Federal Register

Monday,
August 28, 2000

Part II

Environmental Protection Agency

40 CFR Part 63
National Emission Standards for Hazardous Air Pollutants: Cellulose Products Manufacturing; Proposed Rule

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 63

[FRL–6853–6]

RIN 2060–AH11

National Emission Standards for Hazardous Air Pollutants: Cellulose Products Manufacturing

AGENCY: Environmental Protection Agency (EPA).

ACTION: Proposed rule.

SUMMARY: This action proposes national emission standards for hazardous air pollutants (NESHAP) for cellulose products manufacturing. Cellulose products manufacturing includes both the Viscose Processes source category and the Cellulose Ethers source category. The Viscose Processes source category comprises the cellulose food casing, rayon, cellophane, and cellulosic sponge industries. The Cellulose Ethers source category comprises the methyl cellulose, hydroxypropyl methyl cellulose, hydroxypropyl cellulose, hydroxyethyl cellulose, and carboxymethyl cellulose industries. The EPA has identified the Viscose Processes source category and the Cellulose Ethers source category as including major sources of hazardous air pollutant (HAP) emissions, such as carbon disulfide (CS_2), carbonyl sulfide (COS), ethylene oxide, methanol, methyl chloride, propylene oxide, and toluene. These proposed standards will implement section 112(d) of the Clean Air Act (CAA) by requiring all major sources to meet HAP emission standards reflecting the application of the maximum achievable control technology (MACT). The proposed standards will reduce HAP emissions by approximately 4,060 tons per year (ton/yr). In addition, the proposed standards will reduce hydrogen sulfide (H_2S) emissions by approximately 1,490 ton/yr.

DATES: *Comments.* Submit comments on or before October 27, 2000.

Public Hearing. If anyone contacts us requesting to speak at a public hearing by September 18, 2000, a public hearing will be held on September 27, 2000.

ADDRESSES: *Comments.* Written comments should be submitted (in duplicate if possible) to: Air and Radiation Docket and Information Center (6102), Attention Docket Number A–99–39, Room M–1500, U.S. Environmental Protection Agency, 1200 Pennsylvania Anenue, NW., Washington, DC 20460. We request a separate copy also be sent to the contact person listed below in the **FOR FURTHER INFORMATION CONTACT** section.

Public Hearing. If a public hearing is held, it will be held at 10:00 a.m. on September 27, 2000 in our Office of Administration Auditorium, Research Triangle Park, North Carolina, or at an alternate site nearby.

Docket. Docket No. A–99–39 contains supporting information used in developing the standards. The docket is located at the U.S. Environmental Protection Agency, 401 M Street, SW., Washington, DC 20460 in room M–1500, Waterside Mall (ground floor), and may be inspected from 8:30 a.m. to 5:30 p.m., Monday through Friday, excluding legal holidays.

FOR FURTHER INFORMATION CONTACT: For questions about the proposed rule, contact Mr. William Schrock; Organic Chemicals Group; Emission Standards Division (MD–13); U.S. Environmental Protection Agency; Research Triangle Park, North Carolina, 27711; (919) 541–5032; schrock.bill@epa.gov. For questions about the public hearing, contact Ms. Maria Noell; Organic Chemicals Group; Emission Standards Division (MD–13); U.S. Environmental Protection Agency; Research Triangle Park, North Carolina 27711; (919) 541–5673; noell.maria@epa.gov.

SUPPLEMENTARY INFORMATION:

Comments. Comments and data may be submitted by electronic mail (e-mail) to: a-and-r-docket@epa.gov. Electronic comments must be submitted as an ASCII file to avoid the use of special characters and encryption problems and will also be accepted on disks in WordPerfect® version 5.1, 6.1 or Corel 8 file format. All comments and data submitted in electronic form must note the docket number: A–99–39. No confidential business information (CBI) should be submitted by e-mail. Electronic comments may be filed online at many Federal Depository Libraries.

Commenters wishing to submit proprietary information for consideration must clearly distinguish such information from other comments and clearly label it as CBI. Send submissions containing such proprietary information directly to the following address, and not to the public docket, to ensure that proprietary information is not inadvertently placed in the docket: Attention: Mr. William Schrock; c/o OAQPS Document Control Officer (Room 740B); U.S. Environmental Protection Agency; 411 W. Chapel Hill Street; Durham, NC 27701. We will disclose information identified as CBI only to the extent allowed by the procedures set forth in 40 CFR part 2. If no claim of confidentiality accompanies a submission when we receive it, the information may be made available to the public without further notice to the commenter.

Public Hearing. Persons interested in presenting oral testimony or inquiring as to whether a hearing is to be held should contact Ms. Maria Noell at least 2 days in advance of the public hearing. Persons interested in attending such a public hearing must also contact Ms. Noell to verify the time, date, and location of the hearing. The address, telephone number, and e-mail address for Ms. Noell are listed in the preceding **FOR FURTHER INFORMATION CONTACT** section. If a public hearing is held, it will provide interested parties the opportunity to present data, views, or arguments concerning these proposed emission standards.

Docket. The docket is an organized and complete file of all the information considered by us in the development of this rulemaking. The docket is a dynamic file because material is added throughout the rulemaking process. The docketing system is intended to allow members of the public and industries involved to readily identify and locate documents so that they can effectively participate in the rulemaking process. Along with the proposed and promulgated standards and their preambles, the contents of the docket will serve as the record in the case of judicial review. (See section 307(d)(7)(A) of the CAA.) The regulatory text and other materials related to this rulemaking are available for review in the docket or copies may be mailed on request from the Air Docket by calling (202) 260–7548. A reasonable fee may be charged for copying docket materials.

Worldwide Web (WWW). In addition to being available in the docket, an electronic copy of today's proposed rule will also be available on the WWW through the Technology Transfer Network (TTN). Following the Administrator's signature, a copy of the rule will be posted on the TTN's policy and guidance page for newly proposed or promulgated rules http://www.epa.gov/ttn/oarpg. The TTN provides information and technology exchange in various areas of air pollution control. If more information regarding the TTN is needed, call the TTN HELP line at (919) 541–5384.

Regulated Entities. Categories and entities potentially regulated by this action include those listed in the following table.

Category	SIC	NAICS	Examples of regulated entities
Industry	3089	326199	cellulose food casing operations. cellophane operations. cellulosic sponge operations.
	2821	325211	cellulosic sponge operations.
	2823	325221	rayon operations.
	2819	325188	
	2869	325199	cellulose ether operations.

This table is not intended to be exhaustive, but rather provides a guide for readers regarding entities likely to be regulated by this action. To determine whether your process operation is regulated by this action, you should examine the applicability criteria in § 63.5481 of the proposed rule. If you have any questions regarding the applicability of this action to a particular entity, consult the person listed in the preceding **FOR FURTHER INFORMATION CONTACT** section.

Outline. The information presented in this preamble is organized as follows:

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G. Paperwork Reduction Act
H. National Technology Transfer and Advancement Act of 1995

I. Background

A. What is the source of authority for development of NESHAP?

The CAA was enacted, in part, ''to protect and enhance the quality of the Nation's air resources so as to promote the public health and welfare and the productive capacity of its population * * *'' (section 101(b)(1) of the CAA). Section 112 of the CAA requires us to list categories and subcategories of major sources and area sources of HAP and to establish NESHAP for the listed source categories and subcategories. The categories of major sources covered by today's proposed NESHAP were listed on the following dates: Cellulose Food Casings, Rayon, Cellophane, Methyl Cellulose, Carboxymethyl Cellulose, and Cellulose Ethers—July 16, 1992 (57 FR 31576); and Cellulosic Sponges—November 18, 1999 (64 FR 63026). Major sources of HAP are those that have the potential to emit greater than 10 ton/yr of any one HAP or 25 ton/yr of any combination of HAP.

B. What criteria are used in the development of NESHAP?

Section 112 of the CAA requires that we establish NESHAP for the control of HAP from both new and existing major sources. The CAA requires the NESHAP to reflect the maximum degree of reduction in emissions of HAP that is achievable. This level of control is commonly referred to as the MACT.

The MACT floor is the minimum control level allowed for NESHAP and is defined under section 112(d)(3) of the CAA. In essence, the MACT floor ensures that the standard is set at a level that assures that all major sources achieve the level of control at least as stringent as that already achieved by the better-controlled and lower-emitting sources in each source category or subcategory. For new sources, the MACT floor cannot be less stringent than the emission control that is achieved in practice by the best-controlled similar source. The MACT standards for existing sources can be less stringent than standards for new sources, but they cannot be less stringent than the average emission limitation achieved by the best-performing 12 percent of existing sources in the category or subcategory (or the best-performing 5 sources for categories or subcategories with fewer than 30 sources).

In developing MACT, we also consider control options that are more stringent than the floor. We may establish standards more stringent than the floor based on the consideration of cost of achieving the emissions reductions, any non-air quality health and environmental impacts, and energy requirements.

C. What is the history of the source categories?

1. Listing the Initial Source Categories

Section 112 of the CAA requires us to establish emission standards for categories of stationary sources that emit HAP. On July 16, 1992, we published an initial list of source categories to be regulated (57 FR 31576). Today's proposed rule groups the various cellulose products manufacturing industries included in the initial list with another industry recently added to the list and combines them to create two new source categories.

The initial source category list included separate source categories for various cellulose products manufacturing industries. These source categories are Cellulose Food Casings, Rayon, Cellophane, Methyl Cellulose, Carboxymethyl Cellulose, and Cellulose Ethers. The Cellulose Ethers source

category on the initial list included the hydroxyethyl cellulose, hydroxypropyl cellulose, and hydroxypropyl methyl cellulose industries.

2. Adding Another Source Category

In developing this proposed rule, we identified another cellulose products manufacturing industry, cellulosic sponge manufacturing, that was not on the initial source category list. Based on information we obtained while gathering data for this proposed rule, we determined that the production of cellulosic sponges is similar to the production of some of the other cellulose products (cellulose food casings, rayon, and cellophane). We found similarities in raw materials, process operations, emission characteristics, and control device applicability. We added Cellulosic Sponges to the source category list under section 112(c) of the CAA on November 18, 1999 (64 FR 63026).

3. Reducing to Two Source Categories

In developing the proposed rule, we decided to combine the various cellulose products manufacturing source categories on the initial source category list with the Cellulosic Sponge source category that was listed November 18, 1999. Then we split out the Cellulose Food Casing, Rayon, Cellophane, and Cellulosic Sponge manufacturing industries and combined them to create a new source category named ''Viscose Processes.'' We split out the various cellulose ether industries (Methyl Cellulose, Carboxymethyl Cellulose, and Cellulose Ethers) and combined them to create a new source category named ''Cellulose Ethers.''

Within each new source category (Viscose Processes and Cellulose Ethers), we found similarities in raw materials, process operations, emission characteristics, and control device applicability. Based on these factors, we concluded that separate MACT standards were not warranted for each of the individual cellulose products source categories on the source category list.

Instead, we believe that it is technically feasible to regulate emissions from a variety of viscose process operations (or a variety of cellulose ether operations) by a single set of standards. Similar to the Hazardous Organic NESHAP (HON) for the Synthetic Organic Chemical Manufacturing Industry (SOCMI), we are proposing separate requirements for process vents, storage vessels, equipment leaks, and wastewater HAP emission points.

One set of standards for each of the two new source categories would ensure that process equipment with comparable HAP emissions and control technologies are subject to consistent emission control requirements. In addition, some of the cellulose ether operations are collocated within individual plants. Plants with collocated cellulose ether manufacturing operations could more easily comply with one set of standards than with individual standards for each of the collocated process operations.

D. What are the health effects associated with the pollutants emitted from cellulose products manufacturing operations?

Today's proposed rule protects air quality and promotes the public health by reducing emissions of some of the HAP listed in section 112(b)(1) of the CAA. Available emission data, collected as we developed this proposed rule, show that CS_2, COS, and toluene are the HAP emitted in the greatest quantities from viscose process operations. Ethylene oxide, methanol, methyl chloride, and propylene oxide are the HAP emitted in the greatest quantities from cellulose ether operations. Exposure to these HAP has been demonstrated to cause adverse health effects.

This section describes the adverse health effects associated with the exposure to these specific HAP. The adverse health effects resulting from exposure to HAP can range from mild to severe. The severity of health effects resulting from HAP exposure depends on: (1) Concentrations of HAP in the area; (2) the amount of time a person is exposed; and (3) characteristics of exposed individuals (such as genetics, age, pre-existing health conditions, and lifestyle) which vary significantly among the population. Exposure is also influenced by source-specific characteristics (such as emission rates and local meteorological conditions), as well as pollutant-specific characteristics.

The HAP that this proposed rule would control are associated with a variety of adverse health effects. These adverse health effects include chronic health disorders (such as effects on the central nervous and reproductive systems) and acute health disorders (such as irritation of eyes, throat, and mucous membranes and narcotic effects). Three of the HAP have been classified as probable or possible human carcinogens. In general, these findings have only been shown with concentrations higher than those typically found in the ambient air.

We do not have the kind of current, detailed data on the operations covered by today's proposed rule (and the people living around the operations) that are necessary to determine the actual population exposures to the HAP emitted from these operations and the potential for resultant health effects. Therefore, we do not know the extent to which the adverse health effects described above occur in the populations surrounding these operations. However, to the extent the adverse effects do occur, this proposed rule will reduce emissions and subsequent exposures.

1. Health Effects Associated with HAP Emitted from Viscose Process Operations

Acute (short-term) inhalation exposure of humans to CS_2 has caused changes in breathing and chest pains. Nausea, vomiting, dizziness, fatigue, headache, mood changes, lethargy, blurred vision, delirium, and convulsions have also been reported in humans acutely exposed by inhalation. Neurologic effects, including behavioral and neurophysiological changes, have been observed in chronic (long-term) human and animal inhalation studies. Reproductive effects, such as decreased sperm count and menstrual disturbances, have been observed in humans exposed to CS_2 by inhalation. Developmental effects, including birth defects, toxicity to the embryo, and functional and behavioral disturbances, have been observed in animal studies. We have not classified CS_2 with respect to potential human carcinogenicity.

Acute (short-term) inhalation of high concentrations of COS may cause narcotic effects in humans. Carbonyl sulfide may also irritate the eyes and skin in humans. No information is available on the chronic (long-term), reproductive, developmental, or carcinogenic effects of COS in humans. We have not classified COS with respect to potential human carcinogenicity.

Acute (short-term) inhalation of toluene by humans may cause effects to the central nervous system (CNS), such as fatigue, sleepiness, headache, and nausea, as well as irregular heartbeat. Adverse CNS effects have been reported in chronic abusers exposed to high levels of toluene. Symptoms include tremors, decreased brain size, involuntary eye movements, and impaired speech, hearing, and vision. Chronic (long-term) inhalation exposure of humans to lower levels of toluene also causes irritation of the upper respiratory tract, eye irritation, sore throat, nausea, dizziness, headaches, and difficulty with sleep. Studies of

children of pregnant women exposed by inhalation to toluene or to mixed solvents have reported CNS problems, facial and limb abnormalities, and delayed development. However, these effects may not be attributable to toluene alone.

2. Health Effects Associated with HAP Emitted from Cellulose Ether Operations

The acute (short-term) effects of ethylene oxide in humans consist mainly of CNS depression and irritation of the eyes and mucous membranes. High concentrations of ethylene oxide produce weakness, nausea, bronchitis, pulmonary edema, emphysema, and death. Chronic (long-term) exposure to ethylene oxide in humans can cause irritation of the eyes, skin, and mucous membranes, and adversely affect the functioning of the brain and nerves. Limited evidence from animal and human studies indicates that inhalation exposure to ethylene oxide may result in adverse reproductive effects, such as an increased rate of miscarriages. Some limited human cancer data suggest an increase in the incidence of leukemia, stomach cancer, cancer of the pancreas, and Hodgkin's disease in workers exposed to ethylene oxide. Ethylene oxide has been shown to cause lung, gland, and uterine tumors in laboratory animals. We have classified ethylene oxide as a Group B1 (probable) human carcinogen.

Acute (short-term) or chronic (long-term) exposure of humans to methanol by inhalation or ingestion may result in blurred vision, headache, dizziness, and nausea. No information is available on the reproductive, developmental, or carcinogenic effects of methanol in humans. Birth defects have been observed in the offspring of rats and mice exposed to methanol by inhalation. A methanol inhalation study using rhesus monkeys reported a decrease in the length of pregnancy and limited evidence of impaired learning ability in offspring. We have not classified methanol with respect to potential human carcinogenicity.

Acute (short-term) exposure to high concentrations of methyl chloride in humans causes severe neurological effects, including convulsions, coma, and death. Methyl chloride also affects the heart rate, blood pressure, liver, and kidney function in humans. No information is available regarding chronic (long-term) systemic effects of methyl chloride in humans, but animal studies have reported effects to the liver, kidney, spleen, and CNS. No information is available concerning developmental or reproductive effects of methyl chloride in humans. Inhalation studies have demonstrated that methyl chloride causes reproductive effects in male rats, with effects such as testicular lesions and decreased sperm production. We have classified methyl chloride as a Group C (possible) human carcinogen on the basis of limited human data and animal studies that have reported kidney tumors in male mice.

Acute (short-term) exposure of workers to propylene oxide may cause CNS effects, such as headache, weakness, loss of coordination, and coma. Propylene oxide also irritates the eyes and respiratory tract, causing coughing and difficulty in breathing, possibly leading to pulmonary edema and pneumonia. Health effects from chronic propylene oxide exposure in humans have not been reported. Chronic (long-term) animal studies have reported neurological disorders and inflammatory lesions of the nasal cavity, trachea, and lungs. We have classified propylene oxide as a Group B2 (probable) human carcinogen on the basis of nasal tumors observed in rodents exposed by inhalation.

II. Summary of the Proposed Rule

A. What source categories and subcategories are affected by this proposed rule?

Today's proposed rule applies to the Viscose Processes source category and the Cellulose Ethers source category. There are no subcategories.

B. What are the primary sources of HAP emissions and what are the emissions?

The primary sources of HAP emissions at cellulose products manufacturing operations are process vents, storage vessels, equipment leaks, and wastewater systems. Total baseline HAP emissions for all cellulose products manufacturing operations at the current level of control are 20,700 ton/yr. Baseline emissions from process vents account for most of the emissions, or approximately 92 percent of the total. Baseline emissions from wastewater, equipment leaks, and storage vessels account for approximately 4 percent, 3 percent, and 1 percent of the total, respectively.

C. What is the affected source?

The affected source for the Viscose Processes source category is the sum of all operations engaged in the production of cellulose food casing, rayon, cellophane, or cellulosic sponge. The affected source for the Cellulose Ethers source category is the sum of all operations engaged in the production of cellulose ethers.

D. What are the emission limits, operating limits and work practice standards?

As provided under the authority of CAA section 112(h), we are proposing the requirements of this rule in the form of emission limits (such as mass rate, percent reduction, and concentration emission limits), operating limits, and work practice standards. Work practice standards include design, equipment, work practices, and operational standards.

In establishing HAP emission limits for viscose process affected sources, we selected total sulfide emissions as a surrogate for HAP emissions of CS_2 and COS. We are defining total sulfide emissions as the sum of all CS_2, COS, and H_2S emissions (reported as CS_2). (Emissions of H_2S are included because they are generated from by-products of the CS_2 reactions in the viscose process operation.) We are requiring owners and operators of cellulose food casing, rayon, cellophane, and cellulosic sponge operations at both new and existing viscose process affected sources to reduce the total sulfide emissions from their process vents by a specified percentage, which is unique to the type of viscose process operation.

We are requiring owners and operators of any of the three types of cellulose ether operations at both new and existing cellulose ether affected sources to reduce the total HAP emissions from their process vents by 99 percent. The HAP included in total HAP vary for each cellulose ether operation, depending on the cellulose ether product being manufactured.

We are requiring owners and operators of cellulose food casing, rayon, cellophane, and cellulosic sponge operations at both new and existing viscose process affected sources to control the CS_2 emissions from their CS_2 unloading and storage operations by complying with one of the following options: (1) Reducing CS_2 emissions by at least 83 percent using any compliance method, or (2) installing a nitrogen system for CS_2 unloading and storage, or (3) obtaining an equivalent emission reduction from elsewhere in the viscose process (such as process vents).

We are requiring owners and operators of cellulose ether operations at both new and existing cellulose ether affected sources to reduce the HAP emissions from their wastewater by complying with the applicable process wastewater provisions in subpart G of 40 CFR part 63.

We are requiring owners and operators of cellulose ether operations at both new and existing cellulose ether

affected sources to reduce the HAP emissions from equipment leaks by complying with the equipment leak provisions in subpart H of 40 CFR part 63. We are considering allowing owners or operators that can demonstrate that they are below a certain number of leaks an alternative to complying with the equipment leak provisions in subpart H; that is, they may comply with the equipment leak provisions in the proposed subpart F of 40 CFR part 65 (65 FR 57837, October 28, 1998) after it becomes final and we evaluate its requirements.

It is generally not cost effective for owners and operators of these affected sources to continuously test the emission control devices to ensure continuous compliance with the emission standards. Therefore, for the most likely control devices to be used, this proposed rule specifies operating parameters that can be monitored to demonstrate continuous compliance. This proposed rule also specifies operating limits for these parameters. We have established operating limits for carbon adsorbers, thermal oxidizers, condensers, biofilters, oil absorbers, wet scrubbers, and flares.

Owners and operators of affected sources that use a control device other than those listed in this proposed rule may establish operating limits for the appropriate operating parameters subject to prior written approval from the Administrator. The owners and operators must submit for approval a proposed site-specific monitoring 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. The owners and operators of the affected sources must install, operate, and maintain the parameter monitoring system for the alternative control device in accordance with the monitoring plan approved by the Administrator. The owners and operators will also establish operating limits during the initial performance test based on the operating parameters for the alternative control device included in the approved monitoring plan.

Owners and operators of affected sources that use a control device listed in this proposed rule may establish operating limits for alternative operating parameters subject to prior written approval by the Administrator. The owner and operators must submit the application for approval of alternative operating parameters no later than the notification of the performance test. 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 proposed rule), a description of the proposed alternative control device operating parameters, the monitoring approach, the frequency of measuring and recording the alternative parameters, the averaging period for the operating limits, 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 relevant emission limit. The owners and operators of the affected sources must install, operate, and maintain the alternative parameter monitoring systems in accordance with the application approved by the Administrator. The owners and operators will establish operating limits during the initial performance test based on the alternative operating parameters included in the approved application.

E. What are the testing and initial compliance requirements?

We are requiring owners and operators of all affected sources to conduct an initial performance test using specified EPA test methods to demonstrate initial compliance with the emission limits for process vents. The owner or operator would test at the inlet and outlet to the control device and at the stack(s) for the process operation and, using these results, calculate a percent reduction of emissions.

We are also requiring owners and operators of all viscose process affected sources to prepare a material balance that documents HAP usage and HAP emissions at the affected source. The material balance would be based on HAP emissions information from the initial performance test and HAP usage information from records at the affected source.

Prior to the initial performance test, owners and operators of affected sources are required to install the parameter monitoring equipment to be used to demonstrate compliance with the operating limits. During the initial test, the owners or operators would use the parameter monitoring equipment to establish operating parameter limits.

