6560-50-P

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 63

[EPA-HQ-OAR-2018-0415; FRL-]

RIN 2060-AU23

National Emission Standards for Hazardous Air Pollutants for Cellulose Products Manufacturing Residual Risk and Technology Review

AGENCY: Environmental Protection Agency (EPA).

ACTION: Proposed rule.

SUMMARY: The U.S. Environmental Protection Agency (EPA) is proposing amendments to the National Emissions Standards for Hazardous Air Pollutants (NESHAP) for Cellulose Products Manufacturing to address the results of the residual risk and technology review (RTR) that the EPA is required to conduct under the Clean Air Act (CAA). We found risks due to emissions of air toxics to be acceptable from the Cellulose Products Manufacturing source categories and determined that the current NESHAP provides an ample margin of safety to protect public health. We identified no new cost-effective controls under the technology review to achieve further emissions reductions. The EPA is proposing to amend provisions addressing periods of startup, shutdown, and malfunction (SSM); to add provisions regarding periodic emissions testing and electronic reporting; to provide more flexibility for monitoring requirements; and to make technical and editorial changes. The EPA is proposing these amendments to improve the effectiveness of the NESHAP. While the proposed amendments would not result in reductions in emissions of hazardous air pollutants (HAP), this action, if finalized, would result in improved monitoring, compliance, and implementation of the rule.

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/cellulose-products-manufacturing-national-emission-standards*. 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-2018-0415, 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-2018-0415 in the subject line of the message.
- Fax: (202) 566-9744. Attention Docket ID No. EPA-HQ-OAR-2018-0415.
- Mail: U.S. Environmental Protection Agency, EPA Docket Center, Docket ID No. EPA-HQ-OAR-2018-0415, 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; and email address: *hirtz.james@epa.gov*. For questions about monitoring and testing requirements, contact Ms. Theresa Lowe, Sector Policies and Programs Division (D243-05), Office of Air Quality Planning and Standards, U.S. Environmental Protection Agency, Research Triangle Park, North Carolina 27711; telephone number: (919) 541-4786; fax number: (919) 541-4991; and email address: *lowe.theresa@epa.gov*. For information about the applicability of the NESHAP to a particular entity, contact Ms. Maria Malave, Office of Enforcement and Compliance Assurance, U.S. Environmental Protection Agency, WJC South Building (Mail

Code 2227A), 1200 Pennsylvania Avenue, NW, Washington DC 20460; telephone number: (202) 564-7027; and email address: *malave.maria@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-2018-0415. All documents in the docket are listed in Regulations.gov. Although listed, some information is not publicly available, *e.g.*, CBI (Confidential Business Information) 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-2018-0415. 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-2018-0415.

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:

%R	percent recovery
ADI	Applicability Determination Index
AEGL	acute exposure guideline level
AERMOD	air dispersion model used by the HEM-3 model
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
CEMS	continuous emissions monitoring system
CEP	Cellulose Ethers Production
CFR	Code of Federal Regulations
CMC	carboxymethyl cellulose
COS	carbonyl sulfide
CS_2	carbon disulfide
EPA	Environmental Protection Agency
ERPG	Emergency Response Planning Guideline
ERT	Electronic Reporting Tool
FTIR	Fourier Transform Infrared
GACT	generally available control technology
H_2S	hydrogen sulfide
HAP	hazardous air pollutant(s)
HCl	hydrochloric acid
HEC	hydroxyethyl cellulose
HEM-3	Human Exposure Model-3
HF	hydrogen fluoride
HI	hazard index
HPC	hydroxypropyl cellulose
HPMC	hydroxypropyl methyl cellulose
HQ	hazard quotient
IBR	incorporation by reference
ICR	information collection request
ID	identifier
IRIS	Integrated Risk Information System
km	kilometers
km^2	square kilometers
MACT	maximum achievable control technology
MC	methyl cellulose
mg/kg-day	milligrams per kilogram per day
mg/m^3	milligrams per cubic meter
MIR	maximum individual risk
MVP	Miscellaneous Viscose Processes
NAAQS	National Ambient Air Quality Standards
NAICS	North American Industry Classification System
NaOH	sodium hydroxide
NATA	National Air Toxics Assessment

NESHAP	national emission standards for hazardous air pollutants
NRC	National Research Council
NTTAA	National Technology Transfer and Advancement Act
OAQPS	Office of Air Quality Planning and Standards
OECA	Office of Enforcement and Compliance Assurance
OMB	Office of Management and Budget
PAH	polycyclic aromatic hydrocarbons
PB-HAP	hazardous air pollutants known to be persistent and bio-accumulative in the environment
PDF	portable document format
PM	particulate matter
POM	polycyclic organic matter
ppm	parts per million
PRA	Paperwork Reduction Act
QA	quality assurance
RBLC	Reasonably Available Control Technology/Best Available Control Technology/Lowest Achievable Emission Limits Clearinghouse
REL	reference exposure level
RFA	Regulatory Flexibility Act
RfC	reference concentration
RfD	reference dose
RTR	residual risk and technology review
SAB	Science Advisory Board
SBA	Small Business Administration
SCC	source classification code
SSM	startup, shutdown, and malfunction
TOSHI	target organ-specific hazard index
tpy	tons per year
TRIM.FaTE	Total Risk Integrated Methodology.Fate, Transport, and Ecological Exposure model
UF	uncertainty factor
$\mu g/m^3$	microgram per cubic meter
UMRA	Unfunded Mandates Reform Act
URE	unit risk estimate
USGS	United States Geological Survey
VCS	voluntary consensus standards
VOC	volatile organic compounds

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 categories that are 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. 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) included separate source categories for the various cellulose products manufacturing industries. The source categories on the initial list were Cellulose Food Casings, Rayon, Cellophane, Methyl Cellulose, Carboxymethyl Cellulose, and Cellulose Ethers Production. The Cellulose Ethers Production source category on the initial list included the hydroxyethyl cellulose, hydroxypropyl cellulose, and hydroxypropyl methyl cellulose industries. In developing the original proposed rule for Cellulose Products Manufacturing, we identified another cellulose products manufacturing industry, Cellulosic Sponge Manufacturing, that was not on the initial source category list. We added Cellulosic Sponge Manufacturing to the source category list on November 18, 1999 (64 FR 63026) in accordance with section 112(c) of the CAA. When the EPA proposed the Cellulose Products Manufacturing NESHAP on August 28, 2000 (65 FR 52166), the Cellulose Food Casings, Rayon, Cellophane, and Cellulosic Sponge Manufacturing source categories were combined to create a new source category called "Miscellaneous Viscose Processes." At the same time, we combined the Methyl Cellulose, Carboxymethyl Cellulose, and Cellulose Ethers

Production source categories to create a newly expanded "Cellulose Ethers Production" source category. On February 12, 2002 (67 FR 6521), we published an updated source category list that included the Miscellaneous Viscose Processes (MVP) and Cellulose Ethers Production (CEP) source categories.

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

Source Category	NESHAP	NAICS Code[1]
Miscellaneous Viscose Processes	Cellulose Products Manufacturing	325211, 325220, 326121, 326199
Cellulose Ethers Production	Cellulose Products Manufacturing	325199

[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/cellulose-products-manufacturing-national-emission-standards*. 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-2018-0415).

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 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 *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 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

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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.

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. *Natural Resources Defense Council (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 MVP source category includes any facility engaged in the production of cellulose food casings, rayon, cellophane, or cellulosic sponges, which includes the following process steps: production of alkali cellulose from cellulose and sodium hydroxide (NaOH); production of sodium cellulose xanthate from alkali cellulose and carbon disulfide (CS_2) (xanthation); production of viscose from sodium cellulose xanthate and NaOH solution; regeneration of liquid viscose into solid cellulose;[2] and washing of the solid cellulose product (see 65 FR 52171-2, August 28, 2000). It should be noted that, while the current Cellulose Products Manufacturing NESHAP includes standards for rayon manufacturing, all rayon plants in the United States have shut down since promulgation of the original rule.

The CEP source category includes any facility engaged in the production of carboxymethyl cellulose (CMC), hydroxyethyl cellulose (HEC), hydroxypropyl cellulose (HPC), methyl cellulose (MC), or hydroxypropyl methyl cellulose (HPMC), which includes the

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[2] The MVP operations use different methods and equipment to complete the regeneration step. Cellulose food casing operations extrude viscose through a die, forming a tube, while rayon operations extrude viscose through spinnerets, forming thin strands. Cellophane operations extrude viscose through a long slit, forming a flat sheet, while cellulosic sponge operations feed a mixture of viscose and Glauber's salt into a sponge mold.

following process steps: production of alkali cellulose from cellulose and NaOH; reaction of the alkali cellulose with one or more organic chemicals to produce a cellulose ether product;[3] washing and purification of the cellulose ether product; and drying of the cellulose ether product (see 65 FR 52171, August 28, 2000).

This proposal includes both a residual risk assessment and a technology review of the emission sources subject to the Cellulose Products Manufacturing NESHAP. The NESHAP requires MVP operations to reduce the total sulfide emissions from their process vents and control the CS_2 emissions from their CS_2 unloading and storage operations. It also requires cellophane operations to reduce the toluene emissions from their solvent coating operations and toluene storage vessels. The NESHAP requires CEP operations to control the HAP emissions from their process vents, wastewater, equipment leaks, and liquid streams in open systems. The NESHAP requires both MVP and CEP operations to comply with work practice standards for closed-vent systems and heat exchanger systems. The NESHAP also includes various operating limits, initial and continuous compliance requirements, and recordkeeping and reporting requirements for the MVP and CEP source categories.

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

On June 8, 2018, the EPA sent out a survey to the cellulose products manufacturing industry to gather information needed to conduct the regulatory reviews required under CAA sections 112(d)(6) and 112(f)(2). The EPA divided the survey into two parts. Part 1 requested updated inventory data for emission sources subject to 40 CFR part 63, subpart UUUU, to support the residual risk assessment for the two source categories for purposes of detailed

[3] To produce CMC, HEC, HPC, MC, and HPMC, alkali cellulose is reacted with chloroacetic acid, ethylene oxide, propylene oxide, methyl chloride, and a combination of methyl chloride and propylene oxide, respectively.

residual risk modeling. Part 2 requested available information on process equipment, control devices, and other pertinent information to support the 40 CFR part 63, subpart UUUU, technology review. The response rate for the survey was 100 percent. For more details on the data collection conducted to prepare inputs for the residual risk assessment, see the memorandum titled *Preparation of the Residual Risk Modeling Input File for Subpart UUUU,* in the docket for this rulemaking. For more details on the data collection conducted for the technology review, see the memorandum titled *Technology Review for the Cellulose Products Manufacturing Source Category – Proposed Rule*, also available in the docket.

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

In addition to survey data provided by the regulated facilities, the EPA reviewed a number of other information sources to determine if there have been developments in practices, processes, or control technologies by cellulose products manufacturing facilities to support the technology review. These information sources include:

- Emissions data (*e.g.*, stack test reports and continuous emissions monitoring system (CEMS) data) submitted with survey responses;
- Facility operating permits submitted with survey responses and collected from state agencies;
- Semiannual compliance reports submitted with survey responses;
- Other documentation submitted with survey responses (*e.g.*, compliance calculations; process flow diagrams; Safety Data Sheets; information on monitoring, wastewater, and equipment leaks);

- Information on air pollution control options utilized by the industry from the EPA's Reasonably Available Control Technology/Best Available Control Technology/Lowest Achievable Emission Limits Clearinghouse (RBLC);

- Information on applicability and compliance issues from the EPA's Applicability Determination Index (ADI); and

- Literature review of recent information on MVP and CEP practices, processes, and control technologies.

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 proposal.

A. How do we consider risk in our decision-making under 112(f)(2)?

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.[4] 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 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

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[4] 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.

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 categories under review, mobile source emissions, natural source emissions, persistent environmental pollution, or atmospheric transformation in the vicinity of the sources in the categories.

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."[5]

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

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[5] Recommendations of the SAB Risk and Technology Review 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.*

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.A 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 documents which provide more information on the risk assessment inputs and models: *Residual Risk Assessment for the Miscellaneous Viscose Processes Source Category in Support of the 2019 Risk and Technology Review Proposed Rule* and *Residual Risk Assessment for the Cellulose Ethers Production Source Category in Support of the 2019 Risk and Technology Review Proposed Rule*. The methods used to assess risk (as described in the eight 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;[6] 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?

As discussed in section II.C of this preamble, we used data from Part 1 of the 2018 survey as the basis for the risk assessment for the MVP and CEP source categories. Part 1 of the survey, which concluded in August/September 2018, targeted facilities that are major sources of HAP emissions and involved an update of pre-populated National Emissions Inventory (NEI) data spreadsheets (or creation of new datasets). The NEI is a database that contains information about sources that emit criteria air pollutants, their precursors, and HAP. The NEI database

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[6] 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*.

includes estimates of actual annual air pollutant emissions from point and volume sources; emission release characteristic data such as emission release height, temperature, diameter, velocity, and flow rate; and locational latitude/longitude coordinates. We asked facilities subject to the Cellulose Products Manufacturing NESHAP to refine (or create new) inventories based on their NEI datasets for purposes of detailed residual risk modeling. Refinements included providing additional details for HAP emission sources, providing more specific information on the location and characteristics of emission points (*e.g.*, updating emission release coordinates and parameters), and adding or updating HAP emissions data for each emission release point. We compiled the updated datasets for each individual facility into MVP and CEP emissions databases to create the MACT source category residual risk modeling files.

The actual annual emissions data in the emissions databases include data from source tests, CEMS, material balances, emission factors, emission models, and engineering judgment provided by sources surveyed in Part 1 of the survey. We received a comprehensive set of emissions estimates that enabled us to conduct risk modeling of HAP emissions for all major source facilities in the MVP and CEP source categories.

We conducted substantial quality assurance (QA) efforts on the Part 1 data in order to create the modeling files needed for the 40 CFR part 63, subpart UUUU, residual risk assessment.[7] We first reviewed the Part 1 databases to remove non-applicable data (*e.g.*, data marked for deletion by survey respondents) unless we considered them to be source-category data, emission units identified as not subject to the Cellulose Products Manufacturing NESHAP,

[7] These QA efforts are discussed in an April 15, 2019 memorandum in the docket titled *Preparation of the Residual Risk Modeling Input File for Subpart UUUU.*

emission units identified as shut down, records with non-HAP data, and records with zero emissions. No duplicate emissions data were discovered during the QA.

We reviewed the databases to ensure that each record contained a facility identifier (ID), emission unit ID, and process ID. If an ID was missing, one was assigned using information provided by industry (*e.g.*, from EPA databases, from emission unit description or process description in the NEI). In some cases, emission unit IDs and process IDs were revised for consistency. Looking across the updated MVP and CEP inventories, we also reviewed whether there may be any referential integrity issues associated with these IDs (*e.g.*, having the same emission unit ID associated with multiple emission unit descriptions or having the same process ID associated with multiple process descriptions or multiple source classification codes (SCCs)). In those cases, we revised the appropriate ID to address the issue.

In addition, each record was checked to ensure it was labeled with a regulatory code, SCC, and emission process group. No regulatory codes or SCCs were found missing. The SCCs for some records were revised for consistency. Where information on emission process group was missing, the emission process group was determined based on information from SCCs, comments from survey respondents, *etc.* Next, the SCCs and emission process groups were compared and reviewed for consistency with each other; no issues were found.

We reviewed the pollutant codes in the source category risk modeling files to ensure the codes and descriptions matched the latest code lookup table used by the EPA for risk modeling files; the review found the records to be consistent.

We speciated data for chromium and mercury using default speciation criteria for those pollutants for the specific SCC. We speciated chromium emissions as hexavalent chromium (chromium VI) and trivalent chromium (chromium III). We speciated mercury emissions as

particulate divalent mercury, gaseous divalent mercury, and gaseous elemental mercury. We were unable to speciate data for glycol ether for one facility because no information on the glycol ether compound(s) emitted was available from the facility in their Part 1 survey response or operating permit. For unspeciated emission inventories, it is the EPA's risk assessment policy to use the most potent noncancer health benchmark as the default emission compound; in this case, ethylene glycol methyl ether would be modeled.

We reviewed the emissions data by calculating the percent of facilities reporting each HAP, comparing emissions of a facility to category average emissions, calculating standard deviations, and identifying outliers. No pollutants in the MVP and CEP modeling files were found above or below the range for either category.

We reviewed the MVP and CEP risk modeling files to ensure that each record in these files contained an emission release point ID. If an ID was missing, one was assigned using information provided by industry (*e.g.*, from the emission unit ID or process ID). In some cases, emission release point IDs were revised for consistency. Looking across the updated MVP and CEP inventories, we also determined whether there may be any referential integrity issues associated with the emission release information. For each emission release point, each record should have one set of coordinates (latitude and longitude) and one set of stack or fugitive parameters. All records were reviewed for consistency with respect to the emission release point. Where any such issues were identified, we revised the emission release point ID, stack/fugitive parameters, and/or coordinates to address the issue.

We reviewed emission points labeled as stacks to ensure no fugitive parameters were identified; any fugitive parameter values (usually zeroes) entered for these records were deleted. We reviewed stack parameters to ensure all were populated with reasonable values and made

changes where necessary. We checked stack height data to ensure that they were greater than stack diameter. We checked exit gas flow rate data to determine whether they met the EPA's criteria that the flow rate must be within 10 percent of the calculated value (assuming a cylindrical stack). Where exit gas flow rate values did not meet the 10-percent criteria, we conducted a review to determine the source of the discrepancy (*e.g.*, the reported stack parameter was in the wrong units). We also checked for missing stack parameters and populated the missing data using values from other records for the same emission release point; if values from other records were not available, we calculated the missing value based on other related parameters for the same emission release point (*e.g.*, calculated exit gas velocity using available data for stack diameter and exit gas flow rate).

We checked fugitive parameters to ensure there was an associated length, width, and angle, and that no stack parameters for fugitive sources were erroneously populated, other than the required national defaults.

We checked coordinate values (latitude and longitude) to determine if there were any missing values and to ensure only one set of coordinates appeared for each emission release point. We populated the missing data using values from other records for the same emission release point, where possible. We revised coordinate values where necessary to ensure coordinates were consistent for the same emission point. We also checked coordinate values to ensure that all coordinates were on the facility property, by analyzing the distance between coordinates at individual facilities. Only one emission point, a wastewater treatment system emission unit, was found to be an outlier, and the coordinates of this emission point were checked and were found to lie on wastewater tanks near the boundary of the property.

We checked the source category risk modeling files for missing control measure information and filled gaps using control measure comments provided by respondents in their Part 1 survey responses or process diagrams provided by respondents in their Part 2 survey responses.

The emissions inventory for MVP sources identifies no emissions of PB-HAP. The emissions inventory for CEP sources identifies emissions of the following PB-HAP: cadmium compounds, arsenic compounds, lead compounds, and mercury compounds. Risk-based screening levels are available for Tier 1 screening for all of the above PB-HAP except lead compounds, which are compared to the level of the current National Ambient Air Quality Standard (NAAQS) for lead.

Consistent with the EPA's standard practice in conducting risk assessments for source categories, we conducted a two-step process to determine: (1) whether PB-HAP are being emitted; and (2) whether they are being released above screening levels. If these releases are significantly above the screening levels and the EPA has detailed information on the releases and the site, a complete multipathway analysis of the site is conducted to estimate pathway risks for the source category.

We considered actual emissions of the ecological HAP emitted from the CEP source category in the ecological HAP analysis. In addition to the PB-HAP emitted from the CEP source category, we considered hydrochloric acid (HCl) and hydrogen fluoride (HF) for ecological HAP modeling. The CEP source category, however, does not emit HF. Further information about the multipathway analysis performed for this category follows in section IV.A.2.c of this preamble.

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.)

Actual emissions are sometimes less than allowable emissions due to a compliance margin, a more stringent state or local rule, or over-control due to the use of control technologies, equipment, or work practices that are significantly better than that required to meet 40 CFR part 63, subpart UUUU, emission limits. Consequently, as part of the Part 1 survey instructions, the EPA requested that facilities provide MACT-allowable emissions estimates.

Allowable emissions estimates were available for four of the five MVP facilities. Two MVP facilities provided their allowable emissions in their Part 1 survey spreadsheet. Two other MVP facilities provided their allowable emissions separately, in their Part 1 survey response letter. The latter two facilities stated that the stack parameters would be expected to be different if they were to emit at the allowable emissions levels because additional ductwork and ductwork

modifications would be expected in order to route additional fumes to their biofilters if they increased capacity. While we do not intend MACT-allowable emissions in this risk modeling effort to represent the maximum potential-to-emit emission rate, we conservatively used this information for modeling because it was the only readily available information. We created new records in the MVP risk modeling file to include just these allowable emissions data and their associated stack parameters. To avoid any referential integrity issues, we assigned a different emission release point ID to these allowable emissions records.

