Federal Register

Thursday,
January 9, 2003

Part III

Environmental Protection Agency

40 CFR 63

National Emission Standards for Hazardous Air Pollutants: Plywood and Composite Wood Products; Proposed Rule

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 63

[FRL–7419–3]

RIN 2060–AG52

National Emission Standards for Hazardous Air Pollutants: Plywood and Composite Wood Products

AGENCY: Environmental Protection Agency (EPA).

ACTION: Proposed rule.

SUMMARY: This action proposes national emission standards for hazardous air pollutants (NESHAP) for the plywood and composite wood products (PCWP) source category. The EPA has determined that the PCWP source category contains major sources of hazardous air pollutants (HAP), including acetaldehyde, acrolein, formaldehyde, methanol, phenol, and propionaldehyde. These HAP are associated with a variety of adverse health effects. These adverse health effects include chronic health disorders (*e.g.*, damage to nasal membranes, reproductive disorders, and problems with pregnancies) and acute health disorders (*e.g.*, irritation of eyes, throat, and mucous membranes, dizziness, headache, and nausea). Three of the HAP have been classified as probable or possible human carcinogens. These proposed standards would implement section 112(d) of the Clean Air Act (CAA) by requiring all major sources subject to the rule to meet HAP emission standards reflecting the application of the maximum achievable control technology (MACT). Implementation of the proposed standards would reduce HAP emissions from the PCWP source category by approximately 9,700 megagrams per year (Mg/yr) (11,000 tons per year (tons/yr)). In addition, the proposed standards would reduce emissions of volatile organic compounds (VOC) by 25,000 Mg/yr (27,000 tons/yr). This action also proposes to add a method to the relevant General Provisions to measure methanol, formaldehyde, and phenol and a method to measure total HAP at PCWP facilities.

DATES: *Comments.* Submit comments on or before March 10, 2003.

Public Hearing. If anyone contacts the EPA requesting to speak at a public hearing by January 29, 2003, a public hearing will be held on February 10, 2003.

ADDRESSES: *Comments.* Written comments sent by U.S. mail should be submitted (in duplicate if possible) to: Air and Radiation Docket and Information Center (Mail Code 6102T), Attention Docket Number A–98–44, Room B108, U.S. EPA, 1301 Constitution Avenue, NW., Washington, DC 20460. Written comments delivered in person or by courier (*e.g.*, FedEx, Airborne, and UPS) should be submitted (in duplicate if possible) to: Air and Radiation Docket and Information Center (Mail Code 6102T), Attention Docket Number A–98–44, Room B102, U.S. EPA, 1301 Consitution Avenue, NW., Washington, DC 20460. The EPA requests a separate copy also be sent to the contact person listed below (see **FOR FURTHER INFORMATION CONTACT**).

Public Hearing. If a public hearing is held, it will be held at 10 a.m. at the EPA Office of Administration Auditorium, Research Triangle Park, North Carolina.

Docket. Docket No. A–98–44 contains supporting information used in developing the standards. The docket is located at the U.S. EPA, 1301 Constitution Avenue, NW., Washington, DC 20460 in room B108, and may be inspected from 8:30 a.m. to 5:30 p.m., Monday through Friday, excluding legal holidays.

FOR FURTHER INFORMATION CONTACT:

General and technical information. Mary Tom Kissell, Waste and Chemical Processes Group, Emissions Standards Division (C439–03), U.S. EPA, Research Triangle Park, North Carolina 27711, telephone number (919) 541–4516, electronic mail (e-mail) address *kissell.mary@epa.gov*.

Methods, sampling, and monitoring information. Gary McAlister, Source Measurement Analysis Group, Emission Monitoring and Analysis Division (D243–02), U.S. EPA, Research Triangle Park, North Carolina 27711, telephone number (919) 541–1062, e-mail address *mcalister.gary@epa.gov*.

Economic impacts and benefit analysis. Larry Sorrels, Innovative Strategies and Economics Group, Air Quality Strategies and Standards Division (C339–01), U.S. EPA, Research Triangle Park, North Carolina 27711, telephone number (919) 541–5041, e-mail address *sorrels.larry@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–98–44. 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: Mary Tom Kissell, c/o OAQPS Document Control Officer (C404–02), U.S. EPA, Research Triangle Park NC 27711. The EPA will disclose information identified as CBI only the extent allowed by the procedures set forth in 40 CFR part 2. If no claim of confidentiality accompanies a submission when it is received by the EPA, 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 JoLynn Collins, Waste and Chemical Processes Group, Emissions Standards Division (C439–03), U.S. EPA, Research Triangle Park, NC 27711, telephone (919) 541–5671 at least 2 days in advance of the public hearing. Persons interested in attending the public hearing must also call JoLynn Collins to verify the time, date, and location of the hearing. The public hearing 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 the EPA 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, with certain exceptions, 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) 566–1742. A reasonable fee may be charged for copying docket materials.

World Wide Web (WWW). In addition to being available in the docket, an electronic copy of today's proposed rule is also available on the WWW through the Technology Transfer Network (TTN). Following 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:

Category	SIC	NAICS	Examples of regulated entities
Industry	2421	321999	Sawmills with lumber kilns.
	2435	321211	Hardwood plywood and veneer plants.
	2436	321212	Softwood plywood and veneer plants.
	2493	321219	Reconstituted wood products (Particleboard, medium density fiberboard, hardboard, fiberboard, and oriented strandboard plants).
	2439	321213	Structural Wood Members, Not Elsewhere Classified (Engineered wood products plants).

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 facility is regulated by this action, you should examine the applicability criteria in § 63.2231 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:

I. Introduction

A. What Is the Purpose of This Proposed Rule?

The purpose of the proposed rule is to protect the public health by reducing emissions of HAP from PCWP facilities.

B. What Is the Source of Authority for Development of NESHAP?

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 PCWP source category was originally listed as the plywood and particleboard source category on July 16, 1992 (57 FR 31576). The name of the source category was changed to plywood and composite wood products on November 18, 1999 (64 FR 63025) to more accurately reflect the types of manufacturing facilities covered by the source category. Major sources of HAP are those that have the potential to emit greater than 10 tons/yr of any one HAP or 25 tons per year of any combination of HAP.

Section 112(d) of the CAA directs us to adopt emission standards for categories and subcategories of HAP sources. In cases where emission standards are not feasible, section 112(h) of the CAA allows us to develop design, equipment, work practice and/or operational standards. The collection of compliance options, operating requirements, and work practice requirements in today's proposed rule make up the emission standards and work practice standards for the PCWP NESHAP.

C. 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 must also consider any 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 health and environmental impacts, and energy requirements.

D. How Was This Proposed Rule Developed?

We used several resources to develop this proposed rule, including questionnaire responses from industry, emissions test data, site visits to PCWP facilities, telephone contacts, and operating permits. We consulted representatives of the PCWP industry, State and Federal representatives, and emission control device vendors in developing this proposed rule. Industry representatives provided emissions test data, arranged site visits, reviewed draft questionnaires, and identified issues and provided information to help resolve issues in the rulemaking process. State representatives provided emissions test data and copies of permits.

We identified the MACT floor level of control with information obtained from the questionnaire responses, emission test reports, site visits, telephone contacts, and operating permits.

E. What Are the Health Effects of the Pollutants Emitted From the PCWP Industry?

This 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. The HAP emitted by PCWP facilities include, but are not limited to, acetaldehyde, acrolein, formaldehyde, methanol, phenol, and propionaldehyde. Exposure to these compounds has been demonstrated to cause adverse health effects when present in concentrations higher than those typically found in ambient air.

We do not have the necessary data on each PCWP facility and the people living around each facility to determine the actual population exposures to the HAP emitted from these facilities and the potential health effects. Therefore, we do not know the extent to which the adverse health effects described in the following subsections occur in the populations surrounding these facilities. However, to the extent the adverse effects do occur, today's proposed rule would reduce emissions and subsequent exposures.