We are requiring owners and operators of cellulose food casing, rayon, cellophane, and cellulosic sponge operations at new and existing viscose process affected sources to demonstrate initial compliance with the emission limits and work practice standards for CS_2 unloading and storage operations by: (1) Documenting an 85 percent reduction in emissions from CS_2 unloading and storage operations; or (2) certifying that a nitrogen system is being used in CS_2 unloading and storage operations to prevent emissions; or (3) complying with the initial compliance requirements for process vents at viscose process affected sources, such that the total emission reductions from process vents equals the required emission reductions from both process vents and CS_2 unloading and storage operations.

We are requiring owners and operators of cellulose ether operations at new and existing cellulose ether affected sources to comply with the initial compliance provisions for process wastewater in subpart G of 40 CFR part 63.

We are requiring owners and operators of cellulose ether operations at new and existing cellulose ether affected sources to comply with the initial compliance provisions for equipment leaks in subpart H of 40 CFR part 63.

F. What are the continuous compliance provisions?

We are requiring owners and operators of all affected sources to monitor and record the operating parameters established during the initial performance test and calculate average operating parameter values averaged over the period of time specified in this proposed rule to demonstrate continuous compliance with the operating limits.

We are also requiring owners and operators of all viscose process affected sources to maintain the material balance documenting HAP usage and HAP emissions that they established as part of their initial compliance requirements. The owners and operators would use the HAP usage and HAP emissions information from the material balance to calculate the percent reduction in emissions and demonstrate continuous compliance with the emission limits.

We are requiring owners and operators of cellulose food casing, rayon, cellophane, and cellulosic sponge operations at new and existing viscose process affected sources to demonstrate continuous compliance with the emission limits and work practice standards for CS_2 unloading and storage operations by: (1) Keeping a record documenting the 85 percent reduction in emissions; or (2) keeping a record certifying that a nitrogen system is being used; or (3) complying with the continuous compliance requirements for process vents at viscose process affected

sources, such that the total emission reductions from process vents equals the required emission reductions from both process vents and CS_2 unloading and storage operations.

We are requiring owners and operators of cellulose ether operations at new and existing cellulose ether affected sources to comply with the continuous compliance provisions for process wastewater in subpart G of 40 CFR part 63.

We are requiring the owners and operators of cellulose ether operations at new and existing cellulose ether affected sources to comply with the continuous compliance provisions for equipment leaks in subpart H of 40 CFR part 63.

G. What are the notification, reporting, and recordkeeping requirements?

We are requiring owners and operators of all affected sources to submit initial notifications, notifications of performance tests, and notifications of compliance status by the specified dates in the proposed rule, which may vary depending on whether the affected source is new or existing.

We are also requiring owners and operators of all affected sources to submit semiannual compliance reports. In addition, if an owner or operator undertakes action that is inconsistent with their approved startup, shutdown, and malfunction (SSM) plan, then we are requiring that they submit SSM reports within 2 days of starting such action and within 7 days of ending such action.

We are requiring owners and operators of all affected sources to keep a copy of each notification and report, along with supporting documentation. Owners and operators of all affected sources also must keep records related to SSM, records of performance tests, and records for each continuous parameter monitoring system. Owners and operators of those viscose process affected sources that comply with the work practice standard for CS_2 unloading and storage operations requiring installation of a nitrogen system must keep records certifying that a nitrogen system is being used. Owners and operators of all viscose process affected sources must keep records of all material balances and calculations documenting the percent reduction in HAP emissions.

III. Rationale for Selecting the Proposed Standards

A. How did we select the source categories?

Today's proposed rule applies to the Viscose Processes source category and the Cellulose Ethers source category. We are creating these two source categories by combining seven existing source categories based on the differences between the categories and the similarities within each category with regard to raw materials, process operations, emission characteristics, and control device applicability.

1. Raw Materials

Both viscose process operations and cellulose ether operations use cellulose and sodium hydroxide (NaOH) as raw materials to produce alkali cellulose. However, after the production of alkali cellulose, the viscose process operations and cellulose ether operations add different chemicals to the process. All of the viscose process operations use primarily CS_2, while the cellulose ether operations use a variety of chemicals (such as propylene oxide, ethylene oxide, chloroacetic acid, and methyl chloride), depending upon the type of cellulose ether being produced. Some of the cellulose ether operations use the same chemicals. For example, both the methyl cellulose and hydroxypropyl methyl cellulose operations use methyl chloride, and both the hydroxypropyl methyl cellulose and hydroxypropyl cellulose operations use propylene oxide.

2. Process Operations

Although both operations produce alkali cellulose, the viscose process operations and cellulose ether operations are completely different in terms of the process steps and equipment used. For example, all of the viscose process operations include the following process steps: (1) production of alkali cellulose from cellulose and NaOH, (2) production of sodium cellulose xanthate from alkali cellulose and CS_2 (xanthation), (3) production of viscose from sodium cellulose xanthate and NaOH solution, (4) regeneration of liquid viscose into solid cellulose, and (5) washing of the solid cellulose product.

The cellulose ether operations include mostly different process steps, as follows: (1) production of alkali cellulose from cellulose and NaOH, (2) reaction of the alkali cellulose with organic chemical(s) to produce a cellulose ether product, (3) washing and purification of the cellulose ether product, and (4) drying of the cellulose ether product.

3. Emission Characteristics

Viscose process operations emit primarily CS_2, whereas cellulose ether operations do not use or emit CS_2. Emissions from cellulose ether operations include ethylene oxide, methanol, methyl chloride, and propylene oxide. The type of emissions depends upon the type of cellulose ether produced. Some of the cellulose ether operations have the same type of emissions; for example, the methyl cellulose, hydroxypropyl methyl cellulose, and carboxymethyl cellulose operations all emit methanol as a by-product of the reaction.

4. Control Device Applicability

All of the viscose process operations are subject to a permissible exposure limit (PEL) for CS_2 from the U.S. Occupational Safety and Health Administration (OSHA) that requires owners or operators to reduce worker exposure to CS_2 inside the buildings. The viscose process operations have been able to reduce worker exposure to CS_2 by increasing gas flow rates (thereby reducing CS_2 concentrations) and enclosing some processes. As a result, viscose process operations have lower HAP concentrations and higher gas flow rates compared to cellulose ether operations.

Because the viscose process operations and cellulose ether operations are different in terms of the type and concentration of HAP emitted as well as the gas flow rate, the types of control devices that are applicable to the viscose process operations and cellulose ether operations are also different. Cellulose ether operations are better able to apply certain types of control devices, such as condensers, that require high-concentration, low-flow gas streams to operate effectively. Control devices that are effective on low-concentration, high-flow gas streams, such as biofilters and carbon adsorbers, are the most viable options for reducing CS_2 emissions from the viscose process operations.

Some control devices that cellulose ether operations have effectively employed on their organic HAP emissions cannot be as easily employed by viscose process operations on their CS_2 emissions. For example, while wet scrubbers are effective control devices for cellulose ether operations, available data show them to have little effect on CS_2 emissions at viscose process operations. Also, viscose process operations have special concerns regarding the flammability of CS_2 that cellulose ether operations do not have to consider in selecting a control device.

B. How did we select any subcategories?

1. Viscose Process Industry

We reviewed the available information on the viscose process

industry and determined that the various viscose process operations should not be subcategorized. We found that viscose process operations are generally similar with respect to types of raw materials, emissions, initial process steps, and control device applicability.

We are establishing a single set of standards across the Viscose Processes source category in those areas (such as CS_2 unloading and storage, wastewater emissions, and equipment leaks) where we have found important similarities between the various viscose process operations. For example, most viscose process operations use nitrogen or water displacement to unload the liquid CS_2 from the railcar in order to control CS_2 emissions during unloading, and they use nitrogen or water padding in the head space of the CS_2 storage vessels in order to control CS_2 emissions from the vessels.

Other similarities between the various viscose process operations include how they address wastewater emissions and equipment leaks. None of the viscose process operations take any measures to control the CS_2 emissions from their wastewater, and none of the viscose process operations are subject to Federal or State leak detection and repair (LDAR) requirements to control the CS_2 emissions from their equipment leaks.

However, we are establishing separate limits for the various viscose process operations (cellulose food casing, rayon, cellophane, and cellulosic sponge) in those areas (such as process vents) where we have found important differences between the various viscose operations. We found some differences between the various viscose process operations with respect to final process steps and final products. For example, some viscose process 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. Also, cellulose food casing, rayon, and cellophane operations use a hot acid solution in their regeneration step, while cellulosic sponge operations use either a hot salt solution or electricity.

The various viscose process operations produce a variety of products, such as cellulose food casings, rayon, cellophane, and cellulosic sponges, all of which compete in different economic markets. None of the viscose process operations produces more than one of these products. For example, a cellulose food casing operation does not also produce rayon or cellophane.

2. Cellulose Ether Industry

We reviewed the available information on the cellulose ether industry and determined that the Cellulose Ethers source category should not be subcategorized. We found that the various cellulose ether operations are sufficiently similar with respect to their process steps and control device applicability to justify keeping the various operations in one category. Therefore, we are establishing a single set of standards across the Cellulose Ethers source category.

C. How did we select the affected source?

In selecting the affected source for the Viscose Processes source category and the Cellulose Ethers source category, we included all equipment that emits HAP, such as process vents, storage vessels, wastewater treatment processes, and other components (such as pumps, valves, flanges, sampling connections, compressors, and pressure relief devices). In addition, because ''reconstruction,'' as defined in § 63.2 of subpart A of 40 CFR part 63, is calculated based on the affected source, we also included other auxiliary equipment that is necessary to make the operation run but which may not emit HAP.

We are defining the affected source broadly to include the sum of all operations engaged in the production of the cellulose product (that is, cellulose food casing, rayon, cellophane, cellulosic sponge, or cellulose ethers). We defined the affected source broadly because emissions from the sum of all operations are better documented than emissions from individual process lines or emission points. In addition, by defining the affected source broadly, it is less likely that a change will trigger new source MACT. New source MACT would be triggered when the fixed capital cost of new components exceeds 50 percent of the fixed capital cost for all components that would be required to construct a comparable new affected source. Because emissions averaging takes place within the affected source, a broadly defined affected source would provide owners and operators with more flexibility in conducting any emissions averaging.

D. How did we determine the basis and level of the proposed standards for the Viscose Processes source category?

The following sections present the basis for determining the components of the MACT floor for equipment leaks, wastewater emissions, CS_2 unloading and storage operations, and process vents for the Viscose Processes source category. The MACT floor for the category is the sum of the MACT floor components for each type of emission point present at a given affected source. The Viscose Processes source category has fewer than 30 process operations from which to establish existing source MACT floors for these emission points. If there are fewer than 30 sources in a category, the CAA states that the MACT floor for existing affected sources must be determined based on the average emission limitation achieved by the best-performing five sources.

We have previously interpreted the ''average'' emission limitation as either the mean or median emission limitation. Where we had at least five process operations in a group of similar operations to establish a MACT floor (that is, equipment leaks, wastewater emissions, and CS_2 unloading and storage operations), we used the median emission limitation to establish the MACT floor because it corresponds to the control level for an actual control technology. Where we had fewer than five operations in a group of similar operations to establish a MACT floor (that is, process vents), we used another approach, which is discussed below.

For new affected sources, the CAA states that the MACT floor must be determined based on the emission limitation achieved by the best-performing similar source. In each case, we used this approach to determine the new source MACT floor.

1. MACT Floor for Equipment Leaks and Wastewater Emissions

Because none of the ten viscose process operations control CS_2 emissions from equipment leaks or wastewater, the MACT floor for those emission points is no control.

2. MACT Floor for CS_2 Unloading and Storage Operations

Most of the ten viscose process operations have taken steps to control CS_2 emissions from unloading and storage operations by using nitrogen or water displacement to unload the liquid CS_2 from the railcar and using nitrogen or water padding in the head space of the storage vessels. All of these CS_2 control techniques reduce liquid CS_2 contact with air. However, the water

unloading and padding systems result in CS_2-contaminated water being sent to wastewater treatment, thereby generating gaseous CS_2 emissions from wastewater. We have determined that using nitrogen unloading and storage systems reduces CS_2 emissions by at least 85 percent relative to the water unloading and storage systems.

The MACT floor for CS_2 unloading and storage operations at existing affected sources is the median CS_2 emission reduction achieved by the top five viscose process operations. The median viscose process operation has a nitrogen system for both unloading and storage. Therefore, we established the MACT floor for CS_2 unloading and storage operations at 85 percent CS_2 control, which is the calculated control efficiency for nitrogen systems relative to water systems. Because the best-controlled viscose process operation also has a nitrogen system for CS_2 unloading and storage operations, the MACT floor is the same for both new and existing affected sources.

3. MACT Floors for Process Vents

a. *Methodology.* We determined separate components of the viscose process operation MACT floor for each type of process vent used in a viscose process operation (that is, one MACT floor for cellulose food casing, one for rayon, one for cellophane, and one for cellulosic sponge). There are only three viscose process operations that include cellulose food casing process operations, two that include rayon process operations, one that includes cellophane process operation, and four that include cellulosic sponge process operations from which to establish the various process vent components of the MACT floor for viscose process operations. The CAA does not clearly address how to establish the MACT floor for existing affected sources when there are fewer than five process operations to determine the average emission limitation.

For the various viscose process operations (cellulose food casing, rayon, cellophane, and cellulosic sponge), we decided to use the MACT floor approach outlined in the preamble to the proposal for the Generic MACT NESHAP (63 FR 55178, October 14, 1998). According to the preamble to the Generic MACT NESHAP, the smaller the group of similar process operations, the less likely it is that the best control strategies have been implemented for the process operations in that group. Averaging the emission limitations from uncontrolled and well-controlled process operations in a small group would result in a low average emission limitation that is clearly below the emission limitation already demonstrated by at least one process operation in that group. Selecting the average emission limitation also could result in a control level with no corresponding control technology. Selecting the median process operation of the group, which would be uncontrolled, would also have little relevance to the determination of MACT.

As an alternative, the proposal preamble to the Generic MACT NESHAP outlined two basic scenarios where EPA can reasonably infer that the MACT floor requirements for small groups of similar process operations have been satisfied:

> First, when the EPA intends to select a MACT standard that coincides with the level of control achieved by the best-controlled [process operation(s)] in a [group of similar process operations], it is self-evident that the MACT floor has been met, and it is clearly a waste of EPA resources to undertake a separate quantitative MACT floor analysis based, in part, on control levels at the less well-controlled [process operations] * * *. Second, in those instances where the EPA will base its MACT standard for a small [group of similar process operations] (five or fewer [process operations]) on MACT standards previously established for a larger group of demonstrably similar [process operations] in other categories, it is also reasonable to infer MACT floor compliance without the need for a detailed new analysis.

The second scenario under which we would determine MACT floors based on MACT standards previously established for a larger group of similar process operations in other categories is not useful here. We found the cellulose food casing, rayon, cellophane, and cellulosic sponge process operations to be completely different from other industrial process operations in terms of the type and concentration of HAP emitted, gas flow rates, control device applicability, types of emission points, and special concerns regarding the flammability of CS_2 that other industries do not have to consider.

Instead, we selected the first scenario under which we would determine process vent MACT floors based on the emission limitation of the best-performing process operation for each type of viscose process operation (cellulose food casing, rayon, cellophane, and cellulosic sponge). The substantial emissions from viscose process vents (18,900 ton/yr nationwide for ten process operations) demonstrate the need for effective emission control for this emission point. In this case, the emission point is represented by the collection of process vents at each viscose process operation. For example, when we determined the best-performing process operation for rayon process vents, we compared the overall reductions in process vent HAP emissions at the two rayon process operations, and the process operation with the higher overall reduction in process vent HAP emissions was considered to be the best-performing rayon process operation.

We also determined the process vent MACT floors for new affected sources based on the best-performing source for each type of viscose process operation. Consequently, the process vent MACT floors for viscose process operations at existing affected sources are the same as the process vent MACT floors for viscose process operations at new affected sources.

b. *MACT Floor for Cellophane Process Vents.* Because there is only one cellophane process operation, we established the MACT floor for the cellophane production process vents based on the current emission reductions achieved by that process operation. The process operation currently achieves between 85 and 90 percent control of total uncontrolled sulfide emissions (reported as CS_2). The process operation accomplishes these reductions by using a CS_2 recovery system. To take into account any variability, we established the MACT floor for cellophane production process vents at 85 percent control.

We also established the MACT floors for solvent coating process vents and toluene storage vessels at cellophane process operations based on the current emission reductions achieved by the cellophane process operation. The process operation currently achieves between 95 and 100 percent control of uncontrolled toluene emissions from these emission points. The process operation accomplishes these reductions by venting emissions from solvent coating process vents and toluene storage vessels to a solvent recovery system. To take into account any variability, we established the MACT floor for solvent coating process vents and toluene storage vessels at 95 percent control.

c. *MACT Floor for Cellulose Food Casing Process Vents.* Of the three cellulose food casing process operations, we have determined that the best-performing process operation achieves between 25 and 30 percent control of total sulfide emissions (reported as CS_2) from process vents at the MACT floor. The process operation accomplishes part of these sulfide emission reductions by using viscose process changes to reduce the amount of CS_2 added to the process. The process

operation accomplishes the remaining sulfide emission reductions by using caustic scrubbers to capture H_2S emissions, which are generated from by-products of the CS_2 reactions in the viscose process operation. To take into account any variability, we established the MACT floor for cellulose food casing process vents at 25 percent control.

d. *MACT Floor for Rayon Process Vents.* Of the two rayon process operations, we have determined that the best-performing process operation achieves between 55 and 60 percent control of total sulfide emissions reported as CS_2. The process operation accomplishes these reductions by using a new rayon spinning technology, CS_2 recovery operations (using condensers and oil absorbers), and caustic scrubbers (to capture the H_2S generated from CS_2). To take into account any variability, we established the MACT floor for rayon process vents at 55 percent control.

e. *MACT Floor for Cellulosic Sponge Process Vents.* Of the four cellulosic sponge process operations, we have determined that the two best-performing process operations achieve similar CS_2 reductions from process vents, between 75 and 85 percent overall. One of these two process operations reduces CS_2 emissions by using a biofilter to remove the CS_2 emissions from its sponge-making operations. The second process operation reduces CS_2 emissions by using a carbon adsorber to recover the CS_2 from the viscose production and regeneration operations and by using a thermal oxidizer to destroy the CS_2 and H_2S from the salt recovery operation. To take into account any variability, we established the MACT floor for cellulosic sponge process vents at the lower end of the range, that is, 75 percent control.

4. Beyond-the-Floor Technology

The CAA states that MACT must be no less stringent than the MACT floor. Therefore, we also evaluate options more stringent than the MACT floor. When evaluating the more stringent options, we consider the costs, non-air quality health and environmental impacts, and energy requirements that accompany the expected emission reductions.

a. *Beyond-the-floor Technology for CS_2 Unloading and Storage Operations.* We did not consider any beyond-the-floor requirements for CS_2 unloading and storage operations at new or existing affected sources because no beyond-the-floor technologies are available for that emission point.

b. *Beyond-the-Floor Technology for Equipment Leaks and Wastewater Emissions.* We do not project any emission control beyond the MACT floor for equipment leaks and wastewater emissions at new or existing affected sources to be cost effective.

In order to control HAP emissions from equipment leaks, viscose process operations would be required to implement an LDAR program similar to the LDAR provisions in subpart H of 40 CFR part 63. However, the baseline HAP emissions from equipment leaks at viscose process operations account for less than 2 percent of total HAP emissions. Therefore, we do not project that any reduction in HAP emissions from equipment leaks would be worth the cost to implement the LDAR program.

In order to control HAP emissions from wastewater, viscose process operations would be required to implement requirements similar to the process wastewater provisions in subpart G of 40 CFR part 63. However, the baseline HAP emissions from wastewater at viscose process operations account for less than 5 percent of total HAP emissions. Therefore, we do not project that any reduction in HAP emissions from wastewater would be worth the cost to implement requirements similar to those in subpart G.

c. *Beyond-the-Floor Technology for Cellophane and Cellulosic Sponge Process Vents.* We did not consider any beyond-the-floor requirements for cellophane process vents and cellulosic sponge process vents at new or existing affected sources because no beyond-the-floor technologies are available for those emission points.

d. *Beyond-the-Floor Technology for Cellulose Food Casing Process Vents.* We are including beyond-the-floor requirements for process vents in today's proposed rule for cellulose food casing operations at new viscose process affected sources. The arguments supporting the beyond-the-floor requirements are presented below.

None of the existing cellulose food casing operations has achieved CS_2 emission reductions from process vents significantly greater than the MACT floor level, which is 25 percent control of total sulfide emissions (reported as CS_2). However, other viscose process operations (such as, rayon and cellulosic sponge) have achieved higher CS_2 emission reductions using various CS_2 control technologies (such as condensers, biofilters, and carbon adsorbers). Because of similarities in process vents among the various viscose process operations, we believe that cellulose food casing operations are also capable of reducing the CS_2 emissions from their process vents.

We have reviewed information obtained from cellulose food casing operations on CS_2 concentrations and gas flow rates for individual process machines. Based on this information, we found that the emission streams from the stack at cellulose food casing operations have relatively low CS_2 concentrations and high air flows. The stack CS_2 concentrations are typically around 100 parts per million (ppm), and the stack gas flow rates typically exceed 80,000 cubic feet per minute (cfm). We have determined that the cost to control these streams at stack conditions would be excessive. However, we also have determined that, if more concentrated emission streams from further back in the cellulose food casing process are segregated from the less concentrated emission streams and sent to a control device, then CS_2 control technologies could be applied to the cellulose food casing operations more cost effectively.

Two of the four cellulosic sponge operations have achieved total sulfide emission reductions of at least 75 percent for the sum of their process vents by using either a carbon adsorber or a biofilter. We have determined that applying one of these CS_2 control technologies (such as a carbon adsorber) to cellulose food casing process vents at new viscose process affected sources to achieve 75 percent control would be cost effective, with minimal non-air quality environmental and energy impacts. Therefore, we are including a beyond-the-floor control requirement of 75 percent total sulfide control for cellulose food casing process vents at new viscose process affected sources in today's proposed rule.

The cost effectiveness of applying carbon adsorbers to the three existing cellulose food casing process operations to achieve 75 percent control ranges from $500 to $1,600 per ton of total sulfide (reported as CS_2). The incremental cost effectiveness between the MACT floor requirement of 25 percent control and the beyond-the-floor requirement of 75 percent control ranges from $500 to $700 per ton of total sulfide (reported as CS_2). The low incremental cost effectiveness is based primarily on the larger emission reductions achieved beyond the floor. The high capital costs for this control technology ($3.9 to $5.8 million) and the economic status of the industry are the primary factors in our rejecting beyond-the-floor requirements for cellulose food casing operations at existing viscose process affected sources. However, we project that capital costs and cost effectiveness for this control technology will be lower for cellulose food casing operations at new

viscose process affected sources. The costs for the existing affected sources include retrofit costs which increased the capital costs by 50 percent. Retrofit costs will not be a factor for cellulose food casing operations at new viscose process affected sources.

The non-air quality impacts and energy requirements for cellulose food casing operations at new viscose process affected sources are expected to be comparable to those determined for operations at existing viscose process affected sources which are minimal. The energy requirements for applying carbon adsorbers to the three existing cellulose food casing operations range from 2,800 to 4,600 megawatt-hours per year (MWh/yr), and the wastewater impacts range from 15 to 35 million gallons per year (gal/yr).

e. *Beyond-the-Floor Technology for Rayon Process Vents.* We are including beyond-the-floor requirements for process vents in today's proposed rule for rayon operations at new viscose process affected sources. The arguments supporting the beyond-the-floor requirements are presented below.