The remaining MVP facility did not provide allowable emissions data in their survey spreadsheet. However, this facility is the only one in its subcategory, so the original MACT for the subcategory was based on their level of control. Consequently, we assumed that allowable emissions were equal to the reported actual emissions. So, for this facility, the allowable multiplier is 1.

There were some gaps in the allowable emissions estimates provided by the MVP facilities. Allowable emissions for carbonyl sulfide (COS) were not available for one MVP facility for one of their processes because they report it as part of the hydrogen sulfide (H_2S) limit in their title V permit. We created a new record in the MVP risk modeling file that calculated the COS allowable emissions for this process using the same multiplier as H_2S (6.8). Allowable emissions for CS_2 were also not available for a second MVP facility for some of their processes. We calculated the allowable emissions for this facility using the median of the multipliers for those processes at the facility that had allowable emissions estimates. Using this approach, we estimated the median allowable multiplier for CS_2 for this facility to be approximately 2.4.

Allowable emissions estimates were available for 48 percent of the records in the CEP risk modeling file, and the remaining 52 percent of records had no allowable emissions estimates. Of that 52 percent of records, 33 percent were uncontrolled sources of organic HAP, and 19 percent were controlled sources of organic HAP.

For uncontrolled CEP sources without allowable emissions data (*e.g.*, fugitive emissions), we assumed that allowable emissions were equal to their reported actual emissions, since there is no additional control beyond current emissions. For controlled CEP sources without allowable emissions data, we reviewed Part 2 survey data on emission controls for these sources and found that all of these sources were already meeting the 99-percent control required under 40 CFR part 63, subpart UUUU, and based on the data reported, there is little if any additional control beyond current emissions. Consequently, allowable emissions are equal to actuals for controlled CEP sources.

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 proposal were estimated using the Human Exposure Model (HEM-3).[8] 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.

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

a. Dispersion Modeling

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.[9] 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[10] 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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[9] 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).

[10] 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 the 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[11]

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[11] 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,[12] 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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[12] 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 the *Residual Risk Assessment for the Miscellaneous Viscose Processes Source Category in Support of the 2019 Risk and Technology Review Proposed Rule* and in the *Residual Risk Assessment for the Cellulose Ethers Production Source Category in Support of the 2019 Risk and Technology Review Proposed Rule* and in Appendix 5 of both reports: *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,[13] 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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[13] 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 the Miscellaneous Viscose Processes Source Category in Support of the 2019 Risk and Technology Review Proposed Rule*, *Residual Risk Assessment for the Cellulose Ethers Production Source Category in Support of the 2019 Risk and Technology Review Proposed Rule*, and in Appendix 5 of the reports: *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."[14] 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.[15] 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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[14] 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*.

[15] 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."[16] *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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[16] *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).

As part of the Part 1 survey instructions, the EPA requested that facilities provide acute emissions estimates. For the MVP source category, acute emissions estimates were available for four of the five facilities. One of the four facilities was missing an acute emission estimate for COS for one process, but we were able to calculate an estimate for COS by applying the same acute multiplier for CS_2 for the same process at this facility. We developed separate acute multipliers for MVP process operations and MVP storage tanks to estimate acute emissions for the fifth facility. We estimated the average acute multipliers for MVP process operations and MVP storage tanks to be approximately 1.9 and 1.1, respectively.

For the CEP source category, acute emissions estimates were available for 38 percent of the records in the CEP risk modeling file. The remaining 62 percent of records had no acute emissions estimates. For CEP sources without acute emissions data, we reviewed permits and extracted maximum hourly rate data if available, and assumed the acute multiplier would be 10 if no data were available.

A further discussion of why these factors were chosen can be found in the memorandum, *Preparation of the Residual Risk Modeling Input File for Subpart UUUU*, available in the docket for this rulemaking.

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. This was the case for the CEP source category. 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. This was required for the MVP source category, in which 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 Miscellaneous Viscose Processes Source Category in Support of the 2019 Risk and Technology Review Proposed Rule* which is available in the docket for this source category.

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 categories 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 MVP source category, we did not identify emissions of any PB-HAP or lead compounds. Because we did not identify PB-HAP emissions, no further evaluation of multipathway risk was conducted for this source category.

For the CEP source category, we identified PB-HAP emissions of cadmium compounds, arsenic compounds, lead compounds, and mercury compounds, 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. In a Tier 1 screening assessment, 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 polycyclic organic matter (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[17]) and locally grown or raised foods (90th percentile consumption of locally grown or raised foods for the

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

farmer and gardener scenarios[18]). 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 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.[19] Values below the level of the primary (health-based) lead NAAQS are considered to have a low potential for multipathway risk.

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

[19] 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.

For further information on the multipathway assessment for CEP, see the *Residual Risk Assessment for the Cellulose Ethers Production Source Category in Support of the Risk and Technology Review 2019 Proposed Rule*, which is available in the docket for this action.

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, 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 HCl and 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 Cellulose Ethers Production Source Category in Support of the Risk and Technology Review 2019 Proposed Rule*, which is available in the docket for this action.

b. Environmental Risk Screening Methodology

For the environmental risk screening assessment, the EPA first determined whether any facilities in the MVP and CEP source categories emitted any of the environmental HAP. For the CEP source category, we identified emissions of cadmium compounds, arsenic compounds, lead compounds, mercury compounds, and HCl. 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. For the MVP source category, we did not identify emissions of any of the eight environmental HAP included in the screen. Because we did not identify environmental

HAP emissions from the MVP source category, no further evaluation of environmental risk was conducted for that category.

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. 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 square kilometers (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 Cellulose Ethers Production Source Category in Support of the Risk and Technology Review 2019 Proposed Rule*, which is available in the docket for this action.

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 proposal. 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 Miscellaneous Viscose Processes Source Category in Support of the Risk and Technology Review 2019 Proposed Rule and the Residual Risk Assessment for the Cellulose Ethers Production Source Category in Support of the Risk and Technology Review 2019 Proposed Rule*, available through the docket for this action, 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 datasets, 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 Miscellaneous Viscose Processes Source Category in Support of the Risk and Technology Review 2019 Proposed Rule* and the *Residual Risk Assessment for the Cellulose Ethers Production Source Category in Support of the Risk and Technology Review 2019 Proposed Rule*, which are available in the docket for this action. 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 Datasets

Although the development of the RTR emissions datasets involved quality assurance/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. Some of the emission estimates considered in this analysis 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" (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.[20] 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.[21] Chronic noncancer RfC and reference dose (RfD)

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

[21] 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.

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,[22] 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 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

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[22] 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.

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 the CEP 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 the MVP source category, we have identified appropriate human health effect dose-response values for all pollutants.

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 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.[23]

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 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

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[23] 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.

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. MVP Source Category

a. Chronic Inhalation Risk Assessment Results

Table 2 of this preamble provides an overall summary of the inhalation risk results of the MVP source category. The results of the chronic baseline inhalation cancer risk assessment indicate that, based on estimates of current actual and allowable emissions, the MIR posed by the source category was estimated to be less than 1-in-1 million. The risk driver is acetaldehyde

emissions from viscose process equipment. The total estimated cancer incidence from MVP emission sources based on actual and allowable emission levels is 0.000006 excess cancer cases per year, or one case in every 167,000 years. Emissions of acetaldehyde contributed 100 percent to this cancer incidence. Based upon actual or allowable emissions, no people were exposed to cancer risks greater than or equal to 1-in-1 million.

The maximum chronic noncancer HI (TOSHI) values for the MVP source category, based on actual and allowable emissions, were estimated to be less than 1. Based upon actual and allowable emissions, respiratory risks were driven by CS_2 emissions from viscose process equipment.

Table 2. MVP Inhalation Risk Assessment Results[1]

Risk Assessment	Number of Facilities	Maximum Individual Cancer Risk (in 1 million)[2]	Estimated Population at Increased Risk of Cancer ≥ 1-in-1 Million	Estimated Annual Cancer Incidence (cases per year)	Maximum Chronic Noncancer TOSHI[3]	Maximum Refined Acute Noncancer HQ[4]
Baseline Actual Emissions						
Source Category	5	< 1	0	0.000006	0.05	0.4
Facility-Wide	5	1	0	0.00006	0.05	-
Baseline Allowable Emissions						
Source Category	5	< 1	0	0.000006	0.05	-

[1] Based on actual, allowable, and facility-wide emissions.
[2] Maximum individual excess lifetime cancer risk due to HAP emissions from the source category and facility-wide.
[3] Maximum TOSHI. The target organ with the highest TOSHI for the MVP source category is the respiratory system.
[4] 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. When an HQ exceeds 1, we also show the HQ using the next lowest available acute dose-response value. The HQ of 0.4 is based upon an acute ERPG–1.

b. Screening Level Acute Risk Assessment Results

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 value for the MVP source category was less than 1 from CS_2 emissions (based on the acute (1-hour) ERPG–1 for CS_2). It is also important to note that the highest HQ is based on hourly emissions multiplier for each emission process group ranging from 1 to 37 times the annual emissions rate. Acute HQs are not calculated for allowable or whole facility emissions.

c. Multipathway Risk Screening Results

The five facilities modeled in the MVP source category did not report any emissions of lead compounds, carcinogenic PB-HAP (arsenic, dioxin/furans, and POM compounds) or any noncarcinogenic PB-HAP (cadmium and mercury). Since, there are no PB-HAP or lead compounds identified in the emissions inventory for this source category, no further assessment of multipathway risk was conducted.

d. Environmental Risk Screening Results

The five facilities modeled in the MVP source category did not report any emissions of lead compounds, PB-HAP, or any acid gases (HCl or HF). Since there are no ecological HAP identified in the emissions inventory for this source category, no further assessment of ecological risk was conducted.

e. Facility-Wide Risk Results

Results of the assessment of facility-wide emissions indicate that none of the five facilities have a facility-wide MIR cancer risk greater than 1-in-1 million (refer to Table 2). The maximum facility-wide cancer risk is 1-in-1 million, driven by formaldehyde, cadmium compounds, and nickel compounds from a non-category fugitive area source. The total estimated cancer incidence from the whole facility is 0.00006 excess cancer cases per year, or one case in every 16,700 years, with zero people estimated to have cancer risks greater than 1-in-1 million.

The maximum facility-wide chronic noncancer TOSHI is estimated to be less than 1, driven by source category emissions of CS_2 from viscose process equipment.

2. CEP Source Category

a. Chronic Inhalation Risk Assessment Results

Table 3 of this preamble provides an overall summary of the inhalation risk results of the CEP source category. The results of the chronic baseline inhalation cancer risk assessment indicate that, based on estimates of current actual and allowable emissions, the MIR posed by the source category was estimated to be 80-in-1 million. The risk driver is from emissions of ethylene oxide from cellulose ether process equipment used to produce hydroxyethyl cellulose (HEC). The total estimated cancer incidence from CEP emission sources based on actual and allowable emission levels is 0.01 excess cancer cases per year, or one case in every 100 years. Emissions of ethylene oxide contributed 99 percent to this cancer incidence based upon actual emissions. Based upon actual or allowable emissions, 105,000 people were exposed to cancer risks greater than or equal to 1-in-1 million. The maximum chronic noncancer HI (TOSHI) values for the source category, based on actual and allowable emissions, were estimated to be less than 1. Based upon actual and allowable emissions, respiratory risks were driven by chlorine emissions from cellulose ether process equipment.

Table 3. CEP Inhalation Risk Assessment Results[1]

Risk Assessment	Number of Facilities	Maximum Individual Cancer Risk (in 1 million)	Estimated Population at Increased Risk of Cancer ≥ 1-in-1 Million	Estimated Annual Cancer Incidence (cases per year)	Maximum Chronic Noncancer TOSHI[3]	Maximum Screening Acute Noncancer HQ[4]
Baseline Actual Emissions						
Source Category	3	80	105,000	0.01	0.06	0.1
Facility-Wide	3	500[2]	570,000	0.04	4[5]	-

Baseline Allowable Emissions						
Source Category	3	80	112,000	0.01	0.2	-

[1] Based on actual, allowable, and whole facility emissions.
[2] Maximum individual excess lifetime cancer risk due to ethylene oxide emissions from outside of the source category identified as releases from holding ponds, storage tanks, tank truck unloading, and equipment/vent releases.
[3] Maximum TOSHI. The target organ with the highest TOSHI for the CEP source category is the respiratory system.
[4] 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. When an HQ exceeds 1, we also show the HQ using the next lowest available acute dose-response value.
[5] Maximum TOSHI from whole facility are from chlorine emissions from non-category sources (classified as other). The target organ with the highest TOSHI is the respiratory system.

b. Screening Level Acute Risk Assessment Results

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 value for the source category was less than 1 from methanol emissions from cellulose ether process equipment (based on the acute (1-hour) REL for methanol). It is also important to note that the highest HQ is based on an hourly emissions multiplier of 10 times the annual emissions rate. Acute HQs are not calculated for allowable or whole facility emissions.

c. Multipathway Risk Screening Results

One facility within the CEP source category reported emissions of multipathway pollutants of lead compounds, carcinogenic PB-HAP (arsenic), and noncarcinogenic PB-HAP (cadmium and mercury). Results of the worst-case Tier 1 screening analysis indicate that PB-HAP emissions (based on estimates of actual emissions) emitted from the facility exceeded the screening values for the carcinogenic PB-HAP (arsenic compounds) by a factor of 2 and for the noncarcinogenic PB-HAP (cadmium and mercury) was equal to the Tier 1 screening value of 1. Based on this Tier 1 screening assessment for carcinogens, the arsenic, cadmium, and mercury

emission rates for the single facility were below our level 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 0.00001 $\mu g/m^3$ is well below the NAAQS for lead, indicating a low potential for multipathway impacts of concern due to lead.

d. Environmental Risk Screening Results

As described in section III.A of this preamble, we conducted an environmental risk screening assessment for the CEP source category. The three facilities modeled in the source category reported emissions of lead compounds and the above PB-HAP, as well as an acid gas (HCl). In the Tier 1 screening analysis for PB-HAP, we did not find any exceedances of the ecological benchmarks evaluated. For lead, we did not estimate any exceedances of the secondary lead NAAQS. For HCl, the average modeled concentration around each facility (*i.e.,* the average concentration of all off-site data points in the modeling domain) did not exceed any ecological benchmark. In addition, each individual modeled concentration of HCl (*i.e.,* each off-site data point in the modeling domain) was below the ecological benchmarks for all facilities. 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.

e. Facility-Wide Risk Results

Results of the assessment of facility-wide emissions indicate that all three facilities modeled have a facility-wide MIR cancer risk greater than 1-in-1 million (refer to Table 3). The maximum facility-wide cancer risk is 500-in-1 million, mainly driven by ethylene oxide from sources outside the source category, including holding ponds, storage tanks, tank truck unloading, and equipment/vent releases. The next highest cancer risk was 80-in-1 million, based

on whole facility emissions of ethylene oxide. The total estimated cancer incidence from the whole facility is 0.04 excess cancer cases per year, or one case in every 25 years, with 570,000 people estimated to have cancer risks greater than 1-in-1 million and 2,000 people with risks greater than 100-in-1 million. The maximum facility-wide chronic noncancer TOSHI is estimated to be equal to 4, driven by emissions of chlorine from non-category sources.

3. What demographic groups might benefit from this regulation?

To examine the potential for any environmental justice issues that might be associated with the MVP and CEP source categories, we performed a demographic analysis, which is an assessment of risks 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 risks from the MVP and CEP source categories across different demographic groups within the populations living near facilities.

For the MVP source category demographic analysis, the 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. When examining the risk levels of those exposed to emissions from MVP facilities, we find that no one is exposed to a cancer risk at or above 1-in-1 million or to a chronic noncancer TOSHI greater than 1. The methodology and the results of the MVP demographic analysis are presented in a technical report, *Risk and Technology Review – Analysis of Demographic Factors for Populations Living Near Miscellaneous Viscose Processes Facilities*, available in the docket for this action.

The results of the CEP demographic analysis are summarized in Table 4 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 CEP facilities.

Table 4. CEP Demographic Risk Analysis Results

CEP Source Category Demographic Assessment Results - 50 km Study Area Radius			
		Population with Cancer Risk Greater than or Equal to 1-in-1 Million	Population with Hazard Index Greater than 1
	Nationwide	Source Category	
Total Population	317,746,049	104,572	0
	White and Minority by Percent		
White	62%	51%	0%
Minority	38%	49%	0%
	Minority by Percent		
African American	12%	37%	0%
Native American	0.8%	0.3%	0%
Hispanic or Latino (includes white and nonwhite)	18%	7%	0%
Other and Multiracial	7%	4%	0%
	Income by Percent		
Below Poverty Level	14%	12%	0%
Above Poverty Level	86%	88%	0%
	Education by Percent		
Over 25 and without a High School Diploma	14%	16%	0%
Over 25 and with a High School Diploma	86%	84%	0%
	Linguistically Isolated by Percent		
Linguistically Isolated	6%	1%	0%

The results of the CEP source category demographic analysis indicate that emissions from the source category expose approximately 104,572 people to a cancer risk at or above 1-in-1 million and approximately zero people to a chronic noncancer TOSHI greater than 1. The percentages of the at-risk population in three demographic groups (African American, above poverty level, and over 25 without highs school diploma) are greater than their respective nationwide percentages. The methodology and the results of the CEP demographic analysis are

presented in the technical report, *Risk and Technology Review – Analysis of Demographic Factors for Populations Living Near Cellulose Ethers Production Facilities*, available in the docket for this action.

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." (54 FR 38045, September 14, 1989).

In this proposal, the EPA estimated risks based on actual and allowable emissions from the MVP and CEP source categories. In determining whether risks are acceptable, the EPA considered all available health information and risk estimation uncertainty, as described above. The results for the MVP and CEP source categories indicate that both the actual and allowable inhalation cancer risks to the individual most exposed are below the presumptive limit of acceptability of 100-in-1 million.

The results for the MVP source category indicate that both the actual and allowable inhalation cancer risks to the individual most exposed are less than 1-in-1 million, well below the presumptive limit of acceptability of 100-in-1 million. The MVP source category also has chronic noncancer inhalation exposures to HAP with health benchmarks with TOSHI values less than 1 (0.05), 20 times below an exposure that the EPA has determined is without appreciable risk of adverse health effects. Exposures to HAP associated with acute noncancer health effects

also are below levels of health concern with no HAP exposures resulting in an HQ greater than 1 (0.4) based upon the 1-hour REL.

The results for the CEP source category indicate that both the actual and allowable inhalation cancer risks to the individual most exposed are less or equal to 80-in-1 million, below the presumptive limit of acceptability of 100-in-1 million. EPA estimates emissions from the 3 facilities in the source category would result in a cancer incidence of 0.01 excess cancer cases per year, or one case every 100 years based upon actual emissions from the source category. This incidence rate is solely from 1 facility emitting ethylene oxide. We estimate 105,000 individuals are exposed to an inhalation cancer risk equal to or greater than 1-in-1 million from this one facility. Inhalation exposures to HAP associated with chronic noncancer health effects result in a TOSHI of 0.06 based on actual emissions, 16 times below an exposure that the EPA has determined is without appreciable risk of adverse health effects. Exposures to HAP associated with acute noncancer health effects also are below levels of health concern with no HAP exposures resulting in an HQ greater than 1 (0.1) based upon the 1-hour REL.

Multipathway screen values for the CEP source category are below a level of concern for both carcinogenic and non-carcinogenic PB-HAP as well as emissions of lead compounds. Maximum cancer and noncancer risk due to ingestion exposures estimated using Tier 1 health-protective risk screening assumptions are below 2-in-1 million for cancer and equal to 1 based upon Tier 1 noncancer screen values for mercury.

Taking into account this information, the EPA proposes that the risks remaining after implementation of the existing MACT standards for the CEP and MVP source categories are acceptable.

2. Ample Margin of Safety Analysis

The inhalation cancer risk from the MVP source category is less than 1-in-1 million and the chronic noncancer TOSHI due to inhalation exposures is less than 1. Additionally, the results of the MVP acute screening analysis showed that risks were below a level of concern. Because we are proposing that risks from the MVP source category are acceptable and below the thresholds of concern, we are proposing that the current MACT standards applicable to the MVP source category provide an ample margin of safety to protect public health.

Although we are proposing that the risks from the three modeled facilities within the CEP source category are acceptable, the MIR for actual and allowable emissions are 80-in-1 million caused by ethylene oxide emissions from the HEC process. We considered whether the MACT standards applicable to these emission points in particular, as well as all 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 emission standards provide an ample margin of safety to protect public health. Under the ample margin of safety analysis, we evaluated the cost and feasibility of available control technologies and other measures (including those considered under the technology review) that could be applied to the CEP source category to further reduce the risks (or potential risks) due to emissions of HAP identified in the risk assessment.