1. Acetaldehyde

Acetaldehyde is ubiquitous in the environment and may be formed in the body from the breakdown of ethanol (ethyl alcohol). Acute (short-term) exposure to acetaldehyde results in effects including irritation of the eyes, skin, and respiratory tract. In humans, symptoms of chronic (long-term) exposure to acetaldehyde resemble those of alcoholism. Long-term inhalation exposure studies in animals reported damage to the nasal epithelium and mucous membranes, growth retardation, and increased kidney weight. We have classified acetaldehyde as a probable human carcinogen (Group B2) based on animal studies that have shown nasal tumors in rats and laryngeal tumors in hamsters.

2. Acrolein

Acute (short-term) inhalation exposure to acrolein may result in upper respiratory tract irritation and congestion. The major effects from chronic (long-term) inhalation exposure to acrolein in humans consist of general respiratory congestion and eye, nose, and throat irritation. Acrolein is a strong dermal irritant, causing skin burns in humans. We consider acrolein a possible human carcinogen (Group C) based on limited animal cancer data suggesting an increased incidence of tumors in rats exposed to acrolein in the drinking water.

3. Formaldehyde

Both acute (short-term) and chronic (long-term) exposure to formaldehyde irritates the eyes, nose, and throat, and may cause coughing, chest pains, and bronchitis. Reproductive effects, such as menstrual disorders and pregnancy problems, have been reported in female workers exposed to formaldehyde. Limited human studies have reported an association between formaldehyde exposure and lung and nasopharyngeal cancer. Animal inhalation studies have reported an increased incidence of nasal squamous cell cancer. We consider formaldehyde a probable human carcinogen (Group B2).

4. Methanol

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 carcinogenicity.

5. Phenol

Acute (short-term) inhalation and dermal exposure to phenol is highly irritating to the skin, eyes, and mucous membranes in humans. Oral exposure to small amounts of phenol may cause irregular breathing, muscular weakness and tremors, coma, and respiratory arrest at lethal concentrations. Anorexia, progressive weight loss, diarrhea, vertigo, salivation, and a dark coloration of the urine have been reported in chronically (long-term) exposed humans. Gastrointestinal irritation and blood and liver effects have also been reported. No studies of developmental or reproductive effects of phenol in humans are available, but animal studies have reported reduced fetal body weights, growth retardation, and abnormal development in the offspring of animals exposed to phenol by the oral route. We have classified phenol in Group D, not classifiable as to human carcinogenicity.

6. Propionaldehyde

No information is available on the acute (short-term) effects of propionaldehyde in humans. Animal studies have reported that inhalation exposure to high levels of propionaldehyde results in anesthesia and liver damage. No information is available on the chronic (long-term), reproductive, developmental or carcinogenic effects of propionaldehyde in animals or humans. We have not classified propionaldehyde for carcinogenicity.

F. Incorporation by Reference of NCASI Test Methods

With today's action, we are proposing to amend 40 CFR 63.14 by revising paragraph (f) to incorporate by reference two test methods developed by the National Council of the Paper Industry for Air and Stream Improvement (NCASI): (1) Method CI/WP–98.01, Chilled Impinger Method for Use at Wood Products Mills to Measure Formaldehyde, Methanol, and Phenol; and (2) pending review by EPA, Method IM/CAN/WP–99.01, Impinger/Canister Source Sampling Method for Selected HAPs at Wood Products Facilities. These methods are available from the NCASI, Methods Manual, P.O. Box 133318, Research Triangle Park, NC 27709–3318 or at *http://www.ncasi.org.* They are also available from the docket for this proposed rule (Docket Number A–98–44).

In today's proposed rule, NCASI Method CI/WP–98.01 would be allowed as an alternative to:

• EPA Method 320, Measurement of Vapor Phase Organic and Inorganic Emission by Extractive FTIR, for measuring methanol or formaldehyde;

• EPA Method 0011, Sampling for Selected Aldehyde and Ketone Emissions from Stationary Sources, for measuring formaldehyde;

• EPA Method 316, Sampling and Analysis for Formaldehyde Emissions from Stationary Sources in the Mineral Wool and Wool Fiberglass Industries, for measuring formaldehyde;

• EPA Method 308, Procedure for Determination of Methanol Emission from Stationary Sources, for measuring methanol; and

• NCASI Method IM/CAN/WP–99.01 for measuring formaldehyde or methanol.

The NCASI Method CI/WP–98.01 has been validated using EPA Method 301, Field Validation of Pollutant Measurement Methods from Various Waste Media, for measuring methanol, formaldehyde, and phenol emissions from PCWP facilities. (EPA Method 0011 is available in ''Test Methods for Evaluating Solid Waste, Physical/Chemical Methods,'' EPA Publication No. SW–846. EPA Methods 301, 308, 316, and 320 are in 40 CFR part 63, appendix A.)

In today's proposed rule, NCASI Method IM/CAN/WP–99.01, which is a self-validating method, would be allowed, pending our review, as an alternative to:

• EPA Method 320, for measuring methanol, formaldehyde, or total HAP;

• EPA Methods 0011 and 316, for measuring formaldehyde;

• EPA Method 308, for measuring methanol; and

• NCASI Method CI/WP–98.01, for measuring formaldehyde or methanol.

G. Alternative Procedure for Determining Press Enclosure Capture Efficiency

We are working with industry representatives to develop a procedure that uses measurement of tracer gas to determine capture efficiency. We are proposing this ''tracer gas procedure'' today in appendix A to the proposed subpart DDDD.

H. Changes to the Scope of a Source Category

Today's action serves to broaden the PCWP source category to include lumber kilns located at stand-alone kiln-dried lumber manufacturing facilities or at any other type of facility. Wood products industry representatives requested that all lumber kilns (regardless of location) be considered in today's proposed rule so there would be one MACT determination for all lumber kilns nationwide. If lumber kilns at stand-alone kiln-dried lumber manufacturing facilities and other types of facilities are not included in the PCWP NESHAP, kiln-dried lumber manufacturing could be listed as a major source category under section 112(c) of the CAA in the future, requiring a separate section 112(d) rulemaking, and may become separately subject to the provisions of section 112(g) of the CAA as well. Because the design and operation of lumber kilns are essentially the same regardless of whether the kilns are located at a sawmill or are co-located with PCWP or other types of manufacturing operations, we have included lumber kilns in the PCWP source category. Broadening the scope of the PCWP source category to include lumber kilns located at any type of facility is reasonable because based on our information, there are no currently applicable controls at any lumber kilns and it is both more efficient and expeditious to include them in the MACT process now than to separately address them in a rulemaking that would not likely result in meaningful emissions reductions from lumber kilns. Moreover, including all lumber kilns in the PCWP MACT results in placing them on a faster schedule for purposes of future residual risk analysis under CAA section 112(f).

II. Summary of Proposed Rule

A. What Process Units Are Subject to This Proposed Rule?

The proposed rule would regulate HAP emissions from PCWP facilities that are major sources. Plywood and composite wood products are manufactured by bonding wood material (fibers, particles, strands, *etc.*) or agricultural fiber, generally with resin under heat and pressure, to form a structural panel or engineered wood product. Plywood and composite wood products manufacturing facilities also include facilities that manufacture dry veneer and lumber kilns located at any facility. Plywood and composite wood products include (but are not limited to) plywood, veneer, particleboard, oriented strandboard, hardboard, fiberboard, medium density fiberboard, laminated strand lumber, laminated veneer lumber, wood I-joists, kiln-dried lumber, and glue-laminated beams. Table 1 of this preamble lists the process units at PCWP facilities and indicates which process units are subject to the control requirements in today's proposed rule. ''Process unit'' means equipment classified according to its function such as a blender, dryer, press, former, or board cooler.

TABLE 1.—PROCESS UNITS THAT ARE SUBJECT TO THE PROPOSED CONTROL REQUIREMENTS

For the following process units . . .	Does today's proposed rule include control requirements for . . . Existing affected sources?	New affected sources?
Softwood veneer dryers; tube dryers; strand dryers; green rotary dryers; hardboard ovens; reconstituted wood product presses; and pressurized refiners.	Yes	Yes.
Press predryers; fiberboard mat dryers; and board coolers	No	Yes.
Dry rotary dryers; veneer redryers; plywood presses; engineered wood products presses; hardwood veneer dryers; humidifiers; atmospheric refiners; formers; blenders; rotary agricultural fiber dryers; agricultural fiber board presses; sanders; saws; fiber washers; chippers; log vats; lumber kilns; storage tanks; wastewater operations; miscellaneous coating operations; and stand-alone digesters.	No	No.