One of the rayon operations has indicated that an emission control technology (fluidized-bed carbon adsorber) is available to increase their CS_2 emission reductions from 60 to 80 percent. This emission control technology is similar to technology currently being used at one of the cellulosic sponge process operations, which is achieving CS_2 emission reductions of 75 percent for the sum of its process vents using a carbon adsorber. We have determined that applying this CS_2 control technology to rayon operations at new viscose process affected sources will be cost effective, with minimal non-air quality environmental and energy impacts. Therefore, we are including a beyond-the-floor control requirement of 75 percent total sulfide control for rayon process vents at new viscose process affected sources in today's proposed rule.

The cost effectiveness of applying carbon adsorbers to the two existing rayon process operations ranges from $600 to $1,300 per ton of total sulfide (reported as CS_2). The incremental cost effectiveness between the MACT floor requirement of 55 percent control and the beyond-the-floor requirement of 75 percent control ranges from $500 to $1,300 per ton of total sulfide (reported as CS_2). The low incremental cost effectiveness is based primarily on the larger emission reductions achieved beyond the floor. The high capital cost for this control technology ($15.2 to $21.8 million) and the economic status of the industry are the primary factors in our rejecting beyond-the-floor requirements for rayon operations at existing viscose process affected sources. However, we project that capital costs and cost effectiveness for these control technologies will be lower for rayon operations at new viscose process affected sources. The costs for the existing affected sources include retrofit costs which increased the capital costs by 50 percent. Retrofit costs will not be a factor for rayon operations at new viscose process affected sources.

The non-air quality impacts and energy requirements for a rayon operation at a new viscose process affected source are expected to be comparable to those determined for operations at existing viscose process affected sources which are minimal. The energy requirements for applying carbon adsorbers to the two existing rayon operations range from 7,600 to 20,000 MWh/yr, and the wastewater impacts range from 57 to 165 million gal/yr.

E. How did we determine the basis and level of the proposed standards for the Cellulose Ethers source category?

There are four cellulose ether plants that are major sources subject to today's proposed rule. These four cellulose ether plants are comprised of seven individual process operations. One cellulose ether plant has three cellulose ether operations (hydroxyethyl cellulose, hydroxypropyl cellulose, and carboxymethyl cellulose operations). Another cellulose ether plant has two cellulose ether operations (methyl cellulose and hydroxypropyl methyl cellulose operations). A third cellulose ether plant has a hydroxypropyl methyl cellulose operation, and a fourth cellulose ether plant has a hydroxyethyl cellulose operation.

We established the MACT floor for storage vessels, equipment leaks, wastewater emissions, and process vents based on these seven cellulose ether operations. Therefore, we used the MACT floor approach presented in section I.B and determined the MACT floor for existing affected sources based on the average emission limitation achieved by the best-performing five cellulose ether operations. We established the MACT floor using the median as the ''average'' emission limitation because the median corresponds to the control level for an actual control technology.

1. MACT Floor for Storage Vessels

Because none of the seven cellulose ether operations have controlled storage vessels in the size range of those controlled under other rules, the MACT floor for storage vessels at both new and existing affected sources is no control.

2. MACT Floor for Equipment Leaks

Only two of the seven cellulose ether operations are currently subject to any LDAR requirements. Therefore, the median control level (that is, MACT floor) for equipment leaks for existing affected sources is no control. The equipment leak provisions for one of the cellulose ether operations are essentially the same as the equipment leak provisions in subpart H of 40 CFR part 63, with some minor differences. Therefore, for new affected sources, we established subpart H provisions as the MACT floor for equipment leaks.

3. MACT Floor for Wastewater Emissions

Information is available on wastewater HAP emissions and wastewater treatment for five of the seven cellulose ether operations. Methanol is the only HAP in the wastewater for four of the five cellulose ether operations, and isophorone is the only HAP for the fifth cellulose ether operation. Five of those cellulose ether operations treat the wastewater in either onsite or offsite biological treatment units.

The industry has reported that these biological treatment units achieve methanol reductions ranging from 95 to 99 percent, but no data are currently available to confirm these reductions. There are also no data on any isophorone reductions; however, isophorone also may be easily biodegraded. The process wastewater provisions in subpart G of 40 CFR part 63 require only a 31 percent reduction in methanol and a 60 percent reduction in isophorone from Group 1 wastewater streams. Even in an open biological system (perhaps with an open collection system), it should be possible to easily achieve these biodegradation levels. Also, according to the analysis for the Hazardous Organic NESHAP (HON), these two compounds would not readily volatilize from the wastewater before they had a chance to be biodegraded.

Because the top five cellulose ether operations all treat wastewater in a manner at least as stringent as the process wastewater provisions in subpart G of 40 CFR part 63, we established those provisions as the MACT floor for existing affected sources. We established the MACT floor for new affected sources to be the same as for existing affected sources because insufficient information is available to confirm a specific control level better than the HON.

4. MACT Floor for Process Vents

Of the seven cellulose ether operations, five operations have process vents. The remaining two cellulose ether operations have closed-loop systems with no process vent HAP emissions. In our MACT floor determination for process vents at cellulose ether operations, we considered the five operations with process vents.

We established the MACT floor for process vents based on the median emission limitation achieved by the five cellulose ether operations with process vent HAP emissions. For those five cellulose ether operations, the median control level (that is, MACT floor) is 99 percent for existing affected sources. This control level is characteristic of incinerators, condensers, and scrubbers currently used by these process operations to recover and control their HAP emissions. The best-performing cellulose ether operation process vent is also controlled to 99 percent; therefore, we established a MACT floor of 99 percent for new affected sources. For cellulose ether operations with closed-loop systems, the MACT floor is the emission control achieved by use of a closed-loop system.

5. Beyond-the-Floor Technology

We evaluate options more stringent than the MACT floor by considering the costs, non-air quality health and environmental impacts, and energy requirements that accompany the expected emission reductions.

a. *Beyond-the-Floor Technology for Storage Vessels.* We did not consider any beyond-the-floor requirements for storage vessels at new or existing affected sources because we do not project any emission control beyond the MACT floor to be cost effective. In order to control HAP emissions from storage vessels, cellulose ether operations would be required to implement requirements similar to the storage vessel provisions in subpart G of 40 CFR part 63. However, the baseline HAP emissions from storage vessels at cellulose ether operations account for less than 0.2 percent of total HAP emissions. Therefore, we do not project that any reductions in HAP emissions from storage vessels would be worth the cost to implement requirements similar to those in subpart G.

b. *Beyond-the-Floor Technology for Wastewater Emissions and Process Vents.* We did not consider any beyond-the-floor requirements for wastewater emissions and process vents at new or existing affected sources because no beyond-the-floor technologies are available for those emission points.

c. *Beyond-the-Floor Technology for Equipment Leaks.* Two of the seven cellulose ether operations are currently subject to LDAR requirements for their equipment leaks. The equipment leak provisions for one of the cellulose ether processes are essentially the same as the equipment leak provisions in subpart H of 40 CFR part 63, with some minor differences. Therefore, we considered subpart H provisions as beyond-the-floor requirements for equipment leaks at existing cellulose ether affected sources. We are including this beyond-the-floor requirement for existing cellulose ether affected sources in today's proposed rule based on the conclusion that the benefits of additional control beyond the MACT floor justify the additional cost.

The cost effectiveness of implementing the equipment leak provisions in subpart H of 40 CFR part 63 ranges from $400 to $600 per ton of HAP for the five cellulose ether operations that do not currently have LDAR programs. The capital and annual costs are also low, with the capital costs ranging from $10,800 to $21,600, and the annual costs ranging from $17,200 to $95,900. there are no non-air quality impacts and energy requirements associated with these beyond-the-floor requirements.

F. How did we select the form of the standards?

We evaluated the feasibility of the following forms of the standards for the Viscose Processes source category and the Cellulose Ethers source category: (1) emission limits (such as mass rate, percent reduction, and concentration emission limits); and (2) work practice standards (such as design, equipment, work practices, and operational standards).

1. Standard Forms Selected

Based on the evaluations presented in the following section, we are specifying a percent reduction emission limit for MACT standards for viscose process vents, cellulose ether process vents, and toluene storage vessels in today's proposed rule.

We are providing some flexibility for complying with the emission limits and work practice standards for CS_2 unloading and storage operations. We are providing the owners and operators of viscose process affected sources with three options for compliance. The first compliance option (a percent reduction emission limit) specifies that owners and operators may achieve an 83 percent reduction in CS_2 emissions from their CS_2 unloading and storage operations using any compliance method. The second compliance option (an alternative equivalent equipment standard) specifies that owners and operators may install a nitrogen system for their CS_2 unloading and storage operations. The third compliance option (an alternative equivalent percent reduction emission limit) specifies that owners and operators may achieve an equivalent emission reduction from elsewhere in the viscose process.

The third compliance option provides flexibility to owners and operators to control other emission points instead of the CS_2 unloading and storage operations, as long as they can demonstrate that they have achieved an equivalent CS_2 emission reduction. The equivalent of the 85 percent reduction in CS_2 emissions from the CS_2 unloading and storage operation is a 0.14 percent reduction in total sulfide emissions from process vents. The 0.14 percent reduction in process vent emissions is based on the percent reduction in storage vessel throughput to the process when a water system is replaced with a nitrogen system for CS_2 unloading and storage.

We are specifying work practice standards for equipment leaks and wastewater emissions at cellulose either affected sources. For equipment leaks, owners and operators of new and existing cellulose ether affected sources must comply with the LDAR work practice standards in subpart H of 40 CFR part 63. Section 112(h) of the CAA recognizes the need for alternative forms of the standard such as a work practice standard. As described in the preamble to the HON (57 FR 62608), the use of a work practice standard for equipment leaks is justified. We are also evaluating the LDAR work practice standards in the proposed Consolidated Air Rule (if owners and operators can demonstrate that they are below a certain number of leaks) and may allow owners and operators the option of complying with those provisions. For wastewater emissions, we are specifying emission limits and work practice standards based on the process wastewater provisions in subpart G of 40 CFR part 63.

2. Standard Forms Evaluated

The following sections present the evaluations used to determine the form of the MACT standards for today's proposed rule.

a. *Mass Rate Emission Limit.* A mass rate emission limit would be based on information that owners and operators of cellulose ether operations and viscose process operations consider CBI (such

as, amount of final product produced, amount of HAP used, and amount of cellulose used). Considering the small size of the groups used to determine the MACT floors for viscose process vents and cellulose ether process vents, we determined that specifying this type of emission limit could reveal confidential information. Therefore, we rejected this type of emission limit for today's proposed rule.

b. *Percent Reduction Emission Limit.* A percent reduction emission limit is the most common type of emission limit for emission points such as process vents, storage vessels, and wastewater emissions. The percent reduction is calculated as a reduction in uncontrolled HAP emissions.

For process vents at viscose process affected sources, we selected an emission limit based on percent reduction of total sulfide emissions from initial CS_2 usage. This type of emission limit provides owners and operators of viscose process affected sources with the flexibility of take credit for controlling emissions of non-HAP sulfides, implementing process changes that reduce CS_2 usage and recovering and reusing CS_2. Total sulfide emissions (CS_2, H_2S, and COS) would be reported as CS_2. Owners and operators of viscose process affected sources would use the information from the material balance required in today's proposed rule to take into account any sulfides that are uncontrolled, lost to wastewater, etc., and then determine the percent reduction for viscose process vents.

For process vents at cellulose ether affected sources, we also selected an emission limit based on percent reduction of total HAP emissions from initial HAP usage. This type of emission limit provides owners and operators of cellulose ether affected sources with the flexibility to take credit for implementing process changes that reduce HAP usage and recovering and reusing HAP. Similar to viscose process affected sources, owners and operators of cellulose ether affected sources would use the information from the material balance required in today's proposed rule to take into account any HAP that are uncontrolled, lost to wastewater, etc., and then determine the percent reduction for cellulose ether process vents.

c. *Concentration Emission Limit.* We considered a concentration emission limit (such as ppm) as an alternative to a percent reduction emission limit for process vents. For example, if concentrations prior to a control device are already low, then a 90 percent reduction may not be feasible. In such instances, an alternative concentration emission limit at the control device outlet (such as, 20 ppm) could be effective.

However, at viscose process operations, stack concentrations of CS_2 are fairly low because the vent stream is diluted. In order to comply with OSHA limits for worker exposure to CS_2, the ventilation systems associated with viscose process operations are designed to produce large volumes of process and building exhaust air, which reduce the concentration of CS_2 emission limit, then viscose process operations may be able to reduce their CS_2 concentrations by simply increasing the air flow (for example, by installing more powerful fans), which would not achieve any actual reduction in CS_2 emissions. Therefore, we rejected specifying an alternative CS_2 concentration emission limit for viscose process affected sources.

For cellulose ether affected sources, we also rejected specifying an alternative HAP concentration emission limit. Based on available HAP emissions data for cellulose ether operations, concentrations prior to the control device are fairly high, so an alternative HAP concentration emission limit is not necessary.

d. *Equipment Standard.* We are providing owners and operators of viscose process affected sources with the option to comply with an equipment standard as an alternative to the 83 percent reduction emission limit for CS_2 unloading and storage operations. Under this equipment standard, owners and operators may install a nitrogen system for unloading and storing their CS_2. This equipment standard is equivalent to the 83 percent reduction emission limit because the nitrogen system has been demonstrated to achieve an 85 percent reduction in CS_2 emissions relative to water systems.

For process vents at viscose process affected sources, an equipment standard would be restrictive, given the range of CS_2 control technologies available (such as, biofilters, carbon adsorbers, oil absorbers, and condensers). An emission limit (such as, percent reduction) would provide owners and operators with the flexibility to try different approaches to meeting the MACT standard.

e. *Work Practice Standard.* For equipment leaks (such as, from valves, flanges, and connectors), an LDAR work practice standard is the most common type of standard. In today's proposed rule, we are requiring owners and operators of new and existing cellulose ether affected sources to determine the frequency of monitoring for their equipment components and a schedule of repair. We are requiring owners and operators to comply with the LDAR standards of subpart H of 40 CFR part 63. We are evaluating the LDAR standards of the proposed Consolidated Air Rule and may allow that as an alternative in the final rule. The proposed Consolidated Air Rule allows less frequent monitoring and repair (compared to the HON) if owners and operators can demonstrate that they are below a certain number of leaks.

For wastewater emissions, we are specifying emission limits and work practice standards based on the process wastewater provisions in subpart G of 40 CFR part 63.

G. How did we select the alternative standards?

We evaluated pollution prevention standards as an alternative to the emission limits and work practice standards. Based on the evaluations presented below, we decided to reject the pollution prevention alternative standards for today's proposed rule.

One cellulose ether operation reduces HAP emissions by extending the reaction time beyond the point of profitability in a technique called ''extended cookout'' or ECO. By using up most of the HAP raw material in the reaction, this pollution prevention technique leaves less unreacted HAP to be emitted downstream. However, insufficient information is available to determine if this technique can achieve the emission reductions necessary to meet MACT floor requirements.

One cellulose food casing operation has developed a non-viscose process that emits no HAP (that is, no CS_2) and expects to reduce total air emissions by about 99 percent. However, the non-viscose process will not be available prior to proposal and promulgation and has not yet been proven to be an effective alternative process. Also, none of the other viscose process operations (rayon, cellophane, cellulosic sponge) have a non-HAP alternative process for their operations. Therefore, this type of standard may not be feasible for those process operations.

Each of the cellulose food casing operations has implemented process changes to reduce the amount of CS_2 added to the viscose process. However, the owners and operators of these cellulose food casing operations have declared the details of these process changes to be confidential, making a pollution prevention standard based on reduction of CS_2 usage infeasible.

H. How did we select the standards for the Viscose Processes source category?

We selected the proposed standards for the Viscose Processes source category based on our assessment of the cost of achieving the MACT floor and beyond-the-floor control options developed for the source category and any non-air quality health and environmental impacts and energy requirements.

1. Standards for Existing Viscose Process Affected Sources

For existing viscose process affected sources, we selected the MACT floor control options for process vents, CS_2 unloading and storage operations, and toluene storage vessels as the standards for those emission points. We chose not to select any beyond-the-floor options as standards for existing viscose process affected sources. The additional cost of control beyond the floor was not reasonable.

The only beyond-the-floor options we considered were 75 percent control of total sulfide emissions of cellulose food casing process vents and 75 percent control of total sulfide emissions for rayon process vents. For process vents at existing cellulose food casing operations, we determined that the incremental cost effectiveness of going beyond the floor would range from $500 to $700 per tone of total sulfide (reported as CS_2). The low incremental cost effectiveness is based primarily on the larger emission reductions achieved beyond the floor. The high capital costs ($3.9 to $5.8 million) to install control technology capable of achieving 75 percent control beyond the floor and the economic status of the cellulose food casing industry are the primary factors in our rejecting beyond-the-floor requirements for cellulose food casing operations at existing viscose process affected sources.

For process vents at existing rayon operations, we determined that the incremental cost effectiveness of going beyond the floor would range from $500 to $1,300 per ton of total sulfide (reported as CS_2). The low incremental cost effectiveness is based primarily on the larger emission reductions achieved beyond the floor. The high capital costs ($15.3 to $21.8 million) to install control technology capable of achieving 75 percent control beyond the floor and the economic status of the rayon industry are the primary factors in our rejecting beyond-the-floor requirements for rayon operations at existing rayon process affected sources.

2. Standards for New Viscose Process Affected Sources

For new viscose process affected sources, we selected the MACT floor control options for CS_2 unloading and storage operations, toluene storage vessels, cellophane process vents, and cellulosic sponge process vents as the standards for those emission points. We also selected the beyond-the-floor control options for cellulose food casing process vents and rayon process vents (that is, 75 percent control of total sulfide emissions) as the standards for those emission points. We believe that the cost of additional controls beyond the MACT floor for new viscose process affected sources is reasonable.

As noted in the previous section, we rejected beyond-the-floor control options for cellulose food casing process vents and rayon process vents for existing viscose process affected sources because of the high capital costs and economic status of the respective industries. However, we project that capital costs will be lower for cellulose food casing operations at new viscose process affected sources. The control technology costs for the existing operations include retrofit costs which increased the capital costs by 50 percent. Retrofit costs will not be a factor for cellulose food casing operations and rayon operations at new viscose process affected sources.

Also, the non-air quality impacts and energy requirements for cellulose food casing operations and rayon operations at new viscose process affected sources are expected to be minimal. We project that the non-air quality impacts and energy requirements for new viscose process affected sources will be comparable to those determined for existing viscose process affected sources. The energy requirements necessary to achieve control of total sulfide emissions beyond the MACT floor range for 2,800 to 4,600 MWh/yr for the three existing cellulose food casing operations and from 7,600 to 20,000 MWh/yr for the two existing rayon operations. The wastewater impacts range from 15 to 35 million gal/yr for the three existing cellulose food casing operations and from 57 to 165 million gal/yr for the two existing rayon operations.

I. How did we select the standards for the Cellulose Ethers source category?

We selected the proposed standards for the Cellulose Ethers source category based on our assessment of the cost of achieving the MACT floor and beyond-the-floor control options developed for the source category and any non-air quality and environmental impacts and energy requirements.

1. Standards for Existing Cellulose Ethers Affected Sources

For existing cellulose ether affected sources, we selected the MACT floor control options for process vents and wastewater emissions as the standards for those emission points. We also selected the beyond-the-floor control option for equipment leaks as the standard for that emission point. We believe that the cost of additional controls beyond the MACT floor for existing cellulose ether affected sources is reasonable.

The cost effectiveness of implementing the equipment leak provisions in subpart H of the HON ranges from $400 to $600 per tone of HAP for the five cellulose ether operations that do not currently have LDAR program. The capital and annual costs are also low, with the capital costs ranging from $10,800 to $21,600, and the annual costs ranging from $17,200 to $95,900. There are no non-air quality impacts and energy requirements associated with this beyond-the-floor requirement.

2. Standards for New Cellulose Ether Affected Sources

For new cellulose ether affected sources, we selected the MACT floor control options for process vents, wastewater emissions, and equipment leaks as the standards for those emission points. There are no beyond-the-floor control options for new cellulose ether affected sources.

J. How did we select the testing and initial compliance requirements?

We selected the testing and initial compliance requirements based on a combination of the generic testing requirements in the NESHAP General Provisions (40 CFR part 63, subpart A) and specific testing requirements for the Viscose Process and Cellulose Ethers source categories.

1. Initial Performance Test Requirements

We are requiring owners and operators of all affected sources to conduct an initial performance test to demonstrate initial compliance with the applicable emission limits. As specified in § 63.7(e)(3) of subpart A, the owners and operators would conduct three separate test runs for each performance test and use the arithmetic mean of the results of the three runs to determine compliance. As specified in § 63.7(e)(1) of subpart A, each test run must last at least 1 hour. The owners and operators

would establish 3-hour averages for each performance test based on the arithmetic means of the three, 1-hour test runs.

We structured the performance test requirements for continuous operations to account for representative conditions. The owners and operators would conduct testing of emissions from continuous process vents at representative conditions, as defined in § 63.1257(b)(7) of the Pharmaceutical Products NESHAP (subpart GGG of 40 CFR part 63).

We structured the performance test requirements for batch operations to account for the worst-case conditions. We adopted this approach for batch operations because they are cyclical and, therefore, tend to have variable emissions. The owners and operators would conduct testing of emissions from batch process vents at either absolute or hypothetical worst-case conditions, as defined in § 63.1257(b)(8) of the Pharmaceutical Products NESHAP (subpart GGG of 40 CFR part 63).

In order for owners and operators of affected sources to demonstrate initial compliance with the applicable emissions limit for their process vents, we are requiring them to test their process vent emissions at the inlet and outlet to the control device and at the stack. The owners and operators would use the applicable equations in today's proposed rule to determine the percent reduction in emissions. The average emissions measured during the 3-hour performance test must be reduced by the applicable amount in the emission limit.

2. EPA Test Methods

As specified in § 63.7(e)(2) of subpart A, we are requiring that the performance tests be conducted using specified EPA test methods. Owners and operators of cellulose food casing, rayon, cellophane, and cellulosic sponge operations at new and existing viscose process affected sources would use EPA Method 15, ''Determination of Hydrogen Sulfide, Carbonyl Sulfide, and Carbon Disulfide Emissions from Stationary Sources'' (40 CFR part 60, appendix A), to measure the sulfide emissions from their process vents. The EPA Method 15 is the predominant test method used for measuring emissions of the sulfides CS_2, H_2S, and COS from stationary sources. The EPA Method 15 has been used in previous emission tests to measure sulfide emissions at a cellulose food casing process operation and a cellulosic sponge process operation.