The HEC production process utilizes purified wood pulp or cotton linters to produce alkali cellulose by adding a caustic solution. The alkali cellulose is then reacted with ethylene oxide to produce HEC, which is a thickening agent used in cosmetics, cleaning solutions, and other household products. This process utilizes extended cook-out procedures to reduce the amount of ethylene oxide not consumed during the HEC reaction in conjunction with an add-on control device. This process is subject to standard 3 in Table 1 to Subpart UUUU of Part 63 –

Emission Limits and Work Practice Standards, which requires a 99-percent reduction in HAP emissions.

As discussed in section IV.C below and in the memo titled *Technology Review for the Cellulose Products Manufacturing Industry – Proposed Rule* in the docket for this rulemaking, we did not identify any developments in processes, practices, or controls for the CEP source category during our analysis for this proposal. CEP facilities use scrubbers to control emissions of ethylene oxide, as well as other HAP, and these devices are capable of achieving high levels of emission reductions. We did not identify additional technologies capable of further reducing emissions, or improvements to existing technologies that would result in further reduction of emissions. Given that we did not identify any developments in practices, processes, or control technologies and the acceptable risks remaining after implementation of the NESHAP, we are proposing that the existing standards for the CEP source category provide an ample margin of safety to protect public health, and revision of the standards is not required.

Lastly, regarding the facility-wide risks due to ethylene oxide (described above), which are due primarily to emission sources that are not part of the CEP source category, we intend to evaluate these facility-wide estimated emissions and risks further and may address them in a separate future action, as appropriate. In particular, the EPA is addressing ethylene oxide in response to the results of the latest National Air Toxics Assessment (NATA) released in August 2018, which identified the chemical as a potential concern in several areas across the country. (NATA is the Agency's nationwide air toxics screening tool, designed to help the EPA and state, local, and tribal air agencies identify areas, pollutants, or types of sources for further examination.) The latest NATA estimates that ethylene oxide significantly contributes to potential elevated cancer risks in some census tracts across the U.S. (less than 1 percent of the

total number of tracts). These elevated risks are largely driven by an EPA risk value that was updated in late 2016. The EPA will work with industry and state, local, and tribal air agencies as the EPA takes a two-pronged approach to address ethylene oxide emissions: (1) reviewing and, as appropriate, revising CAA regulations for facilities that emit ethylene oxide–starting with air toxics emissions standards for miscellaneous organic chemical manufacturing facilities and commercial sterilizers; and (2) conducting site-specific risk assessments and, as necessary, implementing emission control strategies for targeted high-risk facilities. The EPA will post updates on its work to address ethylene oxide on its website at: *https://www.epa.gov/ethylene-oxide*.

3. Adverse Environmental Effect

For the MVP source category, we did not identify emissions of any environmental HAP. Because we did not identify any environmental HAP emissions, we expect no adverse environmental effects and are proposing that more stringent standards are not necessary to prevent an adverse environmental effect.

For the CEP source category, our analyses showed no exceedances of ecological benchmarks and, therefore, we do not expect there to be an adverse environmental effect as a result of HAP emissions from this source category. We are proposing that it is not necessary to set a more stringent standard to prevent an adverse environmental effect.

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 CEP and MVP facilities. In conducting the technology review, we reviewed sources of information on practices, processes, and control technologies that were not considered

during the development of the Cellulose Products Manufacturing NESHAP, as well as looked for information on improvements in practices, processes, and control technologies that have occurred since the development of the NESHAP. The review included reviewing the industry responses to Part 2 of the sector survey, a search of the RBLC database and the EPA's ADI, reviews of air permits, and a review of relevant literature. After reviewing the information from the aforementioned sources, we did not identify any developments in practices, processes, or control technologies to reduce HAP emissions from the CEP and MVP source categories. Therefore, we are proposing that revisions to the NESHAP are not necessary based on our review under CAA section 112(d)(6).

While these searches did not result in a finding of any new technologies, the results of the ADI search suggest that the EPA could add biofilter effluent conductivity operating limits and parameter monitoring as an alternative to biofilter pH operating limits and monitoring. This is discussed in section IV.D below. Additional details of our technology review can be found in the memorandum titled *Technology Review for the Cellulose Products Manufacturing Industry – Proposed Rule*, which is available in the docket for this action.

D. What other actions are we proposing?

In addition to the proposed actions described above, we are proposing additional 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 electronic submittal of notifications, compliance reports, and performance test reports; addition of periodic emissions

testing requirements and incorporation by reference (IBR) of three test methods (listed in section IV.D.5 below); 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 appears at 40 CFR 63.5515 and Table 10 to Subpart UUUU of Part 63 (Applicability of General Provisions to Subpart UUUU). Consistent with *Sierra Club* v. *EPA,* we are proposing standards in this rule that apply at all times. We are also proposing several revisions to Table 10 (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. However, the EPA is proposing alternative operating limits for periods of startup and shutdown for thermal oxidizers and scrubbers to address issues with parameter monitoring during these periods.

As discussed in the memorandum titled *Summary of the Startup and Shutdown Data for Cellulose Products Manufacturing*, we requested data regarding periods of startup and shutdown as part of the 2018 survey. Facilities did not indicate difficulty meeting the emission standards as a result of startup or shutdown events. However, facilities did indicate difficulty meeting thermal oxidizer and scrubber operating parameters during these periods. This is not unexpected because these periods reflect non-steady state operations and production. For sources equipped with thermal oxidizers, survey responses indicated that they could not meet the setpoint temperature during periods of startup. This is likely due to a temperature drop when the HAP-laden air stream is initially added to the oxidizer. Survey responses indicated that, for sources equipped with scrubbers (wet, water, and caustic), pressure drop, liquid-to-gas ratios, and scrubber liquid flow rate parameter limits could not be met during startup and shutdown. This is not unexpected since pluggage can occur during non-stable conditions, limiting the liquid flow rate and subsequently reducing the pressure drop across the scrubber due to the lack of liquid flow. Consequently, the EPA is proposing the following alternative operating parameter options to demonstrate continuous compliance and ensure proper control device operations during periods of startup and shutdown:

- Wet or caustic scrubber: As an alternative to pressure drop, liquid flow rate, or liquid-to-gas ratio, confirm that the scrubber is operating properly prior to emission unit startup and continue operation until emission unit shutdown is complete. Appropriate startup and shutdown operating parameters may be based on equipment design, manufacturer's

recommendations, or other site-specific operating values established for normal operating periods. Do not include these parameters when determining the daily average.

- Thermal oxidizer: As an alternative to the minimum firebox temperature, confirm that the oxidizer is operating properly prior to emission unit startup (*e.g.*, firebox temperature has reached the setpoint temperature established in the most recent stack test). Do not include these parameters when determining the daily average.

The survey responses for other control devices did not indicate any issues meeting operating parameters during periods of startup and shutdown. One additional survey response requested the addition of a shutdown work practice for process lines and equipment venting. This response suggested that, in the event of a shutdown, it would be appropriate to purge the process gas and/or liquid to an emission control device, recovery device, or return to the process. Additionally, the response suggested that gas streams may be emitted if they contain less than 50 pounds of volatile organic compounds (VOC) or the lower explosive limit is less than 10 percent. The Agency is requesting comment to determine if this would be an appropriate work practice. Emissions from venting due to shutdown should be accounted for in the compliance demonstration in the semiannual compliance report.

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

(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 would go from 99-percent control to zero control until the control device was repaired. The source's emissions during the malfunction would 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 will result in a violation of the standard for this source category. For example, facilities using thermal oxidizers as pollution control equipment indicated in the 2018 survey that interlocks would shut down the process 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 percent reduction of HAP over a 6-month rolling period per group of equipment. Therefore, the malfunction of a singular piece of equipment in a single month over this period is unlikely to result in an exceedance of the standard. The EPA is soliciting information on the type of events that constitute a malfunction event, and best practices and best level of emission control during malfunction events. The EPA is also soliciting information on the cost savings associated with these practices. In addition, the EPA is soliciting specific supporting data on HAP emissions during malfunction events for the MVP and CEP source categories, including the cause of malfunctions, the frequency of malfunctions, the duration of malfunctions, and the estimate of HAP emitted during each malfunction.

In the unlikely event that a source fails to comply with the applicable CAA section 112(d) standards as a result of a malfunction event, 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'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).

If the EPA determines in a particular case that an enforcement action against a source for violation of an emission standard is warranted, the source 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 revise the General Provisions table (Table 10) entry for 40 CFR 63.6(e)(1) and (2) by redesignating it as 40 CFR 63.6(e)(1)(i) and changing the "yes" in column 4 to a "no." 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 63.5515 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 63.5515 does not include that language from 40 CFR 63.6(e)(1).

We are also proposing to revise the General Provisions table (Table 10) by adding an entry for 40 CFR 63.6(e)(1)(ii) and including a "no" in column 4. 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 63.5515.

b. SSM Plan

We are proposing to revise the General Provisions table (Table 10) entry for 40 CFR 63.6(e)(3) by changing the "yes" in column 4 to a "no." Generally, the paragraphs under 40 CFR 63.6(e)(3) 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 revise the General Provisions table (Table 10) entry for 40 CFR 63.6(f)(1) by changing the "yes" in column 4 to a "no." 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 CAA section 112 standard apply continuously. Consistent with *Sierra Club,* the EPA is proposing to revise standards in this rule to apply at all times.

We are proposing to revise the General Provisions table (Table 10) entry for 40 CFR 63.6(h) by redesignating it as 40 CFR 63.6(h)(1) and changing the "yes" in column 4 to a "no." The current language of 40 CFR 63.6(h)(1) exempts sources from 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 CAA 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 revise the General Provisions table (Table 10) entry for 40 CFR 63.7(e)(1) by changing the "yes" in column 4 to a "no." Section 63.7(e)(1) describes performance testing requirements. The EPA is instead proposing to add a performance testing requirement at 40 CFR 63.5535. 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 revise the General Provisions table (Table 10) entries for 40 CFR 63.8(c)(1)(i) and (iii) by changing the "yes" in column 4 to a "no." 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 proposing to revise the General Provisions table (Table 10) by adding an entry for 40 CFR 63.8(d)(3) and including a "no" in column 4. 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 Table 9 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 revise the General Provisions table (Table 10) entry for 40 CFR 63.10(b)(2)(i) through (iv) by redesignating it as 40 CFR 63.10(b)(2)(i) and changing the "yes" in column 4 to a "no." Section 63.10(b)(2)(i) describes the recordkeeping requirements during startup and shutdown. We are instead proposing to add recordkeeping requirements to Table 9. When a source is subject to a different standard during startup and shutdown, it will be important to know when such startup and shutdown periods begin and end in order to determine compliance with the appropriate standard. Thus, the EPA is proposing to add language to Table 9 requiring that sources subject to an emission standard during startup or shutdown that differs from the emission standard that applies at all other times must report the date, time, and duration of such periods. The EPA is also proposing that sources would be required to record information supporting the operating parameter alternatives, including (1) an indication that thermal oxidizers reach set point temperature prior to emission unit startup, and (2) an indication that scrubbers are properly operating prior to emission unit startup. The proposed records are required to demonstrate that alternative operating parameter limits have been met during periods of startup and shutdown.

We are proposing to revise the General Provisions table (Table 10) by adding an entry for 40 CFR 63.10(b)(2)(ii) and including a "no" in column 4. Section 63.10(b)(2)(ii) describes the recordkeeping requirements during a malfunction. The EPA is proposing to add such requirements to Table 9. The regulatory text we are proposing to add differs from the General Provisions it is replacing in that the General Provisions requires 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 Table 9 a requirement that sources 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 failed to meet the standard, and a description of the method used to estimate 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 revise the General Provisions table (Table 10) by adding an entry for 40 CFR 63.10(b)(2)(iv) and including a "no" in column 4. 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 Table 9.

We are proposing to revise the General Provisions table (Table 10) by adding 40 CFR 63.10(b)(2)(v) to the entry for 40 CFR 63.10(b)(2)(iv), which includes a "no" in column 4. 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 revise the General Provisions table (Table 10) by adding an entry for 40 CFR 63.10(c)(15) and including a "no" in column 4. The EPA is proposing that 40 CFR 63.10(c)(15) no longer apply. When applicable, the provision allows an owner or operator to use the affected source's startup, shutdown, and malfunction plan or records kept to satisfy the recordkeeping requirements of the startup, shutdown, and malfunction 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 revise the General Provisions table (Table 10) entry for 40 CFR 63.10(d)(5) by redesignating it as 40 CFR 63.10(d)(5)(i) and changing the "yes" in column 4 to a "no." Section 63.10(d)(5)(i) describes the periodic 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 63.5580 and Table 8. 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 estimate 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 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 revise the General Provisions table (Table 10) by adding an entry for 40 CFR 63.10(d)(5)(ii) and including a "no" in column 4. Section 63.10(d)(5)(ii) describes an immediate report for startups, shutdown, 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. 5-Year Periodic Emissions Testing

As part of an ongoing effort to improve compliance with various federal air emission regulations, the EPA reviewed the testing and monitoring requirements of 40 CFR part 63, subpart UUUU and is proposing the following change. The EPA is proposing to require facilities that use non-recovery control devices to conduct periodic air emissions performance testing, with the first of the periodic performance tests to be conducted within 3 years of the effective date of the revised standards and thereafter no longer than 5 years following the previous test. Requiring periodic performance tests would serve as a check on the accuracy of facilities' mass balance calculations and on the efficiency of the control devices used to achieve compliance with the standards. Periodic performance tests would ensure that control devices are properly maintained over time, thereby reducing the potential for acute emissions episodes. We specifically request comment on the proposed repeat testing requirements.

3. Electronic Reporting

Through this action, we are proposing that owners and operators of cellulose products manufacturing facilities submit electronic copies of required initial notifications, notifications of compliance status, performance test reports, performance evaluation reports, and semiannual reports 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-2018-0415. 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

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

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 initial notifications and notifications of compliance status, the proposed rule requires that owners and operators submit notifications as PDFs to CEDRI. For semiannual reports, the proposed rule requires that owners and operators use the appropriate spreadsheet template to submit information to CEDRI. 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 content, layout, and overall design of the template.

The initial notifications, notifications of compliance status, performance test reports, performance evaluation reports, and semiannual reports are required to be submitted according to the deadlines specified in 40 CFR 63.5580. 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

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[25] See *Subpart_UUUU_Semiannual_Report.xlsx*, available at Docket ID No. EPA-HQ-OAR-2018-0415.

which precludes an owner or operator from accessing the system and submitting required reports is addressed in 40 CFR 63.5580. 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 63.5580. 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

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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.*

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-2018-0415.

4. Biofilter Effluent Conductivity

On November 17, 2006, Viskase Companies, Inc., a company subject to 40 CFR part 63, subpart UUUU, which manufactures cellulose food casings, submitted a request to the EPA to monitor biofilter effluent conductivity as an alternative to effluent pH for the biofilter control devices at their facilities in Osceola, Arkansas, and Loudon, Tennessee. The request stated that pH is in a range such that effluent conductivity would provide a more accurate operating limit:

> For strong acids and bases, pH values are not very meaningful indicators of the concentration. The measurement uncertainty is large because pH is a logarithmic scale. Conductivity measurements are more suitable than pH measurements for producing accurate and reproducible estimates of the concentrations of free acids and bases because the relationship between conductivity and concentration is almost linear over a range of concentrations.

Based on the information provided by Viskase, the EPA conditionally approved the monitoring request to establish and monitor an effluent conductivity operating limit for the biofilter units and stated that the effluent conductivity operating limit must be based on a

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[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.*

performance test and can be supplemented by engineering assessments and/or manufacturer's recommendations.[29]

In addition to granting the alternative monitoring request per 40 CFR 63.8(f), the EPA is also proposing an amendment to 40 CFR part 63, subpart UUUU, to add biofilter effluent conductivity as an alternative parameter to pH. Specifically, the EPA is proposing to revise the operating limits table (Table 2 to Subpart UUUU of Part 63) to add biofilter effluent conductivity to the list of biofilter operating limits, revise the performance testing requirements in 40 CFR 63.5535 to add biofilter effluent conductivity to the list of parameters for which operating limits must be established during the compliance demonstration, and revise the continuous compliance with operating limits table (Table 6 to Subpart UUUU of Part 63) to add biofilter effluent conductivity to the list of parameters to monitor to demonstrate continuous compliance.

5. 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 documents described in the amendments to 40 CFR 63.14:

- ASTM D6420–99 (Reapproved 2010), Standard Test Method for Determination of Gaseous Organic Compounds by Direct Interface Gas Chromatography-Mass Spectrometry, IBR approved for Table 4 to Subpart UUUU of Part 63.
- ASTM D5790–95 (Reapproved 2012), Standard Test Method for Measurement of Purgeable Organic Compounds in Water by Capillary Column Gas

[29] See *Technology Review for the Cellulose Products Manufacturing Source Category – Proposed Rule*, Appendix E, available in the docket.

Chromatography/Mass Spectrometry, IBR approved for Table 4 to Subpart UUUU of Part 63.

- ASTM D6348–12e1, Determination of Gaseous Compounds by Extractive Direct Interface Fourier Transform Infrared (FTIR) Spectroscopy, IBR approved for Table 4 to Subpart UUUU of Part 63.

The EPA has made, and will continue to make, these documents generally available electronically through *https://www.regulations.gov/* and/or in hard copy at the appropriate EPA office (see the **ADDRESSES** section of this preamble for more information).

6. Technical and Editorial Changes

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

- Revise the requirements in 40 CFR 63.5505 to clarify that CS2 storage tanks part of a submerged unloading and storage operation subject to 40 CFR part 63, subpart UUUU, is not subject to 40 CFR part 60, subpart Kb. These types of tanks are not the type of storage vessels in terms of their physical siting and operational design that were intended to be regulated under NSPS Kb, even when these tanks meet the vapor pressure and designed capacity under the rule. These tanks are completely submerged in a common water bath and have no air space within the tanks due to the continuous water layer above the CS2 layer, therefore, the tanks do not have direct CS2 gaseous emissions.

- Revise the performance test requirements in 40 CFR 63.5535 to specify the conditions for conducting performance tests;

- Revise the performance test requirements table (Table 4 to Subpart UUUU of Part 63) to correct an error in the reference to a test method appendix;

- Revise the performance test requirements table (Table 4 to Subpart UUUU of Part 63) to add IBR for ASTM D6420–99 (Reapproved 2010), ASTM D5790–95 (Reapproved 2012), and ASTM D6348–12e1;

- Revise the reporting requirements in 40 CFR 63.5580 and the reporting and recordkeeping requirements tables (Tables 8 and 9 to Subpart UUUU of Part 63) to include the requirements to record and report information on failures to meet the applicable standard and the corrective actions taken; and

- Revise the General Provisions applicability table (Table 10 to Subpart UUUU of Part 63) to align with those sections of the General Provisions that have been amended or reserved over time.

E. What compliance dates are we proposing?

For the proposed rule revisions related to the removal of the exemption from the requirements to meet the standard during SSM periods and the additional electronic reporting requirements, 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 sources 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 unless indicated specifically otherwise, immediately upon startup. All affected existing facilities would have to continue to meet the current requirements of 40 CFR part 63, subpart UUUU, 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 UUUU. As discussed elsewhere in this preamble, we are proposing to add a requirement that initial notifications, notifications of compliance status, performance test results, and the semiannual reports using the new template 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 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 timeframe 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.

Additionally, we are also proposing new requirements to conduct periodic performance testing every 5 years. Establishing a compliance date earlier than 3 years for the first periodic performance test can cause scheduling issues as affected sources compete for a limited number of testing contractors. Considering these scheduling issues, we are proposing that each existing affected source, and each new and reconstructed affected source that commences construction or reconstruction after August 28, 2000, and on or before **[INSERT DATE OF PUBLICATION OF IN THE FEDERAL REGISTER]** and uses a non-recovery control device to comply with the standards, must conduct the first periodic performance test on or before **[DATE 3 YEARS AFTER DATE OF PUBLICATION OF FINAL RULE IN THE FEDERAL REGISTER]** and conduct subsequent periodic performance tests no later than 60 months thereafter following the previous performance test. For each new and reconstructed affected source that commences construction or reconstruction after **[DATE OF PUBLICATION IN THE FEDERAL REGISTER]** and uses a non-recovery control device to comply with the standards, we are

proposing that owners and operators must conduct the first periodic performance test no later than 60 months following the initial performance test required by 40 CFR 63.5535 and conduct subsequent periodic performance tests no later than 60 months thereafter following the previous performance test.

V. Summary of Cost, Environmental, and Economic Impacts

A. What are the affected sources?

There are currently eight facilities operating in the United States that conduct MVP and CEP operations that are subject to the Cellulose Products Manufacturing NESHAP. The 40 CFR part 63, subpart UUUU affected source for the MVP source category is each cellulose food casing, rayon, cellulosic sponge, or cellophane operation, as defined in 40 CFR 63.5610. The affected source for the CEP source category is each cellulose ether operation, as defined in 40 CFR 63.5610.