The affected source for this proposed rule is the combination of all PCWP manufacturing operations, including PCWP process units, onsite storage of raw materials, onsite wastewater treatment operations associated with PCWP manufacturing, and miscellaneous coating operations located in a single facility covering a contiguous area under common control that is also a major source. One of the implications of the proposed definition of affected source is that the control requirements or "floor," as defined in section 112(d)(3), are determined for the entire PCWP facility. Therefore, except for lumber kilns not otherwise located at PCWP facilities, this proposed rule contains the control requirements that represent the MACT level of control for the entire facility. For lumber kilns not otherwise located at PCWP facilities, this proposed rule contains the control requirements that represent the MACT level of control only for lumber kilns.

B. What Pollutants Are Regulated by This Proposed Rule?

The proposed rule would regulate HAP emissions from PCWP facilities. For the purpose of compliance with 40 CFR part 63, subpart DDDD, we defined "total HAP" to be the sum of the emissions of six primary HAP emitted from PCWP manufacturing. For the purpose of determining whether your facility is a major source, you would have to include all HAP as prescribed by rules and guidance pertaining to determination of major source.

The six HAP that define "total HAP" are: Acetaldehyde, acrolein, formaldehyde, methanol, phenol, and propionaldehyde. Other HAP are sometimes emitted and controlled along with these six HAP, but in low quantities that may be difficult to measure. Depending upon which of the compliance alternatives you choose, you could be required to measure emissions of total hydrocarbon (THC), methanol, or formaldehyde as surrogates for measuring total HAP.

C. What Are the Compliance Options?

Today's proposed rule includes a range of compliance options which are summarized in the following subsections. You would have to use one of the compliance options to show compliance with the proposed rule. In most cases, the proposed compliance options would be the same for new and existing sources. Dilution to achieve compliance is prohibited as specified in 40 CFR 63.4.

1. Production-Based Compliance Options

Today's proposed rule includes production-based compliance options which are based on total HAP and vary according to type of process unit. Total HAP emissions are defined in today's proposed rule as the total mass emissions of the following six HAP: Acetaldehyde, acrolein, formaldehyde, methanol, phenol, and propionaldehyde. The production-based compliance options are in units of mass of pollutant per unit of production. Add-on control systems may not be used to meet the production-based compliance options. For pressurized refiners and most dryers, the production-based compliance options are expressed as pounds per oven-dried-ton of wood (lb/ODT). For presses, hardboard ovens, and some dryers, the production-based compliance options are expressed as pounds per thousand square feet of board (lb/MSF), with a reference board thickness.

2. Add-On Control System Compliance Options

If you operate a process unit equipped with an add-on control system, you may use any one of the following six compliance options. "Add-on control system" or "control system" means the combination of capture and control devices used to reduce HAP emissions to the atmosphere.

a. Reduce THC emissions (as carbon, and minus methane if you wish to subtract methane) by 90 percent.

b. Reduce methanol emissions by 90 percent.

c. Reduce formaldehyde emissions by 90 percent.

d. Limit the concentration of THC (as carbon, and minus methane if you wish to subtract methane) in the outlet of the add-on control system to 20 parts per million by volume, dry basis (ppmvd).

e. Limit the concentration of methanol in the exhaust from the add-on control system to 1 ppmvd (can be used only if the concentration of methanol entering the control device is greater than or equal to 10 ppmvd).

f. Limit the concentration of formaldehyde in the exhaust from the add-on control system to 1 ppmvd (can be used only if the concentration of formaldehyde entering the control device is greater than or equal to 10 ppmvd).

In the first three options (a through c), the 90 percent control efficiency represents a total control efficiency. Total control efficiency is defined as the product of the capture efficiency and the control device efficiency. For process units such as rotary strand dryers, capture efficiency is not an issue because the rotary strand dryer has a single exhaust point which is easily captured by the control device. However, for presses and board coolers, the HAP emissions cannot be completely captured without installing an enclosure. If the enclosure meets the criteria for a permanent total enclosure (PTE) as described in EPA Test Method 204 (40 CFR part 51, appendix M), then you could assign the enclosure a capture efficiency of 100 percent. You would have to test other enclosures to determine capture efficiency using EPA Test Methods 204 and 204A through 204F (as appropriate) or the alternative tracer gas procedure in today's proposed rule. For the three concentration options (d through f), you would need to have an enclosure that either meets the criteria for a PTE or achieves a capture efficiency greater than or equal to 95 percent.

The six compliance options are equivalent ways to express the HAP control levels that represent the MACT floor. Because the compliance options are equivalent for controlling HAP emissions, you would be required to meet only one compliance option for add-on control systems. For example, if you elect to test your control system for THC and formaldehyde and the test results demonstrate compliance with only the THC or only the formaldehyde compliance option, you would still be in compliance with today's proposed rule.

3. Emissions Averaging Compliance Option

The CAA does not limit how we set control requirements beyond requiring that they be applicable to all sources in a category and be at least as stringent as the MACT floor. Therefore, the relevant statutory language does not prohibit us from allowing a source to meet MACT through use of emissions averaging as long as averaging does not cross source category boundaries, and the standard is set at a level at least as stringent as the MACT floor. As explained in this preamble, we believe we have met these criteria. In addition, it should be noted that Congress explicitly provided that cost should be considered in setting the standards. Emissions averaging is a means of achieving the required emissions reductions in a cost effective way. Therefore, if you operate an existing affected source, you could choose to comply with the emissions averaging provisions instead of the production-based compliance options or add-on control system compliance options.

Emissions averaging is a system of debits and credits in which the credits must equal or exceed the debits. ''Debit-generating process units'' are the PCWP process units required to meet the proposed control requirements that you choose to either not control or under-control. ''Credit-generating process units'' are the PCWP process units that you choose to control. You may take credit for emissions from debit-generating process units that are under-controlled. Control devices used for credit-generating process units may not be assigned more than 90 percent control efficiency.

Under the emissions averaging provisions, you would determine the required mass removal (RMR) of total HAP from debit-generating process units for a 6-month compliance period. Total HAP is defined in today's proposed rule to include acetaldehyde, acrolein, formaldehyde, methanol, phenol, and propionaldehyde. The RMR would be based on initial total HAP measurements for each debit-generating process unit, your process unit operating hours for a 6-month period, and the required 90 percent control system efficiency. One hundred percent of the RMR for debit-generating process units would have to be achieved or exceeded by the actual mass removal (AMR) of total HAP achieved by credit-generating process units. The AMR is determined based on initial performance tests, the total HAP removal efficiency of the control systems used to control the credit-generating process units, and your process unit operating hours over the 6-month period.

There are some restrictions on use of the emissions averaging provisions in today's proposed rule. You would have to limit emissions averaging to the process units located within your affected source. Emissions averaging could not be used at new affected sources. You could not include in an emissions average those process units that are not operating or that are shut down. You could not include in your emissions average those process units controlled to comply with a State or Federal rule other than today's proposed rule (unless the process unit was included in an emissions average and the control system was installed before the process unit was subject to the other State or Federal rule). Only PCWP process units using add-on control systems may be used to generate credits.