Except as specified below, owners and operators of cellulose ether operations at new and existing cellulose ether affected sources would use EPA Method 18, ''Measurement of Gaseous Organic Compound Emissions by Gas Chromatography'' (40 CFR part 60, appendix A), to measure the emissions of organic HAP such as ethylene oxide, methanol, methyl chloride, and propylene oxide from their process vents. Owners and operators would use Method 25, ''Determination of Total Gaseous Nonmethane Organic Emissions as Carbon'' (40 CFR part 60, appendix A), to determine the destruction efficiency of thermal oxidizers for organic compounds. Owners and operators may use Method 25A, ''Determination of Total Gaseous Organic Concentration using a Flame Ionization Analyzer'' (40 CFR part 60, appendix A), under the following conditions: (1) an exhaust gas volatile organic matter concentration of 50 ppmv or less is required in order to comply with the emission limit, or (2) 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 (3) because of the high efficiency of the control device, the anticipated volatile organic matter concentration at the control device exhaust is 50 ppmv or less, regardless of the inlet concentration.

Owners and operators of cellophane operations at new and existing viscose process affected sources would use EPA Method 18 to measure emissions of toluence from their solvent coating process vents and toluene storage vessels. The EPA Method 18 is the predominant test method used for measuring emissions of speciated gaseous organics.

3. Material Balance

In order for owners and operators of viscose process affected sources to demonstrate continuous compliance with the applicable percent reduction standard, they must be able to calculate the percent reduction of emissions on an ongoing basis after the initial performance test. Therefore, as an additional initial compliance requirement, the owners and operators must also prepare a material balance that includes information on HAP usage and HAP emissions. The material balance would be based on information from the initial performance test and from records at the affected source. If the owners and operators use pollution prevention process changes to comply with the emission limits, then the material balance must include information on the amount of HAP that would have been used in the absence of the process change and the amount of HAP that was used after the process change was implemented. By recording this information, the owners and operators would be able to determine the percent reduction from implementing the process change. The owners and operators would use the applicable equation in today's proposed rule to determine the percent reduction from process changes and any other emission controls.

4. Determination of Operating Limits

In order to establish the operating limits used to demonstrate continuous compliance, the owners and operators of affected sources must install the monitoring equipment used to establish these limits. Because the operating limits will be established during the initial performance test, the owners and operators must install the monitoring equipment prior to the initial performance test. We selected operating parameters for each control device that are reliable indicators of control device performance. See section III.K.1 for further information on the selection of the operating parameters.

To establish site-specific operating limits for condensers, thermal oxidizers, water scrubbers, caustic scrubbers, biofilters, and oil absorbers, the owners and operators must record the applicable operating parameters averaged over the same period as the performance test while the vent stream is routed and constituted normally. For flares, the owners and operators must comply with the requirements in § 63.11 of subpart A to establish site-specific operating limits. For carbon absorbers, the owners and operators must record the applicable operating parameters for each carbon bed regeneration cycle during the period of the performance test. In each case, the owners and operators must locate the monitoring sensors in positions that provide representative parameter values.

5. Initial Compliance Requirements for CS_2 Unloading and Storage Operations

Owners and operators of new and existing cellulose food casing, rayon, cellophane, and cellulosic sponge affected sources would have three options for demonstrating initial compliance with the emission limits and work practice standards for CS_2 unloading and storage operations. If the owners and operators choose to reduce the CS_2 emissions from their CS_2 unloading and storage operations by 83 percent by any compliance method, they must have a record documenting how they met the 83 percent emission limit. If they met the 83 percent

emission limit by installing a nitrogen system, they would calculate the actual percent reduction achieved using the applicable equation in today's proposed rule. If they met the 83 percent emission limit by venting emissions to a control device, then they must conduct an initial performance test to demonstrate the actual percent reduction achieved, prepare a material balance based on information from the test and from records at the affected source, and establish the appropriate control device operating parameters during the test. Owners and operators would calculate the percent reduction of emissions measured during the performance test using the applicable equation in today's proposed rule.

If the owners and operators decide to reduce their CS_2 emissions by installing a nitrogen system for CS_2 unloading and storage, then they must have a record certifying that a nitrogen system is being used for CS_2 unloading and storage operations. Using a nitrogen system for CS_2 unloading and storage ensures the reduction of CS_2 emissions by at least 83 percent relative to water systems, based on MACT floor calculations.

If the owners and operators decide to obtain an equivalent emission reduction from elsewhere in the viscose process, such as a 0.14 percent reduction from process vents, then they must comply with the initial compliance requirements for process vents, that is, conduct an initial performance test of sulfide emissions, prepare a material balance, and establish the appropriate control device operating parameters during the test. The average total sulfide emissions from the process vents, measured during the 3-hour performance test, must be reduced by the applicable amount (such as 75 percent for cellulosic sponge operations) plus 0.14 percent.

6. Initial Compliance Requirements for Cellulose Ether Operations for Wastewater Emissions

Because cellulose ether operations at new and existing cellulose ether affected sources are subject to the applicable process wastewater provisions of subpart G of 40 CFR part 63, they are also subject to the applicable initial compliance provisions of subpart G for process wastewater. These initial compliance provisions include using EPA Method 305, ''Measurement of Emission Potential of Individual Volatile Organic Compounds in Waste'' (40 CFR part 63, appendix A), which is one test method mentioned under subpart G for concentration measurements of process wastewater.

7. Initial Compliance Requirements for Cellulose Ether Operations for Equipment Leaks

Because cellulose ether operations at new and existing cellulose ether affected cellulose ether affected sources are subject to the applicable equipment leak standards of subpart H of 40 CFR part 63, they are also subject to the applicable initial compliance provisions of subpart H for equipment leaks. These initial compliance provisions include using EPA Method 21, ''Determination of Volatile Organic Compounds Leaks'' (40 CFR part 60, appendix A), which is the predominant test method for determining equipment leaks from process equipment, such as valves, flanges and other connections, pumps and compressors, and pressure relief devices.

K. How did we select the continuous compliance requirements?

We selected the continuous compliance requirements based on a combination of general monitoring requirements in the NESHAP General Provisions (40 CFR part 63, subpart A) and specific monitoring requirements for the Viscose Processes and Cellulose Ethers source categories.

1. Control Device Parameter Monitoring Requirements

As specified in § 63.8(c) of subpart A, the owners and operators of affected sources must record the data from their monitoring systems at least once every 15 minutes. They must have a minimum of three of the four required data points to constitute a valid hour of data. They must also have valid hourly data for at least 66 percent of every averaging period (such as, two valid hourly values for a 3-hour averaging period).

In most cases, owners and operators are required to calculate 3-hour averages of their operating parameter values for the purpose of demonstrating continuous compliance with the emission limit. (for carbon adsorbers, owners and operators are required to monitor operating parameters for each regeneration cycle.) We selected the 3-hour averaging time because the initial performance test provisions in today's proposed rule require owners and operators to perform a minimum of three, 1-hour test runs, and the limits of the established parameter values would be based on the average values obtained using all test data obtained during the performance test. Each 3-hour average parameter value must be within the level established during the initial performance test in order for the owners and operators to demonstrate continuous compliance with the operating limit.

Based on information from operations in the Viscose Processes source category, the Cellulose Ethers source category, and other source categories, we selected operating parameters for each control device that are reliable indicators of control device performance. Owners and operators of affected sources would monitor these operating parameters to demonstrate continuous compliance with the operating limits.

a. *Carbon Adsorbers.* We selected the operating parameters for carbon adsorbers based on monitoring provisions in subpart G of 40 CFR part 63 and in the Pharmaceutical Products NESHAP (subpart GGG of 40 CFR part 63). We are requiring owners and operators of affected sources equipped with carbon adsorbers to monitor and record the following parameters to demonstrate continuous compliance: (1) Total regeneration stream flow during the carbon bed regeneration cycle, (2) the temperature of the carbon bed after regeneration, (3) the temperature of the carbon bed after completing the cooling cycle, and (4) regeneration frequency (operating time since the end of the last regeneration). Inlet temperature and flow can affect the adsorption unit efficiency.

b. *Thermal Oxidizers.* Based on information from subpart G of 40 CFR part 63 and from cellulose ether and cellulosic sponge operations, we are requiring owners and operators of affected sources equipped with thermal oxidizers to monitor the temperature in the firebox or in the ductwork immediately downstream of the firebox. A sufficiently high temperature in the firebox helps to ensure complete combustion.

c. *Biofilters.* We selected the operating parameters for biofilters based on information from a cellulosic sponge operation and a biofilter vendor. We are requiring owners and operators of affected sources equipped with a biofilter to monitor the following parameters to demonstrate continuous compliance: (1) Inlet air flow temperature, (2) inlet air flow rate, (3) amount of water and nutrients added, (4) nutrient levels in the biofilter discharge, (5) pH of the effluent, (6) conductivity of the effluent, and (7) pressure drop on the media. These monitoring parameters have also been recommended by a biofilter vendor.

Monitoring the temperature and gas flow rate at the biofilter inlet can assist the owners and operators in maintaining an optimal inlet temperature and flow. Monitoring the nutrient levels added to

the system and in the biofilter discharge determines whether the microbes in the biofilter bed are receiving enough nutrients; the presence of some excess nutrients is an indication that they are. By measuring the pH and conductivity of the effluent, owners and operators can monitor the buildup of sulfuric acid. The pH decreases and the conductivity of the effluent increases as levels of sulfur and sulfuric acid increase. Monitoring the pressure drop across the system can alert owners and operators to problems in the system that increase the pressure drop (such as fungal growth sealing off the bottom of the biofilter bed).

d. *Condensers.* Based on information from the subpart G of 40 CFR part 63 and from cellulose ether operations, we are requiring owners and operators of affected sources equipped with condensers to monitor the condenser outlet gas temperature. Monitoring the outlet gas temperature helps to ensure proper operation of the condenser.

e. *Oil Absorbers.* No information is readily available on operating parameters for owners and operators of affected sources with oil absorbers. However, several parameters are suggested based on the method of operation of this control device. After the CS_2 vapors from the process are absorbed in an absorption vessel, the absorption liquid is passed to heat exchangers, which increase the temperature of the liquid and enhance the release of the CS_2 from the absorption liquid in a steam stripper. The absorption liquid from the stripper is sent through a heat exchanger to cool and is returned to the absorber. The flow of absorption liquid through the absorber, the stripping and condensation temperatures before and after the steam stripper, and the steam flow are good parameters for ensuring the proper operation of this control device. Consequently, we are requiring owners and operators of affected sources equipped with oil absorbers to monitor these parameters to demonstrate continuous compliance.

f. *Scrubbers.* We selected the operating parameters for packed tower scrubbers based on information from subpart G of 40 CFR part 63, and the Pharmaceutical Products NESHAP (subpart GGG of part 63), cellulose food casing operations, and cellulose ether operations. Owners and operators of affected sources equipped with packet tower scrubbers that use water as the scrubber liquid would monitor scrubber pressure drop and scrubber liquid flow rate to demonstrate continuous compliance. Owners and operators of affected sources equipped with packed tower scrubbers that use caustic scrubber liquid would monitor these two parameters and also scrubber liquid pH. The pressure drop across the packed tower scrubber is an indicator of whether the packing in the scrubber is becoming clogged. Continued flow of scrubber liquid ensures that the scrubber is operating properly. Monitoring the pH of the scrubber liquid ensures that the scrubber liquid is at the optimal pH level for absorbing the target pollutant.

g. *Flares.* The simplest and most effective means of determining whether a flare is operating properly is whether the pilot flame is still burning. Therefore, we are requiring owners and operators of affected sources using flares to monitor the presence of the pilot flame in addition to the other flare operating requirements (such as design specifications, heat content specifications, exit velocity limitation, etc.) specified in §63.11 of subpart A.

2. Material Balance

In order for owners and operators of viscose process affected sources to demonstrate continuous compliance with the applicable percent reduction standard, they must be able to calculate the percent reduction of emissions on an ongoing basis. They would calculate the percent reduction using the emissions data from the material balance that they established as part of their initial compliance requirements. The material balance would include information on HAP usage and HAP emissions based on information from the initial performance test and from records at the affected source. If the owners and operators use pollution prevention process changes to comply with the emission limits, then the material balance would include information on the amount of HAP that would have been used in the absence of the process change, and the amount of HAP that was used after the process change was implemented. By recording this information, the owners and operators would be able to determine the percent reduction from implementing the process change. The owners and operators would use the applicable equation in today's proposed rule to determine the percent reduction from process changes and any other emission controls.

3. Continuous Compliance Requirements for CS_2 Unloading and Storage Operations

Owners and operators of cellulose food casing, rayon, cellophane, and cellulosic sponge at new and existing viscose process affected sources would have three options for demonstrating continuous compliance with the emission limits and work practice standards for CS_2 unloading and storage operations.

If owners and operators choose to reduce the CS_2 emissions from their CS_2 unloading and storage operations by 83 percent by any compliance method, they must keep a record documenting how they are meeting the 83 percent emission limit. If they met the 83 percent emission limit by installing a nitrogen system, they would calculate the actual percent reduction achieved using the applicable equation in today's proposed rule. If they met the 85 percent emission limit by venting emissions to a control device, then they must monitor the appropriate control device operating parameters and meet the appropriate operating limits. They would also calculate the percent reduction of emissions from the material balance using the applicable equation in today's proposed rule.

If owners and operators decide to reduce their CS_2 emissions by installing a nitrogen system for CS_2 unloading and storage, then they must keep the record established as part of their initial compliance requirements certifying that a nitrogen system is being used for CS_2 unloading and storage operations. Using a nitrogen system for CS_2 unloading and storage ensures the reduction of CS_2 emissions by at least 83 percent relative to water systems, based on MACT floor calculations.

If owners and operators of affected sources decide to obtain an equivalent emission reduction from elsewhere in the viscose process, such as a 0.14 percent reduction from process vents, then they must comply with the continuous compliance requirements for process vents. They must monitor and record operating parameters at least once every 15 minutes and calculate 3-hour averages of operating parameter values. Each 3-hour average parameter value must be within the value established during the initial performance test to demonstrate continuous compliance with the operating limit. They must also maintain the material balance that they established as part of their initial compliance requirements and document the percent reduction of total sulfide (reported as CS_2) using the emissions data from the material balance. The average total sulfide emissions from the process vents, based on information from the material balance, must be reduced by the applicable amount (such as 75 percent for cellulosic sponge operations) plus 0.14 percent.

4. Continuous Compliance Requirements for Cellulose Ether Operations for Wastewater Emissions

Because owners and operators of new and existing cellulose ether affected sources are subject to the applicable process wastewater provisions of subpart G of 40 CFR part 63, they are also subject to the applicable continuous compliance provisions of subpart G for process wastewater.

5. Continuous Compliance Requirements for Cellulose Ether Operations for Equipment Leaks

Because owners and operators of new and existing cellulose ether affected sources are subject to the applicable equipment leak standards of subpart H of 40 CFR part 63, they are also subject to the applicable continuous compliance provisions of subpart H for equipment leaks.

L. How did we select the notification, reporting, and recordkeeping requirements?

We selected the notification, recordkeeping, and reporting requirements based on generic requirements in the NESHAP General Provisions (40 CFR part 63, subpart A) and specific requirements for the Viscose Processes and Cellulose Ethers source categories.

1. Notification Requirements

The notification requirements that we selected include initial notifications, notification of performance test, notification of compliance status, and notification dates. These notification requirements are based on requirements in §§ 63.7(b) and (c), 63.8(f), 63.9(b) and (h), and 63.10(d)(2) of subpart A.

2. Reporting Requirements

The reporting requirements that we selected include semiannual compliance reports, required in § 63.10(e)(3) of subpart A, and immediate SSM reports, required in § 63.10(d)(5)(ii) of subpart A. If there were no deviations from the emission limits, operating limits, or work practice standards during the reporting period, then the semiannual compliance report must include a statement that there were no deviations. If there were deviations from the emission limits, operating limits, or work practice standards during the reporting period, then the semiannual compliance report must include the information required in today's proposed rule. If there was a startup, shutdown or malfunction during the reporting period, and the source took actions consistent with the SSM plan, then the compliance report must include the information in § 63.10(d)(5)(i) of subpart A. The submittal date for the compliance report is based on information in § 63.10(e)(3)(v) of subpart A.

If there was a startup, shutdown, or malfunction during the reporting period, and the owner or operator took actions inconsistent with the SSM plan, then the owner or operator must submit an immediate SSM report. The report must include the actions taken for the event and the information provided in § 63.10(d)(5)(ii) of subpart A. The submittal date for the immediate SSM report is based on § 63.10(d)(5)(ii) of subpart A.

3. Recordkeeping Requirements

The recordkeeping requirements that we selected include a copy of each notification and report, as well as documentation supporting any initial notification or notification of compliance status, according to the requirements in § 63.10(b)(1)(xiv) of subpart A. Owners and operators of affected sources must also keep the records in § 63.6(e)(3) of subpart A related to SSM, records of performance tests as required in § 63.7(g)(1) of subpart A, and records for each continuous parameter monitoring system.

The records for the continuous parameter monitoring system would include records of operating limits and parameter monitoring data required in today's proposed rule. Owners and operators of affected sources that installed a nitrogen system to comply with the work practice standard for CS_2 unloading and storage operations must keep records certifying that a nitrogen system is being used. Owners and operators must keep records of all material balances and calculations documenting the percent reduction in HAP emissions used to demonstrate compliance with the emission limits.

M. What is the relationship of this rule to other rules?

This section discusses the relationship between today's proposed rule and other Federal rules covering cellulose products manufacturing operations. We evaluated pertinent rules in an effort to minimize the burden on the industry and enforcement authorities. We are interested in hearing from you on specific suggestions for reducing the overall burden of the rule without jeopardizing its enforceability of our overall emission reduction goals.

1. Carbon Disulfide OSHA PEL

Occupational exposure to CS_2 is regulated by the U.S. Department of Labor, Occupational Safety and Health Administration (OSHA). The current permissible exposure limit (PEL) for CS_2, established by OSHA in 1992, is 20 ppm as an 8-hour time-weighted average (TWA) (29 CFR 1910.1000, subpart Z). The PEL requires operations to reduce average worker exposure to CS_2 at or below 20 ppm during an 8-hour shift of a 40-hour week.

Viscose process operations have reduced worker exposure to CS_2 by designing their ventilation systems to produce large volumes of process and building exhaust air. As a result, viscose process operations have relatively low CS_2 concentrations and high gas flow rates.

Currently, OSHA is evaluating setting a lower PEL for CS_2. Many viscose process operations have indicated that they are currently achieving CS_2 levels at or below 4 ppm, which was the PEL for CS_2 for a short period of time, prior to its being increased to 20 ppm. Therefore, we do not anticipate any OSHA limit at or above 4 ppm will have much impact on industry's compliance with the CS_2 emission reduction requirements in today's proposed rule.

However, an OSHA limit lower than 4 ppm could require some viscose process operations to take additional measures and increase their gas flow rates in order to further reduce the CS_2 concentrations inside the operation. The more dilute flows, the more difficult it becomes for MACT floor viscose process operations, that are currently controlled, to maintain the level of CS_2 control that they currently achieve. Control devices would not be as efficient at removing CS_2 at reduced concentrations. Consequently, the MACT floor would have to be revised downward. Otherwise, the MACT standard would be based on obsolete, incorrect information.

The more dilute flow makes it more difficult for viscose process operations to achieve the level of CS_2 control necessary to meet the MACT floor and increases emission control costs to meet the MACT floor. The resulting higher cost effectiveness beyond the MACT floor would make it more difficult for us to establish beyond-the-floor requirements.

Conversely, a tighter OSHA limit could force some viscose process operations to enclose more of their process in order to reduce the CS_2 concentrations inside the operation. The more concentrated flows resulting from the lower OSHA limit would dovetail with the need for more concentrated flows for the CS_2 control devices used to comply with the MACT standard, whether the standard is set at the MACT

floor or beyond-the-floor. To avoid any conflict in implementing our respective standards, we are working with OSHA to coordinate our efforts in reducing worker exposure to CS_2 and air emissions of CS_2.

2. Polyether Polyols NESHAP

The proposed NESHAP for Polyether Polyols Production (subpart PPP of 40 CFR part 63) (62 FR 46818, September 4, 1997) defined a ''polyether polyol'' as

> . . . a compound formed through the polymerization of ethylene oxide or propylene oxide or other cyclic ethers with compounds having one or more reactive hydrogens (i.e., a hydrogen bonded to nitrogen, oxygen, phosphorus, sulfur, etc.) to form polyethers. This definition, excludes materials regulated under the HON, such as glycols and glycol ethers.

One commenter on the proposed rule noted that the cellulose ether, hydroxyethyl cellulose, is formed through the reaction of ethylene oxide on cellulose polymer molecules. The commenter requested that EPA clarify whether hydroxyethyl cellulose is included or excluded from the definition of ''polyether polyol.'' In response to this comment, the final Polyether Polyol NESHAP (64 FR 29439, June 1, 1999) revised the definition of ''polyether polyol'' to specifically exclude hydroxyethyl cellulose. Therefore, hydroxethyl cellulose operations are not subject to the requirements of subpart PPP of 40 CFR part 63 and are subject to today's proposed subpart.

However, the final Polyether Polyol NESHAP did not specifically exclude any of the other cellulose ether operations (for example, hydroxypropyl cellulose operations and hydroxypropyl methyl cellulose operations) subject to today's proposed rule and which also fall under the definition of a polyether polyol. A revision to the Polyether Polyol NESHAP that specifically excludes all cellulose ether operations was published on May 8, 2000 (65 FR 26491). Once this change becomes effective, cellulose ether operations will only be subject to this subpart.

3. Volatile Organic Liquid Storage Vessels New Source Performance Standards (NSPS)

The NSPS for Volatile Organic Liquid Storage Vessels (40 CFR part 60, subpart Kb) includes requirements for storage vessels constructed, reconstructed, or modified after July 23, 1984 that are used to store volatile organic liquids. The NSPS exempts the following storage vessels: (1) vessels with a design capacity less than 75 cubic meters (m^3), (2) vessels with a capacity greater than or equal to 151 m^3 with a maximum true vapor pressure less than 3.5 kilopascals (kPa), and (3) vessels with a capacity greater than or equal to 75 m^3 but less than 151 m^3 with a maximum true vapor pressure less than 15 kPa.

Today's proposed rule also contains requirements for storage vessels containing volatile organic liquids, specifically HAP storage vessels containing CS_2 or toluene at viscose process affected sources. However, the CS_2 storage vessel standards in today's proposed rule primarily address the gaseous CS_2 emissions being generated from the CS_2-contaminated water from water unloading and padding systems, not the gaseous CS_2 emissions from the storage vessel. Also, only the cellophane operation has toluene storage vessels that would be subject to the storage vessel provisions in subpart Kb and today's proposed rule. Therefore, we project no overlap in requirements between subpart Kb and today's proposed rule for CS_2 storage vessels. The owner or operator will identify in the notification of compliance status which storage vessels are in compliance with subpart Kb.

IV. Summary of Environmental, Energy and Economic Impacts

A. What are the air quality impacts?

We have determined nationwide baseline HAP emissions from operations in the Viscose Processes source category and Cellulose Ethers source category to be 20,700 ton/yr at the current level of control. We have determined that the proposed standards will reduce total HAP emissions from these operations by about 4,060 ton/yr.

In addition to reducing emissions of HAP, the proposed standards will also reduce emissions of non-HAP, such as H_2S. We have determined that the proposed standards will reduce H_2S emissions by about 1,490 ton/yr from a baseline level of 4,440 ton/yr.