B. What are the air quality impacts?

The EPA estimates that annual HAP emissions from the MVP and CEP facilities that are subject to the NESHAP are approximately 4,300 tpy. Because we are not proposing revisions to the emission limits, we do not anticipate any quantifiable air quality impacts as a result of the proposed amendments. However, we anticipate that the proposed requirements, including the removal of the SSM exemption and addition of periodic emissions testing, may reduce emissions by ensuring proper operation of control devices.

C. What are the cost impacts?

The eight facilities that would be subject to the proposed amendments would incur minimal net costs to meet revised recordkeeping and reporting requirements and would incur periodic emissions testing costs for add-on control devices. The nationwide costs associated with

the proposed periodic testing requirements are estimated to be $490,000 (2018$) over the 5 years following promulgation of the amendments. For further information on the requirement being proposed, see section IV.D.2 of this preamble. For further information on the costs associated with the proposed requirements, see the memorandum, *Costs and Environmental Impacts of Regulatory Options for the Cellulose Products Manufacturing Industry –Proposed Rule*, and the document, *Supporting Statement for the NESHAP for Cellulose Products Manufacturing (40 CFR Part 63, Subpart UUUU),* which are both available in the docket for this action. We solicit comment on these estimated cost impacts.

D. What are the economic impacts?

Economic impact analyses focus on changes in market prices and output levels. If changes in market prices and output levels in the primary markets are significant enough, impacts on other markets may also be examined. Both the magnitude of costs associated with the proposed requirements and the distribution of these costs among affected facilities can have a role in determining how the market will change in response to a proposed rule. Based on the costs associated with the periodic testing requirements, no significant economic impacts from the proposed amendments are anticipated.

E. What are the benefits?

Although the EPA does not anticipate reductions in HAP emissions as a result of the proposed amendments, we believe that the action, if finalized as proposed, would result in improvements to the rule. Specifically, the proposed amendments revise the standards such that they apply at all times. Additionally, the proposed amendments requiring electronic submittal of initial notifications, performance test results, and semiannual reports will increase the usefulness of the data, is in keeping with current trends of data availability, will further assist in the

protection of public health and the environment, and will ultimately result in less burden on the regulated community. See section IV.D.3 of this preamble for more information.

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 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/cellulose-products-manufacturing-national-emission-standards*. 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-2018-0415 (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/cellulose-products-manufacturing-national-emission-standards*.

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 1974.09. You can find a copy of the ICR in the docket for this rule, and it is briefly summarized here.

The information requirements are based on notification, recordkeeping, and reporting requirements in the NESHAP General Provisions (40 CFR part 63, subpart A), which are essential in determining compliance and mandatory for all operators subject to national emissions standards. These recordkeeping and reporting requirements are specifically authorized by CAA section 114 (42 U.S.C. 7414). All information submitted to the EPA pursuant to the recordkeeping and reporting requirements for which a claim of confidentiality is made is safeguarded according to Agency policies set forth in 40 CFR part 2, subpart B.

We are proposing changes to the paperwork requirements for 40 CFR part 63, subpart UUUU, in the form of eliminating the SSM reporting and SSM plan requirements, adding periodic emissions testing, providing biofilter effluent conductivity as an alternative to monitoring pH, and requiring electronic submittal of notifications, semiannual reports, and performance test reports.

Respondents/affected entities: Respondents include facilities subject to the NESHAP for Cellulose Products Manufacturing (40 CFR part 63, subpart UUUU).

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

Estimated number of respondents: Eight.

Frequency of response: The frequency of responses varies depending on the burden item. Responses include initial notifications, reports of periodic performance tests, and semiannual compliance reports.

Total estimated burden: The annual recordkeeping and reporting burden for this information collection, averaged over the first 3 years of this ICR, is estimated to total 7,256 labor hours (per year). Burden is defined at 5 CFR 1320.3(b).

Total estimated cost: $954,000 per year, including $834,000 per year in labor costs and $120,000 per year in 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_submission@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. No small entities are subject to the requirements of this rule. As such, this action will not impose any requirements on small entities.

E. Unfunded Mandates Reform Act (UMRA)

This action does not contain an 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 reports titled *Residual Risk Assessment for the Miscellaneous Viscose Processes Source Category in Support of the 2019 Risk and Technology Review Proposed Rule* and *Residual Risk Assessment for the Cellulose Ethers Production Source Category in Support of the 2019 Risk and Technology Review Proposed Rule*, which can be found in the docket for this action.

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 ASTM D6420–99 (Reapproved 2010), "Standard Test Method for Determination of Gaseous Organic Compounds by Direct Interface Gas Chromatography-Mass Spectrometry," for the measurement of toluene and total organic HAP. This ASTM has been approved by the EPA as an alternative to EPA Method 18 only when the target compounds are all known and the target compounds are all listed in ASTM D6420 as measurable. This ASTM should not be used for methane and ethane because their atomic mass is less than 35. ASTM D6420 should never be specified as a total VOC method.

The EPA also proposes to use ASTM D5790–95 (Reapproved 2012), "Standard Test Method for Measurement of Purgeable Organic Compounds in Water by Capillary Column Gas Chromatography/Mass Spectrometry." ASTM D5790-95 is acceptable as an alternative to EPA Method 624 and for the analysis of total organic HAP in wastewater samples. For wastewater analyses, this ASTM method should be used with the sampling procedures of EPA Method 25D

or an equivalent method in order to be a complete alternative. The ASTM standard is validated for all of the 21 volatile organic HAP (including toluene) targeted by EPA Method 624, but it is also validated for an additional 14 HAP not targeted by the EPA method.

The EPA proposes to use ASTM D6348–12e1, "Determination of Gaseous Compounds by Extractive Direct Interface Fourier Transform Infrared (FTIR) Spectroscopy" as an acceptable alternative to using EPA Method 320 with caveats requiring inclusion of selected annexes to the standard as mandatory. When using ASTM D6348-12e, the following conditions must be met: (1) the test plan preparation and implementation in the Annexes to ASTM D 6348–03, Sections A1 through A8 are mandatory; and (2) in ASTM D6348–03, Annex A5 (Analyte Spiking Technique), the percent recovery (%R) must be determined for each target analyte (Equation A5.5). In order for the test data to be acceptable for a compound, %R must be greater than or equal to 70 percent and less than or equal to 130 percent. If the %R value does not meet this criterion for a target compound, the test data are not acceptable for that compound and the test must be repeated for that analyte (*i.e.*, the sampling and/or analytical procedure should be adjusted before a retest). The %R value for each compound must be reported in the test report, and all field measurements must be corrected with the calculated %R value for that compound by using the following equation: Reported Results = ((Measured Concentration in the Stack))/(%R) x 100.

The ASTM 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 14 voluntary consensus standards (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 for Cellulose Products Manufacturing*, in the docket for this proposed rule for the reasons for these determinations.

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.3 of this preamble and the technical reports titled *Risk and Technology Review—Analysis of Demographic Factors for Populations Living Near Miscellaneous Viscose Processes Facilities* and *Risk and Technology Review—Analysis of Demographic Factors for Populations Living Near Cellulose Ethers Production Facilities*, which are located in the public docket for this action.

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.

AUG 16 2019

Dated:

Andrew R. Wheeler,
Administrator.

For the reasons set forth in the preamble, the EPA proposes to amend 40 CFR part 63 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 revising paragraphs (h)(72), (85), (89), and (91) to read as follows:

§63.14 Incorporations by reference.

* * * * *

(h) * * *

(72) ASTM D5790-95 (Reapproved 2012), Standard Test Method for Measurement of Purgeable Organic Compounds in Water by Capillary Column Gas Chromatography/Mass Spectrometry, IBR approved for Table 4 to subpart UUUU.

* * * * *

(85) ASTM D6348–12e1, Determination of Gaseous Compounds by Extractive Direct Interface Fourier Transform Infrared (FTIR) Spectroscopy, Approved February 1, 2012, IBR approved for §63.1571(a) and Table 4 to subpart UUUU.

* * * * *

(89) ASTM D6420-99, Standard Test Method for Determination of Gaseous Organic Compounds by Direct Interface Gas Chromatography-Mass Spectrometry, IBR approved for §§63.5799 and 63.5850.

* * * * *

(91) ASTM D6420-99 (Reapproved 2010), Standard Test Method for Determination of Gaseous Organic Compounds by Direct Interface Gas Chromatography-Mass Spectrometry, Approved October 1, 2010, IBR approved for §63.670(j), Table 4 to subpart UUUU, and appendix A to this part: Method 325B.

* * * * *

Subpart UUUU—[Amended]

3. Section 63.5505 is amended by adding paragraph (f) to read as follows:

§63.5505 What emission limits, operating limits, and work practice standards must I meet?

* * * * *

(f) Carbon disulfide storage tanks part of a submerged unloading and storage operation subject to this part are not subject to 40 CFR part 60, subpart Kb (Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced After July 23, 1984).

4. Section 63.5515 is amended by revising paragraphs (a) through (c) to read as follows:

§63.5515 What are my general requirements for complying with this subpart?

(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 June 11, 2002, 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 limitations 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.

(b) 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 June 11, 2002, but on or before **[INSERT DATE OF PUBLICATION IN THE FEDERAL REGISTER]**, you must always operate and maintain your affected source, including air pollution control and monitoring equipment, according to the provisions in §63.6(e)(1)(i). After **[DATE 180 DAYS AFTER PUBLICATION OF FINAL RULE IN THE FEDERAL REGISTER]** for each such source, and after **[INSERT DATE OF PUBLICATION IN THE FEDERAL REGISTER]** for new and reconstructed sources for which construction or reconstruction commenced after **[INSERT DATE OF PUBLICATION IN THE FEDERAL REGISTER]**, you must always operate and maintain your affected source, including air pollution control and monitoring equipment in a manner consistent with good air pollution control practices for minimizing emissions at least to the levels required by this subpart. The general duty to minimize emissions does not require you to make any further efforts to reduce emissions if levels required by the applicable standard have been achieved. Determination of whether a source is operating in compliance with operation and maintenance requirements will be based on information available to the Administrator which may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source.

* * * * *

(c) 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 June 11, 2002, but on or before [**INSERT DATE OF PUBLICATION IN THE FEDERAL REGISTER**], you must maintain a written startup, shutdown, and malfunction (SSM) plan according the provisions in §63.6(e)(3). For each such source, a startup, shutdown, and malfunction plan is not required after [**DATE 180 DAYS AFTER PUBLICATION OF FINAL RULE IN THE FEDERAL REGISTER**]. No startup, shutdown, and malfunction plan is required for any new or reconstruction source for which construction or reconstruction commenced after [**INSERT DATE OF PUBLICATION IN THE FEDERAL REGISTER**].

* * * * *

5. Section 63.5535 is amended by revising paragraph (b), removing and reserving paragraph (c), revising paragraph (g)(1), revising paragraph (h)(1), and revising paragraph (i)(7) to read as follows:

§63.5535 What performance tests and other procedures must I use?

* * * * *

(b) You must conduct each performance test for continuous process vents and combinations of batch and continuous process vents based on representative performance (*i.e.*, performance based on normal operating conditions) of the affected source for the period being tested, according to the specific conditions in Table 4 to this Subpart UUUU. 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.

* * * * *

(g) * * *

(1) Viscose process affected sources that must use non-recovery control devices to meet the applicable emission limit in table 1 to this subpart must conduct an initial performance test of their non-recovery control devices according to the requirements in table 4 to this subpart to determine the control efficiency of their non-recovery control devices and incorporate this information in their material balance. Periodic performance tests must be conducted as specified in §63.5541.

* * * * *

(h) * * *

(1) Cellulose ether affected sources that must use non-recovery control devices to meet the applicable emission limit in table 1 to this subpart must conduct an initial performance test of their non-recovery control devices according to the requirements in table 4 to this subpart to determine the control efficiency of their non-recovery control devices and incorporate this information in their material balance. Periodic performance tests must be conducted as specified in §63.5541.

* * * * *

(i) * * *

(7) For biofilters, record the pressure drop across the biofilter beds, inlet gas temperature, and effluent pH or conductivity averaged over the same time period as the compliance demonstration while the vent stream is routed and constituted normally. Locate the pressure, temperature, and pH or conductivity sensors in positions that provide representative measurement of these parameters. Ensure the sample is properly mixed and representative of the fluid to be measured.

* * * * *

6. Section 63.5541 is added to read as follows:

§63.5541 When must I conduct subsequent performance tests?

(a) For each affected source utilizing a non-recovery control device to comply with §63.5515 constructed or reconstructed before **[INSERT DATE OF PUBLICATION IN THE FEDERAL REGISTER]**, 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.

(b) For each affected source utilizing a non-recovery control device to comply with §63.5515 that commences construction or reconstruction after **[INSERT DATE OF PUBLICATION IN THE FEDERAL REGISTER]**, a periodic performance test must be performed no later than 60 months after the initial performance test required by §63.5535, and subsequent tests no later than 60 months thereafter.

7. Section 63.5545 is amended by revising paragraph (b)(1) and revising paragraph (e)(2) to read as follows:

§63.5545 What are my monitoring installation, operation, and maintenance requirements?

* * * * *

(b) * * *

(1) Ongoing operation and maintenance procedures in accordance with the general requirements of §§63.8(c)(3) and (4)(ii), and 63.5515(b), and 63.5580(c)(6);

* * * * *

(e) * * *

(2) You must conduct a performance evaluation of each CEMS according to the requirements in §63.8, Procedure 1 of 40 CFR part 60, appendix F, and according to the applicable performance specification listed in paragraphs (e)(1)(i) through (iv) of this section.

* * * * *

8. Section 63.5555 is amended by revising paragraph (d) to read as follows:

§63.5555 How do I demonstrate continuous compliance with the emission limits, operating limits, and work practice standards?

* * * * *

(d) Deviations that occur during a period of startup, shutdown, or malfunction are not violations if you demonstrate to the Administrator's satisfaction that you were operating in accordance with §63.5515(b). The Administrator will determine whether deviations that occur during a period you identify as a startup, shutdown, or malfunction are violations, according to the provisions in §63.5515(b).

9. Section 63.5575 is amended by:

§63.5575 What notifications must I submit and when?

You must submit each notification in Table 7 to this subpart that applies to you by the date specified in Table 7 to this subpart. Initial notifications and Notification of Compliance

Status Reports shall be electronically submitted in portable document format (PDF) following the procedure specified in §63.5580(g).

10. Section 63.5580 is amended by:

a. Revising paragraph (b) introductory text;

b. Adding paragraph (b)(6);

c. Revising paragraph (c)(4);

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

e. Adding paragraph (e)(14); and

f. Adding paragraphs (g) through (k).

The revisions and additions read as follows:

§63.5580 What reports must I submit and when?

* * * * *

(b) Unless the Administrator has approved a different schedule for submitting reports under §63.10, you must submit each compliance report by the date in Table 8 to this subpart and according to the requirements in paragraphs (b)(1) through (6) of this section.

* * * * *

(6) Beginning on **[DATE 180 DAYS AFTER DATE OF PUBLICATION OF FINAL RULE IN THE FEDERAL REGISTER]**, submit all subsequent reports following the procedure specified in paragraph (g) of this section.

* * * * *

(c) * * *

(4) 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 June 11, 2002, but on or before **[INSERT DATE OF PUBLICATION IN THE FEDERAL REGISTER]**, if you had a startup, shutdown, or malfunction during the reporting period and you took actions consistent with your startup, shutdown, and malfunction plan, the compliance report must include the information in §63.10(d)(5)(i). No startup, shutdown, and malfunction plan is required for any new or reconstruction source for which construction or reconstruction commenced after **[INSERT DATE OF PUBLICATION IN THE FEDERAL REGISTER]**. After **[DATE 180 DAYS AFTER PUBLICATION OF FINAL RULE IN THE FEDERAL REGISTER]**, this section is no longer relevant.

* * * * *

(e) For each deviation from an emission limit or operating limit occurring at an affected source where you are using a CMS to demonstrate continuous compliance with the emission limit or operating limit in this subpart (see Tables 5 and 6 to this subpart), you must include the information in paragraphs (c)(1) through (4) and (e)(1) through (14) of this section. This includes periods of startup, shutdown, and malfunction.

* * * * *

(2) The date, time, and duration that each CMS was inoperative, except for zero (low-level) and high-level checks.

* * * * *

(14) 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.

* * * * *

(g) *Submitting notifications or reports electronically.* If you are required to submit notifications or reports following the procedure specified in this paragraph, you must submit notifications or reports to the EPA via the Compliance and Emissions Data Reporting Interface (CEDRI), which can be accessed through the EPA's Central Data Exchange (CDX) (*https://cdx.epa.gov/*). Notifications must be submitted as PDFs to CEDRI. You must use the semi-annual 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 semi-annual compliance 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 the 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.

(h) *Performance tests.* 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 (h)(1) through (3) of this section.

(1) *Data collected using test methods supported by the EPA's Electronic Reporting Tool (ERT) as listed on the EPA's ERT website (https://www.epa.gov/electronic-reporting-air-*

emissions/electronic-reporting-tool-ert) at the time of the test. Submit the results of the performance test to the EPA via CEDRI, which can be accessed through the EPA's CDX (*https://cdx.epa.gov/*). The data must be submitted in a file format generated through the use of the EPA's ERT. Alternatively, you may submit an electronic file consistent with the extensible markup language (XML) schema listed on the EPA's ERT website.

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

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

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

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

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

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

(j) *Claims of EPA system outage.* If you are required to electronically submit a report or notification through CEDRI in the EPA's CDX, you may assert a claim of EPA system outage

for failure to timely comply with the reporting requirement. To assert a claim of EPA system outage, you must meet the requirements outlined in paragraphs (j)(1) through (7) of this section.

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

(2) The outage must have occurred within the period of time beginning 5 business days prior to the date that the submission is due.

(3) The outage may be planned or unplanned.

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

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

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

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

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

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

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

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

(k) *Claims of force majeure*. If you are required to electronically submit a report through CEDRI in the EPA's CDX, you may assert a claim of force majeure for failure to timely comply with the reporting requirement. To assert a claim of force majuere, you must meet the requirements outlined in paragraphs (k)(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.

11. Section 63.5590 is amended by adding paragraph (e) to read as follows:

§63.5590 In what form and how long must I keep my records?

* * * * *

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

12. Table 2 to Subpart UUUU is revised to read as follows:

Table 2 to Subpart UUUU of Part 63 - Operating Limits

As required in §63.5505(b), you must meet the appropriate operating limits in the following table:

For the following control technique . . .	you must . . .
1. condenser	maintain the daily average condenser outlet gas or condensed liquid temperature no higher than the value established during the compliance demonstration.
2. thermal oxidizer	a. for periods of normal operation, maintain the daily average thermal oxidizer firebox temperature no lower than the value established during the compliance demonstration b. after **[DATE 180 DAYS AFTER DATE OF PUBLICATION OF FINAL RULE IN THE FEDERAL REGISTER]** for existing sources and new or reconstructed sources for which construction or reconstruction commenced after June 11, 2002, but on or before **[INSERT DATE OF PUBLICATION IN THE FEDERAL REGISTER]**, and immediately upon startup

For the following control technique . . .	you must . . .
	for new or reconstructed sources for which construction or reconstruction commenced after **[INSERT DATE OF PUBLICATION IN THE FEDERAL REGISTER]**, maintain documentation for periods of startup demonstrating that the oxidizer was properly operating (*e.g.*, firebox temperature had reached the setpoint temperature) prior to emission unit startup.
3. water scrubber	a. for periods of normal operation, maintain the daily average scrubber pressure drop and scrubber liquid flow rate within the range of values established during the compliance demonstration; b. after **[DATE 180 DAYS AFTER DATE OF PUBLICATION OF FINAL RULE IN THE FEDERAL REGISTER]** for existing sources and new or reconstructed sources for which construction or reconstruction commenced after June 11, 2002, but on or before **[INSERT DATE OF PUBLICATION IN THE FEDERAL REGISTER]**, and immediately upon startup for new or reconstructed sources for which construction or reconstruction commenced after **[INSERT DATE OF PUBLICATION IN THE FEDERAL REGISTER]**, maintain documentation for periods of startup and shutdown to confirm that the scrubber is operating properly prior to emission unit startup and continues to operate properly until emission unit shutdown is complete. Appropriate startup and shutdown operating parameters may be based on equipment design, manufacturer's recommendations, or other site-specific operating values established for normal operating periods.
4. caustic scrubber	a. for periods of normal operation, maintain the daily average scrubber pressure drop, scrubber liquid flow rate, and scrubber liquid pH, conductivity, or alkalinity within the range of values established during the compliance demonstration; b. after **[DATE 180 DAYS AFTER DATE OF PUBLICATION OF FINAL RULE IN THE FEDERAL REGISTER]** for existing sources and new or reconstructed sources for which construction or reconstruction commenced after June 11, 2002, but on or before **[INSERT DATE OF PUBLICATION IN THE FEDERAL REGISTER]**, and immediately upon startup for new or reconstructed sources for which construction or

For the following control technique . . .	you must . . .
	reconstruction commenced after **[INSERT DATE OF PUBLICATION IN THE FEDERAL REGISTER]**, maintain documentation for periods of startup and shutdown to confirm that the scrubber is operating properly prior to emission unit startup and continues to operate properly until emission unit shutdown is complete. Appropriate startup and shutdown operating parameters may be based on equipment design, manufacturer's recommendations, or other site-specific operating values established for normal operating periods.
5. flare	maintain the presence of a pilot flame.
6. biofilter	maintain the daily average biofilter inlet gas temperature, biofilter effluent pH or conductivity, and pressure drop within the operating values established during the compliance demonstration.
7. carbon absorber	maintain the regeneration frequency, total regeneration adsorber stream mass or volumetric flow during carbon bed regeneration, and temperature of the carbon bed after regeneration (and within 15 minutes of completing any cooling cycle(s)) for each regeneration cycle within the values established during the compliance demonstration.
8. oil absorber	maintain the daily average absorption liquid flow, absorption liquid temperature, and steam flow within the values established during the compliance demonstration.
9. any of the control techniques specified in this table	if using a CEMS, maintain the daily average control efficiency of each control device no lower than the value established during the compliance demonstration.
10. any of the control techniques specified in this table	a. if you wish to establish alternative operating parameters, submit the application for approval of the alternative operating parameters no later than the notification of the performance test or CEMS performance evaluation or no later than 60 days prior to any other initial compliance demonstration; b. the application must include: information justifying the request for alternative operating parameters (such as the infeasibility or impracticality of using the operating parameters in this final rule); a description of the proposed alternative control device operating parameters; the monitoring approach; the frequency of measuring and recording the alternative parameters; how the operating limits are to be calculated; and information documenting that the alternative operating parameters would provide equivalent or better assurance of compliance with the standard;

For the following control technique . . .	you must . . .
	c. install, operate, and maintain the alternative parameter monitoring systems in accordance with the application approved by the Administrator; d. establish operating limits during the initial compliance demonstration based on the alternative operating parameters included in the approved application; and e. maintain the daily average alternative operating parameter values within the values established during the compliance demonstration.
11. alternative control technique	a. submit for approval no later than the notification of the performance test or CEMS performance evaluation or no later than 60 days prior to any other initial compliance demonstration a proposed site-specific plan that includes: a description of the alternative control device; test results verifying the performance of the control device; the appropriate operating parameters that will be monitored; and the frequency of measuring and recording to establish continuous compliance with the operating limits; b. install, operate, and maintain the parameter monitoring system for the alternative control device in accordance with the plan approved by the Administrator; c. establish operating limits during the initial compliance demonstration based on the operating parameters for the alternative control device included in the approved plan; and d. maintain the daily average operating parameter values for the alternative control technique within the values established during the compliance demonstration.

13. Table 3 to Subpart UUUU is revised to read as follows:

Table 3 to Subpart UUUU of Part 63 - Initial Compliance With Emission Limits and Work Practice Standards

As required in §§63.5530(a) and 63.5535(g) and (h), you must demonstrate initial compliance with the appropriate emission limits and work practice standards according to the requirements in the following table:

For . . .	at . . .	for the following emission limit or work practice standard . . .	you have demonstrated initial compliance if . . .
1. the sum of all viscose process vents	a. each existing cellulose food casing operation	i. reduce total uncontrolled sulfide emissions (reported as carbon disulfide) by at least 25% based on a 6-month rolling average; ii. for each vent stream that you control using a control device, route the vent stream through a closed-vent system to the control device; and iii. comply with the work practice standard for closed-vent systems	i. reduce total uncontrolled sulfide emissions (reported as carbon disulfide) by at least 25% based on a 6-month rolling average; ii. for each vent stream that you control using a control device, route the vent stream through a closed-vent system to the control device; and iii. comply with the work practice standard for closed-vent systems
	b. each new cellulose food casing operation	i. reduce total uncontrolled sulfide emissions (reported as carbon disulfide) by at least 75% based on a 6-month rolling average; ii. for each vent stream that you control using a control device, route the vent stream through a closed-vent system to the control device; and iii. comply with the work practice standard for closed-vent systems	(1) the average uncontrolled total sulfide emissions, determined during the month-long compliance demonstration or using engineering assessments, are reduced by at least 75%; (2) you have a record of the range of operating parameter values over the month-long compliance demonstration during which the average uncontrolled total sulfide emissions were reduced by at least 75%; (3) you prepare a material balance that includes the pertinent data used to determine the percent reduction of total sulfide emissions; and (4) you comply with the initial compliance requirements for closed-vent systems.
	c. each existing rayon operation	i. reduce total uncontrolled sulfide emissions (reported as	(1) the average uncontrolled total sulfide emissions, determined during the

For . . .	at . . .	for the following emission limit or work practice standard . . .	you have demonstrated initial compliance if . . .
		carbon disulfide) by at least 35% within 3 years after the effective date based on a 6-month rolling average; for each vent stream that you control using a control device, route the vent stream through a closed-vent system to the control device; and comply with the work practice standard for closed-vent systems; and	month-long compliance demonstration or using engineering assessments, are reduced by at least 35% within 3 years after the effective date; (2) you have a record of the average operating parameter values over the month-long compliance demonstration during which the average uncontrolled total sulfide emissions were reduced by at least 35%; (3) you prepare a material balance that includes the pertinent data used to determine the percent reduction of total sulfide emissions; and (4) you comply with the initial compliance requirements for closed-vent systems; and
		ii. reduce total uncontrolled sulfide emissions (reported as carbon disulfide) by at least 40% within 8 years after the effective date based on a 6-month rolling average; for each vent stream that you control using a control device, route the vent stream through a closed-vent system to the control device; and comply with the work practice standard for closed-vent systems	(1) the average uncontrolled total sulfide emissions, determined during the month-long compliance demonstration or using engineering assessments, are reduced by at least 40% within 8 years after the effective date; (2) you have a record of the average operating parameter values over the month-long compliance demonstration during which the average uncontrolled total sulfide emissions were reduced by at least 40%; (3) you prepare a material balance that includes the

For . . .	at . . .	for the following emission limit or work practice standard . . .	you have demonstrated initial compliance if . . .
			pertinent data used to determine the percent reduction of the total sulfide emissions; and (4) you comply with the initial compliance requirements for closed-vent systems.
	d. each new rayon operation	i. reduce total uncontrolled sulfide emissions (reported as carbon disulfide) by at least 75%; based on a 6-month rolling average; ii. for each vent stream that you control using a control device, route the vent stream through a closed-vent system to the control device; and iii. comply with the work practice standard for closed-vent systems	(1) the average uncontrolled total sulfide emissions, determined during the month-long compliance demonstration or using engineering assessments, are reduced by at least 75%; (2) you have a record of the average operating parameter values over the month-long compliance demonstration during which the average uncontrolled total sulfide emissions were reduced by at least 75%; (3) you prepare a material balance that includes the pertinent data used to determine the percent reduction of total sulfide missions; and (4) you comply with the initial compliance requirements for closed-vent systems.
	e. each existing or new cellulosic sponge operation	i. reduce total uncontrolled sulfide emissions (reported as carbon disulfide) by at least 75% based on a 6-month rolling average; ii. for each vent stream that you control using a control device, route the vent stream through	(1) the average uncontrolled total sulfide emissions, determined during the month-long compliance demonstration or using engineering assessments, are reduced by at least 75%; (2) you have a record of the average operating parameter values over the

For . . .	at . . .	for the following emission limit or work practice standard . . .	you have demonstrated initial compliance if . . .
		a closed-vent system to the control device; and iii. comply with the work practice standard for closed-vent systems	month-long compliance demonstration during which the average uncontrolled total sulfide emissions were reduced by at least 75%; (3) you prepare a material balance that includes the pertinent data used to determine and the percent reduction of total sulfide emissions; and (4) you comply with the initial compliance requirements for closed-vent systems.
	f. each existing or new cellophane operation	i. reduce total uncontrolled sulfide emissions (reported as carbon disulfide) by at least 75% based on a 6-month rolling average; ii. for each vent stream that you control using a control device (except for retractable hoods over sulfuric acid baths at a cellophane operation), route the vent stream through a closed-vent system to the control device; and iii. comply with the work practice standard for closed-vent systems	(1) the average uncontrolled total sulfide emissions, determined during the month-long compliance demonstration or using engineering assessments, are reduced by at least 75%; (2) you have a record of the average operating parameter values over the month-long compliance demonstration during which the average uncontrolled total sulfide emissions were reduced by at least 75%; (3) you prepare a material balance that includes the pertinent data used to determine the percent reduction of total sulfide emissions; and (4) you comply with the initial compliance requirements for closed-vent systems.
2. the sum of all solvent coating process vents	a. each existing or new	i. reduce uncontrolled toluene emissions by at least 95% based on a 6-	(1) the average uncontrolled toluene emissions, determined during the

For . . .	at . . .	for the following emission limit or work practice standard . . .	you have demonstrated initial compliance if . . .
	cellophane operation	month rolling average; ii. for each vent stream that you control using a control device, route the vent stream through a closed-vent system to the control device; and iii. comply with the work practice standard for closed-vent systems	month-long compliance demonstration or using engineering assessments, are reduced by at least 95%; 2. you have a record of the average operating parameter values over the month-long compliance demonstration during which the average uncontrolled toluene emissions were reduced by at least 95%; 3. you prepare a material balance that includes the pertinent data used to determine the percent reduction of toluene emissions; and 4. you comply with the initial compliance requirements for closed-vent systems.
3. the sum of all cellulose ether process vents	a. each existing or new cellulose ether operation using a performance test to demonstrate initial compliance; or	i. reduce total uncontrolled organic HAP emissions by at least 99%; ii. for each vent stream that you control using a control device, route the vent stream through a closed-vent system to the control device; and iii. comply with the work practice standard for closed-vent systems; or	(1) average uncontrolled total organic HAP emissions, measured during the performance test or determined using engineering estimates are reduced by at least 99%; (2) you have a record of the average operating parameter values over the performance test during which the average uncontrolled total organic HAP emissions were reduced by at least 99%; and (3) you comply with the initial compliance requirements for closed-vent systems; or

For . . .	at . . .	for the following emission limit or work practice standard . . .	you have demonstrated initial compliance if . . .
	b. each existing or new cellulose ether operation using a material balance compliance demonstration to demonstrate initial compliance	b. each existing or new cellulose ether operation using a material balance compliance demonstration to demonstrate initial compliance	(1) average uncontrolled total organic HAP emissions, determined during the month-long compliance demonstration or using engineering estimates are reduced by at least 99%; (2) you have a record of the average operation parameter values over the month-long compliance demonstration during which the average uncontrolled total organic HAP emissions were reduced by at least 99%; (3) you prepare a material balance that includes the pertinent data used to determine the percent reduction of total organic HAP emissions; (4) if you use extended cookout to comply, you measure the HAP charged to the reactor, record the grade of product produced, and then calculate reactor emissions prior to extended cookout by taking a percentage of the total HAP charged.
4. closed-loop systems	each existing or new cellulose ether operation	operate and maintain the closed-loop system for cellulose ether operations	you have a record certifying that a closed-loop system is in use for cellulose ether operations.
5. each carbon disulfide unloading and storage operation	a. each existing or new viscose process affected source	i. reduce uncontrolled carbon disulfide emissions by at least 83% from unloading and storage operations based on a 6-month	(1) you have a record documenting the 83% reduction in uncontrolled carbon disulfide emissions; and (2) if venting to a control

For . . .	at . . .	for the following emission limit or work practice standard . . .	you have demonstrated initial compliance if . . .
		rolling average if you use an alternative control technique not listed in this table for carbon disulfide unloading and storage operations; if using a control device to reduce emissions, route emissions through a closed-vent system to the control device; and comply with the work practice standard for closed-vent systems;	device to reduce emissions, you comply with the initial compliance requirements for closed-vent systems;
		ii. reduce uncontrolled carbon disulfide by at least 0.14% from viscose process vents based on a 6-month rolling average; for each vent stream that you control using a control device, route the vent stream through a closed-vent system to the control device; and comply with the work practice standard for closed-vent systems;	(1) you comply with the initial compliance requirements for viscose process vents at existing or new cellulose food casing, rayon, cellulosic sponge, or cellophane operations, as applicable; (2) the 0.14% reduction must be in addition to the reduction already required for viscose process vents at existing or new cellulose food casing, rayon, cellulosic sponge, or cellophane operations, as applicable; and (3) you comply with the initial compliance requirements for closed-vent systems;
		iii. install a nitrogen unloading and storage system; or	you have a record certifying that a nitrogen unloading and storage system is in use; or
		iv. install a nitrogen unloading system; reduce uncontrolled	(1) you have a record certifying that a nitrogen unloading system is in use;

For . . .	at . . .	for the following emission limit or work practice standard . . .	you have demonstrated initial compliance if . . .
		carbon disulfide by at least 0.045% from viscose process vents based on a 6-month rolling average; for each vent stream that you control using a control device, route the vent stream through a closed-vent system to the control device; and comply with the work practice standard for closed-vent systems	(2) you comply with the initial compliance requirements for viscose process vents at existing or new cellulose food casing, rayon, cellulosic sponge, or cellophane operations, as applicable; (3) the 0.045% reduction must be in addition to the reduction already required for viscose process vents at cellulose food casing, rayon, cellulosic sponge, or cellophane operations, as applicable; and (4) you comply with the initial compliance requirements for closed-vent systems.
6. each toluene storage vessel	a. each existing or new cellophane operation	i. reduce uncontrolled toluene emissions by at least 95% based on a 6-month rolling average; ii. if using a control device to reduce emissions, route the emissions through a closed-vent system to the control device; and iii. comply with the work practice standard for closed-vent systems	(1) the average uncontrolled toluene emissions, determined during the month-long compliance demonstration or using engineering assessments, are reduced by at least 95%; (2) you have a record of the average operating parameter values over the month-long compliance demonstration during which the average uncontrolled toluene emissions were reduced by at least 95%; (3) you prepare a material balance that includes the pertinent data used to determine the percent reduction of toluene emissions; and (4) if venting to a control device to reduce emissions,

For . . .	at . . .	for the following emission limit or work practice standard . . .	you have demonstrated initial compliance if . . .
			you comply with the initial compliance requirements for closed-vent systems.
7. equipment leaks	a. each existing or new cellulose ether operation	i. comply with the applicable equipment leak standards of §§63.162 through 63.179; or	you comply with the applicable requirements described in the Notification of Compliance Status Report provisions in §63.182(a)(2) and (c)(1) through (3), except that references to the term "process unit" mean "cellulose ether process unit" for the purposes of this subpart; or
		ii. comply with the applicable equipment leak standards of §§63.1021 through 63.1027	you comply with the applicable requirements described in the Initial Compliance Status Report provisions of §63.1039(a), except that references to the term "process unit" mean "cellulose ether process unit" for the purposes of this subpart.
8. all sources of wastewater emissions	each existing or new cellulose ether operation	comply with the applicable wastewater provisions of §63.105 and §§63.132 through 63.140	you comply with the applicability and Group 1/Group 2 determination provisions of §63.144 and the initial compliance provisions of §§63.105 and 63.145.
9. liquid streams in open systems	each existing or new cellulose ether operation	comply with the applicable provisions of §63.149, except that references to "chemical manufacturing process unit" mean "cellulose ether process unit" for the purposes of this subpart	you install emission suppression equipment and conduct an initial inspection according to the provisions of to §§63.133 through 63.137.

For . . .	at . . .	for the following emission limit or work practice standard . . .	you have demonstrated initial compliance if . . .
10. closed-vent system used to route emissions to a control device	a. each existing or new affected source	i. conduct annual inspections, repair leaks, and maintain records as specified in §63.148	(1) you conduct an initial inspection of the closed-vent system and maintain records according to §63.148; (2) you prepare a written plan for inspecting unsafe-to-inspect and difficult-to-inspect equipment according to §63.148(g)(2) and (h)(2); and (3) you repair any leaks and maintain records according to §63.148.
11. closed-vent system containing a bypass line that could divert a vent stream away from a control device, except for equipment needed for safety purposes (described in §63.148(f)(3))	a. each existing or new affected source	i. install, calibrate, maintain, and operate a flow indicator as specified in §63.148(f)(1); or	you have a record documenting that you installed a flow indicator as specified in Table 1 to this subpart; or
		ii. secure the bypass line valve in the closed position with a car-seal or lock-and-key type configuration and inspect the seal or closure mechanism at least once per month as specified in §63.148(f)(2)	you have record documenting that you have secured the bypass line valve as specified in Table 1 to this subpart.
12. heat exchanger system that cools process equipment or materials in the process unit	a. each existing or new affected source	i. monitor and repair the heat exchanger system according to §63.104(a) through (e), except that references to "chemical manufacturing process	(1) you determine that the heat exchanger system is exempt from monitoring requirements because it meets one of the conditions in §63.104(a)(1) through (6), and you document this

For . . .	at . . .	for the following emission limit or work practice standard . . .	you have demonstrated initial compliance if . . .
		unit" mean "cellulose food casing, rayon, cellulosic sponge, cellophane, or cellulose ether process unit" for the purposes of this subpart	finding in your Notification of Compliance Status Report; or (2) if your heat exchanger system is not exempt, you identify in your Notification of Compliance Status Report the HAP or other representative substance that you will monitor, or you prepare and maintain a site-specific plan containing the information required by §63.104(c) (1) (i) through (iv) that documents the procedures you will use to detect leaks by monitoring surrogate indicators of the leak.

14. Table 4 to Subpart UUUU is amended to read as follows:

Table 4 to Subpart UUUU of Part 63 - Requirements for Performance Tests

As required in §§63.5530(b) and 63.5535(a), (b), (g)(1), and (h)(1), you must conduct performance tests, other initial compliance demonstrations, and CEMS performance evaluations and establish operating limits according to the requirements in the following table:

For . . .	at . . .	you must . . .	using . . .	according to the following requirements . . .
1. the sum of all process vents	1. the sum of all process vents	i. select sampling port's location and the number of traverse points;	EPA Method 1 or 1A in appendix A-1 to 40 CFR part 60 of this chapter;	sampling sites must be located at the inlet and outlet to each control device;
		ii. determine velocity and volumetric flow rate;	EPA Method 2, 2A, 2C, 2D, 2F, or 2G in appendices A-1 and A-2 to part 60 of this chapter;	you may use EPA Method 2A, 2C, 2D, 2F, or 2G as an alternative to using EPA Method 2, as appropriate;

For . . .	at . . .	you must . . .	using . . .	according to the following requirements . . .
		iii. conduct gas analysis; and,	(1) EPA Method 3, 3A, or 3B in appendix A-2 to part 60 of this chapter; or,	you may use EPA Method 3A or 3B as an alternative to using EPA Method 3; or,
			(2) ASME PTC 19.10-1981 - Part 10 (incorporated by reference—see §63.14); and,	you may use ASME PTC 19.10-1981 - Part 10 (available for purchase from Three Park Avenue, New York, NY 10016-5990) as an alternative to using the manual procedures (but not instrumental procedures) in EPA Method 3B.
		iv. measure moisture content of the stack gas.	EPA Method 4 in appendix A-3 to part 60 of this chapter.	
2. the sum of all viscose process vents	a. each existing or new viscose process source	i. measure total sulfide emissions	(1) EPA Method 15 in appendix A-5 to part 60 of this chapter; or	(a) you must conduct testing of emissions at the inlet and outlet of each control device;
				(b) you must conduct testing of emissions from continuous viscose process vents and combinations of batch and continuous viscose process vents at normal operating conditions, as specified in §63.5535;
				(c) you must conduct testing of emissions from batch viscose process vents as specified in §63.490(c), except that the emission reductions required for process vents under this subpart supersede the emission reductions required for

For . . .	at . . .	you must . . .	using . . .	according to the following requirements . . .
				process vents under subpart U of this part; and
				(d) you must collect CPMS data during the period of the initial compliance demonstration and determine the CPMS operating limit during the period of the initial compliance demonstration; or
			(2) carbon disulfide and/or hydrogen sulfide CEMS, as applicable;	(a) you must measure emissions at the inlet and outlet of each control device using CEMS;
				(b) you must install, operate, and maintain the CEMS according to the applicable performance specification (PS-7, PS-8, PS-9, or PS-15) of 40 CFR part 60, appendix B; and
				(c) you must collect CEMS emissions data at the inlet and outlet of each control device during the period of the initial compliance demonstration and determine the CEMS operating limit during the period of the initial compliance demonstration.
3. the sum of all solvent coating process vents	a. each existing or new cellophane operation	i. measure toluene emissions	(1) EPA Method 18 in appendix A-6 to part 60 of this chapter, or Method 320 in appendix A to part 63; or	(a) you must conduct testing of emissions at the inlet and outlet of each control device;
				(b) you may use EPA Method 18 or 320 to determine the control efficiency of any control

For . . .	at . . .	you must . . .	using . . .	according to the following requirements . . .
				device for organic compounds; for a combustion device, you must use only HAP that are present in the inlet to the control device to characterize the percent reduction across the combustion device;
				(c) you must conduct testing of emissions from continuous solvent coating process vents and combinations of batch and continuous solvent coating process vents at normal operating conditions, as specified in §63.5535;
				(d) you must conduct testing of emissions from batch solvent coating process vents as specified in §63.490(c), except that the emission reductions required for process vents under this subpart supersede the emission reductions required for process vents under subpart U of this part; and
				(d) you must conduct testing of emissions from batch solvent coating process vents as specified in §63.490(c), except that the emission reductions required for process vents under this subpart supersede the emission reductions required for process vents under subpart U of this part; and
			(2) ASTM D6420-99 (Reapproved	(a) you must conduct testing of emissions at the

For . . .	at . . .	you must . . .	using . . .	according to the following requirements . . .
			2010) (incorporated by reference—see §63.14); or	inlet and outlet of each control device;
				(b) you may use ASTM D6420-99 (Reapproved 2010) (available for purchase from at least one of the following addresses: 100 Barr Harbor Drive, West Conshohocken, PA 19428-2959; or University Microfilms International, 300 North Zeeb Road, Ann Arbor, MI 48106) as an alternative to EPA Method 18 only where: the target compound(s) are known and are listed in ASTM D6420-99 as measurable; this ASTM should not be used for methane and ethane because their atomic mass is less than 35; ASTM D6420 should never be specified as a total VOC method;
				(c) you must conduct testing of emissions from continuous solvent coating process vents and combinations of batch and continuous solvent coating process vents at normal operating conditions, as specified in §63.5535;
				(d) you must conduct testing of emissions from batch solvent coating process vents as specified in §63.490(c), except that the emission reductions required for process vents under this subpart

For . . .	at . . .	you must . . .	using . . .	according to the following requirements . . .
				supersede the emission reductions required for process vents under subpart U of this part; and
				(e) you must collect CPMS data during the period of the initial compliance demonstration and determine the CPMS operating limit during the period of the initial compliance demonstration.
			(3) ASTM D6348–12e1	(a) you must conduct testing of emissions at the inlet and outlet of each control device;
				(b) you may use ASTM D6348-12e1 (available for purchase from at least one of the following addresses: 100 Barr Harbor Drive, West Conshohocken, PA 19428-2959; or University Microfilms International, 300 North Zeeb Road, Ann Arbor, MI 48106) as an alternative to EPA Method 320 only where the following conditions are met: (1) The test plan preparation and implementation in the Annexes to ASTM D 6348–03, Sections A1 through A8 are mandatory; and (2) in ASTM D6348–03 Annex A5 (Analyte Spiking Technique), the percent recovery (%R) must be determined for each target analyte (Equation A5.5). In order for the test data to be acceptable for a

For . . .	at . . .	you must . . .	using . . .	according to the following requirements . . .
				compound, %R must be greater than or equal to 70 percent and less than or equal to 130 percent. If the %R value does not meet this criterion for a target compound, the test data are not acceptable for that compound and the test must be repeated for that analyte (i.e., the sampling and/or analytical procedure should be adjusted before a retest). The %R value for each compound must be reported in the test report, and all field measurements must be corrected with the calculated %R value for that compound by using the following equation: Reported Results = ((Measured Concentration in the Stack))/(%R) x 100.
				(c) you must conduct testing of emissions from continuous solvent coating process vents and combinations of batch and continuous solvent coating process vents at normal operating conditions, as specified in §63.5535;
				(d) you must conduct testing of emissions from batch solvent coating process vents as specified in §63.490(c), except that the emission reductions required for process vents under this subpart supersede the emission reductions required for

For . . .	at . . .	you must . . .	using . . .	according to the following requirements . . .
				process vents under subpart U of this part; and
				(e) you must collect CPMS data during the period of the initial compliance demonstration and determine the CPMS operating limit during the period of the initial compliance demonstration.
4. the sum of all cellulose ether process vents	a. each existing or new cellulose ether operation	i. measure total organic HAP emissions	(1) EPA Method 18 in appendix A-6 to part 60 of this chapter or Method 320 in appendix A to part 63, or	(a) you must conduct testing of emissions at the inlet and outlet of each control device; (b) you may use EPA Method 18 or 320 to determine the control efficiency of any control device for organic compounds; for a combustion device, you must use only HAP that are present in the inlet to the control device to characterize the percent reduction across the combustion device;
				(c) you must conduct testing of emissions from continuous cellulose ether process vents and combinations of batch and continuous cellulose ether process vents at normal operating conditions, as specified in §63.5535;
				(d) you must conduct testing of emissions from batch cellulose ether process vents as specified in §63.490(c), except that the emission reductions required for process vents under this subpart

For . . .	at . . .	you must . . .	using . . .	according to the following requirements . . .
				supersede the emission reductions required for process vents under subpart U of this part; and
				(d) you must conduct testing of emissions from batch cellulose ether process vents as specified in §63.490(c), except that the emission reductions required for process vents under this subpart supersede the emission reductions required for process vents under subpart U of this part; and
			(2) ASTM D6420-99 (Reapproved 2010) (incorporated by reference—see §63.14); or	(a) you must conduct testing of emissions at the inlet and outlet of each control device;
				(b) you may use ASTM D6420-99 (Reapproved 2010) (available for purchase from at least one of the following addresses: 100 Barr Harbor Drive, West Conshohocken, PA 19428-2959; or University Microfilms International, 300 North Zeeb Road, Ann Arbor, MI 48106) as an alternative to EPA Method 18 only where: the target compound(s) are known and are listed in ASTM D6420-99 as measurable; this ASTM should not be used for methane and ethane because their atomic mass is less than 35; ASTM D6420 should

For . . .	at . . .	you must . . .	using . . .	according to the following requirements . . .
				never be specified as a total VOC method;
				(c) you must conduct testing of emissions from continuous cellulose ether process vents and combinations of batch and continuous cellulose ether process vents at normal operating conditions, as specified in §63.5535;
				(d) you must conduct testing of emissions from batch cellulose ether process vents as specified in §63.490(c), except that the emission reductions required for process vents under this subpart supersede the emission reductions required for process vents under subpart U of this part; and
				(e) you must collect CPMS data during the period of the initial performance test and determine the CPMS operating limit during the period of the initial performance test.
			(3) ASTM D6348–12e1	(a) you must conduct testing of emissions at the inlet and outlet of each control device;
				(b) you may use ASTM D6348-12e1 (available for purchase from at least one of the following addresses: 100 Barr Harbor Drive, West Conshohocken, PA 19428-2959; or University Microfilms International, 300 North Zeeb Road, Ann Arbor, MI 48106) as an

For . . .	at . . .	you must . . .	using . . .	according to the following requirements . . .
				alternative to EPA Method 320 only where the following conditions are met: (1) The test plan preparation and implementation in the Annexes to ASTM D 6348–03, Sections A1 through A8 are mandatory; and (2) in ASTM D6348–03 Annex A5 (Analyte Spiking Technique), the percent recovery (%R) must be determined for each target analyte (Equation A5.5). In order for the test data to be acceptable for a compound, %R must be greater than or equal to 70 percent and less than or equal to 130 percent. If the %R value does not meet this criterion for a target compound, the test data are not acceptable for that compound and the test must be repeated for that analyte (i.e., the sampling and/or analytical procedure should be adjusted before a retest). The %R value for each compound must be reported in the test report, and all field measurements must be corrected with the calculated %R value for that compound by using the following equation: Reported Results = ((Measured Concentration in the Stack))/(%R) x 100.

For . . .	at . . .	you must . . .	using . . .	according to the following requirements . . .
				(c) you must conduct testing of emissions from continuous solvent coating process vents and combinations of batch and continuous solvent coating process vents at normal operating conditions, as specified in §63.5535;
				(d) you must conduct testing of emissions from batch solvent coating process vents as specified in §63.490(c), except that the emission reductions required for process vents under this subpart supersede the emission reductions required for process vents under subpart U of this part; and
				(e) you must collect CPMS data during the period of the initial compliance demonstration and determine the CPMS operating limit during the period of the initial compliance demonstration.
			(3) EPA Method 25 in appendix A-7 to part 60 of this chapter; or	(a) you must conduct testing of emissions at the inlet and outlet of each control device;
				(a) you must conduct testing of emissions at the inlet and outlet of each control device;
				(c) you must conduct testing of emissions from continuous cellulose ether process vents and combinations of batch and continuous cellulose ether process vents at normal

For . . .	at . . .	you must . . .	using . . .	according to the following requirements . . .
				operating conditions, as specified in §63.5535;
				(d) you must conduct testing of emissions from batch cellulose ether process vents as specified in §63.490(c), except that the emission reductions required for process vents under this subpart supersede the emission reductions required for process vents under subpart U of this part; and
				(e) you must collect CPMS data during the period of the initial performance test and determine the CPMS operating limit during the period of the initial performance test; or
			(4) EPA Method 25A in appendix A-7 to part 60 of this chapter	(a) you must conduct testing of emissions at the inlet and outlet of each control device;
				(b) you may use EPA Method 25A if: an exhaust gas volatile organic matter concentration of 50 ppmv or less is required in order to comply with the emission limit; the volatile organic matter concentration at the inlet to the control device and the required level of control are such as to result in exhaust volatile organic matter concentrations of 50 ppmv or less; or because of the high control efficiency of the control device, the anticipated volatile organic

For . . .	at . . .	you must . . .	using . . .	according to the following requirements . . .
				matter concentration at the control device exhaust is 50 ppmv or less, regardless of the inlet concentration;
				(c) you must conduct testing of emissions from continuous cellulose ether process vents and combinations of batch and continuous cellulose ether process vents at normal operating conditions, as specified in §63.5535;
				(d) you must conduct testing of emissions from batch cellulose ether process vents as specified in §63.490(c), except that the emission reductions required for process vents under this subpart supersede the emission reductions required for process vents under subpart U of this part; and,
				(e) you must collect CPMS data during the period of the initial performance test and determine the CPMS operating limit during the period of the initial performance test.
5. each toluene storage vessel	a. each existing or new cellophane operation	i. measure toluene emissions	(1) EPA Method 18 in appendix A-6 to part 60 of this chapter or Method 320 in appendix A to part 63; or	(a) if venting to a control device to reduce emissions, you must conduct testing of emissions at the inlet and outlet of each control device;
				(b) you may use EPA Method 18 or 320 to determine the control efficiency of any control device for organic

For . . .	at . . .	you must . . .	using . . .	according to the following requirements . . .
				compounds; for a combustion device, you must use only HAP that are present in the inlet to the control device to characterize the percent reduction across the combustion device;
				(c) you must conduct testing of emissions from continuous storage vessel vents and combinations of batch and continuous storage vessel vents at normal operating conditions, as specified in §63.5535 for continuous process vents;
				(d) you must conduct testing of emissions from batch storage vessel vents as specified in §63.490(c) for batch process vents, except that the emission reductions required for process vents under this subpart supersede the emission reductions required for process vents under subpart U of this part; and,
				(e) you must collect CPMS data during the period of the initial compliance demonstration and determine the CPMS operating limit during the period of the initial compliance demonstration; or
			(2) ASTM D6420-99 (Reapproved 2010) (incorporated by	(a) if venting to a control device to reduce emissions, you must conduct testing of

For . . .	at . . .	you must . . .	using . . .	according to the following requirements . . .
			reference—see §63.14); or	emissions at the inlet and outlet of each control device;
				(b) you may use ASTM D6420-99 (Reapproved 2010) (available for purchase from at least one of the following addresses: 100 Barr Harbor Drive, West Conshohocken, PA 19428-2959; or University Microfilms International, 300 North Zeeb Road, Ann Arbor, MI 48106) as an alternative to EPA Method 18 only where: the target compound(s) are known and are listed in ASTM D6420-99 as measurable; this ASTM should not be used for methane and ethane because their atomic mass is less than 35; ASTM D6420 should never be specified as a total VOC method;
				(c) you must conduct testing of emissions from continuous storage vessel vents and combinations of batch and continuous storage vessel vents at normal operating conditions, as specified in §63.5535 for continuous process vents;
				(d) you must conduct testing of emissions from batch storage vessel vents as specified in §63.490(c) for batch process vents, except that the emission reductions required for process vents under this

For . . .	at . . .	you must . . .	using . . .	according to the following requirements . . .
				subpart supersede the emission reductions required for process vents under subpart U of this part; and,
				(e) you must collect CPMS data during the period of the initial compliance demonstration and determine the CPMS operating limit during the period of the initial compliance demonstration.
			(3) ASTM D6348–12e1	(a) you must conduct testing of emissions at the inlet and outlet of each control device;
				(b) you may use ASTM D6348-12e1 (available for purchase from at least one of the following addresses: 100 Barr Harbor Drive, West Conshohocken, PA 19428-2959; or University Microfilms International, 300 North Zeeb Road, Ann Arbor, MI 48106) as an alternative to EPA Method 320 only where the following conditions are met: (1) The test plan preparation and implementation in the Annexes to ASTM D 6348–03, Sections A1 through A8 are mandatory; and (2) in ASTM D6348–03 Annex A5 (Analyte Spiking Technique), the percent recovery (%R) must be determined for each target analyte (Equation A5.5). In order for the test data to be

For . . .	at . . .	you must . . .	using . . .	according to the following requirements . . .
				acceptable for a compound, %R must be greater than or equal to 70 percent and less than or equal to 130 percent. If the %R value does not meet this criterion for a target compound, the test data are not acceptable for that compound and the test must be repeated for that analyte (i.e., the sampling and/or analytical procedure should be adjusted before a retest). The %R value for each compound must be reported in the test report, and all field measurements must be corrected with the calculated %R value for that compound by using the following equation: Reported Results = ((Measured Concentration in the Stack))/(%R) x 100.
				(c) you must conduct testing of emissions from continuous solvent coating process vents and combinations of batch and continuous solvent coating process vents at normal operating conditions, as specified in §63.5535;
				(d) you must conduct testing of emissions from batch solvent coating process vents as specified in §63.490(c), except that the emission reductions required for process vents under this subpart supersede the emission

For . . .	at . . .	you must . . .	using . . .	according to the following requirements . . .
				reductions required for process vents under subpart U of this part; and
				(e) you must collect CPMS data during the period of the initial compliance demonstration and determine the CPMS operating limit during the period of the initial compliance demonstration.
6. the sum of all process vents controlled using a flare	a. each existing or new affected source	i. measure visible emissions	(1) EPA Method 22 in appendix A-7 to part 60 of this chapter	(a) you must conduct the flare visible emissions test according to §63.11(b).
7. equipment leaks	a. each existing or new cellulose ether operation	i. measure leak rate	(1) applicable equipment leak test methods in §63.180; or	(a) you must follow all requirements for the applicable equipment leak test methods in §63.180; or
			(2) applicable equipment leak test methods in §63.1023	(a) you must follow all requirements for the applicable equipment leak test methods in §63.1023.
8. all sources of wastewater emissions	a. each existing or new cellulose ether operation	i. measure wastewater HAP emissions	(1) applicable wastewater test methods and procedures in §§63.144 and 63.145; or	(a) You must follow all requirements for the applicable wastewater test methods and procedures in §§63.144 and 63.145; or
			(2) applicable wastewater test methods and procedures in §§63.144 and 63.145, using ASTM D5790-95 (Reapproved 2012) as an alternative to EPA	(a) you must follow all requirements for the applicable waste water test methods and procedures in §§63.144 and 63.145, except that you may use ASTM D5790-95 (Reapproved 2012) (available for purchase from at least one of the

For . . .	at . . .	you must . . .	using . . .	according to the following requirements . . .
			Method 624 in appendix A to part 163 of this chapter.	following addresses: 100 Barr Harbor Drive, West Conshohocken, PA 19428-2959; or University Microfilms International, 300 North Zeeb Road, Ann Arbor, MI 48106) as an alternative to EPA Method 624, under the condition that this ASTM method be used with the sampling procedures of EPA Method 25D or an equivalent method.
9. any emission point	a. each existing or new affected source using a CEMS to demonstrate compliance	i. conduct a CEMS performance evaluation	(1) applicable requirements in §63.8 and applicable performance specification (PS-7, PS-8, PS-9, or PS-15) in appendix B to part 60 of this chapter	(a) you must conduct the CEMS performance evaluation during the period of the initial compliance demonstration according to the applicable requirements in §63.8 and the applicable performance specification (PS-7, PS-8, PS-9, or PS-15) of 40 CFR part 60, appendix B; (b) you must install, operate, and maintain the CEMS according to the applicable performance specification (PS-7, PS-8, PS-9, or PS-15) of 40 CFR part 60, appendix B; and
				(c) you must collect CEMS emissions data at the inlet and outlet of each control device during the period of the initial compliance demonstration and determine the CEMS operating limit during the period of the initial compliance demonstration.

15. Table 5 to Subpart UUUU is revised to read as follows:

Table 5 to Subpart UUUU of Part 63 - Continuous Compliance With Emission Limits and Work Practice Standards

As required in §63.5555(a), you must demonstrate continuous compliance with the appropriate emission limits and work practice standards according to the requirements in the following table:

For . . .	at . . .	for the following emission limit or work practice standard . . .	you must demonstrate continuous compliance by . . .
1. the sum of all viscose process vents	a. each existing or new viscose process affected source	i. reduce total uncontrolled sulfide emissions (reported as carbon disulfide) by at least the specified percentage based on a 6-month rolling average; ii. for each vent stream that you control using a control device (except for retractable hoods over sulfuric acid baths at a cellophane operation), route the vent stream through a closed-vent system to the control device; and iii. comply with the work practice standard for closed-vent systems (except for retractable hoods over sulfuric acid baths at a cellophane operation)	(1) maintaining a material balance that includes the pertinent data used to determine the percent reduction of total sulfide emissions; (2) documenting the percent reduction of total sulfide emissions using the pertinent data from the material balance; and (3) complying with the continuous compliance requirements for closed-vent systems.
2. the sum of all solvent coating process vents	a. each existing or new cellophane operation	i. reduce uncontrolled toluene emissions by at least 95% based on a 6-month rolling average; ii. for each vent stream that you control using a control device, route the vent stream through a closed-vent system to the control device; and iii. comply with the work practice standard for closed-vent systems	(1) maintaining a material balance that includes the pertinent data used to determine the percent reduction of toluene emissions; (2) documenting the percent reduction of toluene emissions using the pertinent data from the material balance; and (3) complying with the continuous compliance

For . . .	at . . .	for the following emission limit or work practice standard . . .	you must demonstrate continuous compliance by . . .
			requirements for closed-vent systems.
3. the sum of all cellulose ether process vents	a. each existing or new cellulose ether operation using a performance test to demonstrate initial compliance; or	i. reduce total uncontrolled organic HAP emissions by at least 99%; ii. for each vent stream that you control using a control device, route the vent stream through a closed-vent system to the control device; and, iii. comply with the work practice standard for closed-vent systems; or	(1) complying with the continuous compliance requirements for closed-vent systems; or (2) if using extended cookout to comply, monitoring reactor charges and keeping records to show that extended cookout was employed.
	(1) complying with the continuous compliance requirements for closed-vent systems; or (2) if using extended cookout to comply, monitoring reactor charges and keeping records to show that extended cookout was employed.	i. reduce total uncontrolled organic HAP emissions by at least 99% based on a 6-month rolling average; ii. for each vent stream that you control using a control device, route the vent stream through a closed-vent system to control device; and iii. comply with the work practice standard for closed-vent systems	(1) complying with the continuous compliance requirements for closed-vent systems; or (2) if using extended cookout to comply, monitoring reactor charges and keeping records to show that extended cookout was employed.
	b. each existing or new cellulose ether operation using a material balance compliance demonstration to demonstrate initial compliance	i. reduce total uncontrolled organic HAP emissions by at least 99% based on a 6-month rolling average; ii. for each vent stream that you control using a control device, route the vent stream through a closed-vent system to control device; and iii. comply with the work	(1) maintaining a material balance that includes the pertinent data used to determine the percent reduction of total organic HAP emissions; (2) documenting the percent reduction of total organic HAP emissions using the pertinent data from the material balance;

For . . .	at . . .	for the following emission limit or work practice standard . . .	you must demonstrate continuous compliance by . . .
		practice standard for closed-vent systems	(3) if using extended cookout to comply, monitoring reactor charges and keeping records to show that extended cookout was employed; (4) complying with the continuous compliance requirements for closed-vent systems.
4. closed-loop systems	each existing or new cellulose either operation	operate and maintain a closed-loop system	keeping a record certifying that a closed-loop system is in use for cellulose ether operations.
5. each carbon disulfide unloading and storage operation	a. each existing or new viscose process affected source	i. reduce uncontrolled carbon disulfide emissions by at least 83% based on a 6-month rolling average if you use an alternative control technique not listed in this table for carbon disulfide unloading and storage operations; if using a control device to reduce emissions, route emissions through a closed-vent system to the control device; and comply with the work practice standard for closed-vent systems;	(1) keeping a record documenting the 83% reduction in carbon disulfide emissions; and (2) if venting to a control device to reduce emissions, complying with the continuous compliance requirements for closed-vent systems;
		ii. reduce total uncontrolled sulfide emissions by at least 0.14% from viscose process vents based on a 6-month rolling average; for each vent stream that you control using a control device, route the vent stream through a	(1) maintaining a material balance that includes the pertinent data used to determine the percent reduction of total sulfide emissions; (2) documenting the percent reduction of total sulfide emissions using the pertinent data from the

For . . .	at . . .	for the following emission limit or work practice standard . . .	you must demonstrate continuous compliance by . . .
		closed-vent system to the control device; and comply with the work practice standard for closed-vent systems;	material balance; and (3) complying with the continuous compliance requirements for closed-vent systems;
		iii. install a nitrogen unloading and storage system; or	Keeping a record certifying that a nitrogen unloading and storage system is in use; or
		iv. install a nitrogen unloading system; reduce total uncontrolled sulfide emissions by at least 0.045% from viscose process vents based on a 6-month rolling average; for each vent stream that you control using a control device, route the vent stream through a closed-vent system to the control device; and comply with the work practice standard for closed-vent systems	(1) keeping a record certifying that a nitrogen unloading system is in use; (2) maintaining a material balance that includes the pertinent data used to determine the percent reduction of total sulfide emissions; (3) documenting the percent reduction of total sulfide emissions using the pertinent data from the material balance; and (4) complying with the continuous compliance requirements for closed-vent systems.
6. each toluene storage vessel	a. each existing or new cellophane operation	a. each existing or new cellophane operation	(1) maintaining a material balance that includes the pertinent data used to determine the percent reduction of toluene emissions; (2) documenting the percent reduction of toluene emissions using the pertinent data from the material balance; and (3) if venting to a control device to reduce emissions, complying with the continuous

For . . .	at . . .	for the following emission limit or work practice standard . . .	you must demonstrate continuous compliance by . . .
			compliance requirements for closed-vent systems.
7. equipment leaks	a. each existing or new cellulose ether operation	i. applicable equipment leak standards of §§63.162 through 63.179; or ii. applicable equipment leak standards of §§63.1021 through 63.1037	complying with the applicable equipment leak continuous compliance provisions of §§63.162 through 63.179; or complying with the applicable equipment leak continuous compliance provisions of §§63.1021 through 63.1037.
8. all sources of wastewater emissions	each existing or new cellulose either operation	applicable wastewater provisions of §63.105 and §§63.132 through 63.140.	complying with the applicable wastewater continuous compliance provisions of §§63.105, 63.143, and 63.148.
9. liquid streams in open systems	each existing or new cellulose ether operation	comply with the applicable provisions of §63.149, except that references to "chemical manufacturing process unit" mean "cellulose ether process unit" for the purposes of this subpart	conducting inspections, repairing failures, documenting delay of repair, and maintaining records of failures and corrective actions according to §§63.133 through 63.137.
10. closed-vent system used to route emissions to a control device	each existing or new affected source	conduct annual inspections, repair leaks, maintain records as specified in §63.148	conducting the inspections, repairing leaks, and maintaining records according to §63.148.
11. closed-vent system containing a bypass line that could divert a vent stream away from a control device, except for equipment needed for safety purposes	a. each existing or new affected source	i. install, calibrate, maintain, and operate a flow indicator as specified in §63.148(f)(1); or	(1) taking readings from the flow indicator at least once every 15 minutes; (2) maintaining hourly records of flow indicator operation and detection of any diversion during the hour, and (3) recording all periods when the vent stream is diverted from the control

For . . .	at . . .	for the following emission limit or work practice standard . . .	you must demonstrate continuous compliance by . . .
(described in §63.148(f)(3)			stream or the flow indicator is not operating; or
		ii. secure the bypass line valve in the closed position with a car-seal or lock-and-key type configuration and inspect the seal or mechanism at least once per month as specified in §63.148(f)(2).	(1) maintaining a record of the monthly visual inspection of the seal or closure mechanism for the bypass line; and (2) recording all periods when the seal mechanism is broken, the bypass line valve position has changed, or the key for a lock-and-key type lock has been checked out.
12. heat exchanger system that cools process equipment or materials in the process unit	a. each existing or new affected source	i. monitor and repair the heat exchanger system according to §63.104(a) through (e), except that references to "chemical manufacturing process unit" mean "cellulose food casing, rayon, cellulosic sponge, cellophane, or cellulose ether process unit" for the purposes of this subpart	(1) monitoring for HAP compounds, other substances, or surrogate indicators at the frequency specified in §63.104(b) or (c); (2) repairing leaks within the time period specified in §63.104(d)(1); (3) confirming that the repair is successful as specified in §63.104(d)(2); (4) following the procedures in §63.104(e) if you implement delay of repair; and (5) recording the results of inspections and repair according to §63.104(f)(1).

16. Table 6 to Subpart UUUU is revised to read as follows:

Table 6 to Subpart UUUU of Part 63 - Continuous Compliance With Operating Limits

As required in §63.5555(a), you must demonstrate continuous compliance with the appropriate operating limits according to the requirements in the following table:

For the following control technique . . .	for the following operating limit . . .	you must demonstrate continuous compliance by . . .
1. condenser	maintain the daily average condenser outlet gas or condensed liquid temperature no higher than the value established during the compliance demonstration	collecting the condenser outlet gas or condensed liquid temperature data according to §63.5545; reducing the condenser outlet gas temperature data to daily averages; and maintaining the daily average condenser outlet gas or condensed liquid temperature no higher than the value established during the compliance demonstration.
2. thermal oxidizer	a. for normal operations, maintain the daily average thermal oxidizer firebox temperature no lower than the value established during the compliance demonstration	collecting the thermal oxidizer firebox temperature data according to §63.5545; reducing the thermal oxidizer firebox temperature data to daily averages; and maintaining the daily average thermal oxidizer firebox temperature no lower than the value established during the compliance demonstration.
	b. for periods of startup, maintain documentation demonstrating that the oxidizer was properly operating (*e.g.*, firebox temperature had reached the setpoint temperature) prior to emission unit startup.	collecting the appropriate, site-specific data needed to demonstrate that the oxidizer was properly operating prior to emission unit start up; and excluding firebox temperature from the daily averages during emission unit startup.
3. water scrubber	a. for normal operations, maintain the daily average scrubber pressure drop and scrubber liquid flow rate within the range of values established during the compliance demonstration	collecting the scrubber pressure drop and scrubber liquid flow rate data according to §63.5545; reducing the scrubber parameter data to daily averages; and maintaining the daily scrubber parameter values within the range of values established during the compliance demonstration.
	b. for periods of startup and shutdown, maintain	collecting the appropriate, site-specific data needed to demonstrate that the

For the following control technique . . .	for the following operating limit . . .	you must demonstrate continuous compliance by . . .
	documentation to confirm that the scrubber is operating properly prior to emission unit startup and continues to operate properly until emission unit shutdown is complete. Appropriate startup and shutdown operating parameters may be based on equipment design, manufacturer's recommendations, or other site-specific operating values established for normal operating periods.	scrubber was operating properly during emission unit startup and emission unit shutdown; and excluding parameters from the daily average calculations.
4. caustic scrubber	a. for normal operations, maintain the daily average scrubber pressure drop, scrubber liquid flow rate, and scrubber liquid pH, conductivity, or alkalinity within the range of values established during the compliance demonstration	collecting the scrubber pressure drop, scrubber liquid flow rate, and scrubber liquid pH, conductivity, or alkalinity data according to §63.5545; reducing the scrubber parameter data to daily averages; and maintaining the daily scrubber parameter values within the range of values established during the compliance demonstration.
	b. for periods of startup and shutdown, maintain documentation to confirm that the scrubber is operating properly prior to emission unit startup and continues to operate properly until emission unit shutdown is complete. Appropriate startup and shutdown operating parameters may be based on equipment design, manufacturer's recommendations, or other site-specific operating values established for normal operating periods.	collecting the appropriate, site-specific data needed to demonstrate that the scrubber was operating properly during emission unit startup and emission unit shutdown; and excluding parameters from the daily average calculations.
5. flare	maintain the presence of a pilot flame	collecting the pilot flame data according to §63.5545; and maintaining the presence of the pilot flame.

For the following control technique . . .	for the following operating limit . . .	you must demonstrate continuous compliance by . . .
6. biofilter	maintain the daily average biofilter inlet gas temperature, biofilter effluent pH or conductivity, and pressure drop within the values established during the compliance demonstration	collecting the biofilter inlet gas temperature, biofilter effluent pH or conductivity, and biofilter pressure drop data according to §63.5545; reducing the biofilter parameter data to daily averages; and maintaining the daily biofilter parameter values within the values established during the compliance demonstration.
7. carbon absorber	maintain the regeneration frequency, total regeneration stream mass or volumetric flow during carbon bed regeneration and temperature of the carbon bed after regeneration (and within 15 minutes of completing any cooling cycle(s)) for each regeneration cycle within the values established during the compliance demonstration	collecting the data on regeneration frequency, total regeneration stream mass or volumetric flow during carbon bed regeneration and temperature of the carbon bed after regeneration (and within 15 minutes of completing any cooling cycle(s)) for each regeneration cycle according to §63.5545; and maintaining carbon absorber parameter values for each regeneration cycle within the values established during the compliance demonstration.
8. oil absorber	maintain the daily average absorption liquid flow, absorption liquid temperature, and steam flow within the values established during the compliance demonstration	collecting the absorption liquid flow, absorption liquid temperature, and steam flow data according to §63.5545; reducing the oil absorber parameter data to daily averages; and maintaining the daily oil absorber parameter values within the values established during the compliance demonstration.
9. any of the control techniques specified in this table	if using a CEMS, maintain the daily average control efficiency for each control device no lower than the value established during the compliance demonstration	collecting CEMS emissions data at the inlet and outlet of each control device according to §63.5545; determining the control efficiency values for each control device using the inlet and outlet CEMS emissions data; reducing the control efficiency values for each control device to daily averages; and maintaining the daily average control efficiency for each control device no lower than the value established during the compliance demonstration.

17. Table 7 to Subpart UUUU is revised to read as follows:

Table 7 to Subpart UUUU of Part 63 - Notifications

As required in §§63.5490(c)(4), 63.5530(c), 63.5575, and 63.5595(b), you must submit the appropriate notifications specified in the following table:

If you . . .	then you must . . .
1. are required to conduct a performance test	submit a notification of intent to conduct a performance test at least 60 calendar days before the performance test is scheduled to begin, as specified in §§63.7(b)(1) and 63.9(e).
2. are required to conduct a CMS performance evaluation	submit a notification of intent to conduct a CMS performance evaluation at least 60 calendar days before the CMS performance evaluation is scheduled to begin, as specified in §§63.8(e)(2) and 63.9(g).
3. wish to use an alternative monitoring method	submit a request to use alternative monitoring method no later than the notification of the initial performance test or CMS performance evaluation or 60 days prior to any other initial compliance demonstration, as specified in §63.8(f)(4).
4. start up your affected source before June 11, 2002	submit an initial notification no later than 120 days after June 11, 2002, as specified in §63.9(b)(2).
5. start up your new or reconstructed source on or after June 11, 2002	submit an initial notification no later than 120 days after you become subject to this subpart, as specified in §63.9(b)(3).
6. cannot comply with the relevant standard by the applicable compliance date	submit a request for extension of compliance no later than 120 days before the compliance date, as specified in §§63.9(c) and 63.6(i)(4).
7. are subject to special requirements as specified in §63.6(b)(3) and (4)	notify the Administrator of your compliance obligations no later than the initial notification dates established in §63.9(b) for new sources not subject to the special provisions, as specified in §63.9(d).
8. are required to conduct visible emission observations to determine the compliance of flares as specified in §63.11(b)(4)	notify the Administrator of the anticipated date for conducting the observations specified in §63.6(h)(5), as specified in §§63.6(h)(4) and 63.9(f).
9. are required to conduct a performance test or other initial compliance demonstration as specified in Table 3 to this subpart	a. submit a Notification of Compliance Status Report, as specified in §63.9(h); b. submit the Notification of Compliance Status Report, including the performance test, CEMS performance evaluation, and any other initial

If you . . .	then you must . . .
	compliance demonstration results within 240 calendar days following the compliance date specified in §63.5495; and c. beginning on **[DATE 180 DAYS AFTER DATE OF PUBLICATION OF FINAL RULE IN THE FEDERAL REGISTER]**, submit all subsequent Notifications of Compliance Status following the procedure specified in §63.5580(g), (j), and (k).
10. comply with the equipment leak requirements of subpart H of this part for existing or new cellulose ether affected sources	comply with the notification requirements specified in §63.182(a)(1) and (2), (b), and (c)(1) through (3) for equipment leaks, with the Notification of Compliance Status Reports required in subpart H included in the Notification of Compliance Status Report required in this subpart.
11. comply with the equipment leak requirements of subpart UU of this part for existing or new cellulose ether affected sources	comply with the notification requirements specified in §63.1039(a) for equipment leaks, with the Notification Compliance Status Reports required in subpart UU of this part included in the Notification of Compliance Status Report required in this subpart.
12. comply with the wastewater requirements of subparts F and G of this part for existing or new cellulose ether affected sources	comply with the notification requirements specified in §§63.146(a) and (b), 63.151, and 63.152(a)(1) through (3) and (b)(1) through (5) for wastewater, with the Notification of Compliance Status Reports required in subpart G of this part included in the Notification of Compliance Status Report required in this subpart.

18. Table 8 to Subpart UUUU is revised to read as follows:

Table 8 to Subpart UUUU of Part 63 - Reporting Requirements

As required in §63.5580, you must submit the appropriate reports specified in the following table:

You must submit a compliance report, which must contain the following information . . .	and you must submit the report . . .
1. if there are no deviations from any emission limit, operating limit, or work practice standard during the reporting period, then the report must contain the information specified in §63.5580(c);	semiannually as specified in §63.5580(b); beginning on **[DATE 180 DAYS AFTER PUBLICATION OF FINAL RULE IN THE FEDERAL REGISTER]**, submit all subsequent

You must submit a compliance report, which must contain the following information . . .	and you must submit the report . . .
	reports following the procedure specified in §63.5580(g).
2. if there were no periods during which the CMS was out-of-control, then the report must contain the information specified in §63.5580(c)(6);	
3. if there is a deviation from any emission limit, operating limit, or work practice standard during the reporting period, then the report must contain the information specified in §63.5580(c) and (d);	
4. if there were periods during which the CMS was out-of-control, then the report must contain the information specified in §63.5580(e);	
5. if prior to **[DATE 180 DAYS AFTER PUBLICATION OF FINAL RULE IN THE FEDERAL REGISTER],** you had a startup, shutdown, or malfunction during the reporting period and you took actions consistent with your SSM plan, then the report must contain the information specified in §63.10(d)(5)(i);	
6. if prior to **[DATE 180 DAYS AFTER PUBLICATION OF FINAL RULE IN THE FEDERAL REGISTER],** you had a startup, shutdown, or malfunction during the reporting period and you took actions that are not consistent with your SSM plan, then the report must contain the information specified in §63.10(d)(5)(ii);	
7. the report must contain any change in information already provided, as specified in §63.9(j);	
8. for cellulose ether affected sources complying with the equipment leak requirements of subpart H of this part, the report must contain the information specified in §63.182(a)(3) and (6) and (d)(2) through (4);	
9. for cellulose ether affected sources complying with the equipment leak requirements of subpart UU of this part, the report must contain the information specified in §63.1039(b);	
10. for cellulose ether affected sources complying with the wastewater requirements of subparts F and G of this part, the report must contain the information specified in §§63.146(c) through (e) and 63.152(a)(4) and (5) and (c) through (e);	

You must submit a compliance report, which must contain the following information . . .	and you must submit the report . . .
11. for affected sources complying with the closed-vent system provisions in §63.148, the report must contain the information specified in §63.148(j)(1);	
12. for affected sources complying with the bypass line provisions in §63.148(f), the report must contain the information specified in §63.148(j)(2) and (3);	
13. for affected sources invoking the delay of repair provisions in §63.104(e) for heat exchanger systems, the next compliance report must contain the information in §63.104(f)(2)(i) through (iv); if the leak remains unrepaired, the information must also be submitted in each subsequent compliance report until the repair of the leak is reported; and	
14. for storage vessels subject to the emission limits and work practice standards in Table 1 to Subpart UUUU, the report must contain the periods of planned routine maintenance during which the control device does not comply with the emission limits or work practice standards in Table 1 to this subpart	

19. Table 9 to Subpart UUUU is revised to read as follows:

Table 9 to Subpart UUUU of Part 63 - Recordkeeping Requirements

As required in §63.5585, you must keep the appropriate records specified in the following table:

If you operate . . .	then you must keep . . .	and the record(s) must contain . . .
1. an existing or new affected source	a copy of each notification and report that you submitted to comply with this subpart	all documentation supporting any Initial Notification or Notification of Compliance Status Report that you submitted, according to the requirements in §63.10(b)(2)(xiv), and any compliance report required under this subpart.
2. an existing or new affected source that commenced construction or reconstruction before **[INSERT DATE OF PUBLICATION IN**	a. the records in §63.6(e)(3)(iii) through (iv) related to startup, shutdown, and malfunction prior to **[DATE 180 DAYS AFTER DATE OF PUBLICATION OF**	i. SSM plan; ii. when actions taken during a startup, shutdown, or malfunction are consistent with the procedures specified in the SSM plan, records demonstrating that the procedures specified in the plan were followed;

If you operate . . .	then you must keep . . .	and the record(s) must contain . . .
THE FEDERAL REGISTER]	**FINAL RULE IN THE FEDERAL REGISTER]**	iii. records of the occurrence and duration of each startup, shutdown, or malfunction; and iv. when actions taken during a startup, shutdown, or malfunction are not consistent with the procedures specified in the SSM plan, records of the actions taken for that event.
	b. records related to startup and shutdown, failures to meet the standard, and actions taken to minimize emissions after **[DATE 180 DAYS AFTER DATE OF PUBLICATION OF FINAL RULE IN THE FEDERAL REGISTER]**	i. record the date, time, and duration of each startup and/or shutdown period, including the periods when the affected source was subject to the alternative operating parameters applicable to startup and shutdown; ii. in the event that an affected unit fails to meet an applicable standard, record the number of failures. For each failure, record the date, time and duration of each failure; iii. 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; and iv. record actions taken to minimize emissions in accordance with §63.5515(b), and any corrective actions taken to return the affected unit to its normal or usual manner of operation.
3. a new or reconstructed affected source that commenced construction or reconstruction after **[INSERT DATE OF PUBLICATION IN THE FEDERAL REGISTER]**	a. records related to startup and shutdown, failures to meet the standard, and actions taken to minimize emissions	i. record the date, time, and duration of each startup and/or shutdown period, including the periods when the affected source was subject to alternative operating parameters applicable to startup and shutdown; ii. in the event that an affected unit fails to meet an applicable standard, record the number of failures. For each failure, record the date, time and duration of each failure; iii. for each failure to meet an applicable standard, record and retain a list of the affected sources or equipment, an

If you operate . . .	then you must keep . . .	and the record(s) must contain . . .
		estimate of the quantity of each regulated pollutant emitted over any emission limit and a description of the method used to estimate the emissions; and iv. record actions taken to minimize emissions in accordance with §63.5515(b), and any corrective actions taken to return the affected unit to its normal or usual manner of operation.
4. an existing or new affected source	a. a site-specific monitoring plan	i. information regarding the installation of the CMS sampling source probe or other interface at a measurement location relative to each affected process unit such that the measurement is representative of control of the exhaust emissions (e.g., on or downstream of the last control device); ii. performance and equipment specifications for the sample interface, the pollutant concentration or parametric signal analyzer, and the data collection and reduction system; iii. performance evaluation procedures and acceptance criteria (e.g., calibrations); iv. ongoing operation and maintenance procedures in accordance with the general requirements of §§63.8(c)(3) and (4)(ii), 63.5515(b), and 63.5580(c)(6); v. ongoing data quality assurance procedures in accordance with the general requirements of §63.8(d)(2); and vi. ongoing recordkeeping and reporting procedures in accordance with the general requirements of §§63.10(c)(1)-(6), (c)(9)-(14), (e)(1), and (e)(2)(i) and 63.5585.
5. an existing or new affected source	records of performance tests and CEMS performance evaluations, as required in §63.10(b)(2)(viii) and any other initial compliance demonstrations	all results of performance tests, CEMS performance evaluations, and any other initial compliance demonstrations, including analysis of samples, determination of emissions, and raw data.
6. an existing or new affected source	a. records for each CEMS	i. records described in §63.10(b)(2)(vi) through (xi); ii. previous (superseded) versions of the

If you operate . . .	then you must keep . . .	and the record(s) must contain . . .
		performance evaluation plan, with the program of corrective action included in the plan required under §63.8(d)(2); iii. request for alternatives to relative accuracy test for CEMS as required in §63.8(f)(6)(i); iv. records of the date and time that each deviation started and stopped, and whether the deviation occurred during a period of startup, shutdown, or malfunction or during another period; and v. records required in Table 6 to Subpart UUUU to show continuous compliance with the operating limit.
7. an existing or new affected source	a. records for each CPMS	i. records required in Table 6 to Subpart UUUU to show continuous compliance with each operating limit that applies to you; and ii. results of each CPMS calibration, validation check, and inspection required by §63.5545(b)(4).
8. an existing or new cellulose ether affected ether source	records of closed-loop systems	records certifying that a closed-loop system is in use for cellulose ether operations.
9. an existing or new viscose process affected source	records of nitrogen unloading and storage systems or nitrogen unloading systems	records of nitrogen unloading and storage systems or nitrogen unloading systems
10. an existing or new viscose process affected source	records of material balances	all pertinent data from the material balances used to estimate the 6-month rolling average percent reduction in HAP emissions.
11. an existing or new viscose process affected source	records of calculations	documenting the percent reduction in HAP emissions using pertinent data from the material balances.
12. an existing or new cellulose ether affected source	a. extended cookout records	i. the amount of HAP charged to the reactor; ii. the grade of product produced; iii. the calculated amount of HAP remaining before extended cookout; and iv. information showing that extended cookout was employed.
13. an existing or new cellulose ether affected source	a. equipment leak records	i. the records specified in §63.181 for equipment leaks; or

If you operate . . .	then you must keep . . .	and the record(s) must contain . . .
		ii. the records specified in 63.1038 for equipment leaks.
14. an existing or new cellulose ether affected source	wastewater records	the records specified in §§63.105, 63.147, and 63.152(f) and (g) for wastewater.
15. an existing or new affected source	closed-vent system records	the records specified in §63.148(i).
16. an existing or new affected source	a. bypass line records	i. hourly records of flow indicator operation and detection of any diversion during the hour and records of all periods when the vent stream is diverted from the control stream or the flow indicator is not operating; or ii. the records of the monthly visual inspection of the seal or closure mechanism and of all periods when the seal mechanism is broken, the bypass line valve position has changed, or the key for a lock-and-key type lock has been checked out and records of any car-seal that has broken.
17. an existing or new affected source	heat exchanger system records	records of the results of inspections and repair according to source §63.104(f)(1).
18. an existing or new affected source	control device maintenance records	records of planned routine maintenance for control devices used to comply with the percent reduction emission limit for storage vessels in Table 1 to Subpart UUUU.
19. an existing or new affected source	safety device records	a record of each time a safety device is opened to avoid unsafe conditions according to §63.5505(d).

20. Table 10 to Subpart UUUU is revised to read as follows:

Table 10 to Subpart UUUU of Part 63 - Applicability of General Provisions to Subpart UUUU

As required in §§63.5515(h) and 63.5600, you must comply with the appropriate General Provisions requirements specified in the following table:

Citation	Subject	Brief description	Applies to Subpart UUUU
§63.1	Applicability	Initial applicability determination; applicability after standard established;	Yes.

Citation	Subject	Brief description	Applies to Subpart UUUU
		permit requirements; extensions, notifications	
§63.2	Definitions	Definitions for part 63 standards	Yes
§63.3	Units and Abbreviations	Units and abbreviations for part 63 standards	Yes.
§63.4	Prohibited Activities and Circumvention	Prohibited activities; compliance date; circumvention, severability	Yes.
§63.5	Preconstruction Review and Notification Requirements	Preconstruction review requirements of section 112(i)(1)	Yes.
§63.6(a)	Applicability	General provisions apply unless compliance extension; general provisions apply to area sources that become major	Yes.
§63.6(b)(1) through (4)	Compliance Dates for New and Reconstructed sources	Standards apply at effective date; 3 years after effective date; upon startup; 10 years after construction or reconstruction commences for CAA section 112(f)	Yes.
§63.6(b)(5)	Notification	Must notify if commenced construction or reconstruction after proposal	Yes.
§63.6(b)(6)	[Reserved]		
§63.6(b)(7)	Compliance Dates for New and Reconstructed Area Sources That Become Major	Area sources that become major must comply with major source and standards immediately upon becoming major, regardless of whether required to comply when they were an area source	Yes.
§63.6(c)(1) and (2)	Compliance Dates for Existing Sources	Comply according to date in subpart, which must be no later than 3 years after effective date; for CAA section 112(f) standards, comply within 90 days of effective date unless compliance extension	Yes.

Citation	Subject	Brief description	Applies to Subpart UUUU
§63.6(c)(3) and (4)	[Reserved]		
§63.6(c)(5)	Compliance Dates for Existing Area Sources That Become Major	Area sources that become major must comply with major source standards by date indicated in subpart or by equivalent time period (*e.g.*, 3 years)	Yes.
§63.6(d)	[Reserved]		
§63.6(e)(1)(i)	General Duty to Minimize Emissions.	You must operate and maintain affected source in a manner consistent with safety and good air pollution control practices for minimizing emissions	No, for new or reconstructed sources which commenced construction or reconstruction after **[INSERT DATE OF PUBLICATION IN THE FEDERAL REGISTER]**, see §63.5515 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.
§63.6(e)(1)(ii)	Requirement to Correct Malfunctions ASAP	You must correct malfunctions as soon as practicable after their occurrence	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

Citation	Subject	Brief description	Applies to Subpart UUUU
			sources before **[DATE 181 DAYS AFTER PUBLICATION OF FINAL RULE IN THE FEDERAL REGISTER]**, and No thereafter.
§63.6(e)(1)(iii)	Operation and Maintenance Requirements	Operation and maintenance requirements are enforceable independent of emissions limitations or other requirements in relevant standards	Yes.
§63.6(e)(2)	[Reserved]		
§63.6(e)(3)	Startup, Shutdown, and Malfunction Plan	Requirement for startup, shutdown, and malfunction and SSM plan; content of SSM plan	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)	SSM Exemption	You must comply with emission standards at all times except during SSM	No, for new or reconstructed sources which commenced construction or reconstruction after **[INSERT DATE**

Citation	Subject	Brief description	Applies to Subpart UUUU
			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) and (3)	Methods for Determining Compliance/Finding of Compliance	Compliance based on performance test, operation and maintenance plans, records, inspection	Yes.
§63.6(g)(1) through (3)	Alternative Standard	Procedures for getting an alternative standard	Yes.
§63.6(h)(1)	SSM Exemption	You must comply with opacity and visible emission standards at all times except during SSM	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 utilizing flares before **[DATE 181 DAYS AFTER PUBLICATION OF FINAL RULE IN THE FEDERAL REGISTER]**, and No thereafter.
§63.6(h)(2) through (9)	Opacity and Visible Emission (VE) Standards	Requirements for opacity and visible emission limits	Yes, but only for flares for which EPA Method 22

Citation	Subject	Brief description	Applies to Subpart UUUU
			observations are required under §63.11(b).
§63.6(i)(1) through (16)	Compliance Extension	Procedures and criteria for Administrator to grant compliance extension	Yes.
§63.6(j)	Presidential Compliance Exemption	President may exempt source category from requirement to comply with subpart	Yes.
§63.7(a)(1) and (2)	Performance Test Dates	Dates for conducting initial performance test; testing and other compliance demonstrations; must conduct 180 days after first subject to subpart	Yes.
§63.7(a)(3)	Section 114 Authority	Administrator may require a performance test under CAA Section 114 at any time	Yes.
§63.7(b)(1)	Notification of Performance Test	Must notify Administrator 60 days before the test	Yes.
§63.7(b)(2)	Notification of Rescheduling	If rescheduling a performance test is necessary, must notify Administrator 5 days before scheduled date of rescheduled test	Yes.
§63.7(c)	Quality Assurance and Test Plan	Requirement to submit site-specific test plan 60 days before the test or on date Administrator agrees with; test plan approval procedures; performance audit requirements; internal and external QA procedures for testing	No.
§63.7(d)	Testing Facilities	Requirements for testing facilities	Yes.
§63.7(e)(1)	Performance Testing	Performance tests must be conducted under representative conditions; cannot conduct performance tests during SSM; not a	No, see §63.5535 and Table 4.

Citation	Subject	Brief description	Applies to Subpart UUUU
		violation to exceed standard during SSM	
§63.7(e)(2)	Conditions for Conducting Performance Tests	Must conduct according to this subpart and EPA test methods unless Administrator approves alternative	Yes.
§63.7(e)(3)	Test Run Duration	Must have three test runs of at least 1 hour each; compliance is based on arithmetic mean of three runs; conditions when data from an additional test run can be used	Yes.
§63.7(f)	Alternative Test Method	Procedures by which Administrator can grant approval to use an alternative test method	Yes.
§63.7(g)	Waiver of Tests	Procedures for Administrator to waive performance test	Yes.
§63.8(a)(1)	Applicability of Monitoring Requirements	Subject to all monitoring requirements in standard	Yes.
§63.8(a)(2)	Performance Specifications	Performance specifications in Appendix B of 40 CFR part 60 apply	Yes.
§63.8(a)(3)	[Reserved]		
§63.8(a)(4)	Monitoring with Flares	Unless your subpart says otherwise, the requirements for flares in §63.11 apply	Yes.
§63.8(b)(1)	Monitoring	Must conduct monitoring according to standard unless Administrator approves alternative	Yes.
§63.8(b)(2) and (3)	Multiple Effluents and Multiple Monitoring Systems	Specific requirements for installing monitoring systems; must install on each effluent before it is combined and before it is released to the atmosphere unless Administrator approves otherwise; if more than one monitoring system	Yes.

Citation	Subject	Brief description	Applies to Subpart UUUU
		on an emission point, must report all monitoring system results, unless one monitoring system is a backup	
§63.8(c)(1) and (c)(1)(i)	General Duty to Minimize Emissions and CMS Operation	Maintain monitoring system in a manner consistent with good air pollution control practices	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)(1)(ii)	Parts for Routine Repairs	Keep parts for routine repairs readily available	Yes.
§63.8(c)(1)(iii)	Requirements to develop SSM Plan for CMS	Develop a written SSM plan for CMS	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**

Citation	Subject	Brief description	Applies to Subpart UUUU
			OF FINAL RULE IN THE FEDERAL REGISTER], and No thereafter.
§63.8(c)(2) and (3)	Monitoring System Installation	Must install to get representative emission of parameter measurements; must verify operational status before or at performance test	Yes.
§63.8(c)(4)	Continuous Monitoring System (CMS) Requirements	CMS must be operating except during breakdown, out-of control, repair, maintenance, and high-level calibration drifts	No. Replaced with language in §63.5560.
§63.8(c)(4)(i) and (ii)	Continuous Monitoring System (CMS) Requirements	Continuous opacity monitoring systems (COMS) must have a minimum of one cycle of sampling and analysis for each successive 10-second period and one cycle of data recording for each successive 6-minute period; CEMS must have a minimum of one cycle of operation for each successive 15-minute period	Yes, except that §63.8(c)(4)(i) does not apply because subpart UUUU does not require COMS.
§63.8(c)(5)	COMS Minimum Procedures	COMS minimum procedures	No. Subpart UUUU does not require COMS.
§63.8(c)(6)	CMS Requirements	Zero and high level calibration check requirements; out-of-control periods	No. Replaced with language in §63.5545.
§63.8(c)(7) and (8)	CMS Requirements	Out-of-control periods, including reporting	No. Replaced with language in §63.5580(c)(6).
§63.8(d)	CMS Quality Control	Requirements for CMS quality control, including calibration, etc.; must keep quality control plan on record for 5 years; keep old versions for 5 years after	No, except for requirements in §63.8(d)(2).

Citation	Subject	Brief description	Applies to Subpart UUUU
		revisions; program of correction action to be included in plan required under §63.8(d)(2).	
§63.8(e)	CMS Performance Evaluation	Notification, performance evaluation test plan, reports	Yes, except that §63.8(e)(5)(ii) does not apply because subpart UUUU does not require COMS.
§63.8(f)(1) through (5)	Alternative Monitoring Method	Procedures for Administrator to approve alternative monitoring	Yes, except that no site-specific test plan is required. The request to use an alternative monitoring method must be submitted with the notification of performance test or CEMS performance evaluation or 60 days prior to any initial compliance demonstration.
§63.8(f)(6)	Alternative to Relative Accuracy Test	Procedures for Administrator to approve alternative relative accuracy tests for CEMS	Yes.
§63.8(g)(1) through (4)	Data Reduction	COMS 6-minute averages calculated over at least 36 evenly spaced data points; CEMS 1-hour averages computed over at least four equally spaced data points; data that cannot be used in average	No. Replaced with language in §63.5545(e).
§63.8(g)(5)	Data Reduction	Data that cannot be used in computing averages for CEMS and COMS	No. Replaced with language in §63.5560(b).
§63.9(a)	Notification Requirements	Applicability and State delegation	Yes.
§63.9(b)(1) through (5)	Initial Notifications	Submit notification subject 120 days after effective date; notification of intent to	Yes.

Citation	Subject	Brief description	Applies to Subpart UUUU
		construct or reconstruct; notification of commencement of construction or reconstruction; notification of startup; contents of each	
§63.9(c)	Request for Compliance Extension	Can request if cannot comply by date or if installed BACT/LAER	Yes.
§63.9(d)	Notification of Special Compliance Requirements for New Source	For sources that commence construction between proposal and promulgation and want to comply 3 years after effective date	Yes.
§63.9(e)	Notification of Performance Test	Notify Administrator 60 days prior	Yes.
§63.9(f)	Notification of VE or Opacity Test	Notify Administrator 30 days prior	Yes, but only for flares for which EPA Method 22 observations are required as part of a flare compliance assessment.
§63.9(g)	Additional Notifications When Using CMS	Notification of performance evaluation; notification using COMS data; notification that exceeded criterion for relative accuracy	Yes, except that §63.9(g)(2) does not apply because subpart UUUU does not require COMS.
§63.9(h)(1) through (6)	Notification of Compliance Status Report	Contents; due 60 days after end of performance test or other compliance demonstration, except for opacity or VE, which are due 30 days after; when to submit to Federal vs. State authority	Yes.
§63.9(i)	Adjustment of Submittal Deadlines	Procedures for Administrator to approve change in when notifications must be submitted	
§63.9(j)	Change in Previous Information	Must submit within 15 days after the change	Yes, except that the notification must be submitted as part of

Citation	Subject	Brief description	Applies to Subpart UUUU
			the next semiannual compliance report, as specified in Table 8 to this subpart.
§63.10(a)	Recordkeeping and Reporting	Applies to all, unless compliance extension; when to submit to Federal vs. State authority; procedures for owners of more than one source	Yes.
§63.10(b)(1)	Recordkeeping and Reporting	General requirements; keep all records readily available; keep for 5 years	Yes.
§63.10(b)(2)(i)	Recordkeeping of Occurrence and Duration of Startups and Shutdowns	Records of occurrence and duration of each startup or shutdown that causes source to exceed emission limitation	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)	Recordkeeping of Failures to Meet a Standard	Records of occurrence and duration of each malfunction of operation or air pollution control and monitoring equipment	No, see Table 9 for recordkeeping of (1) date, time and duration; (2) listing of affected source or equipment, and an estimate of the quantity of each regulated pollutant emitted over the

Citation	Subject	Brief description	Applies to Subpart UUUU
			standard; and (3) actions to minimize emissions and correct the failure.
§63.10(b)(2)(iii)	Maintenance Records	Records of maintenance performed on air pollution control and monitoring equipment	Yes.
§63.10(b)(2)(iv) and (v)	Actions Taken to Minimize Emissions During SSM	Records of actions taken during SSM to minimize emissions	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), (x), and (xi)	CMS Records	Malfunctions, inoperative, out-of-control; calibration checks, adjustments, maintenance	Yes.
§63.10(b)(2)(vii) through (ix)	Records	Measurements to demonstrate compliance with emission limits; performance test, performance evaluation, and opacity/VE observation results; measurements to determine conditions of performance tests and performance evaluations	Yes, including results of EPA Method 22 observations required as part of a flare compliance assessment.
§63.10(b)(2)(xii)	Records	Records when under waiver	Yes.

Citation	Subject	Brief description	Applies to Subpart UUUU
§63.10(b)(2)(xiii)	Records	Records when using alternative to relative accuracy test	Yes.
§63.10(b)(2)(xiv)	Records	All documentation supporting Initial Notification and Notification of Compliance Status Report	Yes.
§63.10(b)(3)	Records	Applicability determinations	Yes.
§63.10(c)(1) through (6), (9) through (14)	Records	Additional records for CMS	Yes.
§63.10(c)(7) and (8)	Records	Records of excess emissions and parameter monitoring exceedances for CMS	No. Replaced with language in Table 9 to this subpart.
§63.10(c)(15)	Use of SSM Plan	Use SSM plan to satisfy recordkeeping requirements for identification of malfunction, correction action taken, and nature of repairs to CMS	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)	General Reporting Requirements	Requirement to report	Yes.
§63.10(d)(2)	Report of Performance Test Results	When to submit to Federal or State authority	Yes, except that Table 7 to this subpart specifies the submittal date for the Notification of

Citation	Subject	Brief description	Applies to Subpart UUUU
			Compliance Status Report.
§63.10(d)(3)	Reporting Opacity or VE Observations	What to report and when	Yes, but only for flares for which EPA Method 22 observations are required as part of a flare compliance assessment.
§63.10(d)(4)	Progress Reports	Must submit progress reports on schedule if under compliance extension	Yes.
§63.10(d)(5)(i)	Periodic SSM Reports	Contents and submission of periodic SSM reports	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 §63.5580(c)(4) and Table 8 for malfunction reporting requirements.
§63.10(d)(5)(ii)	Immediate SSM Reports	Contents and submission of immediate SSM reports	No, for new or reconstructed sources which commenced construction or reconstruction after

Citation	Subject	Brief description	Applies to Subpart UUUU
			[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]** except that the immediate SSM report must be submitted as part of the next semiannual compliance report, as specified in Table 8 to this subpart, and No thereafter.
§63.10(e)(1) and (2)	Additional CMS Reports	Must report results for each CEMS on a unit; written copy of performance evaluation; three copies of COMS performance evaluation	Yes, except that §63.10(e)(2)(ii) does not apply because subpart UUUU does not require COMS.
§63.10(e)(3)(i) through (iii)	Reports	Schedule for reporting excess emissions and parameter monitor exceedance (now defined as deviations)	No. Replaced with language in §63.5580.
§63.10(e)(3)(iv)	Excess Emissions Reports	Requirement to revert to quarterly submission if there is an excess emissions and parameter monitor exceedance (now defined as deviations); provision to request semiannual reporting after compliance for 1 year; submit report by 30th day	No. Replaced with language in §63.5580.

Citation	Subject	Brief description	Applies to Subpart UUUU
		following end of quarter or calendar half; if there has not been an exceedance or excess emission (now defined as deviations), report contents is a statement that there have been no deviations	
§63.10(e)(3)(v)	Excess Emissions Reports	Must submit report containing all of the information in §63.10(c)(5) through (13), §63.8(c)(7) and (8)	No. Replaced with language in §63.5580.
§63.10(e)(3)(vi) through (viii)	Excess Emissions Report and Summary Report	Requirements for reporting excess emissions for CMS (now called deviations); requires all of the information in §63.10(c)(5) through (13), §63.8(c)(7) and (8)	No. Replaced with language in §63.5580.
§63.10(e)(4)	Reporting COMS Data	Must submit COMS data with performance test data	No. Subpart UUUU does not require COMS.
§63.10(f)	Waiver for Recordkeeping or Reporting	Procedures for Administrator to waive	Yes.
§63.11	Control and Work Practice Requirements	Requirements for flares and alternative work practice for equipment leaks	Yes.
§63.12	State Authority and Delegations	State authority to enforce standards	Yes.
§63.13	Addresses	Addresses where reports, notifications, and requests are sent	Yes.
§63.14	Incorporations by Reference	Test methods incorporated by reference	Yes.
§63.15	Availability of Information and Confidentiality	Public and confidential information	Yes.
§63.16	Performance Track Provisions	Requirements for Performance Track member facilities	Yes.