D. What Operating Requirements Are in the Proposed Rule?

The operating requirements in today's proposed rule would apply to add-on control systems used to comply with the proposed rule and to process units that can meet the proposed production-based compliance options. For incineration-based control devices and biofilters, the proposed rule specifies that you would either monitor operating parameters or use a THC continuous emission monitoring system (CEMS) to demonstrate continuous compliance. The proposed operating requirements are summarized below:

- If you operate a thermal oxidizer, such as a regenerative thermal oxidizer (RTO) or a combustion unit that accepts process exhaust into the flame zone, you would be required to maintain the firebox temperature at a level that is greater than or equal to the minimum temperature established during the performance test. You would also be required to maintain the average static pressure at the inlet of the thermal oxidizer within the operating range established during the performance test. You may choose to monitor gas flow rate at the thermal oxidizer stack as an alternative to monitoring static pressure. If you monitor gas flow, you must maintain the gas flow rate below the maximum flow rate established during the performance test. If you operate a combustion unit that accepts process exhaust into the flame zone and that combustion unit has a heat input capacity of greater than or equal to 44 megawatts (MW), you would be exempt from the testing and monitoring requirements described above for thermal oxidizers.
- If you operate a catalytic oxidizer, such as a regenerative catalytic oxidizer (RCO) or thermal catalytic oxidizer (TCO), you would be required to maintain the temperature upstream of the catalyst bed at or above the minimum temperature established during the performance test. You would also be required to maintain the average static pressure at the inlet of the catalytic oxidizer within the operating range established during the performance test. You may choose to monitor gas flow rate at the catalytic oxidizer stack as an alternative to monitoring static pressure. If you monitor gas flow, you must maintain the gas flow rate below the maximum flow rate established during the performance test.
- If you operate a biofilter, you would be required to maintain the temperature of the air stream entering the biofilter, pH of the biofilter effluent, and pressure drop across the biofilter bed within the ranges you specify during the initial performance test or during qualifying previous performance tests using the required test methods. If you use values from previous performance tests to establish the operating parameter ranges, you would have to certify that the biofilter and associated process unit(s) have not been modified subsequent to the date the previous data were collected.
- If you operate an add-on control system not listed in today's proposed rule, you would establish operating parameters to be monitored and parameter values that represent your operating requirements during the performance test, subject to prior written approval by the Administrator.
- If you operate a process unit that can meet the production-based compliance options without an add-on

control device, you would be required to maintain the average process unit inlet or operating temperature (depending on the specific process unit) below the maximum temperature established during the performance test.

• As an alternative to monitoring the operating parameters specified above for thermal oxidizers, catalytic oxidizers, biofilters, other control devices, and process units that meet the compliance options for process units without add-on control systems, you would be allowed to monitor THC concentration in the outlet stack with a THC CEMS. You would be required to maintain the outlet THC concentration below the maximum concentration established during the performance test. You may choose to subtract methane from the THC concentration measured by the CEMS if you wish to do so.

E. What Are the Work Practice Requirements?

The work practice requirements in today's proposed rule apply to veneer dryers, dry rotary dryers, veneer redryers, and hardwood veneer dryers. For veneer dryers, the proposed work practice requirements require you to minimize fugitive emissions from the veneer dryer doors (by applying appropriate operation and maintenance procedures) and from the green end of the dryers (through proper balancing of hot zone exhausts). The proposed work practice requirements also specify parameters that you would monitor to demonstrate that each dry rotary dryer, redryer, and hardwood veneer dryer continuously operates in a manner consistent with the definitions of these process units provided in today's proposed rule, as follows:

• If you operate a dry rotary dryer, you would be required to maintain the inlet dryer temperature at or below 600 °F and maintain the moisture content of the wood particles entering the dryer at or below 30 weight percent, on a dry basis.

• If you operate a veneer redryer, you would be required to maintain the moisture content of the wood veneer entering the dryer at or below 25 percent, by weight.

• If you operate a hardwood veneer dryer, you would be required to process less than 30 percent, by volume, softwood species each year.

F. When Must I Comply With This Proposed Rule?

Existing PCWP facilities must comply within 3 years of the date the promulgated rule is published in the **Federal Register**. New sources that commence construction after today's date must comply immediately upon initial startup or on the effective date of the rule, whichever is later.

G. How Do I Demonstrate Initial Compliance With This Proposed Rule?

The initial compliance requirements in today's proposed rule vary with the different compliance options.

1. Production-Based Compliance Options

If you are complying with the production-based compliance options in today's proposed rule, you would be required to conduct an initial performance test using specified test methods to demonstrate initial compliance. You would be required to test the efficiency of your emissions capture device during the initial compliance test if the process unit is a press or board cooler. The actual emission rate of the press or board cooler would be equivalent to the measured emissions divided by the capture efficiency. You would be required to install process (temperature) monitoring equipment to be used to demonstrate compliance with the operating requirements for process units without add-on control systems or install a THC CEMS and monitor the outlet THC concentration. During the initial compliance test, you would use the process monitoring equipment to establish the parameter value that represents your operating requirement for the process unit.

2. Add-On Control System Compliance Options

If you use the compliance options for add-on control systems, you would be required to conduct an initial performance test using specified test methods to demonstrate initial compliance. With the exception of the 20 ppmvd THC concentration option, you would be required to test at both the inlet and the outlet of the control device. If you use any of the six compliance options for add-on control systems, and the process unit is a press or a board cooler without a PTE, you would also be required to test the capture efficiency of your partial enclosure. Prior to the initial performance test, you would be required to install control device parameter monitoring equipment or THC CEMS to be used to demonstrate compliance with the operating requirements for add-on control systems in today's proposed rule. During the initial compliance test, you would use the control device parameter monitoring equipment or THC CEMS to establish the parameter values that represent your operating requirements for the control systems. If your add-on control system is preceded by a particulate control device, you would only be required to establish operating parameter values for the HAP control system and not for the particulate control device. If your control device is a biofilter, then you may use historical operating records for the biofilter to establish your operating requirements as long as you were in compliance with the emission limits in today's proposed rule when the data were collected, the test data were obtained using the test methods in today's proposed rule, and no modifications were made to the process unit or biofilter subsequent to the date the historical data were collected.

3. Emissions Averaging Compliance Option

If you elect to comply with the emissions averaging compliance option in today's proposed rule, you would be required to submit an Emissions Averaging Plan (EAP) to the Administrator for approval. The EAP would describe the process units you are including in the emissions average. The plan also would specify which process units will be credit-generating units and which process units will be debit-generating units. The EAP would also have to include descriptions of the control systems used to generate emission credits, documentation of the total HAP measurements made to determine the RMR, calculations and supporting documentation to demonstrate that the AMR will be greater than or equal to the RMR, and a summary of the operating parameters that will be monitored for the credit-generating units.

Following approval of your EAP, you would be required to conduct performance tests to determine the total HAP emissions from all process units included in the EAP. The credit-generating process units would be equipped with add-on control systems; therefore, for those process units, you would follow the procedures for demonstrating initial compliance as outlined above for add-on control systems. The emissions averaging provisions would require you to conduct all total HAP measurements and performance test(s) when the process units are operating under representative operating conditions. Today's proposed rule defines ''representative operating conditions'' as those conditions under which the process unit will be typically operating following the compliance date. Representative conditions would include such things as using a representative range of materials (*e.g.*, wood material of a typical species mix and moisture content, typical resin formulations) and operating the process unit at typical operating temperature ranges.

4. Work Practice Requirements

The work practice requirements in today's proposed rule do not require you to conduct any initial performance tests. To demonstrate initial compliance with the work practice requirements for dry rotary dryers, you would have to install parameter monitoring devices to continuously monitor the dryer inlet operating temperature and the moisture content (dry basis) of the wood furnish (*i.e.*, wood fibers, particles, or strands used for making board) entering the dryer. You would then use the parameter monitoring devices to continuously monitor and record the dryer temperature and wood furnish moisture content for a minimum of 30 days. If the monitoring data indicate that during the minimum 30-day demonstration period, your dry rotary dryer continuously processed wood furnish with an inlet moisture content less than or equal to 30 percent, and the dryer was continuously operated at an inlet dryer temperature less than or equal to 600 °F, then your dryer would meet the definition of a dry rotary dryer in today's proposed rule. You would submit the monitoring data as part of your notification of compliance status report.

To demonstrate initial compliance with the work practice requirements for hardwood veneer dryers, you would have to calculate the annualized percentage of softwood veneer processed in the dryer by volume, using veneer dryer production records for the 12-month period prior to the compliance date. If the total annual percentage by volume of softwood veneer is less than 30 percent, your veneer dryer would meet the definition of hardwood veneer dryer. You would then submit a summary of the production data for the 12-month period and a statement verifying that the veneer dryer will continue to process less than 30 percent softwoods as part of your notification of compliance status report.

To demonstrate initial compliance with the work practice requirements for softwood veneer dryers, you would have to develop a plan for minimizing fugitive emissions from the veneer dryer green end and heated zones. You would submit the plan with your notification of compliance status report.

To demonstrate initial compliance with the work practice requirements for veneer redryers, you would have to install a device that can be used to continuously monitor the moisture content (dry basis) of veneer entering the dryer. You would then use the moisture monitoring device to continuously monitor and record the inlet moisture content of the veneer for a minimum of 30 days. If the monitoring data indicate that your veneer dryer continuously processed veneer with a moisture content less than or equal to 25 percent during the minimum 30-day demonstration period, then your veneer dryer would meet the definition of a veneer redryer in today's proposed rule. You would submit the monitoring data as part of your notification of compliance status report.

H. How Do I Demonstrate Continuous Compliance With This Proposed Rule?

The continuous compliance requirements in today's proposed rule vary with the different types of compliance options.

1. Production-Based Compliance Options

If you comply with the production-based compliance options, then you would have to install a continuous parameter monitoring system (CPMS) to monitor the process operating parameter(s) used to demonstrate compliance with the operating requirements in today's proposed rule. Your CPMS would have to collect data at least every 15 minutes, and you would need to have at least three data points per hour to have a valid hour of data. You would have to operate the CPMS at all times the process unit is operating. You also would have to conduct proper maintenance of the CPMS and maintain an inventory of necessary parts for routine repairs of the CPMS. Using the data collected with the CPMS, you would calculate and record the 3-hour block average values of each process operating parameter.

The process operating parameter you would monitor for green rotary dryers, tube dryers, and strand dryers is dryer inlet temperature. The process operating parameter you would monitor for hardboard ovens, press predryers, reconstituted wood product presses, fiberboard mat dryer hot zones, and softwood veneer dryer hot zones is operating temperature. You would not be required to monitor process parameters for reconstituted wood product board coolers or pressurized refiners. For each temperature parameter, you would have to continuously maintain the 3-hour block average temperature below the maximum temperature established during the performance test.

Instead of operating a CPMS, you could choose to operate a CEMS for monitoring THC concentration to demonstrate compliance with the operating requirements in today's proposed rule. If you choose to operate a THC CEMS in lieu of a CPMS, you would have to demonstrate continuous compliance as described in the following subsection.

2. Add-On Control System Compliance Options

For add-on control systems, you would have to install a CPMS to monitor the specified control device operating parameter(s) or install a CEMS to monitor THC concentration to demonstrate compliance with the operating requirements in today's proposed rule. If you operate a CPMS, it would have to collect data at least every 15 minutes, and you would need to have at least three data points per hour to have a valid hour of data. You would have to operate the CPMS at all times the process unit is operating. You also would have to conduct proper maintenance of the CPMS and maintain an inventory of necessary parts for routine repairs of the CPMS. Using the data collected with the CPMS, you would calculate and record the average values of each operating parameter according to the specified averaging times.

For thermal oxidizers, you would have to continuously maintain the 3-hour block average firebox temperature at or above the minimum temperature established during the performance test. For catalytic oxidizers, you would have to continuously maintain the 3-hour block average temperature upstream of the catalyst bed at or above the minimum value established during the performance test. For both thermal and catalytic oxidizers, you would also have to continuously maintain the 3-hour block average static pressure at the inlet of the thermal oxidizer within the operating range established during the performance test. As an alternative to monitoring static pressure, you may monitor gas flow rate at the oxidizer stack. If you monitor gas flow, you must maintain the 3-hour block average gas flow rate below the maximum flow rate established during the performance test.

For biofilters, you would have to maintain the gas temperature entering the biofilter, effluent pH, and pressure drop across the biofilter bed within the operating ranges you establish. You would establish your biofilter operating parameter limits, their monitoring frequencies, and their averaging times based on data collected during the initial performance test or during qualifying previous performance tests using the required test methods. If you use values from previous performance tests to establish the operating parameter ranges, you would have to certify that the biofilter and associated process unit(s) have not been modified subsequent to the date the previous data were collected. If previous performance test data are not available (as would be the case for a new biofilter installation) you would be allowed up to 180 days after the compliance date to gather the necessary information and establish your biofilter operating parameter ranges.

If you choose to operate a CEMS for monitoring THC concentration instead of operating a CPMS, you must install, operate, and maintain the CEMS according to Performance Specification 8 in 40 CFR part 60, appendix B. You would also be required to comply with the CEMS data quality assurance requirements in Procedure 1 of appendix F of 40 CFR part 60. You would be required to conduct a performance evaluation of the CEMS according to 40 CFR 63.8 and Performance Specification 8. The CEMS would have to complete a minimum of one cycle of operation (sampling, analyzing, and data recording) for each successive 15-minute period. Using the data collected with the CEMS, you would calculate and record the 3-hour block average THC concentration. You would have to continuously monitor and maintain the 3-hour block average THC concentration at or below the maximum established during the performance test. You may use a CEMS capable of subtracting methane from the measured THC concentration if you wish to do so.

If you comply with today's proposed rule using an add-on control system, you could request a routine control device maintenance exemption from the Administrator. Your request for a routine control device maintenance exemption would have to document the need for routine maintenance on the control device and the time required to accomplish the maintenance, describe the maintenance activities and the frequency of these activities, explain why the maintenance could not be accomplished during process shutdowns, describe how you plan to minimize emissions to the greatest extent possible during these maintenance activities, and provide any other documentation required by the Administrator. If your request for the routine control device maintenance exemption is approved by the Administrator, it would have to be incorporated into your title V permit. The compliance options and operating requirements would not apply during times when control device maintenance covered under your approved routine control device maintenance exemption is performed. The routine control device maintenance exemption may not exceed 3 percent of annual operating uptime for each green rotary dryer, tube dryer, strand dryer, or pressurized refiner controlled. The routine control device maintenance exemption is limited to 0.5 percent of the annual operating uptime for each softwood veneer dryer, reconstituted wood product press, reconstituted wood product board cooler, hardboard oven, press predryer, or fiberboard mat dryer controlled. If your control device is used to control a combination of equipment with different downtime allowances (*e.g.*, a tube dryer and a press), then the highest (*i.e.*, 3 percent) downtime allowance applies.

3. Emissions Averaging Compliance Option

To demonstrate continuous compliance with the emissions averaging provisions, you would have to continuously comply with the applicable operating requirements for add-on control systems (described in the previous subsection). You also would have to maintain records of your operating hours for each process unit included in the EAP. For each semiannual compliance period, you would have to demonstrate that the AMR equals or exceeds the RMR using your initial (or most recent) total HAP measurements for debit-generating units, initial (or most recent) performance test results for credit-generating units, and the operating hours recorded for the semiannual compliance period.

4. Work Practice Requirements

To demonstrate continuous compliance with the work practice requirements for dry rotary dryers and veneer redryers, you would be required to operate all dry rotary dryers and veneer redryers so that they continuously meet the definitions of these process units in today's proposed rule. For dry rotary dryers, you would have to continuously monitor and maintain the inlet furnish moisture content at or below 30 percent and the inlet dryer operating temperature at or below 600 °F. You would also have to manually measure the moisture content of a representative sample of the inlet wood furnish once per day to verify the readings from the moisture meter. For veneer redryers, you would have to continuously monitor and maintain the inlet veneer moisture content at or below 25 percent.

To demonstrate continuous compliance with the work practice requirements for softwood veneer dryers, you would have to follow the procedures in your operating plan for minimizing fugitive emissions from the green end and heated zones of the veneer dryer and maintain records documenting that you have followed your plan. For hardwood veneer dryers, you would have to continue to process less than 30 percent softwood veneer by volume and maintain records on veneer dryer production.

III. Rationale for Proposed Rule

A. How Did We Select the Source Category and Any Subcategories?

The PCWP source category includes the manufacture of many types of wood products, including (but not limited to) plywood, veneer, particleboard, oriented strandboard, hardboard, fiberboard, medium density fiberboard, laminated strand lumber, laminated veneer lumber, wood I-joists, kiln-dried lumber, and glue-laminated beams. During our review of the available information on this source category, we found that the processes used to produce the different types of wood products were more similar than dissimilar with respect to the types of equipment used and the HAP emitted. Published definitions of the various wood products often group several types of products together or overlap with definitions developed for other similar wood products. As the wood products industry continues its relatively high rate of growth, new and different wood products are coming into the marketplace, some of which are hybrids of existing wood products or modified versions of existing wood products. Because the differences between many of the product lines are already somewhat blurred and the equipment that is used to manufacture wood products cuts across industry sectors, we determined that establishing subcategories based on product type was unwarranted and could seriously hamper applicability determinations. Therefore, today's proposed rule does not establish any subcategories under the PCWP source category.

B. How Did We Define the Affected Source?

In today's proposed rule, the affected source is the collection of process units associated with the manufacturing of PCWP at a plant site. The affected source includes, but is not limited to, those process units found in green end operations, drying operations, blending and forming operations, pressing and board cooling operations, and miscellaneous finishing operations (such as sanding, sawing, patching, edge sealing, and other finishing operations not subject to other NESHAP). The affected source also includes onsite storage of raw materials used in the manufacture of PCWP, such as resins, onsite wastewater treatment operations specifically associated with PCWP manufacturing, and miscellaneous coating operations. The affected source includes lumber kilns at PCWP manufacturing facilities and at any other facility.

Miscellaneous coating operations are activities such as edge coating of PCWP, labeling and printing on PCWP, application of anti-skid coatings, putty/patching operations at plywood facilities, etc. Only those onsite miscellaneous coating operations at PCWP manufacturing facilities that are listed in § 63.2292 of today's proposed rule are covered by these proposed NESHAP. We specifically excluded these miscellaneous coatings operations from the proposed Wood Building Products Surface Coating NESHAP (40 CFR part 63, subpart QQQQ). We included these sources in the definition of affected source for PCWP because these miscellaneous coating operations are part of the PCWP manufacturing process and are performed at the same location.

To provide compliance flexibility, we defined the affected source as the combination of all of the process units at a PCWP manufacturing facility. Many of the PCWP facilities that already control HAP emissions to the levels that would be required in today's proposed rule do so by first combining emissions from different process units and then controlling the combined emissions in one or more emission control devices. Much of the control device efficiency data used to set the proposed compliance options for add-on control systems was based on control equipment that was used to control emissions from multiple types of process units. As a result, the required level of control would be the same for most types of process units. For example, the control level for new and existing reconstituted wood products presses would be the same as the control level for new and existing tube dryers. We believe that the proposed broad definition of affected source is consistent with the way the industry applies add-on control devices, and that it creates more meaningful opportunities for emissions averaging. The affected source definition we selected is the same for both new and existing sources.

The affected source includes lumber kilns co-located at PCWP manufacturing facilities and lumber kilns at other facilities that do not manufacture PCWP (*i.e.*, stand-alone kiln-dried lumber manufacturing facilities such as sawmills). Wood products industry representatives requested that all lumber kilns (regardless of location) be considered in today's proposed rule so there would be one MACT determination for all lumber kilns nationwide.

If lumber kilns at stand-alone kiln-dried lumber manufacturing facilities are not included in the PCWP NESHAP, those stand-alone facilities could be listed as a major source category under section 112(c) of the CAA in the future and may be subject to the provisions of section 112(g) of the CAA as well. We believe no additional emissions reductions would be accomplished by listing lumber kilns as a separate source category or by having them regulated by case-by-case MACT. We believe this because: (1) The design and operation of lumber kilns are essentially the same regardless of whether the kilns are located at a sawmill or co-located with PCWP manufacturing operations, (2) we know of no lumber kilns that are controlled for HAP, and (3) we know of no cost effective HAP controls for lumber kilns. In addition, we know of no additional recordkeeping or reporting that stand-alone facilities would incur by being part of the PCWP source category since the PCWP source category includes only major sources. Including stand-alone kilns in the PCWP source category will save resources for regulatory agencies and industry and does not forego HAP reductions; therefore, we are proposing stand-alone kilns as part of the PCWP source category.

C. How Did We Determine the MACT Floor for Existing Sources?

Section 112(l)(3) of the CAA specifies that each MACT standard be at least as stringent as the floor for the sources in the relevant source category or subcategory. Today's proposed PCWP rule does not have subcategories; therefore, the average emission limitation achieved by the best-performing 12 percent of all major PCWP facilities represents the MACT floor for the source category. In order to rank the PCWP facilities based on performance, we would need facilitywide uncontrolled emissions data and facilitywide controlled emissions data for each facility to determine the percent reduction in HAP emissions achieved by each facility. We do not have actual facilitywide emissions data; however, we have accurate and complete information on the type and number of individual process units at PCWP facilities. In addition, emissions data are based on process unit data. Therefore, we decided to apply the MACT floor methodology at the process-unit level. Our information is especially accurate and complete for dryers and presses, which are generally the highest-emitting process units and the ones most likely to have add-on control systems that reduce HAP emissions from PCWP facilities. With this approach, the sourcewide MACT floor is represented by the MACT floor level of control established for each process unit group. We believe that applying the MACT floor methodology to process unit groups results in the closest possible approximation of the true sourcewide MACT floor, since it better enables us to take into account process unit-specific emissions data. We do not believe the results from this approach are significantly different from what they would be if facilitywide source-specific data had been available.

We determined the MACT floor control level for existing sources using the following procedure:

- We reviewed available data on pollution prevention techniques and the performance of add-on control devices and identified those add-on control systems that were best at reducing HAP emissions;
- For each process unit group identified in Table 1 of this preamble, we ranked the process units in that group from the best performing to the worst performing based on the type of add-on control system applied to each process unit;
- For each process unit group, we then identified the add-on control system that represented the MACT floor technology; and
- Using available information on the performance of the add-on control systems, we determined the performance level of the add-on control systems.

This procedure is explained in more detail in the following paragraphs. Additional information on how we determined the proposed MACT floor for the PCWP industry is available in the docket for this rule (Docket Number A–98–44).

1. Identifying the Best-Performing Add-On Control Systems

Although we believe that the potential for pollution prevention exists for some facilities in the PCWP industry, we are not aware of any demonstrated pollution prevention techniques that can be universally applied across the industry. Furthermore, we have no information on the degree of emissions reduction that can be achieved through pollution prevention measures. The PCWP facilities use add-on control devices because there currently are no feasible pollution prevention measures. Therefore, we focused our analysis on the performance of add-on control devices. We reviewed the available data on control device performance to determine which add-on control systems are best at reducing HAP emissions. We focused our analysis on THC, formaldehyde, and methanol because these three pollutants are the most prevalent pollutants emitted from the PCWP industry and represent the majority of the available data on control device performance. The design and operating factors that affect a control system's ability to reduce emissions of formaldehyde, methanol, or THC are generally the same. For example, an RTO designed to reduce THC emissions will also reduce formaldehyde or methanol emissions.

Based on a review of the available control device performance data for the PCWP industry, we concluded that only two types of add-on air pollution control devices (APCD) consistently and continuously reduced HAP emissions: incineration-based controls (including RTOs, RCOs, and incineration of pollutants in onsite process combustion equipment used to control emissions from various PCWP process units) and biofilters (used to control PCWP press emissions). The control device efficiency data showed that APCD installed for particulate matter (PM) abatement had no effect on gaseous HAP or THC emissions. These APCD include cyclones, multiclones (or multicyclones), baghouses (or fabric filters), and electrified filter beds (EFB). The performance data for wet electrostatic precipitators (WESP) and wet scrubbers installed for PM control also showed no effect on HAP and THC emissions. These wet systems may achieve short-term reductions in THC or gaseous HAP emissions, however, the HAP and THC control efficiency data, which range from slightly positive to negative values, indicate that the ability of these wet systems to absorb water-soluble compounds (such as formaldehyde) diminishes as the recirculating scrubbing liquid becomes saturated with these compounds.

The performance data for the incineration-based controls and biofilters showed methanol and formaldehyde emissions reductions equal to or greater than 90 percent, except in those cases where the pollutant loadings of the emission stream entering the control systems were very low. The performance data for THC showed that incineration-based control systems could achieve THC emissions reductions equal to or greater than 90 percent. The THC emissions reductions achieved with biofilters varied somewhat, with an average THC reduction of about 80 percent. Although biofilters are less effective in reducing some of the less water-soluble VOC compounds, such as pinenes, that make up a portion of the THC measurements, they can achieve HAP emissions reductions equal to or greater than 90 percent. These emissions reductions are reported only for biofilters treating emissions from presses at PCWP facilities. No PCWP process units other than presses are currently using biofilters to reduce air pollution. Both incineration-based controls and biofilters can achieve identical formaldehyde and methanol emissions reductions.

2. Ranking of Process Units

We ranked the process units within each process unit group according to the HAP control devices that were applied. Information on the number of process units nationwide and the types of add-on control devices applied to process units was based primarily on responses to a survey of the industry.

When we ranked the process units, we treated process units equipped with any type of incineration-based control system or biofilters as being equivalent with respect to their potential to reduce HAP emissions. We ranked the process units by control device rather than actual unit-specific emissions reductions because we have limited inlet/outlet data on which to calculate control efficiency. Based on available information (*e.g.*, RTO operating temperatures), we are not aware of any significant design or operational differences among each type of control system evaluated that would affect the ranking of process units. Furthermore, we are not aware of factors other than the type of control system used that would significantly affect the ranking of process units.

3. Identifying Control Technologies To Establish the MACT Floor

We established MACT floor control levels by applying the floor procedures to similar process units. We believe that this approach results in the closest approximation of the true sourcewide MACT floor.

With a few exceptions, there were at least 30 process units in each process unit group. As discussed in section I.C, when there are at least 30 sources in the source category, the MACT floor for existing sources is equivalent to the average emission limitation achieved by the best-performing 12 percent of existing sources in that group. Our interpretation of the ''average emission limitation'' is that it is a measure of central tendency, such as the median. If the median is used when there are at least 30 process units in a process unit group, then the emission level achievable by the process unit and its control system that is at the bottom of the top 6 percent of the best-performing process units (*i.e.*, the 94th percentile) represents the MACT floor control level for that component of the sourcewide floor. For example, there are approximately 303 softwood veneer dryers nationwide, and HAP emissions from approximately 64 of these dryers (21 percent nationwide) are controlled using incineration-based control systems. The HAP emissions from the remainder of the softwood veneer dryers are uncontrolled. In this example, the 94th percentile is represented by the control system applied to the softwood plywood dryer ranked at number 18 (18/303 = 6 percent). However, incineration-based controls are also used by softwood veneer dryers ranked below the 94th percentile. Assuming that there are no significant design or operational differences between the different types of incineration-based control systems that would affect their performance, we would consider the incineration-based control technologies as being equivalent for control of HAP emissions. Thus, all of the softwood veneer dryers equipped with incineration-based control systems would be representative of the MACT floor level of control for softwood veneer dryers.

For those process unit groups where there were fewer than 30 but at least five process units, such as hardboard ovens, the emission level achievable by the process unit and its control system that is the median of the best-performing five sources represents the MACT floor level of control. For example, the MACT floor level of control for fiberboard mat dryers is no emissions reductions because there are ten fiberboard mat dryers nationwide, and emissions from only two of the ten fiberboard mat dryers are controlled (both via incineration). Therefore, the top five fiberboard mat dryers include the two that are controlled, plus three that are uncontrolled. In this example, the median source (the fiberboard mat dryer ranked ''number 3'') is uncontrolled.

When a process unit group had fewer than five process units, we determined the appropriate control technology based on the control technology used by the majority of the process units in the process unit group.

For those process units not required to meet the control requirements in today's proposed rule, we determined that: (1) The MACT floor level of control is no emissions reductions, and beyond the floor control options are too costly to be feasible; or (2) insufficient information is available to conclude that the MACT floor level of control is represented by any emissions reductions (miscellaneous coating operations and wastewater operations). We are requesting comment on whether no emissions reductions for miscellaneous coating operations and for wastewater operations is appropriate. Commenters should submit any information they have on HAP or VOC emissions from miscellaneous coatings and wastewater operations.

4. Determining the Performance Level of MACT Floor Technologies

Using the procedures described above, we determined that the proposed MACT floor level of control for process units was either no emissions reductions or equivalent to the emissions reductions achieved by incineration-based control systems or biofilters. Although some process units are equipped with add-on controls that perform at a level somewhere between zero emissions reductions and the performance level achievable with incineration-based controls and biofilters, none of these control systems were identified as MACT floor control technologies because they either do not reduce organic HAP emissions (bag houses) or do so on an inconsistent and unreliable basis (wet electrostatic precipitators). Therefore, we focused our analysis on incineration-based controls and biofilters.

For the purpose of establishing the performance level of the MACT floor control systems, we decided to group all of the available data on incineration-based controls and biofilters together. We grouped all the data together because the available data for incineration-based controls is incomplete. Without complete data, we could not identify which were the best performing incinerators; therefore, we could not identify the top performing 12 percent. By considering all of the performance data together, we maximized the amount of available data on which we could base the MACT floor level of performance.

The reasons the available data are incomplete are: Multiple emission points are treated, inlet/outlet data are limited, data among pollutants vary, and pollutant loadings are variable. These are discussed below.

Multiple emission points treated. Some of the control systems treat HAP emissions from multiple types of process units, such as tube dryers, reconstituted panel presses, and board coolers. In those cases, separate determinations of the performance of the control system on emissions from each type of process unit were not possible.

Limited inlet/outlet data. Limited or no inlet/outlet data were available for the control systems applied to the process units in each group.

Variability in data among pollutants. In some cases, it was not possible to directly compare the performance of different control systems because data were not available for the same pollutant. For example, for one RTO, we might only have THC emissions data, and for another RTO, we might only have formaldehyde data.

Variability in pollutant loadings. Our ability to compare the performance of the different types of incineration-based control systems with each other and with biofilters was also hampered by the fact that the uncontrolled emissions being treated by the different control systems varied with respect to pollutant loading (inlet concentration) and pollutant type. For example, the available THC concentration data for the inlet of the control systems ranged from as low as 45 ppmvd to as high as 5,100 ppmvd. With the exception of some control systems with lower pollutant inlet concentrations, the available data for incineration-based controls and biofilters show that these control systems can achieve THC, methanol or formaldehyde emissions reductions greater than or equal to 90 percent.

We considered basing the control system performance level on just one pollutant, such as THC as a surrogate for HAP. Many of the existing PCWP facilities with MACT control systems are already required to meet a specified VOC control efficiency, and these facilities generally measure THC emissions as a surrogate for VOC emissions. Source VOC mass emissions (as required in new source review or prevention of significant deterioration reviews and emission limits for VOC by definition) must be expressed on a mass basis. This requires an adjustment for other compounds, such as formaldehyde, to the measured THC emissions. However, THC emissions data sometimes include methane which is neither a HAP nor a VOC. The THC emissions data also frequently include other non-HAP compounds, such as terpenes, which are associated with processing of softwoods. We also considered basing the control system performance level on HAP, measured as total HAP, or methanol as a surrogate for HAP, or formaldehyde as a surrogate for HAP. Methanol and formaldehyde are the predominant HAP emitted from PCWP process units, and they can be measured directly. However, not all process units emit formaldehyde at detectable levels, and not all process units emit methanol at detectable levels, so basing the performance level only on methanol or only on formaldehyde was not possible. For process units where both the methanol and formaldehyde emissions are low, THC emissions may be the only viable option for defining the control system performance. We rejected basing the control system performance level on total HAP emissions because it seemed overly burdensome to require testing of multiple pollutants at the outlet of a control device when testing of one dominant pollutant would be sufficient for determining control device performance. Furthermore, the total HAP control efficiency could be negatively affected by those measurements for HAP not detected at either the inlet or outlet of the control device (*e.g.*, the method detection limit used in the calculation of total HAP control efficiency may be slightly higher at the inlet than the outlet resulting in decreased total HAP control efficiency).

Another consideration in determining the performance level that represents the MACT floor level of control is the format of this performance level (*e.g.*, percent reduction, outlet concentration level). In general, applying an incineration-based MACT control system to a process unit that emits high concentrations of HAP and THC will result in a greater percentage of emissions reductions than if that same incineration-based MACT control system was applied to a process unit that emits lower concentrations of HAP and THC. Therefore, a performance level solely in the form of a percent reduction in emissions could not adequately characterize the performance level of the MACT floor control technology. In similar MACT rulemakings where incineration-based control technologies represent the MACT floor, we have defined the performance level of the incineration-based control technologies as either a percent reduction or an outlet concentration, whichever is less stringent, with both forms being considered equivalent to the other. We have recognized in these previous MACT rulemakings that there are practical limits to the ability of incineration-based control systems to treat more dilute emission streams. We consider the practical limit of control of THC via incineration to be approximately 20 ppmvd in the outlet of the control device.

To account for the variability in the type and amount of HAP in the uncontrolled emissions from the various process units and the effect of this variability on control system performance, we decided to base the MACT floor performance level on all three of the pollutants we analyzed and include maximum concentration levels in the outlet of the control systems as an alternative to emissions reductions. The MACT floor performance level is a 90 percent reduction in THC or methanol or formaldehyde emissions. The maximum concentration level in the outlet of the MACT floor control system is 20 ppmvd for THC, or 1 ppmvd for methanol, or 1 ppmvd for formaldehyde. We chose 20 ppmvd as the alternative maximum concentration for THC because 20 ppmvd represents the practical limit of control for THC. We chose 1 ppmvd as the maximum outlet concentration for both methanol and formaldehyde because this concentration is achievable by MACT control systems and the method detection limits for these compounds using the NCASI impinger/canister method (NCASI Method IM/CAN/WP–99.01, proposed to be incorporated by reference in today's proposed rule) are less than 1 ppmvd. Based on the available data for MACT control systems, these six emission levels for add-on control systems are considered equivalent options for defining the performance level of a MACT control system.

D. How Did We Determine the MACT Floor for New Sources?

For new sources, the CAA requires the MACT floor to be based on the degree of emissions reductions achieved in practice by the best-controlled similar source. We believe for most process unit groups that the existing source MACT floor control level also represents the level of control appropriate for new sources because the same types of emission control systems, such as thermal oxidizers and biofilters, are used. In these cases, the existing source MACT floor technology represents the greatest degree of emissions reductions that is achievable under all circumstances within each particular operation regulated by the proposed rule. For a few process units, the MACT floor level of control for new units is more stringent than for existing units. In those cases, we determined the MACT floor control level for existing process units was no emissions reductions, and that the MACT control level for new sources was represented by incineration-based controls or biofilters.

E. What Control Options Beyond the MACT Floor Did We Consider?

The control devices that represent the MACT floor control level achieve the greatest HAP emissions reductions of any available control technologies. There are no controls that achieve greater emissions reductions than the MACT floor control level for process unit groups with MACT floor control levels represented by incineration-based controls or biofilters; therefore, we only looked at beyond the floor options for process unit groups at existing sources where the MACT floor level of control was no emissions reductions. Process units that were inherently lower-emitting, such as sanding and sawing operations, were excluded from the beyond-the-floor analyses because emissions from these process units would not be cost effective to control. Based on a review of the HAP emissions data for process units where the MACT floor level of control was determined to be no emissions reductions, we selected blenders and stand-alone digesters for a beyond-the-floor analysis because these process units emit higher levels of HAP emissions relative to other process units. We also conducted beyond-the-floor analyses for three process unit groups with no emissions reductions at the MACT floor control level for existing sources but requiring control for new sources. These process units included fiberboard mat dryers, press predryers, and board coolers. We determined that the environmental benefits of requiring controls for these process units did not justify the cost. Moreover, many of the existing control devices at well-controlled facilities would not have the additional capacity to treat the emissions from these process units, and thus, these facilities would have to install new controls. Therefore, we decided that the control level for blenders, stand-alone digesters, fiberboard mat dryers, press predryers, and board coolers should be no emissions reductions at existing sources.

F. How Did We Select the Format of the Proposed Rule?

We decided to offer several formats for complying with today's proposed rule. The purpose of multiple formats is to provide you the flexibility to comply in the most cost-effective and efficient manner. We considered the following factors in selecting the format of the proposed rule:

- The format should allow for multiple compliance techniques for the various types of facilities in the industry.
- The format should simplify compliance and ensure that the cost of compliance is not excessive.
- The format must be enforceable.

The format of this proposed rule is based on a combination of production-based compliance options, percent emissions reduction compliance options, pollutant concentration compliance options, and work practice requirements. We are also including emissions averaging as an option for complying with the proposed rule. The following subsections describe the selection of the formats for each compliance option and work practice requirement included in the proposed rule.

1. Production-Based Compliance Options

The production-based total HAP compliance options apply to process unit emissions prior to entering an add-on control system. This option allows for future pollution prevention techniques and cost-effective control of inherently lower-emitting process units. The production-based compliance options were determined by applying a 90 percent reduction to the highest total HAP test for each type of process unit with a controlled MACT floor. A 90 percent reduction was selected because it is equivalent to the emissions reductions achievable through the use of MACT. The 90 percent reduction was applied to the highest tests rather than the average emission factors because the production-based options calculated using the highest tests more closely correlate with actual emissions from process units with MACT control systems. If the average emission factors were used in the calculation of the production-based compliance options, some of the process units with MACT control systems would not be capable of meeting those options. Use of statistical methods for predicting the highest test value likely to be observed for each process unit was also considered. However, the available total HAP test data sets are too small to justify use of such statistical methods, and the resulting compliance options, in many cases, seemed unreasonably high compared to the actual emissions from process units with MACT control systems. Therefore, statistical methods were not used. We based the production-based compliance options on total HAP emissions, as defined in today's proposed rule, because of the variability in uncontrolled HAP emissions within and among the different types of process units. Total HAP emissions varied less than the emissions of individual HAP and the emissions of THC.

2. Add-On Control System Compliance Options

The six compliance options for add-on control systems in today's proposed rule are based on the performance of incineration-based control systems and biofilters. We included two formats in these compliance options: Emissions reductions (percent) and maximum outlet pollutant concentrations. Many of the well-controlled facilities are already subject to permit limits that are in the form of a percent reduction in emissions. Therefore, we expect that some of those facilities may choose to comply with an emissions reduction option. We are also including outlet concentration options so that sources that have lower inlet pollutant concentrations (and thus, have lesser ability to achieve higher emissions reductions) can demonstrate compliance. We consider the emissions reduction options and the outlet concentration options to be equivalent limits. We are not requiring an oxygen correction to the outlet concentration options because most of our outlet concentration data were measured at ambient oxygen levels due to the relatively dilute emission streams being treated. Dilution to achieve compliance with the proposed PCWP rule is prohibited by 40 CFR 63.4.

We are restricting the use of the formaldehyde and methanol concentration-based options to only those sources with formaldehyde or methanol emissions entering the control device that are greater than 10 ppmvd. We have included this restriction to prevent circumvention of the proposed standards. For example, if a process unit emits primarily formaldehyde and only a very small amount of methanol (slightly less than 1 ppmvd), without the 10 ppmvd restriction, you could demonstrate compliance with the 1 ppmvd methanol concentration option without using a control system or using a control system that does not reduce HAP, such as a baghouse. The 10 ppmvd restriction does not apply to the percent reduction compliance options.

3. Emissions Averaging Compliance Option

Today's proposed rule includes an emissions averaging compliance option because we believe that emissions averaging represents an equivalent, more flexible, and less costly alternative to controlling certain emission points to MACT floor levels. