failure to meet a standard, and to provide data that may document how the source met the general duty to minimize emissions when the source has failed to meet an applicable standard.

We are proposing to add an entry to the General Provisions table (Table 2) for 40 CFR 63.10(b)(2)(iv) and enter a "no" in the applicability column. When applicable, the provision requires sources to record actions taken during SSM events when actions were inconsistent with their SSM plan. The requirement is no longer appropriate because SSM plans will no longer be required. The requirement previously applicable under 40 CFR 63.10(b)(2)(iv)(B) to record actions to minimize emissions and record corrective actions is now applicable by reference to 40 CFR 63.3340.

We are proposing to add an entry to the General Provisions table (Table 2) for 40 CFR 63.10(b)(2)(v) and enter a "no" in the applicability column. When applicable, the provision requires sources to record actions taken during SSM events to show that actions taken were consistent with their SSM plan. The requirement is no longer appropriate because SSM plans will no longer be required.

We are proposing to add an entry to the General Provisions table (Table 2) for 40 CFR 63.10(c)(15) and enter a "no" in the applicability column. The EPA is proposing that 40 CFR 63.10(c)(15) no longer applies. When applicable, the provision allows an owner or operator to use the affected source's SSM plan or records kept to satisfy the recordkeeping requirements of the SSM plan, specified in 40 CFR 63.6(e), to also satisfy the requirements of 40 CFR 63.10(c)(10) through (12). The EPA is proposing to eliminate this requirement because SSM plans would no longer be required, and, therefore, 40 CFR 63.10(c)(15) no longer serves any useful purpose for affected units.

g. Reporting

We are proposing to add an entry to the General Provisions table (Table 2) for 40 CFR 63.10(d)(5)(i) and enter a "no" in the applicability column. Section 63.10(d)(5)(i) describes the reporting requirements for startups, shutdowns, and malfunctions. To replace the General Provisions reporting requirement, the EPA is proposing to add reporting requirements to 40 CFR 63.3400. The replacement language differs from the General Provisions requirement in that it eliminates periodic SSM reports as a stand-alone report. We are proposing language that requires sources that fail to meet an applicable standard at any time to report the information concerning such events in the semiannual compliance report already required under this rule. We are proposing that the report must contain the number, date, time, duration, and the cause of such events (including unknown cause, if applicable), a list of the affected source or equipment, an estimate of the quantity of each regulated pollutant emitted over any emission limit, and a description of the method used to determine the emissions.

Examples of such methods would include product-loss calculations, mass balance calculations, measurements when available, or engineering judgment based on known process parameters. The EPA is proposing this requirement to ensure that there is adequate information to determine compliance, to allow the EPA to determine the severity of the failure to meet an applicable standard, and to provide data that may document how the source owner or operator met the general duty to minimize emissions during a failure to meet an applicable standard.

We will no longer require owners or operators to determine whether actions taken to correct a malfunction are consistent with an SSM plan, because plans would no longer be required. The proposed amendments, therefore, eliminate the cross-reference to 40 CFR 63.10(d)(5)(i) that contains the description of the previously required SSM report format and submittal schedule from this section. These specifications are no longer necessary because the events will be reported in otherwise required reports with similar format and submittal requirements.

We are proposing to add an entry to the General Provisions table (Table 2) for 40 CFR 63.10(d)(5)(ii) and enter a “no” in the applicability column. Section 63.10(d)(5)(ii) describes an immediate report for startups, shutdowns, and malfunctions when a source failed to meet an applicable standard but did not follow the SSM plan. We will no longer require owners and operators to report when actions taken during a startup, shutdown, or malfunction were not consistent with an SSM plan, because plans would no longer be required.

2. Method for Determining Volatile Matter Retained in the Coated Web

The EPA finalized an alternative compliance option as part of the Surface Coating of Wood Building Products RTR on March 4, 2019 (84 FR 7682), which would allow facilities to account for HAP retained in the product as a result of utilizing reactive coatings. Discussions between the EPA and industry trade associations elucidated the need for a similar compliance alternative in the POWC NESHAP. Particularly, the current NESHAP allows for the accounting of retained HAP in 40 CFR 63.3360(g), but 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 found to be vague and unworkable. To provide clarity and reduce regulatory burden, the EPA is proposing the utilization of an emission factor to account for volatile organic matter retained in the coated web. As discussed below, we are proposing to include new language in this rulemaking 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). The proposed amendment adds compliance flexibility and reduces regulatory burden but does not alter the emission standard. This approach quantifies emissions in a way that is representative of the actual emissions from the coating operations.

We are proposing language in 40 CFR 63.3360(g) that allows a facility to develop a site- and product-specific emission factor for use to calculate the amount of volatile organics retained in its coated web. This site- and product-specific emission factor is determined by performing an EPA Method 25A test and calculating the ratio of the mass of volatile organics emitted to the mass of volatile organics in the coating materials evaluated over a three-run test average. This site- and product-specific emission factor can be used for the production of similar products to the product tested during the performance test. A separate performance test must be performed for each different group of products for which a source owner or operator intends to account for the retained volatiles in the compliance demonstration calculations. The site- and product-specific emission factor is then used in Equation 4 to determine the amount retained for each group of products. The amount of volatile organics retained in the web can then be subtracted from the emissions calculated in the appropriate equations in 40 CFR 63.3370.

Facilities using the proposed equations in 40 CFR 63.3360(g) to account for volatiles retained in the coated web would be required to conduct an initial performance test to develop a site- and product-specific emission factor to demonstrate compliance. It is not clear how many POWC facilities may elect to use this approach and, therefore, be required to perform this initial air emissions performance test; therefore, we have not assessed a cost for this test. Additionally, facilities choosing to use this approach will also have associated recordkeeping and reporting requirements in 40 CFR 63.3410 and 40 CFR 63.3400, respectively. We have not assessed a cost for the additional recordkeeping and reporting requirements because it is unclear how many POWC facilities will elect to use this approach.

3. Periodic Emissions Testing

As part of an ongoing effort to improve compliance with various federal air emission regulations, the EPA reviewed the compliance demonstration requirements in the POWC NESHAP. Currently, if a source owner or operator chooses to comply with the standards using a non-recovery add-on control device, such as a thermal oxidizer, the results of an initial performance test are used to demonstrate compliance; however, the current rule does not require periodic performance testing for these emission capture systems and add-on controls. We are proposing a periodic emissions testing provision for sources using non-recovery add-on controls in 40 CFR 63.3360(a)(2), in addition to the one-time initial emissions and capture efficiency testing and ongoing parametric monitoring to ensure ongoing compliance with the standards.

Although ongoing monitoring of operating parameters is required by the 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 *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). Based on the need for vigilance in maintaining the control device equipment, we are proposing periodic testing of non-recovery add-on control devices once every 5 years.

Currently, there are an estimated 123 oxidizers at 81 facilities that are used to demonstrate compliance with the POWC NESHAP. Currently, 58 of those oxidizers are tested on at least a 5-year frequency due to state requirements to check destruction efficiency and re-establish operating parameters; therefore, 65 oxidizers are not currently tested on a regular basis. The repeat performance testing provision which the Agency is proposing would impact these 65 oxidizers if the provisions were finalized, with an estimated cost of $28,000 for each repeat performance test. The inclusion of a periodic repeat testing requirement would help demonstrate that emissions control equipment is continuing to operate as designed and that the facility remains in compliance with the standard. We specifically request comment on the proposed repeat testing requirements.

4. Electronic Reporting

Through this proposal, the EPA is proposing that owners and operators of POWC facilities 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 the Compliance and Emissions Data Reporting Interface (CEDRI). A description of the electronic data submission process is provided in the memorandum, *Electronic Reporting Requirements for New Source Performance Standards (NSPS) and National Emission Standards for Hazardous Air Pollutants (NESHAP) Rules*, available in Docket ID No. EPA-HQ-OAR-2018-0416. This proposed rule requirement would replace the current rule requirement to submit the notifications and reports to the Administrator at the appropriate address listed in 40 CFR 63.13. This proposed 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 proposed rule requires that performance test results collected using test methods that are supported by the EPA's Electronic Reporting Tool (ERT) as listed on the ERT website[24] 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 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 semiannual compliance reports required in 40 CFR 63.3400(c), the proposed rule requires that owners and operators use the final semiannual report template to submit information to CEDRI. The template will reside in CEDRI and is to be used on and after 180

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[24] *https://www.epa.gov/electronic-reporting-air-emissions/electronic-reporting-tool-ert.*

days past finalization of this proposed action. A draft version of the proposed template for these reports is included in the docket for this rulemaking.[25] The EPA specifically requests comment on the format and usability of the template (*e.g.*, filling out and uploading a provided spreadsheet versus entering the required information into an on-line fillable CEDRI web form), as well as the content, layout, and overall design of the template. Prior to 180 days after the final semiannual compliance report template has been made available in CEDRI, owners and operators of affected sources will be required to submit semiannual compliance reports as currently required by the rule. When the EPA finalizes the semiannual compliance report template, POWC sources will be notified about its availability via the CEDRI website. We plan to finalize the required reporting format with the final rule. The owner or operator would begin submitting reports electronically with the next report that is due, once the electronic template has been available for at least 180 days.

For 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. If electronic forms are developed for these notifications, we will notify source owners and operators about their availability via the CEDRI website. For electronic submittal of notifications of compliance status reports required in 40 CFR 63.3400(e), the final semiannual report template discussed above, will also contain the information required for the notification of compliance status report. This will satisfy the requirement to provide the notifications of compliance status information electronically, eliminating the need to provide a separate notification of compliance status report. As stated

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[25] See *POWC_Electronic_Reporting_Template.xlsx*, available at Docket ID No. EPA-HQ-2018-0416.

above, the final semiannual report template will be available after finalizing this proposed action and source owners or operators will be required to use the form after 180 days. Prior to the availability of the final semiannual compliance report template in CEDRI, owners and operators of affected sources will be required to submit semiannual compliance reports as currently required by the rule. As stated above, we will notify sources about the availability of the final semiannual report template via the CEDRI website.

Additionally, the EPA has 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 is providing 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. The situation where an extension may be warranted due to outages of the EPA's CDX or CEDRI which precludes an owner or operator from accessing the system and submitting required reports is addressed in 40 CFR 63.3400(i). The situation where an extension may be warranted due to a *force majeure* event, which 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 an owner or operator from complying with the requirement to submit a report electronically as required by this rule is addressed in 40 CFR 63.3400(j). Examples of such events are acts of nature, acts of war or terrorism, or equipment failure or safety hazards beyond the control of the facility.

The electronic submittal of the reports addressed in this proposed rulemaking 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. Electronic reporting also eliminates paper-based, manual processes, thereby saving time and resources, simplifying data entry, eliminating redundancies, minimizing data reporting errors, and providing data quickly and accurately to the affected facilities, air agencies, the EPA, and the public. Moreover, electronic reporting is consistent with the EPA's plan[26] to implement Executive Order 13563 and is in keeping with the EPA's Agency-wide policy[27] developed in response to the White House's Digital Government Strategy.[28] 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,* available in Docket ID No. EPA-HQ-OAR-2018-0416.

5. Temperature Sensor Calibration

Facilities with controlled sources subject to the POWC NESHAP that use regenerative thermal or catalytic oxidizers to comply with the standard are currently required to establish a minimum operating temperature during performance testing and subsequently maintain a 3-hour

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[26] *EPA's Final Plan for Periodic Retrospective Reviews*, August 2011. Available at: *https://www.regulations.gov/document?D=EPA-HQ-OA-2011-0156-0154*.

[27] *E-Reporting Policy Statement for EPA Regulations*, September 2013. Available at: *https://www.epa.gov/sites/production/files/2016-03/documents/epa-ereporting-policy-statement-2013-09-30.pdf.*

[28] *Digital Government: Building a 21st Century Platform to Better Serve the American People*, May 2012. Available at: *https://obamawhitehouse.archives.gov/sites/default/files/omb/egov/digital-government/digital-government.html*.

block average firebox temperature above the minimum temperature established during the performance test to demonstrate ongoing compliance. Temperature sensors are used to measure the temperature in the firebox. At 40 CFR 63.3350(e)(9), the POWC NESHAP currently requires conducting an electronic calibration of the temperature monitoring device every 3 months or the temperature sensor must be replaced. 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 and so they have requested that an alternative approach to the current requirement in 40 CFR 63.3350(e)(9) be considered.

The EPA is proposing to modify 40 CFR 63.3350(e) to allow multiple alternative approaches to temperature sensor calibration. The first alternative would allow 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°F, whichever is greater. The second alternative would be to have the temperature sensor manufacturer certify the electrical properties of the temperature sensor. The third alternative would codify the common practice of replacing temperature sensors quarterly. The fourth alternative would be to permanently install a redundant temperature sensor as close as practicable to the process temperature sensor. The redundant sensors must read within 25°F of each other for thermal and catalytic oxidizers. The EPA plans to maintain the option of allowing facilities to follow calibration procedures developed by the temperature sensor manufacturer when temperature sensor manufacturers develop calibration procedures for their products.

6. Operating Parameter Clarification

We are proposing to clarify language in 40 CFR 63.3370 which currently implies deviations in operating parameters result in non-compliance with the standard. Specifically, we are proposing a clarification 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. Operating parameters were established in the POWC NESHAP to aid in determining a source's compliance, but they 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 in during the stack test would not necessarily indicate a violation of the emission standard for the month, but it is a deviation of the operating parameter limits.

7. IBR Under 1 CFR part 51

The EPA is proposing regulatory text that includes IBR. In accordance with requirements of 1 CFR 51.5, the EPA is proposing to incorporate by reference the following voluntary consensus standards (VCS) described in the amendments to 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 (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 (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 (1996), Standard Test Method for Specific Gravity of Drying Oils, Varnishes, Resins, and Related Materials at 25/25°C, IBR approved for 40 CFR 63.3360(c).

While ANSI/ASME PTC 19.10-1981 was incorporated by reference when 40 CFR part 63, subpart JJJJ was originally promulgated (67 FR 72347, December 4, 2002), the method has been updated, requiring a revision to the regulatory text addressing its IBR. All of the other above-referenced VCS, except for ASTM D2369-10 (Reapproved 2015)^e are being incorporated by reference for 40 CFR part 63, subpart JJJJ for the first time under this rulemaking.

8. Technical and Editorial Changes

a. Removal of Occupational Safety and Health Administration (OSHA)-Defined Carcinogens Reference

We propose to amend 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. We are proposing to remove this reference because 29 CFR 1910.1200(d)(4) has been amended and no longer readily defines which compounds are carcinogens. We are proposing to replace these references to OSHA-defined carcinogens and 29 CFR 1910.1200(d)(4) with a list (in proposed new Table 3 to 40 CFR part 63, subpart JJJJ) 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. We propose to include organic HAP in proposed Table 3 to 40 CFR part 63, subpart JJJJ if they were categorized in the EPA's Prioritized Chronic Dose-Response Values for Screening Risk Assessments (dated May 9, 2014) as a "human carcinogen," "probable human carcinogen," or "possible human carcinogen" according to *The Risk Assessment Guidelines of 1986* (EPA/ 600/8–87/045, August 1987),[29] or as "carcinogenic to humans," "likely to be carcinogenic to humans," or with "suggestive evidence of carcinogenic potential" according to the *Guidelines for Carcinogen Risk Assessment* (EPA/ 630/P–03/001F, March 2005).

b. Clarification of Compliance Demonstration Options

An introductory paragraph and a new subsection are proposed in this action to clarify the compliance demonstration requirements in 40 CFR 63.3370. As promulgated, it is 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 is proposed to clarify the intent of how compliance can be demonstrated across the web coating lines in a facility. Additionally, a new subsection 40 CFR 63.3370(r) is also being proposed to clarify that compliance with the subpart is demonstrated using a mass-balance. 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

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[29] See *https://www.epa.gov/fera/dose-response-assessment-assessing-health-risks-associated-exposure-hazardous-air-pollutants.*

facilities and the regulating agencies as to what is required for compliance. The mass-balance summary approach proposed in 40 CFR 63.3370(r) clarifies the intent of the rule.

c. Clarification of Coating Materials Definition

The EPA is proposing to revise the coating material definition in 40 CFR 63.3310 to clarify that coating materials are liquid or semi-liquid materials, consistent with 40 CFR part 63, subpart OOOO. Additionally, we are proposing to revise the web coating line definition to clarify that coating materials are liquid or semi-liquid. 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.

d. Addition of Web Coating Line Usage Threshold

The EPA is proposing to add a usage threshold to 40 CFR 63.3300(h), consistent with 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. We are proposing 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.

e. Addition of Printing Activity Exemption

The EPA is proposing to add a printing activity exemption to 40 CFR 63.3300(i) which would allow 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. This proposed exemption will reduce regulatory burden without resulting in increased emissions.

f. Clarification of Testing Requirements

The EPA is proposing to remove the "by compound" statement in 40 CFR 63.3320(b)(4) to clarify that the standard is 20 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.

g. Applicability to Sources Using Only Non-HAP Coatings

As identified during the development of the risk modeling input file and discussed in section III.C of this preamble, 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 a 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 recordkeeping and reporting requirements of 40 CFR part 63, subpart JJJJ, even though the coatings used contain no HAP, and, therefore, no HAP were emitted from the web coating lines. The EPA is requesting comment on changing the applicability of the subpart to exclude sources that only use non-HAP coatings but are located at a major source from the POWC NESHAP requirements to reduce regulatory burden.

h. Other

The following are additional proposed changes 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 63.3350(e)(4) to clarify 3-hour averages should be block averages, consistent with the requirements in Table 1 to 40 CFR part 63, subpart JJJJ.
- 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 40 CFR part 63, subpart JJJJ) 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.

E. What compliance dates are we proposing?

The EPA is proposing that existing affected sources must comply with the amendments in this rulemaking no later than 180 days after the effective date of the final rule. The EPA is also proposing that affected source owners or operators that commence construction or reconstruction after **[INSERT DATE OF PUBLICATION IN THE FEDERAL REGISTER]** must comply with all requirements of the subpart, including the amendments being proposed 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 existing facilities would have to continue to meet the current requirements of 40 CFR part 63, subpart JJJJ until the applicable compliance date of the amended rule. The final action is not expected to be a "major rule" as defined by 5 U.S.C. 804(2), so the effective date of the final rule will be the promulgation date as specified in CAA section 112(d)(10).

For existing sources, we are proposing two changes that would impact ongoing compliance requirements for 40 CFR part 63, subpart JJJJ. As discussed elsewhere in this preamble, we are proposing to add a requirement that initial notifications, notifications of compliance status reports, performance test results, performance evaluation results, and semiannual reports be submitted electronically. We are also proposing to change the requirements for SSM by removing the exemption from the requirements to meet the standard during SSM periods, and by removing the requirement to develop and implement an SSM plan. Our experience with similar industries that are required to convert reporting mechanisms, install necessary hardware, install necessary 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 different compliance dates for individual requirements would create and the additional burden such an assortment of dates would impose. From our assessment of the time frame needed for compliance with the entirety of the revised requirements, the EPA considers a period of 180 days to be the most expeditious compliance period practicable, and, thus, is proposing that existing affected sources be in compliance with all of this regulation's revised requirements within 180 days of the regulation's effective date. We solicit comment on this proposed compliance period, and we specifically request submission of information from sources in this source category regarding specific actions that would need to be undertaken to comply with the proposed amended requirements and the time needed to make the adjustments for compliance with any of the revised requirements. We note that information provided may result in changes to the proposed compliance date.

V. Summary of Cost, Environmental, and Economic Impacts

A. What are the affected sources?

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. An existing source means any affected source of which the construction or reconstruction was commenced on or before September 13, 2000, and has not undergone reconstruction. 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. There is currently one known new affected source that is under construction that will be subject to the POWC NESHAP. No other facilities are under construction or are planned to be constructed which would be considered “new facilities” under the POWC NESHAP to the EPA’s knowledge.

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. Prior to the development of the POWC NESHAP, the EPA estimated HAP emissions to be 42,000 tpy (67 FR 72331).

The proposed 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 we are unable to quantify the specific emissions reductions associated with eliminating the exemption. The requirement for repeat performance testing once every 5 years for 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 proposed rule. The EPA expects no secondary air emissions impacts or energy impacts from this rulemaking.

For further information, see the memorandum titled *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. Additionally, the EPA is proposing a work practice for malfunctions to reduce lost product. The EPA does not believe removing the SSM exemption or adding the malfunction work practice will result in additional incurred costs.

As discussed in detail in the memorandum titled *Cost, Environmental, and Energy Impacts of Regulatory Options for the Paper and Other Web Coatings Risk and Technology Review*, it was estimated that an additional 65 oxidizers will have to perform repeat performance testing every 5 years. The estimated cost for an inlet-outlet EPA Method 25A performance test (with electronic reporting of results) is $28,000 per test, for an estimated nationwide cost of $1,820,000 (2018$) every 5 years. The proposed 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 1 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 proposed revisions to the POWC NESHAP, the 168 affected facilities are owned by 91 different parent companies, and the total costs associated with the proposed 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 proposed revisions to the POWC NESHAP are small entities. However, the costs associated with the proposed 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 proposed amendments.

E. What are the benefits?

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

VI. Request for Comments

We solicit comments on this proposed action. In addition to general comments on this proposed action, we are also interested in additional data that may improve the risk assessments and other analyses. We are specifically interested in receiving any improvements to the data used in the site-specific emissions profiles used for risk assessment modeling. Such data should include supporting documentation in sufficient detail to allow characterization of the quality and representativeness of the data or information. Section VII of this preamble provides more information on submitting data.

VII. Submitting Data Corrections

The site-specific emissions profiles used in the source category risk and demographic analyses and instructions are available for download on the RTR website at *https://www.epa.gov/stationary-sources-air-pollution/paper-and-other-web-coating-national-emission-standards-hazardous-0*. The data files include detailed information for each HAP emissions release point for the facilities in the source category.

If you believe that the data are not representative or are inaccurate, please identify the data in question, provide your reason for concern, and provide any "improved" data that you have, if available. When you submit data, we request that you provide documentation of the basis for the revised values to support your suggested changes. To submit comments on the data downloaded from the RTR website, complete the following steps:

1. Within this downloaded file, enter suggested revisions to the data fields appropriate for that information.

2. Fill in the commenter information fields for each suggested revision (*i.e.*, commenter name, commenter organization, commenter email address, commenter phone number, and revision comments).

3. Gather documentation for any suggested emissions revisions (*e.g.*, performance test reports, material balance calculations).

4. Send the entire downloaded file with suggested revisions in Microsoft® Access format and all accompanying documentation to Docket ID No. EPA-HQ-OAR-2018-0416 (through the method described in the **ADDRESSES** section of this preamble).

5. If you are providing comments on a single facility or multiple facilities, you need only submit one file for all facilities. The file should contain all suggested changes for all sources at that facility (or facilities). We request that all data revision comments be submitted in the form of

updated Microsoft® Excel files that are generated by the Microsoft® Access file. These files are provided on the RTR website at *https://www.epa.gov/stationary-sources-air-pollution/paper-and-other-web-coating-national-emission-standards-hazardous-0*.

VIII. 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 OMB for review.

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

This action is not expected to be 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 1951.08, 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 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: 17,600 hours (per year). Burden is defined at 5 CFR 1320.3(b).

Total estimated cost: $2,789,000 (per year)**,** includes $789,000 annualized capital or 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.

Submit your comments on the Agency's need for this information, the accuracy of the provided burden estimates, and any suggested methods for minimizing respondent burden to the EPA using the docket identified at the beginning of this rule. You may also send your ICR-related comments to OMB's Office of Information and Regulatory Affairs via email to *OIRA_* s*ubmission@omb.eop.gov*, Attention: Desk Officer for the EPA. Since OMB is required to make a decision concerning the ICR between 30 and 60 days after receipt, OMB must receive comments no later than **[INSERT DATE 30 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER]**. The EPA will respond to any ICR-related comments in the 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 proposed 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, and does not significantly or uniquely affect small governments. 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 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 following risk report, titled *Residual Risk Assessment* *for the Paper and Other Web Source Category in Support of the 2019 Risk and Technology Review Proposed 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 proposes to use ANSI/ASME PTC 19.10–1981, “Flue and Exhaust Gas Analyses,” for its manual methods of measuring the oxygen or carbon dioxide content of the exhaust gas. This standard is acceptable as an alternative to EPA Method 3B and is available from the American Society of Mechanical Engineers (ASME) at *http://www.asme.org*; by mail at Three Park Avenue, New York, NY 10016-5990; or by telephone at (800) 843-2763. While this standard was incorporated by reference when 40 CFR part 63, subpart JJJJ was originally promulgated (67 FR 72347), it is being cited in different paragraphs in the proposed amendments, requiring a revision to their IBR.

The EPA also proposes to use the following six VCS as alternatives to EPA Method 24 and is incorporating them by reference for the first time in the proposed 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 solventborne and waterborne paints and related coatings. This method is an acceptable alternative to EPA Method 24 if 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 (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 *http://www.astm.org/*.

While the EPA has identified another 19 VCS as being potentially applicable to this proposed rule, 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 proposed rule for the reasons for these determinations (Docket ID No. EPA-HQ-OAR-2018-0416).

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.

The EPA welcomes comments on this aspect of the proposed rulemaking and, specifically, invites the public to identify potentially applicable VCS and to explain why such standards should be used in this regulation.

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 IV.A.6 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).

List of Subjects in 40 CFR Part 63

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

______________________________.
Dated:

____
Andrew R. Wheeler,
Administrator.

For the reasons set out in the preamble, 40 CFR part 63 is proposed to be 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—[Amended]

2. Section 63.14 is amended by:

a. Revising paragraph (e)(2);

b. Redesignating paragraphs (h)(50) through (h)(111) as (h)(52) through (h)(113);

c. Redesignating paragraphs (h)(19) through (h)(49) as (h)(20) through (h)(50);

d. Adding new paragraph (h)(19) and (51); and

e. Revising newly redesignated paragraphs (h)(22), (27), (31), and (81).

The revisions and additions read as follows:

§63.14 Incorporations by reference.

* * * * *

(e) * * *

(2) ANSI/ASME PTC 19.10-1981 Part 10 (2010), Flue and Exhaust Gas Analyses, IBR approved for §63.3360(e).

(h) * * *

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

* * * * *

(22) 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), 63.4141(b) and (c) and 63.4741(a).

* * * * *

(27) ASTM D2369-10 (Reapproved 2015)^{e}, Standard Test Method for Volatile Content of Coatings, approved June 1, 2015, IBR approved for §§63.3360(c), 63.4141(a) and (b), 63.4161(h), 63.4321(e), 63.4341(e), 63.4351(d), 63.4741(a), 63.4941(a) and (b), and 63.4961(j).

* * * * *

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

* * * * *

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

* * * * *

(81) 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 §§63.3360(c), 63.4141(b), 63.4741(a) and (b), and 63.4941(b).

* * * * *

Subpart JJJJ—[Amended]

3. Section 63.3300 is amended by:

a. Revising the introductory text;

b. Revising paragraphs (a), (b), (d), (e) and (f); and

c. Adding paragraphs (h) and (i).

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 (i) 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, must 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 40 CFR 63, subpart OOOO.

(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.

4. Section 63.3310 is amended by revising the definitions of “coating material(s)” and “web coating line”.

The revisions and additions read as follows:

§63.3310 What definitions are used in this subpart?

* * * * *

Coating material(s) means all liquid or semi-liquid materials, including inks, varnishes, adhesives, primers, solvents, reducers, and other materials applied to a substrate via a web coating line. Materials used to form a substrate 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 the introductory text of paragraph (b) and revising paragraph (b)(4).

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.

* * * * *

(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 63.3330 is revised to read as follows:

§63.3330 When must I comply?

(a) For existing affected sources which commenced construction or reconstruction prior to September 13, 2000, and for new affected sources which commenced construction or reconstruction after September 13, 2000, but before [**INSERT DATE OF PUBLICATION IN THE FEDERAL REGISTER]**, you must comply as follows:

(1) Before [**DATE 180 DAYS AFTER DATE OF PUBLICATION OF FINAL RULE IN THE FEDERAL REGISTER**], the affected coating operation(s) must be in compliance with the applicable emission limit in §63.3320 at all times, except during periods of startup, shutdown, and malfunction (SSM). On and after [**DATE 180 DAYS AFTER DATE OF PUBLICATION OF FINAL RULE IN THE FEDERAL REGISTER**] the affected coating operation(s) must be in compliance with the applicable emission limit in §63.3320 at all times, including periods of startup, shutdown, and malfunction.

(2) A periodic performance test must be performed by [**DATE 3 YEARS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER**], and subsequent tests no later than 60 months thereafter, as required in §63.3360.

(3) After [**DATE 180 DAYS AFTER DATE OF PUBLICATION OF FINAL RULE IN THE FEDERAL REGISTER**], you must electronically submit initial notifications, semiannual compliance reports, and performance test reports, as required in §63.3400.

(b) For new affected sources which commenced construction or reconstruction after [**INSERT DATE OF PUBLICATION IN THE FEDERAL REGISTER]**, you must comply as indicated in (b)(1) through (4) 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 startup, shutdown, and malfunction, immediately upon startup.

(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 and performance test reports as required in §63.3400. After **[DATE 180 DAYS AFTER DATE OF PUBLICATION OF FINAL RULE IN THE FEDERAL REGISTER**], you must electronically submit semiannual compliance reports as required in §63.3400.

7. Section 63.3340 is revised to read as follows:

§63.3340 What general requirements must I meet to comply with the standards?

(a) Before [**DATE 181 DAYS AFTER PUBLICATION OF FINAL RULE IN THE FEDERAL REGISTER**], for each existing source, and for each new or reconstructed source for which construction or reconstruction commenced after September 13, 2000, but on or before [**INSERT DATE OF PUBLICATION IN THE FEDERAL REGISTER**], you must be in compliance with the emission limits, operating limits, and work practice standards in this subpart at all times, except during periods of startup, shutdown, and malfunction. After [**DATE 180 DAYS AFTER PUBLICATION OF FINAL RULE IN THE FEDERAL REGISTER**], for each such source you must be in compliance with the emission limits, operating limits, and work practice standards in this subpart at all times. For new and reconstructed sources for which construction or reconstruction commenced after [**INSERT DATE OF PUBLICATION IN THE FEDERAL REGISTER**], you must be in compliance with the emission limits, operating limits, and work practice standards in this subpart at all times, immediately upon startup.

(b) For affected sources as of [**INSERT DATE OF PUBLICATION IN THE FEDERAL REGISTER**], before [**DATE 181 DAYS AFTER PUBLICATION OF FINAL RULE IN THE FEDERAL REGISTER**], 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 [**DATE 180 DAYS AFTER PUBLICATION OF FINAL RULE IN THE FEDERAL REGISTER**] for such sources and after [**INSERT DATE OF PUBLICATION IN THE FEDERAL REGISTER**] 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.

8. Section 63.3350 is amended by:

a. Revising paragraph (b);

b. Revising the introductory text of paragraph (c);

c. Revising paragraph (d)(1)(iii);

d. Revising the introductory text of paragraph (e) and paragraph (e)(2);

e. Revising paragraph (e)(4);

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

g. Adding paragraph (e)(5); and

h. Revising the newly designated 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.

(1) * * *

(2) 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.

* * * * *

(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) You must develop a quality control program, as required in §63.8(d). 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. The program of corrective action should be included in the plan required under §63.8(d)(2).

* * * * *

(10) *Oxidizer.* If you are using an oxidizer to comply with the emission standards, 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. Calibrate the chart recorder or data logger at least quarterly.

(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 have an accuracy of ±1 percent of the temperature being monitored in degrees Fahrenheit, or ±1.8 degree 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 degree 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) Validate the temperature sensor at least quarterly using method (iv)(A), (B), (C), (D), or (E):

(A) 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% of the temperature measured by the NIST traceable device or 5°F whichever is greater.

(B) Follow applicable procedures in the manufacturer owner's manual.

(C) Request the temperature sensor manufacturer to certify or re-certify electromotive force (electrical properties) of the thermocouple.

(D) 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 25°F of each other for thermal oxidizers and catalytic oxidizers.

(v) Conduct calibration and validation checks 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 all components for integrity and all electrical connections for continuity, oxidation, and galvanic corrosion.

* * * * *

9. Section 63.3360 is amended by:

a. Revising paragraph (a);

b. Revising the introductory text of paragraph (b);

c. Revising paragraphs (b)(1) through (b)(2);

d. Revising paragraph (c)(1)(i);

e. Revising paragraphs (c)(2) through (c)(4);

f. Revising paragraphs (d)(1) through (d)(3);

g. Revising paragraphs (e)(1) and (e)(2);

h. Revising the introductory text of paragraph (f); and

i. Revising paragraph (g).

The revisions 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 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 §63.3360(c) and (d). 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).
(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 non-recovery control device to determine the destruction or removal efficiency according to §63.3360(e). If applicable, perform a periodic test once every 5 years to determine the mass of volatile matter retained in the coated web or otherwise not emitted to the atmosphere according to §63.3360(g).

(b) *Control Device.* If you are using a control device to comply with the emission standards in §63.3320, you are not required to conduct a performance test to demonstrate compliance if one or more of the criteria in paragraphs (b)(1) through (3) of this section are met.

(1) The control device is equipped with continuous emission monitoring systems (CEMS) for determining inlet and outlet total organic volatile matter concentration and meeting the requirements of Performance Specification 6, 8, or 9 in Appendix B to 40 CFR Part 60 and capture efficiency has been determined in accordance with the requirements of this subpart such that an overall organic HAP control efficiency can be calculated, and the CEMS are used to demonstrate continuous compliance in accordance with §63.3350; or

(2) You have met the requirements of §63.7(h) (for waiver of performance testing); or

* * * * *

(c) * * *

(1) * * *

(i) Include each organic HAP in Table 3 to this subpart determined to be present at greater than or equal to 0.1 mass percent 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) may be used as an alternative to using Method 24.

(i) ASTM Method D1963-85 (1996), “Standard Test Method for Specific Gravity of Drying Oils, Varnishes, Resins, and Related Materials at 25/25°C,” (incorporated by reference, see §63.14);

(ii) ASTM Method D2111-10 (2015), “Standard Test Methods for Specific Gravity of Halogenated Organic Solvents and Their Admixtures,” (incorporated by reference, see §63.14);

(iii) ASTM Method D2369-10 (Reapproved 2015)^{e}, “Standard Test Method for Volatile Content of Coatings,” (incorporated by reference, see §63.14);

(iv) ASTM Method D2697-03 (2014), “Standard Test Method for Volume Nonvolatile Matter in Clear or Pigmented Coatings,” (incorporated by reference, see §63.14); and

(v) ASTM Method D6093-97 (Reapproved 2016), “Standard Test Method for Percent Volume Nonvolatile Matter in Clear or Pigmented Coatings Using a Helium Gas Pycnometer,” (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 of 40 CFR part 63) 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 the organic HAP specified in Table 3 to this subpart 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, "Standard Practice for Determining Volatile Organic Compound Content of Paints and Related Coatings," (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 of §63.3370 and the as-applied coating solids content must be calculated using Equation 6 of §63.3370.

(e) * * *

(1) *Initial performance test.* An initial performance test to establish the destruction or removal efficiency of the control device 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 (2010), "Flue and Exhaust Gas Analyses," (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:

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

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 §63.3360(e)(1)(ii), dry standard cubic meters (dscm)/h.

C_c = Concentration of organic compounds as carbon, ppmv.

12.0 = Molecular weight of carbon.

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

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

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.

* * * * *

(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 web using Equation 3. The EF must be developed by conducting a performance test using Method 25A of Appendix A-7 to 40 CFR Part 60 and be determined by obtaining the average of a three-run test. 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 product.

(1) Calculate the mass of volatile organics retained in the web for the month from each group of similar products using Equation 3:

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

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).

* * * * *

10. Section 63.3370 is amended by:

a. Adding introductory text;

b. Revising paragraph (a);

c. Revising paragraph (c)(1)(ii);

d. Revising paragraphs (c)(2)(i) and (c)(2)(ii);

e. Revising paragraphs (c)(3) and (c)(4);

f. Revising paragraph (d);

g. Redesignating paragraphs (e) through (p) as paragraphs (f) through (q);

h. Adding new paragraph (e);

i. Revising redesignated paragraphs (f) through (m);

j. Revising redesignated paragraphs (o) though (q); and

k. Adding paragraph (r).

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)-(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	Follow the procedures set out in §63.3370(b).

	material used at a new affected source does not exceed 0.08 kg organic HAP per kg coating solids as-purchased	
(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 coating material as-applied on a monthly average basis; or	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).
	(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	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)

organic HAP applied		is less than the calculated equivalent allowable organic HAP (Equation 17 or 18 of §63.3370).
(4) Accounting for volatile matter retained in the web	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 by compound 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 rate does not exceed 0.04 kg organic HAP per kg coating material for an existing affected source or 0.016 kg organic HAP per kg coating material for a new affected source on a monthly average as-applied basis; or	Follow the procedures set out in §63.3370(h) to determine compliance with §63.3320(b)(2) according to §63.3370(j) if using a solvent recovery device, or §63.3370(l) if using an oxidizer.
	(iv) Overall organic HAP emission rate does not exceed the calculated limit based on emission limitations	Follow the procedures set out in §63.3370(i). Show that the monthly organic HAP emission rate is less than the calculated equivalent allowable organic HAP emission rate (Equation 17 or 18 of §63.3370). Calculate the monthly organic HAP emission rate according to §63.3370(j) if using a solvent recovery device, or §63.3370(l) if using an oxidizer.

(6) Use of multiple capture and/or control devices	(i) Overall organic HAP control efficiency is equal to 95 percent at an existing affected source and 98 percent at a new affected source on a monthly basis; or	Follow the procedures set out in §63.3370(f) to determine compliance with §63.3320(b)(1) according to §63.3370(f)(1) or (2).
	(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).

* * * * *

(c) * * *

(1) * * *

(ii) Calculate the as-applied organic HAP content of each coating material using Equation 4:

$$C_{ahi} = \frac{\left(C_{hi}M_i + \sum_{j=1}^{q} C_{hij}M_{ij}\right)}{M_i + \sum_{j=1}^{q} M_{ij}} \qquad \text{Equation 4}$$

Where:

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

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

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

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

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

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

or calculate the as-applied volatile organic content of each coating material using Equation 5:

$$C_{avi} = \frac{\left(C_{vi}M_i + \sum_{j=1}^{q} C_{vij}M_{ij}\right)}{M_i + \sum_{j=1}^{q} M_{ij}} \qquad \text{Equation 5}$$

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:

$$C_{asi} = \frac{\left(C_{si}M_i + \sum_{j=1}^{q} C_{sij}M_{ij}\right)}{M_i + \sum_{j=1}^{q} M_{ij}} \qquad \text{Equation 6}$$

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:

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

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:

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

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:

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

Equation 9

Where:

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

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

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

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

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

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

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

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

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

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

* * * * *

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

$$H_m = \sum_{i=1}^{p} C_{hi} M_i + \sum_{j=1}^{q} C_{hij} M_{ij} - M_{vret} \qquad \text{Equation 10}$$

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 web.* If you choose to use the equation in §63.3360(g) to take into account retained volatile organic matter, 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 by compound 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 by compound 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 by compound 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 §63.3370.

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

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

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

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

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

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

(vii) *Organic HAP emitted.* Calculate the organic HAP emitted during the month using Equation 12:

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

Equation 12

Where:

H_e = Total monthly organic HAP emitted, kg.

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

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

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

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

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

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

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

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

(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:

$$S = \frac{H_e}{\sum_{i=1}^{p} M_i + \sum_{j=1}^{q} M_{ij}} \qquad \text{Equation 14}$$

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:

$$R = \frac{(E)(CE)}{100} \qquad \text{Equation 15}$$

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:

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

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°F below the temperature established in accordance with §63.3360(e)(3)(i) for each 3-hour period, or the catalytic oxidizer temperature is greater than 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 assuming no control of emissions 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 no control:

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

(3) *No operating limit deviations.* You are in compliance with the emission standards in §63.3320(b) if the oxidizer is operated such that the average operating parameter value is greater than the operating parameter value established in accordance with §63.3360(e) 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.

(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 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 no control:

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

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

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

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

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

0.08 kg organic HAP per kg coating solids at a new affected source, and coating material applied at less than 20 mass percent coating solids complying with 4 mass percent organic HAP at an existing affected source and 1.6 mass-percent organic HAP at a new affected source as follows:

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

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

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

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

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

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

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

or Equation 18 for a new affected source:

$$H_a = 0.08\left[\sum_{i=1}^{p} M_i G_i C_{si}\right] + 0.016\left[\sum_{i=1}^{p} M_i\left(1 - G_i\right) + \sum_{j=1}^{q} M_{L_j}\right] \qquad \text{Equation 18}$$

Where:

H_a = Monthly allowable organic HAP emissions, kg.

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

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

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

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

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

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

* * * * *

(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), (2)(ii), (3)(iii), and (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 (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 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 paragraphs (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:

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

Where:

H_e = Total monthly organic HAP emitted, kg.

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

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

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

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

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

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

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

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

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

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)-(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 utilized on the lines, including from coating materials or coating solids, for the same period. 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 each work station of each of your individually/grouping(s) of lines.

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

(iii) For every always-controlled work station, 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 web if you have determined an emission factor in accordance with §63.3360(g).

(iv) For every intermittently-controlled work station, 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 web 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 every work station of your individual/grouping(s) of lines 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 §63.3370(r)(4)(i)-(iii), as applicable, and each oxidizer control device, if used, additionally meets §63.3370(r)(4)(iv)

(i) The total mass of organic HAP emitted by the effected 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.

(iv) The oxidizer control device(s), if any, is operated such that the average operating parameter value is greater than or less than (as appropriate) the operating parameter value established in accordance with §63.3360(e) 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 §63.3360(f).

11. Section 63.3400 is amended by:

a. Revising paragraph (a) and introductory text of paragraph (b);

b. Revising paragraphs (c)(1)(ii) and (c)(1)(iv);

c. Revising the introductory text of paragraph (c)(2);

d. Revising paragraphs (c)(2)(v) and (c)(2)(vi);

e. Revising paragraphs (e) and (f);

f. Redesignating paragraph (g) as paragraph (k) and revising the introductory text; and

g. Adding new paragraphs (g), (h), (i) and (j).

The additions and revisions read as follows:

§63.3400 What notifications and reports must I submit?

(a) 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) 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. Before [**DATE 180 DAYS AFTER DATE OF PUBLICATION OF THE FINAL RULE IN THE FEDERAL REGISTER**], the report must be postmarked or delivered by the aforementioned dates. On and after [**DATE 180 DAYS AFTER DATE OF PUBLICATION OF THE FINAL RULE IN THE FEDERAL REGISTER**], the 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 CEMS to comply with the emission limitations in this subpart, the compliance report must contain the following information:

(A) The total operating time of each affected source during the reporting period.

(B) In the event that an affected unit fails to meet an applicable standard, record the number of failures. For each failure record the date, time, the cause and duration of each failure.

(C) For each failure to meet an applicable standard, record and retain a list of the affected sources or equipment, an estimate of the quantity of each regulated pollutant emitted over any emission limit and a description of the method used to estimate the emissions.

(D) 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.

(E) Information on the number, duration, and cause for CPMS downtime incidents, if applicable, other than downtime associated with zero and span and other calibration checks.

(vi) For each deviation from an emission limit occurring at an affected source where you are using a CEMS to comply with the emission limit in this subpart, you must include the following information:

(A) The total operating time of each affected source during the reporting period.

(B) In the event that an affected unit fails to meet an applicable standard, record the number of failures. For each failure record the date, time, the cause and duration of each failure.

(C) For each failure to meet an applicable standard, record and retain a list of the affected sources or equipment, an estimate of the quantity of each regulated pollutant emitted over any emission limit and a description of the method used to estimate the emissions.

(D) 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.

(E) The date and time that each CEMS and CPMS, if applicable, was inoperative except for zero (low-level) and high-level checks.

(F) The date and time that each CEMS and CPMS, if applicable, was out-of-control, including the information in §63.8(c)(8).

(G) 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.

(H) 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.

(I) 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.

(J) A summary of the total duration (in hours) of CEMS and CPMS downtime during the reporting period and the total duration of CEMS and CPMS downtime as a percent of the total source operating time during that reporting period.

(K) A breakdown of the total duration of CEMS and 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.

(L) The date of the latest CEMS and CPMS certification or audit.

(M) A description of any changes in CEMS, CPMS, or controls since the last reporting period.

* * * * *

(e) You must submit a Notification of Compliance Status as specified in §63.9(h). For affected sources that commence construction or reconstruction after [**INSERT DATE OF PUBLICATION IN THE FEDERAL REGISTER**], the Notification of Compliance Status must be submitted electronically using the procedure in §63.3400(h). For affected sources that commenced construction or reconstruction on or before [**INSERT DATE OF PUBLICATION IN THE FEDERAL REGISTER**], the Notification of Compliance Status must be submitted electronically using the procedure in §63.3400(h) after [**DATE 180 DAYS AFTER DATE OF PUBLICATION OF THE FINAL RULE IN THE FEDERAL REGISTER**].

(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). 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.

(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 the Compliance and Emissions Data Reporting Interface (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 continuous monitoring system (CMS) performance evaluation (as defined in §63.2) following the procedures specified in paragraphs (g)(1) through (3) of this section.

(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 Central Data Exchange (CDX) (*https://cdx.epa.gov/*). Initial notifications and notifications of compliance status must be submitted as PDFs 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. 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 confidential business information (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 five business days prior to the date that the submission is due.

(3) The outage may be planned or unplanned.

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

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

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

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

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

(iv) The date by which you propose to report, or if you have already met the reporting requirement at the time of the notification, the date you reported.

(6) The decision to accept the claim of EPA system outage and allow an extension to the reporting deadline is solely within the discretion of the Administrator.

(7) In any circumstance, the report must be submitted electronically as soon as possible after the outage is resolved.

(j) *Extension for force majuere 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 majuere, 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) For existing affected sources that commenced construction or reconstruction before [**INSERT DATE OF PUBLICATION IN THE FEDERAL REGISTER**], before [**DATE 180 DAYS AFTER PUBLICATION OF THE FINAL RULE IN THE FEDERAL REGISTER]** you must submit startup, shutdown, and malfunction 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, [**DATE 180 DAYS AFTER PUBLICATION OF THE FINAL RULE IN THE FEDERAL REGISTER**], and for affected sources that commence construction or reconstruction after [**INSERT DATE OF PUBLICATION IN THE FEDERAL REGISTER**], this section is no longer relevant.

* * * * *

12. Section 63.3410 is amended by:

a. Revising paragraph (a)(1);

b. Revising paragraph (a)(2);

c. Revising paragraph (b); and

d. Adding paragraphs (c) and (d).

The additions and revisions read as follows:

§63.3410 What records must I keep?

(a) * * *

(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 emission limit occurring at an affected source, you must record the following information.

(1) The total operating time of each affected source during the reporting period.

(2) In the event that an affected unit fails to meet an applicable standard, record the number of failures. For each failure record the date, time, the cause and duration of each failure.

(3) For each failure to meet an applicable standard, record and retain a list of the affected sources or equipment, an estimate of the quantity of each regulated pollutant emitted over any emission limit and a description of the method used to estimate the emissions.

(4) 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) 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 EPA as part of an on-site compliance evaluation.

13. 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) through (3) 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).

(3) Approval of alternatives to the work practice standards under §63.3322.

14. 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 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 the limit established according to §63.3360(e)(3)(ii)	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.
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)).

15. 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 [**INSERT DATE OF PUBLICATION IN THE FEDERAL REGISTER**], see §63.3340(a) for general duty requirement. Yes, for all other affected sources before [**DATE 181 DAYS AFTER PUBLICATION OF FINAL RULE IN THE FEDERAL REGISTER**], 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 [**INSERT DATE OF PUBLICATION IN THE FEDERAL REGISTER**]. Yes, for all other affected sources before [**DATE 181 DAYS AFTER PUBLICATION OF FINAL RULE IN THE FEDERAL REGISTER**], 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 [**INSERT DATE OF PUBLICATION IN THE FEDERAL REGISTER**]. Yes,

		for all other affected sources before [**DATE 181 DAYS AFTER PUBLICATION OF FINAL RULE IN THE FEDERAL REGISTER**], and No thereafter.
§63.6(f)(1)	Depends, see explanation	No, for new or reconstructed sources which commenced construction or reconstruction after [**INSERT DATE OF PUBLICATION IN THE FEDERAL REGISTER**]. Yes, for all other affected sources before [**DATE 181 DAYS AFTER PUBLICATION OF FINAL RULE IN THE FEDERAL REGISTER**], 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 [**INSERT DATE OF PUBLICATION IN THE FEDERAL REGISTER**], see §63.3340(a) for general duty requirement. Yes, for all other affected sources before [**DATE 181 DAYS AFTER PUBLICATION OF FINAL RULE IN THE FEDERAL REGISTER**], 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 [**INSERT DATE OF PUBLICATION IN THE FEDERAL REGISTER**]. Yes, for all other affected sources before [**DATE 181 DAYS AFTER PUBLICATION OF FINAL RULE IN THE FEDERAL REGISTER**], and No thereafter.
§63.8(c)(2)-(3)	Yes.	
§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.	
§63.8(d)(3)	No	§63.3350(e)(5) specifies the program of corrective action.
§63.8(e)-(f)	Yes	§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 [**INSERT DATE OF PUBLICATION IN THE FEDERAL REGISTER**]. Yes, for all other affected sources before [**DATE 181 DAYS AFTER PUBLICATION OF FINAL RULE IN THE FEDERAL REGISTER**], 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 [**INSERT DATE OF PUBLICATION IN THE FEDERAL REGISTER**]. Yes, for all other affected sources before [**DATE 181 DAYS AFTER PUBLICATION OF FINAL RULE IN THE FEDERAL REGISTER**], 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 [**INSERT DATE OF PUBLICATION IN THE FEDERAL REGISTER**]. Yes, for all other affected sources before [**DATE 181 DAYS AFTER PUBLICATION OF FINAL RULE IN THE FEDERAL REGISTER**], 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 [**INSERT DATE OF PUBLICATION IN THE FEDERAL REGISTER**]. Yes, for all other affected sources before [**DATE 181 DAYS AFTER PUBLICATION OF FINAL RULE IN THE**

		FEDERAL REGISTER], 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 [**INSERT DATE OF PUBLICATION IN THE FEDERAL REGISTER**]. Yes, for all other affected sources before [**DATE 181 DAYS AFTER PUBLICATION OF FINAL RULE IN THE FEDERAL REGISTER**], and No thereafter. See §63.3400(c) for malfunction reporting requirements.
§63.10(e)(1)-(2)	Yes	Provisions for COMS are not applicable.
§63.10(e)(3)-(4)	No	Subpart JJJJ does not require opacity and visible emissions observations.
§63.10(f)	Yes.	
§63.11	No	Subpart JJJJ does not specify use of flares for compliance.
§63.12	Yes.	
§63.13	Yes.	
§63.14	Yes	Subpart JJJJ includes provisions for alternative ASME and ASTM test methods that are incorporated by reference.
§63.15	Yes.	
§63.16	Yes.	

16. Subpart JJJJ is amended by adding Table 3 to read as follows:

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

Chemical Name	CAS No.
1,1,2,2-Tetrachloroethane	79-34-5
1,1,2-Trichloroethane	79-00-5
1,1-Dimethylhydrazine	57-14-7
1,2-Dibromo-3-chloropropane	96-12-8
1,2-Diphenylhydrazine	122-66-7
1,3-Butadiene	106-99-0
1,3-Dichloropropene	542-75-6
1,4-Dioxane	123-91-1

2,4,6-Trichlorophenol	88-06-2
2,4/2,6-Dinitrotoluene (mixture)	25321-14-6
2,4-Dinitrotoluene	121-14-2
2,4-Toluene diamine	95-80-7
2-Nitropropane	79-46-9
3,3'-Dichlorobenzidine	91-94-1
3,3'-Dimethoxybenzidine	119-90-4
3,3'-Dimethylbenzidine	119-93-7
4,4'-Methylene bis(2-chloroaniline)	101-14-4
Acetaldehyde	75-07-0
Acrylamide	79-06-1
Acrylonitrile	107-13-1
Allyl chloride	107-05-1
alpha-Hexachlorocyclohexane (a-HCH)	319-84-6
Aniline	62-53-3
Benzene	71-43-2
Benzidine	92-87-5
Benzotrichloride	98-07-7
Benzyl chloride	100-44-7
beta-Hexachlorocyclohexane (b-HCH)	319-85-7
Bis(2-ethylhexyl)phthalate	117-81-7
Bis(chloromethyl)ether	542-88-1
Bromoform	75-25-2
Captan	133-06-2
Carbon tetrachloride	56-23-5
Chlordane	57-74-9
Chlorobenzilate	510-15-6
Chloroform	67-66-3
Chloroprene	126-99-8
Cresols (mixed)	1319-77-3
DDE	3547-04-4
Dichloroethyl ether	111-44-4
Dichlorvos	62-73-7
Epichlorohydrin	106-89-8
Ethyl acrylate	140-88-5
Ethylene dibromide	106-93-4
Ethylene dichloride	107-06-2
Ethylene oxide	75-21-8
Ethylene thiourea	96-45-7

Ethylidene dichloride (1,1-Dichloroethane)	75-34-3
Formaldehyde	50-00-0
Heptachlor	76-44-8
Hexachlorobenzene	118-74-1
Hexachlorobutadiene	87-68-3
Hexachloroethane	67-72-1
Hydrazine	302-01-2
Isophorone	78-59-1
Lindane (hexachlorocyclohexane, all isomers)	58-89-9
m-Cresol	108-39-4
Methylene chloride	75-09-2
Naphthalene	91-20-3
Nitrobenzene	98-95-3
Nitrosodimethylamine	62-75-9
o-Cresol	95-48-7
o-Toluidine	95-53-4
Parathion	56-38-2
p-Cresol	106-44-5
p-Dichlorobenzene	106-46-7
Pentachloronitrobenzene	82-68-8
Pentachlorophenol	87-86-5
Propoxur	114-26-1
Propylene dichloride	78-87-5
Propylene oxide	75-56-9
Quinoline	91-22-5
Tetrachloroethene	127-18-4
Toxaphene	8001-35-2
Trichloroethylene	79-01-6
Trifluralin	1582-09-8
Vinyl bromide	593-60-2
Vinyl chloride	75-01-4
Vinylidene chloride	75-35-4