We have determined that the proposed standards will increase secondary emissions of particulate matter, sulfur dioxide, nitrogen oxides, and carbon monoxide from industrial and utility boilers by about 23 ton/yr. Secondary emissions were assumed to be generated from the utility boilers that generate the electricity for the control devices as well as from the industrial boilers that generate the steam used in operating the control devices (e.g., carbon adsorbers).

B. What are the cost impacts?

We have determined that the capital costs for emission control equipment for the proposed standards will be $33.0 million, and the capital costs for monitoring equipment will be $251,000. The capitol costs include the costs to purchase and install the equipment.

We have determined that the incremental annual costs for emission control for the proposed standards will be $7.7 million/yr, and the annual costs for monitoring will be $362,000. The annual costs include the direct annual costs (comprised of labor, materials, and utilities) plus the indirect annual costs (comprised of overhead, taxes, insurance, administrative charges, and capital recovery).

We expect that the total average costs for annual recordkeeping and reporting required by the proposed standards will be $2,041 over the first 3 years after implementation of the standards.

C. What are the economic impacts?

With our economic impact analysis, we sought to evaluate the impacts this proposed rule would have on the cellulose manufacturing market, consumers, and society. Because of the variability in end products in cellulose products manufacturing, we assessed impacts on five separate market segments. We treated the Cellulose Ethers source category as one segment and divided the Viscose Processes source category into four segments: cellophane, rayon, food casings, and sponges. The total annualized social cost (in 1998 dollars) of the proposed rule on the industry is $7.7 million, with costs to the firms affected by this proposed rule ranging from 0.2 to 4.5 percent of sales. The cost-to-sales ratios for ethers and cellophane were below 1 percent, suggesting the proposed rule had minimal impact on these segments. Since the cost-to-sales ratios were higher overall for the rayon, food casings, and sponge segments of the cellulose market, we performed a market analysis using 1998 as the baseline. The results indicated less than 1 percent change in market prices and in the quantity of cellulose products produced for these three segments.

We do not predict that cellulose manufacturing facilities will close as a result of this proposed rule. However, available economic data suggest that some facilities in this source category would very likely close if current trends continue—even if they did not incur compliance costs from this proposed rule. The impact of these proposed standards may be that decisions to close facilities may occur sooner than they would otherwise.

D. What are the non-air health, environmental and energy impacts?

We have determined that the overall energy demand (electricity plus steam) for operations in the Viscose Processes source category and Cellulose Ethers source category will increase by about 16,000 MWh/yr under the proposed standards. We determined this net increase based on the additional energy demand for control devices installed to meet the proposed standards. No information for comparison is currently available on the baseline energy consumption for the Viscoe Processes source category and Cellulose Ethers source category.

We have determined that wastewater generation will increase by about 115 million gal/yr from a baseline level of 9,204 million gal/yr with the installation of the control devices. We project that some of the control strategies examined for the proposed standards will generate additional solid waste, primarily from the use of scrubbers. We have no information on the amount of additional solid waste that will be generated, but we anticipate that the amount will be small.

V. Solicitation of Comments and Public Participation

We would like to have full public participation in arriving at our final decisions, and we encourage comment on all aspects of this proposal from all interested parties. Interested parties should submit supporting data and detailed analyses with their comments so we can make maximum use of them. Information on where and when to submit comments is listed in ''Comments'' under the **ADDRESSES** and **DATES** sections. Information on procedures for submitting proprietary information in the comments is listed in ''Comments'' under the **SUPPLEMENTARY INFORMATION** section.

VI. Administrative Requirements

A. Executive Order 12866, Regulatory Planning and Review

Under Executive Order 12866 (58 FR 51735, October 4, 1993), EPA must determine whether the regulatory action is ''significant'' and therefore subject to review by the Office of Management and Budget (OMB) and the requirements of the Executive Order. The Executive Order defines ''significant regulatory action'' as one that is likely to result in a rule that may:

(1) Have an annual effect on the economy of $100 million or more or adversely affect in a material way the economy, a sector of the economy, productivity, competition, jobs, the environment, public health or safety, or state, local, or tribal governments or communities;

(2) Create a serious inconsistency or otherwise interfere with an action taken or planned by another agency;

(3) Materially alter the budgetary impact of entitlements, grants, user fees, or loan programs, or the rights and obligation of recipients thereof; or

(4) Raise novel legal or policy issues arising out of legal mandates, the President's priorities, or the principles set forth in the Executive Order.

Pursuant to the terms of Executive Order 12866, it has been determined that this rule is not a ''significant regulatory action'' because none of the listed criteria apply to this action. Consequently, this action was not submitted to OMB for review under Executive Order 12866.

B. Executive Order 13132, Federalism

Executive Order 13132, entitled ''Federalism'' (64 FR 43255, August 10, 1999) requires EPA to develop an accountable process to ensure ''meaningful and timely input by State and local officials in the development of regulatory policies that have federalism implications.'' ''Policies that have federalism implications'' is defined in the Executive Order to include regulations that 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.'' Under Executive Order 13132, EPA may not issue a regulation that has federalism implications, that imposes substantial direct compliance costs, and that is not required by statute, unless the Federal government provides the funds necessary to pay the direct compliance costs incurred by State and local governments, or EPA consults with State and local officials early in the process of developing the proposed regulation. The EPA also may not issue a regulation that has federalism implications and that preempts State law unless EPA consults with State and local officials early in the process of developing the proposed regulation.

If EPA complies by consulting, Executive Order 13132 requires EPA to provide to OMB, in a separately identified section of the preamble to the rule, a federalism summary impact statement (FSIS). The FSIS must include a description of the extent of EPA's prior consultation with State and local officials, a summary of the nature of their concerns and EPA's position supporting the need to issue the regulation, and a statement of the extent to which the concerns of State and local officials have been met. Also, when EPA transmits a draft final rule with federalism implications to OMB for review pursuant to Executive Order 12866, it must include a certification from EPA's Federalism Official stating that EPA has met the requirements of Executive Order 13132 in a meaningful and timely manner.

This proposal rule 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, as specified in Executive Order 13132. Thus, the requirements of section 6 of the Executive Order do not apply to this rule.

C. Executive Order 13084, Consultation and Coordination With Indian Tribal Governments

Under Executive Order 13084, EPA may not issue a regulation that is not required by statute, that significantly or uniquely affects the communities of Indian tribal governments, and that imposes substantial direct compliance costs on those communities, unless the Federal government provides the funds necessary to pay the direct compliance costs incurred by the tribal governments, or EPA consults with those governments. If EPA complies by consulting, Executive Order 13084 requires EPA to provide to OMB, in a separately identified section of the preamble to the rule, a description of the extent of EPA's prior consultation with representatives of affected tribal governments, a summary of the nature of their concerns, and a statement supporting the need to issue the regulation. In addition, Executive Order 13084 requires EPA to develop an effective process permitting elected officials and other representatives of Indian tribal governments ''to provide meaningful and timely input in the development of regulatory policies on matters that significantly or uniquely affect their communities.'' Today's proposed rule does not significantly or uniquely affect the communities of Indian tribal governments. No tribal governments own or operate cellulose food casing operations, rayon operations, cellophane operations, cellulosic sponge operations, or cellulose ether operations. Accordingly, the requirements of section 3(b) of Executive Order 13084 do not apply to this action.

D. Executive Order 13045, Protection of Children From Environmental Health Risks and Safety Risks

Executive Order 13045 (62 FR 19885, April 23, 1997) applies to any rule that: (1) is determined to be ''economically significant'' as defined under Executive Order 12866, and (2) concerns an environmental health or safety risk that EPA has reason to believe may have a disproportionate effect on children. If the regulatory action meets both criteria, EPA must evaluate the environmental health or safety effects of the planned rule on children, and explain why the planned regulation is preferable to other potentially effective and reasonably feasible alternatives that EPA considered.

The EPA interprets Executive Order 13045 as applying only to those regulatory actions that are based on health or safety risks, such that the analysis required under section 5–501 of the Executive Order has the potential to influence the regulation. This rule is not subject to Executive Order 13045 because it is based solely on technology performance. No children's risk analysis was performed because no alternative technologies exist that would provide greater stringency at a reasonable cost. Furthermore, this rule has been determined not to be ''economically significant'' as defined under Executive Order 12866.

E. Unfunded Mandates Reform Act of 1995

Title II of the Unfunded Mandates Reform Act of 1995 (UMRA), Pub. L. 104–4, establishes requirements for Federal agencies to assess the effects of their regulatory actions on State, local, and tribal governments and the private sector. Under section 202 of the UMRA, EPA generally must prepare a written statement, including a cost-benefit analysis, for proposed and final rules with ''Federal mandates'' that may result in expenditures by State, local, and tribal governments, in aggregate, or by the private sector, of $100 million or more in any 1 year. Before promulgating an EPA rule for which a written statement is needed, section 205 of the UMRA generally requires EPA to identify and consider a reasonable number of regulatory alternatives and adopt the least-costly, most cost-effective, or least-burdensome alternative that achieves the objectives of the rule. The provisions of section 205 do not apply when they are inconsistent with applicable law. Moreover, section 205 allows EPA to adopt an alternative other than the least-costly, most cost-effective, or least-burdensome alternative if the Administrator publishes with the final rule an explanation why that alternative was not adopted. Before EPA establishes any regulatory requirements that may significantly or uniquely affect small governments, including tribal governments, it must have developed under section 203 of the UMRA a small government agency plan. The plan must provide for notifying potentially affected small governments, enabling officials of affected small governments to have meaningful and timely input in the development of EPA's regulatory proposals with significant Federal intergovernmental mandates, and informing, educating, and advising small governments on compliance with the regulatory requirements.

The EPA has determined that this proposed rule does not contain a Federal mandate that may result in expenditures of $100 million or more for State, local, and tribal governments, in the aggregate, or the private sector in any 1 year. The maximum total annual cost of this proposed rule for any year has been determined to be less than $9 million. Thus, today's proposed rule is not subject to the requirements of sections 202 and 205 of the UMRA. In addition, EPA has determined that this proposed rule contains no regulatory requirements that might significantly or uniquely affect small governments because it contains no requirements that apply to such governments or impose obligations upon them. Therefore, today's proposed rule is not subject to the requirements of section 203 of the UMRA.

F. Regulatory Flexibility Act (RFA), as Amended by the Small Business Regulatory Enforcement Fairness Act of 1966 (SBREFA), 5 U.S.C. 601 et seq.

The RFA generally requires an agency to prepare a regulatory flexibility analysis of any rule subject to notice and comment rulemaking requirements under the Administrative Procedure Act or any other statute unless the agency certifies that the rule will not have a significant economic impact on a substantial number of small entities. Small entities include small businesses, small organizations, and small governmental jurisdictions.

For purposes of assessing the impacts of today's proposed rule on small entities, small entity is defined as: (1) A small business that has fewer than 1,000 employees for SIC codes 2823, 2819, and 2869; fewer than 750 employees for SIC code 2821; or fewer than 500 employees for SIC code 3089; (2) a small governmental jurisdiction that is a government of a city, county, town, school district or special district with a population of less than 50,000; and (3) a small organization that is any not-for-profit enterprise which is independently owned and operated and is not dominant in its field.

After considering the economic impact of today's proposed rule on small entities, I certify that this action will not have a significant economic impact on a substantial number of small entities. We have determined that only one company meets one of the definitions of small entity—a small business that has fewer than 500 employees for SIC code 3089. This company owns only 1 of the 14 operations subject to today's proposed rule. There are several firms subject to today's proposed rule whose costs will be a greater percentage of sales than this small business. Furthermore, the market impacts on this company are minimal, and are in line with impacts experience by other firms subject to today's proposed rule.

Although this proposed rule will not have a significant economic impact on a substantial number of small entities, EPA nonetheless has tried to reduce the impact of this proposed rule on small entities. We held a number of meetings with industry in which the lone small business participated, and we visited the only small business impacted by this proposed rule. The EPA continues to be interested in the potential impacts of the proposed rule on small entities and welcomes comments on issues related to such impacts.

G. Paperwork Reduction Act

The information collection requirements in this proposed rule will be submitted for approval to the Office of Management and Budget under the Paperwork Reduction Act, 44 U.S.C. 3501 *et seq.* The EPA has prepared an Information Collection Request (ICR) document 1974.01, and you may obtain a copy from Sandy Farmer by mail at Office of Environmental Information, Collection Strategies Division (2822), U.S. Environmental Protection Agency, 1200 Pennsylvania Avenue NW., Washington, DC 20460, by email at farmer.sandy@epa.gov, or by calling (202) 260–2740. You may also download a copy off the Internet at http://www.epa.gov/icr. The information requirements are not effective until OMB approves them.

The information requirements are based on notification, recordkeeping, and reporting requirements in the NESHAP General Provisions (40 CFR part 63, subpart A), which are mandatory for all operators subject to national emission standards. These

recordkeeping and reporting requirements are specifically authorized by section 114 of the CAA (42 U.S.C. 7414). All information submitted to EPA pursuant to the recordkeeping and reporting requirements for which a claim of confidentiality is made is safeguarded according to EPA's policies set forth in 40 CFR part 2, subpart B.

The proposed rule would require maintenance inspections of the control devices but would not require any notifications or reports beyond those required by the NESHAP General Provisions (40 CFR part 63, subpart A). The recordkeeping requirements require only the specific information needed to determine compliance.

The annual recordkeeping and reporting burden for this collection (averaged over the first 3 years after the effective date of the rule) has been determined to be 42 labor hours per year, at a total annual cost of $2,041. This burden number includes one-time notifications and recordkeeping. Total capital/startup costs over the 3-year period of the ICR have been determined to be $0. Total annualized operation and maintenance costs associated with the notification requirements have been determined to be $129.

Burden means the total time, effort, or financial resources expended by persons to generate, maintain, retain, or disclose or provide information to or for a Federal agency. This includes the time needed to: (1) Review instructions; (2) develop, acquire, install, and utilize technology and systems for the purposes of collecting, validating, and verifying information, processing and maintaining information, and disclosing and providing information; (3) adjust the existing ways to comply with any previously applicable instructions and requirements; (4) train personnel to be able to respond to a collection of information; (5) search data sources; (6) complete and review the collection of information; and (7) transmit or otherwise disclose the information.

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 EPA's regulations are listed in 40 CFR part 9 and 48 CFR chapter 15.

Comments are requested on the Agency's need for this information, the accuracy of the provided burden estimates, and any suggested methods for minimizing respondent burden, including through the use of automated collection techniques. Send comments on the ICR to the Director, Collection Strategies Division; U.S. Environmental Protection Agency (2822); 1200 Pennsylvania Avenue, NW, Washington, DC 20460; and to the Office of Information and Regulatory Affairs, Office of Management and Budget, 725 17th St., NW, Washington, DC 20503, marked ''Attention: Desk Officer for EPA.'' Include the ICR number in any correspondence. Since OMB is required to make a decision concerning the ICR between 30 and 60 days after August 28, 2000, a comment to OMB is best assured of having its full effect if OMB receives it by September 27, 2000. The final rule will respond to any OMB or public comments on the information collection requirements contained in this proposal.

H. National Technology Transfer and Advancement Act of 1995

Section 12(d) of the National Technology Transfer and Advancement Act of 1995 (NTTAA), Pub. L. No. 104–113, section 12(d) (15 U.S.C. 272 note), directs all Federal agencies to use voluntary consensus standards instead of government-unique standards in their regulatory and procurement activities, unless to do so would be inconsistent with applicable law or otherwise impractical. Voluntary consensus standards are technical standards (such as materials specifications, test methods, sampling procedures, business practices) developed or adopted by one or more voluntary consensus standards bodies. Examples of organizations generally regarded as voluntary consensus standards bodies include the American Society for Testing and Materials (ASTM), the National Fire Protection Association (NFPA), and the Society of Automotive engineers (SAE). The NTTAA requires Federal agencies to provide Congress, through annual reports to OMB, with explanations when an agency does not use available and applicable voluntary consensus standards.

Consistent with the NTTAA, EPA conducted searches to identify voluntary consensus standards for use in emissions testing. The search for emissions testing procedures identified 20 voluntary consensus standards that appeared to have possible use in lieu of EPA standard reference methods. However, after reviewing the available standards, EPA determined that nine of the candidate consensus standards identified for measuring emissions of the HAP or surrogates subject to emission limits in the proposed rule would not be practical due to lack of equivalency, documentation, and validation data. Eleven of the remaining candidate consensus standards are under development or under EPA review. The EPA plans to follow, review, and consider adopting these standards after their development and after further review by EPA is completed.

The ASTM D6420–99 is currently under EPA review as an approved alternative to EPA Method 18. The EPA will also compare this final ASTM standard to methods previously approved as alternatives to EPA Method 18 with specific applicability limitations. These methods, designated as ALT–017 and CTM–028, are available through EPA's Emission Measurement Center Internet site at www.epa.gov/ttn/emc/tmethods.html. The final ASTM D6420–99 standard is very similar to these approved alternative methods, which may be equally suitable for specific applications. The EPA plans to continue its review of the final ASTM standard and will consider adopting the ASTM standard at a later date.

The EPA takes comment on compliance demonstration requirements proposed in this rulemaking and specifically invites the public to identify potentially applicable voluntary consensus standards. Commenters should also explain why this proposed rule should adopt these voluntary consensus standards in lieu of EPA's standards. Emission test methods submitted for evaluation should be accompanied with a basis for the recommendation, including method validation data and the procedure used to validate the candidate method (if a method other than EPA Method 301 (40 CFR part 63, appendix A) was used).

Table 4 to the proposed rule lists the EPA test methods included in the proposed rule. Most of the methods have been used by States and industry for more than 10 years. Nevertheless, as specified in § 63.7(e)(2)(ii) and (f) of subpart A, the proposed rule also allows any State or affected source to apply to EPA for permission to use an alternative method in place of any of the EPA test methods listed in Table 4 to the proposed rule.

List of Subjects in 40 CFR Part 63

Environmental protection, Administrative practice and procedure, Air pollution control, Cellulose products manufacturing, Hazardous substances, Intergovernmental relations, Reporting and recordkeeping requirements.

Dated: August 11, 2000.

Carol M. Browner,

Administrator.

For the reasons stated in the preamble, part 63, title 40, chapter I of the Code of the Federal Regulations is proposed to be amended as follows:

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

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

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

2. It is proposed that part 63 be amended by adding subpart UUUU to read as follows:

Subpart UUUU—National Emission Standards for Hazardous Air Pollutants for Cellulose Products Manufacturing

Sec.

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Table 10 to Subpart UUUU—Applicability of General Provisions to Subpart UUUU

What This Subpart Covers

§ 63.5480 What is the purpose of this subpart?

This subpart establishes emission limits, operating limits, and work practice standards for hazardous air pollutants (HAP) emitted from cellulose products manufacturing operations. Carbon disulfide, carbonyl sulfide, ethylene oxide, methanol, methyl chloride, propylene oxide, and toluene are the HAP emitted in the greatest quantities from cellulose products manufacturing operations. This subpart also establishes requirements to demonstrate initial and continuous compliance with the emission limits, operating limits, and work practice standards.

§ 63.5485 Am I subject to this subpart?

You are subject to this subpart if you own or operate a cellulose products manufacturing operation that is located at a major source of HAP emissions.

(a) Cellulose products manufacturing includes both the Viscose Processes source category and the Cellulose Ethers source category. The Viscose Processes source category includes the collection of manufacturing processes that use the viscose process. These manufacturing processes include the cellulose food casing, rayon, cellophane, and cellulosic sponge manufacturing processes. The Cellulose Ethers source category includes the collection of cellulose ether operations that manufacture any of the following products: carboxymethyl cellulose, hydroxyethyl cellulose, hydroxypropyl cellulose, methyl cellulose, and hydroxypropyl methyl cellulose.

(b) A major source of HAP is any stationary source or group of stationary sources located within a contiguous area and under common control that emits or has the potential to emit any single HAP at a rate of 9.07 megagrams (10 tons) or more per year or any combination of HAP at a rate of 22.68 megagrams (25 tons) or more per year.

§ 63.5490 What parts of my plant does this subpart cover?

(a) This subpart applies to each new, reconstructed, or existing affected source at a cellulose products manufacturing operation.

(b) The affected source for the Viscose Processes source category is the sum of all operations engaged in the production of cellulose food casing, rayon, cellophane, or cellulosic sponge. The affected source for the Cellulose Ethers source category is the sum of all operations engaged in the production of cellulose ethers.

(c) An affected source is a new affected source if you began construction of the affected source after August 28, 2000 and you meet the applicability criteria at the time you began construction.

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

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

§ 63.5495 When do I have to comply with this subpart?

(a) If you have a new or reconstructed affected source, you must comply with this subpart according to the requirements in paragraphs (a)(1) and (2) of this section.

(1) If you start up your affected source before [the effective date of the final rule], then you must comply with this subpart no later than [the effective date of the final rule].

(2) If you start up your affected source after [the effective date of the final rule], then you must comply with this subpart upon startup of your affected source.

(b) If you have an existing affected source, then you must comply with the emission limits, operating limits, and work practice standards for existing sources no later than 3 years after [the effective date of the final rule].

(c) If you have an area source that increases its emissions or its potential to emit so that it becomes a major source of HAP, then the requirements in paragraphs (c)(1) and (2) of this section apply.

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

(2) All other parts of the source must be in compliance with this subpart by [3 years after the effective date of the final rule].

(d) You must meet the notification requirements in § 63.5575 according to the schedule in § 63.5575 and in 40 CFR part 63, subpart A. Some of the notifications must be submitted earlier than the compliance date of the standards in this subpart.

Emission Limits, Operating Limits, and Work Practice Standards

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

(a) You must meet each emission limit and work practice standard in Table 1 to subpart UUUU that applies to you.

(b) You must meet each operating limit in Table 2 to subpart UUUU that applies to you.

(c) As provided in § 63.6(g), you may apply to EPA for permission to use an alternative to the work practice standards in this section.

General Compliance Requirements

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

(a) 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.

(b) You must always operate and maintain your affected source, including air pollution control and monitoring equipment, according to the provisions in § 63.6(e)(1)(i).

(c) You must develop and implement a written startup, shutdown, and malfunction (SSM) plan according to the provisions in § 63.6(e)(3).

(d) You must be in compliance with the provisions of subpart A of this part, except as noted in Table 10 to subpart UUUU.

Testing and Initial Compliance Requirements

§ 63.5530 How do I demonstrate initial compliance with the emission limits and work practice standards?

(a) You must demonstrate initial compliance with each emission limit and work practice standard that applies to you according to Table 3 to subpart UUUU. You must also install and operate the monitoring equipment according to the requirements in § 63.5545 that apply to you.

(b) You must establish each site-specific operating limit in Table 2 to subpart UUUU that applies to you according to the requirements in § 63.5535 and Table 4 to subpart UUUU.

(c) You must submit the Notification of Compliance Status report containing the results of the initial compliance demonstration according to the requirements of § 63.5580(e).

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

(a) You must conduct each performance test in Table 4 to this subpart that applies to you.

(b) You must conduct each performance test for continuous process vents according to the requirements in § 63.7(e)(1) and under the specific conditions in Table 4 to this subpart. You must conduct each performance test for batch process vents under the specific conditions in Table 4 to this subpart and not under normal operating conditions as specified in § 63.7(e)(1).

(c) You may not conduct performance tests during periods of startup, shutdown, or malfunction, as specified in § 63.7(e)(1).

(d) You must conduct three separate test runs for each performance test required in this section, as specified in § 63.7(e)(3). Each test run must last at least 1 hour.

(e) You must use the equations in paragraphs (e)(1) through (8) of this section to determine compliance with the emission limits.

(1) Except as specified in paragraphs (e) (5) and (6) of this section, you must calculate the percent reduction for each test run using Equation 1 of this section:

$$PR = \frac{ER_i - ER_o}{(ER_s - ER_o) + ER_i}\ (100\%) \qquad \text{(Eq. 1)}$$

Where:

PR = percent reduction, percent

ER_i = total emission rate of organic HAP or sulfide in the inlet vent stream of the control device, pounds per hour

ER_o = total emission rate of organic HAP or sulfide in the outlet vent stream of the control device, pounds per hour

ER_s = total emission rate of organic HAP or sulfide in the stack, pounds per hour

(2) The total organic HAP emission rate is the sum of the emission rates of the individual HAP components. You must calculate total organic HAP emission rate for each run using Equation 2 of this section:

$$ER_{HAP_t} = \frac{1}{n}\sum_{i=1}^{n}\left(\sum_{j=1}^{m} ER_{HAP_j}\right) \qquad \text{(Eq. 2)}$$

Where:

ER_{HAPt} = total emission rate of organic HAP in vent stream, pounds per hour

ER_{HAPj} = emission rate of individual organic HAP in vent stream, pounds per hour

j = individual HAP

m = number of individual HAP sampled in each test run

i = test run

n = number of test runs

(3) The total sulfide emission rate is the sum of the emission rates of the individual sulfide components, expressed as carbon disulfide. You must calculate total sulfide emission rate for each test run using Equation 3 of this section:

$$ER_{sulf_t} = \frac{1}{n}\sum_{i=1}^{n}\left(ER_{CS2} + \left(ER_{H2S} * \frac{M_{CS2}}{M_{H2S}}\right) + \left(ER_{COS} * \frac{M_{CS2}}{M_{COS}}\right)\right) \qquad \text{(Eq. 3)}$$

Where:

ER_{sulft} = total emission rate of sulfide in vent stream, pounds per year, as carbon disulfide

ER_{CS2} = emission rate of carbon disulfide in vent stream, pounds per hour

ER_{H2S} = emission rate of hydrogen sulfide in vent stream, pounds per hour

M_{CS2} = mass of carbon disulfide per pound-mole of carbon disulfide, 76 pounds per pound-mole

M_{H2S} = mass of hydrogen sulfide per pound-mole of carbon disulfide, 68

pounds per pound-mole
ER_{COS} = emission rate of carbonyl sulfide in vent stream, pounds per hour
M_{COS} = mass of carbonyl sulfide per pound-mole of carbon disulfide, 120 pounds per pound-mole
i = test run
n = number of test runs

(4) You must calculate the percent reduction with process changes and any other emissions reductions using Equation 4 of this section:

$$PR = \frac{ER_u - ER_s}{ER_u} (100\%) \qquad \text{(Eq. 4)}$$

Where:
PR = percent reduction, percent
ER_u = total uncontrolled emission rate of organic HAP or sulfide prior to process changes and other emission controls, pounds per hour
ER_s = total emission rate of organic HAP or sulfide in the stack, pounds per hour

(5) You must calculate the total uncontrolled emission rate of organic HAP or sulfide prior to process changes and other emission controls using Equation 5 of this section:

$$ER_u = \frac{\left(ER_s - ER_o + ER_i\right)}{\left(100 - CE_{pc}\right)/100} \qquad \text{(Eq. 5)}$$

Where:
ER_u = total uncontrolled emission rate of organic HAP or sulfide prior to process changes and other emission controls, pounds per hour
ER_s = total emission rate of organic HAP or sulfide in the stack, pounds per hour
ER_o = total emission rate of organic HAP or sulfide in the outlet vent stream of the control device, pounds per hour
ER_i = total emission rate of organic HAP or sulfide in the inlet vent stream of the control device, pounds per hour
CE_{pc} = calculated control efficiency of process change, percent

(6) You must calculate the percent reduction for carbon disulfide unloading and storage operations using Equation 6 of this section:

$$PR = \frac{ER_w - ER_n}{ER_w} (100\%) \qquad \text{(Eq. 6)}$$

Where:
PR = percent reduction, percent
ER_w = emission rate of carbon disulfide from water unloading and storage system, pounds per year
ER_n = emission rate of carbon disulfide from nitrogen unloading and storage system, pounds per year

(7) You must calculate the emission rate of carbon disulfide from a water unloading and storage system using Equation 7 of this section:

$$ER_w = \frac{V_{ww} \times C_{CS2} \times F_e \times d_{CS2}}{1 \times 10^6} \qquad \text{(Eq. 7)}$$

Where:
ER_w = emission rate of carbon disulfide from water unloading and storage system, pounds per year
V_{ww} = volume of wastewater, gallons per year
C_{CS2} = concentration of carbon disulfide in water, parts per million volume
F_e = fraction of carbon disulfide emitted from wastewater, 0.92 (based on Table 34 of the HON)
d_{CS2} = density of carbon disulfide, pounds per gallon

(8) You must calculate the emission rate of carbon disulfide from a nitrogen unloading and storage system using Equation 8 of this section:

$$ER_n = \frac{TT \times P_1 \times V_1 \times VP_a \times MW}{TC \times P_2 \times F \times R \times T_a} \qquad \text{(Eq. 8)}$$

Where:
ER_n = emission rate of carbon disulfide from nitrogen unloading and storage system, pounds per year
TT = tank throughput, gallons per year
P_1 = initial head space pressure, pounds per square inch ambient
V_1 = available head space volume (assume 50 percent of capacity), gallons
VP_a = ambient vapor pressure for carbon disulfide, pounds per square inch ambient
MW = molecular weight of carbon disulfide, 76 pounds per pound-mole
TC = tank capacity, gallons
P_2 = maximum vent setting of vapor pressure for carbon disulfide, pounds per square inch ambient
F = conversion factor, 7.48 gallons per cubic foot
R = Ideal gas law constant, 10.73 pounds per square inch-cubic feet per pound-mole-degrees Rankine
T_a = ambient temperature, degrees Rankine

(f) You must establish each site-specific operating limit in Table 2 to this subpart that applies to you according to the requirements in paragraphs (f)(1) through (8) of this section.

(1) For condensers, record the outlet (product side) gas temperature averaged over the same period as the performance test while the vent stream is routed and constituted normally. Locate the temperature sensor in a position that provides a representative temperature.

(2) For thermal oxidizers, record the firebox temperature averaged over the same period as the performance test. Locate the temperature sensor in a position that provides a representative temperature.

(3) For water scrubbers, record the pressure drop and flow rate of the scrubber liquid averaged over the same time period as the performance test (both measured while the vent stream is routed and constituted normally). Locate the pressure and flow sensors in positions that provide representative measurements of the pressure and flow.

(4) For caustic scrubbers, record the pressure drop, flow rate of the scrubber liquid, and pH of the scrubber liquid averaged over the same time period as the performance test (measured while the vent stream is routed and constituted normally). Locate the pressure, flow, and pH sensors in positions that provide representative measurements of the pressure, flow and pH. Ensure the sample is properly mixed and representative of the fluid to be measured.

(5) For flares, comply with the requirements in § 63.11 to establish site-specific operating limits.

(6) For biofilters, record the pressure drop across the biofilter beds, inlet gas temperature, inlet gas flow rate, inlet nutrient and water levels, effluent pH,

effluent conductivity, and effluent nutrient levels averaged over the same time period as the performance test (measured while the vent stream is routed and constituted normally). Locate the pressure, temperature, flow, pH, and conductivity sensors in positions that provide representative measurement of the pressure, temperature, flow, pH, and conductivity. Ensure the sample is properly mixed and representative of the fluid to be measured.

(7) For carbon adsorbers, record the total regeneration stream mass flow during each carbon bed regeneration cycle during the period of the performance test, the temperature of the carbon bed after each regeneration during the period of the performance test (and within 15 minutes of completion of any cooling cycle or cycles), and the operating time since the end of the last regeneration cycle during the period of the performance test. Locate the temperature and flow sensors in positions that provide representative measurement of the temperature and flow.

(8) For oil absorbers, record the flow of absorption liquid through the absorber, the temperatures of the absorption liquid before and after the steam stripper, and the steam flow through the steam stripper averaged during the same period of the performance test. Locate the temperature and flow sensors in positions that provide representative measurement of the temperature and flow.

§ 63.5540 By what date must I conduct a performance test or other initial compliance demonstration?

(a) You must conduct performance tests at least 180 calendar days before the compliance date that is specified for your source in § 63.5495 and according to the provisions in § 63.7(a)(2).

(b) For each emission limit or work practice standard that applies to you in Table 3 of this subpart where initial compliance is not demonstrated using a performance test, you must conduct the initial compliance demonstration within 30 calendar days after the compliance date that is specified for your source in § 63.5495.

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

(a) You must install, operate, and maintain each continuous parameter monitoring system (CPMS) according to the requirements in paragraphs (a)(1) through (6) of this section.

(1) The CPMS must complete a minimum of one cycle of operation for each successive 15-minute period. You must have a minimum of three of the four required data points to constitute a valid hour of data.

(2) Have valid hourly data for at least 66 percent of every averaging period (such as, two valid hourly values for a 3-hour averaging period).

(3) Determine the hourly average of all recorded readings.

(4) Determine the 3-hour average of all recorded readings for each 3-hour period during the semiannual reporting period described in Table 8 to this subpart.

(5) Record the results of each inspection, calibration, and validation check.

(b) For each temperature monitoring device, you must meet the requirements in paragraphs (a) and (b)(1) through (7) of this section.

(1) Locate the temperature sensor in a position that provides a representative temperature.

(2) Use a temperature sensor with a minimum tolerance of 2.2 °C or 0.75 percent of the temperature value, whichever is larger.

(3) Shield the temperature sensor system from electromagnetic interference and chemical contaminants.

(4) If a chart recorder is used, it must have a sensitivity in the minor division of at least 20 °F.

(5) At least semiannually, perform an electronic calibration, according to the procedures in the manufacturer's owners manual. Following the electronic calibration, you must conduct a temperature sensor validation check, in which a second or redundant temperature sensor placed near the process temperature sensor must yield a reading within 16.7 °C of the process temperature sensor's reading.

(6) Conduct calibration and validation checks any time the sensor exceeds the manufacturer's specified maximum operating temperature range, or install a new temperature sensor.

(7) At least monthly, inspect all components for integrity and all electrical connections for continuity, oxidation, and galvanic corrosion.

(c) For each flow measurement device, you must meet the requirements in paragraphs (a) and (c)(1) through (5) of this section.

(1) Locate the flow sensor and other necessary equipment, such as straightening vanes, in a position that provides a representative flow.

(2) Use a flow sensor with a minimum tolerance of 2 percent of the flow rate.

(3) Reduce swirling flow or abnormal velocity distributions due to upstream and downstream disturbances.

(4) At least semiannually, conduct a flow sensor calibration check.

(5) At least monthly, inspect all components for integrity, all electrical connections for continuity, and all mechanical connections for leakage.

(d) For each pressure measurement device, you must meet the requirements in paragraphs (a) and (d)(1) through (7) of this section.

(1) Locate the pressure sensor(s) in a position that provides a representative measurement of the pressure.

(2) Minimize or eliminate pulsating pressure, vibration, and internal and external corrosion.

(3) Use a gauge with a minimum tolerance of 0.5 inch of water or a transducer with a minimum tolerance of 1 percent of the pressure range.

(4) Check pressure tap pluggage daily.

(5) Using a manometer, check gauge calibration quarterly and transducer calibration monthly.

(6) Conduct calibration checks any time the sensor exceeds the manufacturer's specified maximum operating pressure range, or install a new pressure sensor.

(7) At least monthly, inspect all components for integrity, all electrical connections for continuity, and all mechanical connections for leakage.

(e) For each pH measurement device, you must meet the requirements in paragraphs (a) and (e)(1) through (4) of this section.

(1) Locate the pH sensor in a position that provides a representative measurement of pH.

(2) Ensure the sample is properly mixed and representative of the fluid to be measured.

(3) Check the pH meter's calibration on at least two points every 8 hours of process operation.

(4) At least monthly, inspect all components for integrity and all electrical connections for continuity.

Continuous Compliance Requirements

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

(a) You must demonstrate continuous compliance with each emission limit, operating limit, and work practice standard in Tables 1 and 2 to this subpart that applies to you according to methods specified in Tables 5 and 6 to this subpart.

(b) You must report each instance in which you did not meet each emission limit, each operating limit, and each work practice standard in Tables 5 and 6 to this subpart that apply to you. This includes periods of startup, shutdown, and malfunction. These instances are

deviations from the emission limits, operating limits, and work practice standards in this subpart. These deviations must be reported according to the requirements in § 63.5580.

(c) During periods of startup, shutdown, and malfunction, you must operate according to the SSM plan.

(d) Consistent with §§ 63.6(e) and 63.7(e)(1), 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 according to the SSM plan. The Administrator will determine whether deviations that occur during a period of startup, shutdown, and malfunction are violations, according to the provisions in § 63.6(e).

§ 63.5560 How do I monitor and collect data to demonstrate continuous compliance?

(a) You must monitor and collect data according to this section.

(b) Except for monitor malfunctions, associated repairs, and required quality assurance or control activities (including, as applicable, calibration checks and required zero and span adjustments), you must monitor continuously (or collect data at all required intervals) at all times that the affected source is operating, including periods of startup, shutdown, and malfunction.

(c) You may not use data recorded during monitoring malfunctions, associated repairs, and required quality assurance or control activities in data averages and calculations used to report emission or operating levels, nor may such data be used in fulfilling a minimum data availability requirement, if applicable. You must use all the data collected during all other periods in assessing the operation of the control device and associated control system.

Notifications, Reports, and Records

§ 63.5575 What notifications must I submit and when?

(a) You must submit each notification in Table 7 to this subpart that applies to you.

§ 63.5580 What reports must I submit and when?

(a) You must submit each report in Table 8 to this subpart that applies to you.

(b) Unless the Administrator has approved a different schedule for submitting reports under § 63.10, you must submit each report by the date in Table 8 to this subpart and according to the requirements in paragraphs (b)(1) through (5) of this section.

(1) The first compliance report must cover the period beginning on the compliance date that is specified for your affected source in § 63.5495 and ending on June 30 or December 31, whichever date is the first date following the end of the first calendar half after the compliance date that is specified for your source in § 63.5495.

(2) The first compliance report must be postmarked or delivered no later than July 31 or January 31, whichever date follows the end of the first calendar half after the compliance date that is specified for your affected source in § 63.5495.

(3) Each subsequent compliance report must cover the semiannual reporting period from January 1 through June 30 or the semiannual reporting period from July 1 through December 31.

(4) Each subsequent compliance report must be postmarked or delivered no later than July 31 or January 31, whichever date is the first date following the end of the semiannual reporting period.

(5) For each affected source that is subject to permitting regulations pursuant to 40 CFR part 70 or 40 CFR part 71, and if the permitting authority has established dates for submitting semiannual reports pursuant to 40 CFR 70.6(3)(iii)(A) or 40 CFR 71.6(3)(iii)(A), you may submit the first and subsequent compliance reports according to the dates the permitting authority has established instead of according to the dates in paragraphs (b)(1) through (4) of this section.

(c) The compliance report must contain the information in paragraphs (c)(1) through (6) of this section.

(1) Company name and address.

(2) Statement by a responsible official, with that official's name, title, and signature, certifying the truth, accuracy, and completeness of the content of the report. This certification must state that, based on information and belief formed after reasonable inquiry, the statements and information in the report are true, accurate, and complete.

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

(4) 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).

(5) If there are no deviations from any emission limits, operating limits, or work practice standards that apply to you (see Tables 5 and 6 to this subpart), the compliance report must contain a statement that there were no deviations from the emission limits, operating limits, or work practice standards during the reporting period.

(6) If there were no periods during which the CPMS was out-of-control, the compliance report must contain a statement that there were no periods during which the CPMS was out-of-control during the reporting period. You must include specifications for out-of-control operation in the CPMS quality control plan required under § 63.8(d)(2).

(d) For each deviation from an emission limit or work practice standard that occurs at an affected source where you are not using a CPMS to demonstrate continuous compliance with the emission limits or work practice standards in this subpart (see Table 5 to this subpart), the compliance report must contain the information in paragraphs (c)(1) through (4) and (d)(1) through (2) of this section. This includes periods of startup, shutdown, and malfunction.

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

(2) Information on the number, duration, and cause of deviations (including unknown cause, if applicable), as applicable, and the corrective action taken.

(e) For each deviation from an emission limit or operating limit occurring at an affected source where you are using a CPMS 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 (12) of this section. This includes periods of startup, shutdown, and malfunction.

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

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

(3) The date, time, and duration that each CPMS was out-of-control.

(4) The date and time that each deviation started and stopped, and whether each deviation occurred during a period of startup, shutdown, or malfunction or during another period.

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

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

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

(8) An identification of each hazardous air pollutant that was monitored at the affected source.

(9) A brief description of the process units.

(10) A brief description of the CPMS.

(11) The date of the latest CPMS certification or audit.

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

(f) If you have obtained a title V operating permit pursuant to 40 CFR part 70 or 40 CFR part 71, you must report all deviations as defined in this subpart in the semiannual monitoring report required by 40 CFR 70.6(3)(iii)(A) or 40 CFR 71.6(3)(iii)(A). If you submit a compliance report according to Table 8 of this subpart along with, or as part of, the semiannual monitoring report required by 40 CFR 70.6(3)(iii)(A) or 40 CFR 71.6(3)(iii)(A), and the compliance report includes all required information concerning deviations from any emission limit, operating limit, or work practice standard in this subpart, then submitting the compliance report will satisfy any obligation to report the same deviations in the semiannual monitoring report. However, submitting a compliance report will not otherwise affect any obligation you may have to report deviations from permit requirements to the permit authority.

§ 63.5585 What records must I keep?

You must keep the records in Table 9 to this subpart that apply to you.

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

(a) Your records must be in a form suitable and readily available for expeditious review, according to § 63.10(b)(1).

(b) As specified in § 63.10(b)(1), you must keep each record for 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record.

(c) You must keep each record on site for at least 2 years after the date of each occurrence, measurement, maintenance, corrective action, report, or record, according to § 63.10(b)(1). You can keep the records offsite for the remaining 3 years.

Other Requirements and Information

§ 63.5600 What other requirements apply to me?

Table 10 to this subpart shows which provisions of the General Provisions in §§ 63.1 through 63.13 apply to you.

§ 63.5605 Who implements and enforces this subpart?

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

(b) In delegating implementation and enforcement authority of this subpart to a State, local, or tribal agency under 40 CFR part 63, subpart E, the Administrator keeps the authorities contained in paragraphs (b)(1) through (4) of this section and does not delegate such authorities to the State, local, or tribal agency.

(1) Approval of alternatives to the non-opacity emission limits, operating limits, and work practice standards in § 63.5505(a) through (c) and under § 63.6(g).

(2) Approval of major alternatives to test methods under § 63.7(e)(2)(ii) and (f) and as defined in § 63.90.

(3) Approval of major alternatives to monitoring under § 63.8(f) and as defined in § 63.90.

(4) Approval of major alternatives to recordkeeping and reporting under § 63.10(f) and as defined in § 63.90.

§ 63.5610 What definitions apply to this subpart?

Terms used in this subpart are defined in the Clean Air Act, in 40 CFR 63.2, and in this section as follows:

Cellophane operation means an operation that manufactures a thin, transparent cellulose material used in food packaging (for example, candy, cheese, baked goods), adhesive tapes, and membranes for industrial uses, such as batteries.

Cellulose ether operation means an operation that manufactures cellulose derivatives used as thickeners and binders in consumer and other products.

Cellulose ether process means a manufacturing process that includes the following process steps:

(1) Reaction of cellulose (for example, wood pulp or cotton linters) with sodium hydroxide to produce alkali cellulose;

(2) Reaction of the alkali cellulose with a chemical compound(s) to produce a cellulose ether product;

(3) Washing and purification of the cellulose ether product; and

(4) Drying of the cellulose ether product.

Cellulose ethers source category means the collection of cellulose ether operations that manufacture any of the following products: carboxymethyl cellulose, hydroxyethyl cellulose, hydroxypropyl cellulose, methyl cellulose, and hydroxypropyl methyl cellulose.

Cellulose food casing operation means an operation that manufactures cellulose casings used in manufacturing meat products (for example, hot dogs, sausages). The food casings are used to form the meat products and, in most cases, are removed from the meat products before sale.

Cellulosic sponge operation means an operation that manufactures a porous cellulose product for consumer use (for example, for cleaning).

Control technique means any equipment or process control used for capturing, recovering, or oxidizing HAP vapors. The equipment includes, but is not limited to, biofilters, carbon adsorbers, condensers, flares, oil absorbers, thermal oxidizers, and scrubbers, or any combination of these. The process control includes extended cookout and viscose process modification (as defined in this section).

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

(1) Fails to meet any requirement or obligation established by this subpart, including, but not limited to, any emission limit, operating limit, or work practice standard;

(2) Fails to meet any term or condition that is adopted to implement an applicable requirement in this subpart and that is included in the operating permit for any affected source required to obtain such a permit; or

(3) Fails to meet any emission limit, operating limit, or work practice standard in this subpart during startup, shutdown, or malfunction, regardless of whether or not such failure is permitted by this subpart.

Emission point means an individual process vent, storage vessel, wastewater stream, or equipment leak.

Equipment leak means emissions of HAP from a pump, valve, flange, sampling connection, or other components (for example, compressor, pressure relief device) in HAP service.

Extended cookout (ECO) means a control technique that reduces the amount of unreacted ethylene oxide (EO) or propylene oxide (PO) leaving the reactor. This is accomplished by allowing the product to react for a longer time, thereby leaving less unreacted EO or PO and reducing emissions of EO or PO that might have occurred otherwise.

Nitrogen system means the combination of a nitrogen unloading system for unloading carbon disulfide and a nitrogen padding system for storing carbon disulfide. The nitrogen unloading system is a system of unloading carbon disulfide from railcars to storage vessels using nitrogen displacement to prevent gaseous carbon disulfide emissions to the atmosphere and to preclude contact with oxygen. The nitrogen padding system is a system of padding the carbon disulfide storage vessels with nitrogen to prevent contact with oxygen.

Oil absorber means a packed-bed absorber that absorbs pollutant vapors using a type of oil (for example, kerosene) as the absorption liquid.

Process vent means a vent from a process operation through which a HAP-containing gas stream is, or has the potential to be, released to the atmosphere. Process vents do not include vents on storage tanks, vents on wastewater emission sources, or pieces of equipment regulated under the equipment leak standards.

Rayon operation means an operation that manufactures cellulose fibers used in the production of either textiles (for example, apparel, drapery, upholstery) or non-woven products (for example, feminine hygiene products, wipes, computer disk liners, surgical swabs).

Reconstruction means replacing components of an affected source so that:

(1) The fixed capital cost of the new components exceeds 50 percent of the fixed capital cost that would be required to construct a comparable new affected source; and

(2) It is technologically and economically feasible for the reconstructed source to meet the relevant standard(s) established in this subpart. Reconstruction excludes any routine part replacement or maintenance. Upon reconstruction, an affected source is subject to relevant standards for new sources, including compliance dates, irrespective of any change in emissions of HAP from that source.

Responsible official means responsible official as defined in 40 CFR 70.2.

Solvent coating process means a manufacturing process in which cellophane film is coated (for example, with Saran or nitrocellulose) to impart moisture impermeability to the film and to make it printable. Both Saran and nitrocellulose use the same solvents—tetrahydrofuran and toluene.

Storage vessel means a tank or other vessel used to store liquids that contain one or more HAP. Storage vessels do not include the following:

(1) Vessels permanently attached to motor vehicles such as trucks, railcars, barges, or ships;

(2) Pressure vessels designed to operate in excess of 204.9 kilopascals (30 pounds per square inch) and without emissions to the atmosphere;

(3) Vessels with capacities smaller than 38 cubic meters (10,000 gallons);

(4) Vessels and equipment storing and/or handling material that contains no HAP or contains HAP as impurities only;

(5) Surge control vessels;

(6) Wastewater storage vessels; and

(7) Storage vessels assigned to another process unit regulated under another subpart of part 63.

Subpart means 40 CFR part 63, subpart UUUU.

Total HAP means the sum of organic HAP emissions measured using EPA Method 18.

Total sulfide means the sum of emissions for carbon disulfide, hydrogen sulfide, and carbonyl sulfide reported as carbon disulfide using EPA Method 15.

Viscose process. (1) Viscose process means a manufacturing process that includes the following process steps:

(i) Reaction of cellulose (for example, wood pulp) with sodium hydroxide to produce alkali cellulose;

(ii) Reaction of alkali cellulose with carbon disulfide to produce sodium cellulose xanthate;

(iii) Combination of sodium cellulose xanthate with additional sodium hydroxide to produce viscose solution;

(iv) Extrusion of the viscose into various shapes (for example, hollow casings, thin fibers, thin sheets, molds);

(v) Regeneration of the cellulose product;

(vi) Washing of the cellulose product; and

(vii) Possibly acid or salt recovery.

(2) The cellulose products manufactured using the viscose process include cellulose food casings, rayon, cellophane, and cellulosic sponges.

Viscose process modification means a change to the viscose process that occurred after January 1992 that allows either the recovery of carbon disulfide or a reduction in carbon disulfide usage in the process.

Viscose processes source category means the collection of manufacturing processes that use the viscose process. These manufacturing processes include the cellulose food casing, rayon, cellophane, and cellulosic sponge manufacturing processes.

Wastewater means water which, during manufacturing or processing, comes into direct contact with, or results from, the production or use of any raw material, intermediate product, by-product, or waste product.

Water system means the combination of a water unloading system for unloading carbon disulfide and a water padding system for storing carbon disulfide. The water unloading system is a system of unloading carbon disulfide from railcars to storage vessels using water displacement to prevent gaseous carbon disulfide emissions to the atmosphere and to preclude contact with oxygen. The water padding system is a system of padding the carbon disulfide storage vessels with water to prevent contact with oxygen. The water, which is saturated with carbon disulfide, is later sent to wastewater treatment.

Work practice standard means any design, equipment, work practice, or operational standard, or combination thereof, that is promulgated pursuant to section 112(h) of the Clean Air Act.

TABLE 1 TO SUBPART UUUU.—EMISSION LIMITS AND WORK PRACTICE STANDARDS

For . . .	At . . .	You must . . .	Or you must . . .	Or you must . . .
1 The sum of all process vents.	Existing cellulose food casing operations.	Reduce total uncontrolled sulfide emissions (reported as carbon disulfide) by at least 25% based on a 6-month rolling average.		

TABLE 1 TO SUBPART UUUU.—EMISSION LIMITS AND WORK PRACTICE STANDARDS—Continued

For . . .	At . . .	You must . . .	Or you must . . .	Or you must . . .
2 The sum of all process vents.	New cellulose food casing operations.	Reduce total uncontrolled sulfide emissions (reported as carbon disulfide) by at least 75% based on a 6-month rolling average.		
3 The sum of all process vents.	Existing rayon operations	Reduce total uncontrolled sulfide emissions (reported as carbon disulfide) by at least 55% based on a 6-month rolling average.		
4 The sum of all process vents.	New rayon operations	Reduce total uncontrolled sulfide emissions (reported as carbon disulfide) by at least 75% based on a 6-month rolling average.		
5 The sum of all cellophane production process vents.	Existing and new cellophane operations.	Reduce total uncontrolled sulfide emissions (reported as carbon disulfide) by at least 85% based on a 6-month rolling average.		
6 The sum of all solvent coating process vents.	Existing and new cellophane operations.	Reduce uncontrolled toluene emissions by at least 95% based on a 6-month rolling average.		
7 The sum of all process vents.	Existing and new cellulosic sponge operations.	Reduce total uncontrolled sulfide emissions (reported as carbon disulfide) by at least 75% based on a 6-month rolling average.		
8 The sum of all process vents.	Existing and new cellulose ether operations.	Reduce total uncontrolled organic HAP emissions by at least 99% based on a 6-month rolling average.		
9 Closed-loop systems.	Existing and new cellulose ether operations.	Comply by operating the existing closed-loop system.		
10 Each carbon disulfide unloading and storage operation.	Existing and new cellulose food casing, rayon, cellophane, and cellulosic sponge operations.	Reduce uncontrolled carbon disulfide emissions by at least 83% from unloading and storage operations based on a 6-month rolling average.	Reduce uncontrolled carbon disulfide emissions by at least 0.14% from process vents.	Install a nitrogen unloading and storage system (as defined in § 63.5610)
11 Each toluene storage vessel.	Existing and new cellophane operations.	Reduce uncontrolled toluene emissions by at least 95% based on a 6-month rolling average.		
12 All sources of waste-water emissions.	Existing and new cellulose ether operations.	Comply with the applicable process wastewater provisions of §§ 63.132–63.140 of subpart G of this part.		
13 Equipment leaks	Existing and new cellulose ether operations.	Comply with the applicable equipment leak standards of §§ 63.162–63.179 of subpart H of this part.	Comply with the applicable equipment leak standards of §§ 65.106–65.118 of subpart F of 40 CFR part 65.	

TABLE 2 TO SUBPART UUUU.—OPERATING LIMITS

For the following control technique . . .	You must . . .
1 Condenser	Maintain the 3-hour average condenser outlet gas temperature no higher than the maximum value established during the performance test.
2 Thermal oxidizer	Maintain the 3-hour average thermal oxidizer firebox temperature no lower than the minimum value established during the performance test.
3 Water scrubber	Maintain the 3-hour average scrubber pressure drop and scrubber liquid flow rate within the operating values established during the performance test.
4 Caustic scrubber	Maintain the 3-hour average scrubber pressure drop, scrubber liquid pH, and scrubber liquid flow rate within the operating values established during the performance test.
5 Flare	Maintain the applicable flare operating parameters in § 63.11 within the operating values established during the performance test.
6 Biofilter	Maintain the 3-hour average biofilter inlet gas temperature, gas flow rate, and nutrient and water values; biofilter effluent pH, conductivity, and nutrient levels; and pressure drop within the operating values established during the performance test.

TABLE 2 TO SUBPART UUUU.—OPERATING LIMITS—Continued

For the following control technique . . .	You must . . .
7 Carbon adsorber	Maintain the regeneration frequency, bed heating temperature, bed cooling temperature, and regeneration stream flow for each regeneration cycle within the values established during the performance test.
8 Oil absorber	Maintain the 3-hour average absorption liquid flow, absorption liquid temperature, and steam flow within the values established during the performance test.
9 Alternative control technique	1. Submit for approval a proposed site-specific monitoring plan that includes (1) a description of the alternative control device, (2) test results verifying the performance of the control device, (3) the appropriate operating parameters that will be monitored, and (4) the frequency of measuring and recording to establish continuous compliance with the operating limits. 2. Install, operate, and maintain the parameter monitoring system for the alternative control device in accordance with the monitoring plan approved by the Administrator. 3. Establish operating limits during the initial performance test based on the operating parameters for the alternative control device included in the approved monitoring plan. 4. Maintain the 3-hour average operating parameter values for the alternative control technique within the values established during the performance test.
10 Any of the control techniques specified in this table.	1. 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. 2. The application must include (1) information justifying the request for alternative operating parameters (such as the infeasibility or impracticality of using the operating parameters in this proposed rule), (2) a description of the proposed alternative control device operating parameters, (3) the monitoring approach, (4) the frequency of measuring and recording the alternative parameters, (5) how the operating limits are to be calculated, and (6) information documenting that the alternative operating parameters would provide equivalent or better assurance of compliance with the standard. 3. Install, operate, and maintain the alternative parameter monitoring systems in accordance with the application approved by the Administrator. 4. Establish operating limits during the initial performance test based on the alternative operating parameters included in the approved application. 5. Maintain the 3-hour average alternative operating parameter values within the values established during the performance test.

TABLE 3 TO SUBPART UUUU.—INITIAL COMPLIANCE WITH EMISSION LIMITS AND WORK PRACTICE STANDARDS

For . . .	At . . .	For the following emission limit or work practice standard . . .	You have demonstrated initial compliance if . . .
1 The sum of all process vents.	Existing cellulose food casing operations.	Reduce total uncontrolled sulfide emissions (reported as carbon disulfide) by at least 25% based on a 6-month rolling average.	1. The average total sulfide emissions, measured during the 3-hour performance test using Method 15, are reduced by the applicable amount; and 2. You have a record of the average operating parameter values over the 3-hour performance test during which the average total sulfide emissions were reduced by the applicable amount; and 3. You prepare a material balance that includes data on carbon disulfide usage and carbon disulfide, hydrogen sulfide, and carbonyl sulfide emissions at the inlet and outlet to the control device and the stack. The material balance must be based on information from the initial performance test.
2 The sum of all process vents.	New cellulose food casing operations.	Reduce total uncontrolled sulfide emissions (reported as carbon disulfide) by at least 75% based on a 6-month rolling average.	1. The average total sulfide emissions, measured during the 3-hour performance test using Method 15, are reduced by the applicable amount; and 2. You have a record of the average operating parameter values over the 3-hour performance test during which the average total sulfide emissions were reduced by the applicable amount; and

TABLE 3 TO SUBPART UUUU.—INITIAL COMPLIANCE WITH EMISSION LIMITS AND WORK PRACTICE STANDARDS—Continued

For . . .	At . . .	For the following emission limit or work practice standard . . .	You have demonstrated initial compliance if . . .
			3. You prepare a material balance that includes data on carbon disulfide usage and carbon disulfide, hydrogen sulfide, and carbonyl sulfide emissions at the inlet and outlet to the control device and the stack. The material balance must be based on information from the initial performance test.
3 The sum of all process vents.	Existing rayon operations	Reduce total uncontrolled sulfide emissions (reported as carbon disulfide) by at least 55% based on a 6-month rolling average.	1. The average total sulfide emissions, measured during the 3-hour performance test using Method 15, are reduced by the applicable amount; and 2. You have a record of the average operating parameter values over the 3-hour performance test during which the average total sulfide emissions were reduced by the applicable amount; and 3. You prepare a material balance that includes data on carbon disulfide usage and carbon disulfide, hydrogen sulfide, and carbonyl sulfide emissions at the inlet and outlet to the control device and the stack. The material balance must be based on information from the initial performance test.
4 The sum of all process vents.	New rayon operations	Reduce total uncontrolled sulfide emissions (reported as carbon disulfide) by at least 75% based on a 6-month rolling average.	1. The average total sulfide emissions, measured during the 3-hour performance test using Method 15, are reduced by the applicable amount; and 2. You have a record of the average operating parameter values over the 3-hour performance test during which the average total sulfide emissions were reduced by the applicable amount; and 3. You prepare a material balance that includes data on carbon disulfide usage and carbon disulfide, hydrogen sulfide, and carbonyl sulfide emissions at the inlet and outlet to the control device and the stack. The material balance must be based on information from the initial performance test.
5 The sum of all cellophane production process vents.	Existing and new cellophane operations.	Reduce total uncontrolled sulfide emissions (as carbon disulfide) by at least 85% based on a 6-month rolling average.	1. The average total sulfide emissions, measured during the 3-hour performance test using Method 15, are reduced by the applicable amount; and 2. You have a record of the average operating parameter values over the 3-hour performance test during which the average total sulfide emissions were reduced by the applicable amount; and

TABLE 3 TO SUBPART UUUU.—INITIAL COMPLIANCE WITH EMISSION LIMITS AND WORK PRACTICE STANDARDS—Continued

For . . .	At . . .	For the following emission limit or work practice standard . . .	You have demonstrated initial compliance if . . .
			3. You prepare a material balance that includes data on carbon disulfide usage and carbon disulfide, hydrogen sulfide, and carbonyl sulfide emissions at the inlet and outlet to the control device and the stack. The material balance must be based on information from the initial performance test.
6 The sum of all solvent coating process vents.	Existing and new cellophane operations.	Reduce uncontrolled toluene emissions by at least 95% based on a 6-month rolling average.	1. Average toluene emissions, measured during the 3-hour performance test using Method 18, are reduced by 95%; and 2. You have a record of the average operating parameter values over the 3-hour performance test during which the average toluene emissions were reduced by 95%; and 3. You prepare a material balance that includes data on toluene usage and emissions at the inlet and outlet to the control device and the stack. The material balance must be based on information from the initial performance test.
7 The sum of all process vents.	Existing and new cellulosic sponge operations.	Reduce total uncontrolled sulfide emissions (as carbon disulfide) by at least 75% based on a 6-month rolling average.	1. The average total sulfide emissions, measured during the 3-hour performance test using Method 15, are reduced by the applicable amount; and 2. You have a record of the average operating parameter values over the 3-hour performance test during which the average total sulfide emissions were reduced by the applicable amount; and 3. You prepare a material balance that includes data on carbon disulfide usage and carbon disulfide, hydrogen sulfide, and carbonyl sulfide emissions at the inlet and outlet to the control device and the stack. The material balance must be based on information from the initial performance test.
8 The sum of all process vents.	Existing and new cellulose ether operations.	Reduce total uncontrolled organic HAP emissions by at least 99% based on a 6-month rolling average.	1. Average total organic HAP emissions, measured during the 3-hour performance test using Method 18, are reduced by 99%; and 2. You have a record of the average operating parameter values over the 3-hour performance test during which the average total organic HAP emissions were reduced by 99%.
9 Closed-loop systems	Existing and new cellulose ether operations.	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.

TABLE 3 TO SUBPART UUUU.—INITIAL COMPLIANCE WITH EMISSION LIMITS AND WORK PRACTICE STANDARDS—Continued

For . . .	At . . .	For the following emission limit or work practice standard . . .	You have demonstrated initial compliance if . . .
10 Each carbon disulfide unloading and storage operation.	Existing and new cellulose food casing, rayon, cellophane, and cellulosic sponge operations.	Reduce uncontrolled carbon disulfide emissions by at least 83% from unloading and storage operations based on a 6-month rolling average. Or	1. You have a record documenting the 83% reduction in carbon disulfide emissions relative to water systems. 2. If you meet the 83 percent emission limit by installing a nitrogen system, you must calculate the actual percent reduction achieved using the applicable equation in § 63.5535. 3. If you meet the 83 percent emission limit by venting emissions to a control device, then you must conduct an initial performance test to demonstrate the actual percent reduction achieved, prepare a material balance based on information from the test and from records at the affected source, and establish the appropriate control device operating parameters during the test. You must calculate the percent reduction of emissions measured during the performance test using the applicable equation in § 63.5535. Or
11	.....	Reduce uncontrolled carbon disulfide by at least 0.14% from process vents based on a 6-month rolling average. Or	1. You comply with the initial compliance requirements for process vents at existing and new cellulose food casing, rayon, cellophane, and cellulosic sponge operations. 2. The 0.14% reduction must be in addition to the reduction already required for the process vents for cellulose food casing, rayon, cellophane, and cellulosic sponge operations. Or
12	.....	Install a nitrogen system for carbon disulfide unloading and storage.	You have a record certifying that a nitrogen system is in use for carbon disulfide unloading and storage operations.
13 Each toluene storage vessel.	Existing and new cellophane operations	Reduce uncontrolled toluene emissions by at least 95% based on a 6-month rolling average.	1. Average toluene emissions, measured during the 3-hour performance test using Method 18, are reduced by 95%; and 2. You have a record of the average operating parameter values over the 3-hour performance test during which the average toluene emissions were reduced by 95%; and 3. You prepare a material balance that includes data on toluene usage and emissions at the inlet and outlet to the control device and the stack. The material balance must be based on information from the initial performance test.
14 All sources of wastewater emissions.	Existing and new cellulose ether operations	Comply with the applicable process wastewater provisions of §§ 63.132–63.140 of subpart G of this part.	You comply with the applicable process wastewater initial compliance provisions of § 63.145 of subpart G of this part.

TABLE 3 TO SUBPART UUUU.—INITIAL COMPLIANCE WITH EMISSION LIMITS AND WORK PRACTICE STANDARDS—Continued

For . . .	At . . .	For the following emission limit or work practice standard . . .	You have demonstrated initial compliance if . . .
15 Equipment leaks	Existing and new cellulose ether operations.	Comply with the applicable equipment leak standards of §§ 63.162–63.179 of subpart H of this part.	You comply with the applicable equipment leak initial compliance provisions of § 63.180 of subpart H of this part.
16 Equipment leaks	Existing and new cellulose ether operations.	Comply with the applicable equipment leak standards of §§ 65.106–65.118 of subpart F of 40 CFR part 65.	You comply with the applicable equipment leak initial compliance status report provisions of §§ 65.120 of subpart F of 40 CFR part 65.

TABLE 4 TO SUBPART UUUU.—REQUIREMENTS FOR PERFORMANCE TESTS

For . . .	At . . .	You must . . .	Using . . .	According to the following requirements . . .
1 The sum of all process vents.	Any existing and new affected source.	Select sampling port's location and the number of traverse ports.	Method 1 or 1A of 40 CFR part 60, appendix A § 63.7(d)(1)(i).	Sampling sites must be located at the inlet and outlet to the control device and the stack.
2 The sum of all process vents.	Any existing and new affected source.	Determine velocity and volumetric flow rate.	Method 2, 2A, 2C, 2D, 2F, or 2G in appendix A to part 60 of this chapter.	You may use Method 2A, 2C, 2D, 2F, or 2G as an alternative to using Method 2.
3 The sum of all process vents.	Any existing and new affected source.	Conduct gas analysis	Method 3, 3A, or 3B in appendix A to part 60 of this chapter.	You may use Method 3A or 3B as an alternative to using Method 3.
4 The sum of all process vents.	Any existing and new affected source.	Measure moisture content of the stack gas.	Method 4 in appendix A to part 60 of this chapter.	
5 The sum of all process vents.	Existing and new cellulose food casing, rayon, cellophane, and cellulosic sponge operations.	Measure total sulfide emissions.	Method 15 in appendix A to part 60 of this chapter.	1. You must conduct testing of emissions from continuous process vents at representative conditions, as specified in § 63.1257(b)(7) of subpart GGG of this part. 2. You must conduct testing of emissions from batch process vents at absolute or hypothetical worst-case conditions or hypothetical worst-case conditions, as specified in § 63.1257(b)(8) of subpart GGG of this part. 3. You must collect operating parameter monitoring system data during the period of the initial performance test, and determine the operating parameter limit during the period of the initial performance test.

TABLE 4 TO SUBPART UUUU.—REQUIREMENTS FOR PERFORMANCE TESTS—Continued

For . . .	At . . .	You must . . .	Using . . .	According to the following requirements . . .
6 The sum of all solvent coating process vents.	Existing and new cellophane operations.	Measure toluene emissions ...	Method 18 in appendix A to part 60 of this chapter.	1. You must conduct testing of emissions from continuous process vents at representative conditions, as specified in § 63.1257(b)(7) of subpart GGG of this part. 2. You must conduct testing of emissions from batch process vents at absolute or hypothetical worst-case conditions or hypothetical worst-case conditions, as specified in § 63.1257(b)(8) of subpart GGG of this part. 3. You must collect operating parameter monitoring system data during the period of the initial performance test, and determine the operating parameter limit during the period of the initial performance test.
7 The sum of all process vents.	Existing and new cellulose ether operations.	Measure total organic HAP emissions.	Method 18, Method 25, or Method 25A in appendix A to part 60 of this chapter.	1. You must use Method 25 to determine the destruction efficiency of thermal oxidizers for organic compounds. 2. You may use Method 25A if: a. An exhaust gas volatile organic matter concentration of 50 ppmv or less is required in order to comply with the emission limit, or b. 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 c. Because of the high efficiency of the control device, the anticipated volatile organic matter concentration at the control device exhaust is 50 ppmv or less, regardless of the inlet concentration.

TABLE 4 TO SUBPART UUUU.—REQUIREMENTS FOR PERFORMANCE TESTS—Continued

For . . .	At . . .	You must . . .	Using . . .	According to the following requirements . . .
				3. You must conduct testing of emissions from continuous process vents at representative conditions, as specified in § 63.1257(b)(7) of subpart GGG of this part. 4. You must conduct testing of emissions from batch process vents at absolute or hypothetical worst-case conditions or hypothetical worst-case conditions, as specified in § 63.1257(b)(8) of subpart GGG of this part. 5. You must collect operating parameter monitoring system data during the period of the initial performance test, and determine the operating parameter limit during the period of the initial performance test.
8 Each toluene storage vessel.	Existing and new cellophane operations.	Measure toluene emissions ...	Method 18 in appendix A to part 60 of this chapter.	3. You must collect operating parameter monitoring system data during the period of the initial performance test, and determine the operating parameter limit during the period of the initial performance test.
9 All sources of waste-water emissions.	Existing and new cellulose ether operations.	Measure wastewater HAP emissions.	Applicable process wastewater test methods in § 63.145 of subpart G of this part.	You must follow all requirements for the applicable process wastewater test methods in § 63.145 of subpart G of this part.
10 Equipment leaks	Existing and new cellulose ether operations.	Measure leak rate	Applicable equipment leak test methods in § 63.180 of subpart H of this part or § 65.104 of subpart F of 40 CFR part 65.	You must follow all requirements for the applicable equipment leak test methods in § 63.180 of subpart H of this part or § 65.104 of subpart F of 40 CFR part 65.

TABLE 5 TO SUBPART UUUU.—CONTINUOUS COMPLIANCE WITH EMISSION LIMITS AND WORK PRACTICE STANDARDS

For . . .	At . . .	For the following emission limit or work practice standard . . .	Using the following control technique . . .	You must demonstrate continuous compliance by . . .
1 The sum of all process vents.	Existing and new cellulose food casing, rayon, cellophane, and cellulosic sponge operations.	Applicable emission limit	Process change	1. Maintaining a material balance that includes data on the amount of carbon disulfide that would have been used in the absence of the process change, the amount of carbon disulfide that was used after the process change was implemented, and the total sulfide (as carbon disulfide) emitted from the process; and 2. Documenting the percent reduction using the carbon disulfide usage and emissions data from the material balance.
2 The sum of all process vents.	Existing and new cellulose food casing, rayon, cellophane, and cellulosic sponge operations.	Applicable emission limit	Any control technique	1. Maintaining a material balance that includes data on carbon disulfide usage and carbon disulfide, hydrogen sulfide, and carbonyl sulfide emissions at the inlet and outlet to the control device and the stack; and 2. Documenting the percent reduction of total sulfide (as carbon disulfide) using the emissions data from the material balance.
3 The sum of all solvent coating process vents.	Existing and new cellophane operations.	Reduce uncontrolled toluene emissions by 95% based on a 6-month rolling average.	Any control technique	1. Maintaining a material balance that includes data on toluene usage and emissions at the inlet and outlet to the control device and the stack; and 2. Documenting the percent reduction of toluene using the emissions data from the material balance.
4 The sum of all process vents.	Existing and new cellulose ether operations.	Reduce total uncontrolled organic HAP emissions by at least 99% based on a 6-month rolling average.	Any control technique	1. Reducing average total organic HAP emissions, measured using Method 18, by 99%; and 2. Keeping a record documenting the 99% reduction of the average total organic HAP emissions.

TABLE 5 TO SUBPART UUUU.—CONTINUOUS COMPLIANCE WITH EMISSION LIMITS AND WORK PRACTICE STANDARDS—Continued

For . . .	At . . .	For the following emission limit or work practice standard . . .	Using the following control technique . . .	You must demonstrate continuous compliance by . . .
5 Closed-loop systems.	Existing and new cellulose ether operations.	Operate and maintain a closed-loop system.	Closed-loop system	Keeping a record certifying that a closed-loop system is in use for cellulose ether operations.
6 Each carbon disulfide unloading and storage operation.	Existing and new cellulose food casing, rayon, cellophane, and cellulosic sponge operations.	Reduce uncontrolled carbon disulfide emissions by 83% based on a 6-month rolling average.	Any control technique	Keeping a record documenting the 83% reduction in carbon disulfide emissions relative to water systems.
7 Each carbon disulfide unloading and storage operation.	Existing and new cellulose food casing, rayon, cellophane, and cellulosic sponge operations.	Reduce total uncontrolled sulfide emissions by 0.14% from process vents based on a 6-month rolling average.	Any control technique	1. Maintaining a material balance that includes data on carbon disulfide usage and carbon disulfide, hydrogen sulfide, and carbonyl sulfide emissions at the inlet and outlet to the control device and the stack; and 2. Documenting the percent reduction of total sulfide (as carbon disulfide) using the emissions data from the material balance.
8 Each carbon disulfide unloading and storage operation.	Existing and new cellulose food casing, rayon, cellophane, and cellulosic sponge operations.	Install a nitrogen system for carbon disulfide unloading and storage operations.	Nitrogen system	Keeping a record certifying that a nitrogen system is in use for carbon disulfide unloading and storage operations.
9 Each toluene storage vessel.	Existing and new cellophane operations.	Reduce uncontrolled toluene emissions by 95% based on a 6-month rolling average.	Any control technique	1. Maintaining a material balance that includes data on toluene usage and emissions at the inlet and outlet to the control device and the stack; and 2. Documenting the percent reduction of toluene using the emissions data from the material balance.
10 All sources of waste-water emissions.	Existing and new cellulose ether operations.	Applicable process wastewater provisions of §§ 63.132–63.140 of subpart G of this part.	Applicable process wastewater control techniques of § 63.139 of subpart G of this part.	Complying with the applicable process wastewater continuous compliance provisions of § 63.143 of subpart G of this part.
11 Equipment leaks	Existing and new cellulose ether operations.	Applicable equipment leak standards of §§ 63.162–63.179 of subpart H of this part.	Applicable equipment leak control techniques of §§ 63.162–63.179 of subpart H of this part.	Complying with the applicable equipment leak continuous compliance provisions of §§ 63.162–63.179 of subpart H of this part.

TABLE 5 TO SUBPART UUUU.—CONTINUOUS COMPLIANCE WITH EMISSION LIMITS AND WORK PRACTICE STANDARDS—Continued

For . . .	At . . .	For the following emission limit or work practice standard . . .	Using the following control technique . . .	You must demonstrate continuous compliance by . . .
12 Equipment leaks	Existing and new cellulose ether operations.	Applicable equipment leak standards of §§ 65.106–65.118 of subpart F of 40 CFR part 65.	Applicable equipment leak control techniques of §§ 65.106–65.118 of subpart F of 40 CFR part 65.	Complying with the applicable equipment leak continuous compliance provisions of § 65.104 of subpart F of 40 CFR part 65.

TABLE 6 TO SUBPART UUUU.—CONTINUOUS COMPLIANCE WITH OPERATING LIMITS

For the following control technique . . .	For the following operating limit . . .	You must demonstrate continuous compliance by . . .
1 Condenser	Maintain the 3-hour average condenser outlet gas temperature no higher than the maximum value established during the performance test.	1. Collecting the condenser outlet gas temperature data according to § 63.5545; and 2. Reducing the condenser outlet gas temperature data to 3-hour averages; and 3. Maintaining the 3-hour average condenser outlet gas temperature below the maximum value established during the performance test.
2 Thermal oxidizer	Maintain the 3-hour average thermal oxidizer firebox temperature above the minimum value established during the performance test.	1. Collecting the thermal oxidizer firebox temperature data according to § 63.5545; and 2. Reducing the thermal oxidizer firebox temperature data to 3-hour averages; and 3. Maintaining the 3-hour average thermal oxidizer firebox temperature above the minimum value established during the performance test.
3 Water scrubber	Maintain the 3-hour average scrubber pressure drop and scrubber liquid flow rate within the values established during the performance test.	1. Collecting the scrubber pressure drop and scrubber liquid flow rate data according to § 63.5545; and 2. Reducing the scrubber parameter data to 3-hour averages; and 3. Maintaining the 3-hour scrubber parameter values within the values established during the performance test.
4 Caustic scrubber	Maintain the 3-hour average scrubber pressure drop, scrubber liquid pH, and scrubber liquid flow rate within the values established during the performance test.	1. Collecting the scrubber pressure drop, scrubber liquid pH, and scrubber liquid flow rate data according to § 63.5545; and 2. Reducing the scrubber parameter data to 3-hour averages; and 3. Maintaining the 3-hour scrubber parameter values within the values established during the performance test.
5 Flare	Maintain the applicable flare operating parameter values in § 63.11 within the values established during the performance test.	1. Collecting the applicable flare operating parameter data according to the requirements in § 63.11; and 2. Maintaining the applicable flare operating parameter values in § 63.11 within the values established during the performance test.
6 Biofilter	Maintain the 3-hour average biofilter inlet gas temperature, gas flow rate, and nutrient and water levels; biofilter effluent pH, conductivity, and nutrient levels; and pressure drop within the values established during the performance test.	1. Collecting the biofilter inlet gas temperature, gas flow rate, and nutrient and water levels; biofilter effluent pH, conductivity, and nutrient levels; and biofilter pressure drop data according to § 63.5545; and 2. Reducing the biofilter parameter data to 3-hour averages; and 3. Maintaining the 3-hour biofilter parameter values within the values established during the performance test.
7 Carbon adsorber	Maintain the regeneration frequency, bed heating temperature, bed cooling temperature, and regeneration stream flow for each regeneration cycle within the values established during the performance test.	1. Collecting the regeneration frequency, bed heating temperature, bed cooling temperature, and regeneration stream flow data for each regeneration cycle according to § 63.5545; and 2. Maintaining the carbon adsorber parameter values for each regeneration cycle within the values established during the performance test.

TABLE 6 TO SUBPART UUUU.—CONTINUOUS COMPLIANCE WITH OPERATING LIMITS—Continued

For the following control technique . . .	For the following operating limit . . .	You must demonstrate continuous compliance by . . .
8 Oil absorber	Maintain the 3-hour average absorption liquid flow, absorption liquid temperature, and steam flow within the values established during the performance test.	1. Collecting the absorption liquid flow, absorption liquid temperature, and steam flow data according to §63.5545; and 2. Reducing the oil absorber parameter data to 3-hour averages; and 3. Maintaining the 3-hour oil absorber parameter values within the values established during the performance test.

TABLE 7 TO SUBPART UUUU.—NOTIFICATIONS

If . . .	Then . . .
1 You operate a new or existing affected source	You must submit all of the notifications in §63.6 (h)(4) and (h)(5), §63.7 (b) and (c), §63.8 (e) and (f)(4) and (f)(6), and §63.9 (b) through (h) that apply to you by the dates specified.
2 You start up your affected source before [the effective date of the final rule], as specified in §63.9(b)(2).	You must submit an initial notification not later than [120 days after the effective date of the final rule].
3 You start up your new or reconstructed affected source on or after [the effective date of the final rule], as specified in §63.9(b)(3).	You must submit an initial notification not later than 120 calendar days after you become subject to this subpart.
4 You are required to conduct a performance test	You must submit a notification of intent to conduct a performance test at least 60 calendar days before the performance test is scheduled to begin, as required in §63.7(b)(1).
5 You are required to conduct a performance test or other initial compliance demonstration as specified in Table 3 of this subpart.	1. You must submit a Notification of Compliance Status, according to §63.9(h)(2)(ii). 2. You must submit the Notification of Compliance Status, including the performance test results, before the close of business on the 60th calendar day following the completion of the performance test according to §63.10(d)(2).
6 You are required to conduct an initial compliance demonstration as specified in Table 3 of this subpart that does not include a performance test.	For each initial compliance demonstration, you must submit the Notification of Compliance Status before the close of business on the 30th calendar day following the completion of the initial compliance demonstration.

TABLE 8 TO SUBPART UUUU.—REPORTING REQUIREMENTS

You must submit a(n) . . .	The report must contain . . .	You must submit the report . . .
1 Compliance 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 in §63.5580(c). 2. If there were no periods during which the CPMS was out-of-control, then the report must contain a statement that there were no periods during which the CPMS was out-of-control during the reporting period. You must develop and include specifications for out-of-control operation in the CPMS quality control plan required under §63.8(d)(2). 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 in §63.5580 (c) and (d). 4. If there were periods during which the CPMS was out-of-control, then the report must contain the information in §63.5580(e). 5. If 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 in §63.10(d)(5)(i).	Semiannually according to the requirements in §63.5580(b).
2 Immediate SSM report if you took actions during a startup, shutdown, or malfunction during the reporting period that are not consistent with your SSM plan.	1. Actions taken for the event	1. By fax or telephone within 2 working days after starting actions inconsistent with the plan.

TABLE 8 TO SUBPART UUUU.—REPORTING REQUIREMENTS—Continued

You must submit a(n) . . .	The report must contain . . .	You must submit the report . . .
	2. The information in § 63.10(d)(5)(ii)	2. By letter within 7 working days after the end of the event unless you have made alternative arrangements with the permitting authority. [§ 63.10(d)(5)(ii)].

TABLE 9 TO SUBPART UUUU.—RECORDKEEPING REQUIREMENTS

You must keep . . .	The record(s) must contain . . .
1 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 that you submitted, according to the requirements in § 63.10(b)(2)(xiv).
2 The records in § 63.6(e)(3) related to startup, shutdown, and malfunction.	1. SSM plan. 2. 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. 3. Records of the occurrence and duration of each startup, shutdown, or malfunction. 4. 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.
3 Records of performance tests, as required in 63.10(b)(2)(viii)	All results of performance tests, including analysis of samples, determination of emissions, and raw data.
4 Records for each continuous parameter monitoring system	Records required in Tables 5 and 6 of this subpart to show continuous compliance with each emission limit and work practice standard that applies to you.
5 Records of closed-loop systems	Records certifying that a closed-loop system is in use for cellulose ether operations.
6 Records of nitrogen systems	Records certifying that a nitrogen system is in use for carbon disulfide unloading and storage operations.
7 Records of material balances	1. If use control device to comply, monthly records that include HAP usage and HAP emissions at the inlet and outlet to the control device and the stack. 2. If use process changes to comply, monthly records that include the amount of HAP that would have been used in the absence of the process change, the amount of HAP that was used after the process change was implemented, and the amount of HAP emitted from the process.
8 Records of calculations	Documenting the percent reduction in HAP emissions using HAP usage and emissions data from the material balances and applicable equations in § 63.5545.

TABLE 10.—APPLICABILITY OF GENERAL PROVISIONS TO SUBPART UUUU

Citation	Subject	Brief description	Applies to Subpart UUUU
§ 63.1	Applicability	Initial applicability determination; applicability after standard established; permit requirements; extensions, notifications.	Yes.
§ 63.2	Definitions	Definitions for part 63 standards	Yes.
§ 63.3	Units and Abbreviations	Units and abbreviations for part 63 standards	Yes.
§ 63.4	Prohibited Activities	Prohibited activities; compliance date; circumvention, severability.	Yes.
§ 63.5	Construction/Reconstruction	Applicability; applications; approvals	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)–(4)	Compliance Dates for New and Reconstructed sources.	Standards apply at [effective date of the final rule]; 3 years after [effective date of the final rule]; 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].		

TABLE 10.—APPLICABILITY OF GENERAL PROVISIONS TO SUBPART UUUU—Continued

Citation	Subject	Brief description	Applies to Subpart UUUU
§ 63.6(b)(7)	Compliance Dates for New and Reconstructed Area Sources That Become Major.	Area sources that become major must comply with major source standards immediately upon becoming major, regardless of whether required to comply when they were an area source.	Yes.
§ 63.6(c)(1)–(2)	Compliance Dates for Existing Sources.	Comply according to date in subpart, which must be no later than 3 years after [effective date of the final rule]; for CAA Section 112(f) standards, comply within 90 days of [effective date of the final rule] unless compliance extension.	Yes.
§ 63.6(c)(3)–(4)	[Reserved].		
§ 63.6(c)(5)	Compliance Dates for Existing Area Sources That Become Major.	Area sources that become major must comply with major source standards by date indicated in subpart or by equivalent time period (for example, 3 years).	Yes.
§ 63.6(d)	[Reserved].		
§ 63.6(e)(1)–(2)	Operation & Maintenance	Operate to minimize emissions at all times; correct malfunctions as soon as practicable; operation and maintenance requirements independently enforceable; information Administrator will use to determine if operation and maintenance requirements were met.	Yes.
§ 63.6(e)(3)	Startup, Shutdown, and Malfunction Plan.	Requirement for startup, shutdown, and malfunction and SSM plan; content of SSM plan.	Yes.
§ 63.6(f)(1)	Compliance Except During SSM	You must comply with emission standards at all times except during SSM.	Yes.
§ 63.6(f)(2)–(3)	Methods for Determining Compliance	Compliance based on performance test, operation and maintenance plans, records, inspection.	Yes.
§ 63.6(g)(1)–(3)	Alternative Standard	Procedures for getting an alternative standard	Yes.
§ 63.6(h)	Opacity/Visible Emission (VE) Standards.	Requirements for opacity and visible emission limits	No. Subpart UUUU has no opacity or VE limits.
§ 63.6(h)(1)–(9)	Compliance with Opacity/VE Standards.	You must comply with opacity/VE standards at all times except during SSM.	No. Subpart UUUU has no opacity or VE limits.
§ 63.6(i)(1)–(14)	Compliance Extension	Procedures and criteria for Administrator to grant compliance extension.	Yes.
§ 63.6(j)	Presidential Compliance Exemption	President may exempt source category from requirement to comply with subpart.	Yes.
§ 63.7(a)(1)–(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. Except for existing sources that is included in § 63.5540.
§ 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/Test Plan	Requirement to submit site-specific test plan 60 days before the test or on date Administrator agrees with; test plan approval procedures; performance audit requirements; internal and external QA procedures for testing.	Yes.
§ 63.7(d)	Testing Facilities	Requirements for testing facilities	Yes.
§ 63.7(e)(1)	Conditions for Conducting Performance Tests.	Performance tests must be conducted under representative conditions; cannot conduct performance tests during SSM; not a violation to exceed standard during SSM.	Yes. Performance tests conducted under representative conditions for continuous process vents, worst-case conditions for batch process vents, as specified in Table 4 of this subpart.
§ 63.7(e)(2)	Conditions for Conducting Performance Tests.	Must conduct according to 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.

TABLE 10.—APPLICABILITY OF GENERAL PROVISIONS TO SUBPART UUUU—Continued

Citation	Subject	Brief description	Applies to Subpart UUUU
§ 63.7(g)	Performance Test Data Analysis	Must include raw data in performance test report; must submit performance test data 60 days after end of test with the notification of compliance status; keep data for 5 years.	Yes.
§ 63.7(h)	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)–(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 on an emission point, must report all monitoring system results, unless one monitoring system is a backup.	Yes.
§ 63.8(c)(1)	Monitoring System Operation and Maintenance.	Maintain monitoring system in a manner consistent with good air pollution control practices.	Yes.
§ 63.8(c)(1)(i)	Routine and Predictable SSM	Follow the SSM plan for routine repairs; keep parts for routine repairs readily available; reporting requirements for SSM when action is described in SSM plan.	Yes.
§ 63.8(c)(1)(ii)	SSM not in SSM plan	Reporting requirements for SSM when action is not described in SSM plan.	Yes.
§ 63.8(c)(1)(iii)	Compliance with Operation and Maintenance Requirements.	How Administrator determines if source complying with operation and maintenance requirements; review of source O&M procedures, records; manufacturer's instructions, recommendations; inspection.	Yes.
§ 63.8(c)(2)–(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)–(ii)	Continuous Monitoring System (CMS) Requirements.	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.	No. Subpart UUUU does not require CEMS.
§ 63.8(c)(5)	COMS Minimum Procedures	COMS minimum procedures	No. Subpart UUUU has no opacity or VE limits.
§ 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)–(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 revisions.	No, except for requirements in § 63.8(d)(2).
§ 63.8(e)	CMS Performance Evaluation	Notification, performance evaluation test plan, reports	No. Subpart UUUU does not require performance evaluation tests for the CPMS.
§ 63.8(f)(1)–(5)	Alternative Monitoring Method	Procedures for Administrator to approve alternative monitoring.	Yes.
§ 63.8(f)(6)	Alternative to Relative Accuracy Test	Procedures for Administrator to approve alternative relative accuracy tests for CEMS.	No. Subpart UUUU does not require relative accuracy tests for the CPMS.

TABLE 10.—APPLICABILITY OF GENERAL PROVISIONS TO SUBPART UUUU—Continued

Citation	Subject	Brief description	Applies to Subpart UUUU
§ 63.8(g)(1)–(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(a).
§ 63.8(g)(5)	Data Reduction	Data that cannot be used in computing averages for CEMS and COMS.	Yes. These requirements are applicable to CPMS.
§ 63.9(a)	Notification Requirements	Applicability and State delegation	Yes.
§ 63.9(b)(1)–(5)	Initial Notifications	Submit notification subject 120 days after [effective date of the final rule]; notification of intent to construct/recon-struct; notification of commencement of construct/recon-struct; notification of startup; contents of each.	Yes.
§ 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 of the final rule].	Yes.
§ 63.9(e)	Notification of Performance Test	Notify Administrator 60 days prior	Yes.
§ 63.9(f)	Notification of VE/Opacity Test	Notify Administrator 30 days prior	No. Subpart UUUU has no opacity or VE limits.
§ 63.9(g)	Additional Notifications When Using CMS.	Notification of performance evaluation; notification using COMS data; notification that exceeded criterion for relative accuracy.	No. Subpart UUUU does not require CEMS.
§ 63.9(h)(1)–(6)	Notification of Compliance Status	Contents; due 60 days after end of performance test or other compliance demonstration, except for opacity/VE, which are due 30 days after; when to submit to Federal vs. State authority.	Yes. Except subpart UUUU has no opacity or VE limits.
§ 63.9(i)	Adjustment of Submittal Deadlines	Procedures for Administrator to approve change in when notifications must be submitted.	Yes.
§ 63.9(j)	Change in Previous Information	Must submit within 15 days after the change	Yes.
§ 63.10(a)	Recordkeeping/Reporting	Applies to all, unless compliance extension; when to submit to Federal vs. State authority; procedures for owners of more than one source.	Yes.
§ 63.10(b)(1)	Recordkeeping/Reporting	General Requirements; keep all records readily available; keep for 5 years.	Yes.
§ 63.10(b)(2)(i)–(iv)	Records related to Startup, Shutdown, and Malfunction.	Occurrence of each of operation (process equipment); occurrence of each malfunction of air pollution equipment; maintenance on air pollution control equipment; actions during startup, shutdown, and malfunction.	Yes.
§ 63.10(b)(2) (vi), (x)–(xi).	CMS Records	Malfunctions, inoperative, out-of-control; calibration checks, adjustments, maintenance.	Yes.
§ 63.10(b)(2) (vii)–(ix)	Records	Measurements to demonstrate compliance with emission limits; performance test, performance evaluation, and VE observation results; measurements to determine conditions of performance tests and performance evaluations.	Yes. Except subpart UUUU has no opacity or VE limits and does not require CEMS.
§ 63.10(b)(2) (xii)	Records	Records when under waiver	Yes.
§ 63.10(b)(2) (xiii)	Records	Records when using alternative to relative accuracy test	No. Subpart UUUU does not require CEMS.
§ 63.10(b)(2) (xiv)	Records	All documentation supporting initial notification and notification of compliance status.	Yes.
§ 63.10(b)(3)	Records	Applicability determinations	Yes.
§ 63.10(c)(1)–(6), (9)–(15).	Records	Additional records for CMS	No. Subpart UUUU does not require CEMS.
§ 63.10(c)(7)–(8)	Records	Records of excess emissions and parameter monitoring exceedances for CMS.	No. Replaced with language in § 63.5585.
§ 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.
§ 63.10(d)(3)	Reporting Opacity or VE Observations.	What to report and when	No. Subpart UUUU has no opacity or VE limits.
§ 63.10(d)(4)	Progress Reports	Must submit progress reports on schedule if under compliance extension.	Yes.
§ 63.10(d)(5)	Startup, Shutdown, and Malfunction Reports.	Contents and submission	Yes.

TABLE 10.—APPLICABILITY OF GENERAL PROVISIONS TO SUBPART UUUU—Continued

Citation	Subject	Brief description	Applies to Subpart UUUU
§ 63.10(e)(1)–(2)	Additional CMS Reports	Must report results for each CEM on a unit; written copy of performance evaluation; three copies of COMS performance evaluation.	No. Subpart UUUU does not require CEMS.
§ 63.10(e)(3)	Reports	Excess emission reports	No. Replaced with language in § 63.5580.
§ 63.10(e)(3) (i)–(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)–(v)	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 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.	No. Replaced with language in § 63.5580.
§ 63.10(e)(3) (iv)-(v)	Excess Emissions Reports	Must submit report containing all of the information in § 63.10(c)(5–13), § 63.8(c)(7–8).	No. Replaced with language in § 63.5580.
§ 63.10(e)(3) (vi)-(viii)	Excess Emissions Report and Summary Report.	Requirements for reporting excess emissions for CMSs (now called deviations); requires all of the information in § 63.10(c)(5–13), § 63.8(c)(7–8).	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 has no opacity or VE limits.
§ 63.10(f)	Waiver for Recordkeeping/Reporting	Procedures for Administrator to waive	Yes.
§ 63.11	Flares	Requirements for flares	Yes.
§ 63.12	Delegation	State authority to enforce standards	Yes.
§ 63.13	Addresses	Addresses where reports, notifications, and requests are sent.	Yes.
§ 63.14	Incorporation by Reference	Test methods incorporated by reference	Yes.
§ 63.15	Availability of Information	Public and confidential information	Yes.

[FR Doc. 00–21073 Filed 8–25–00; 8:45 am]

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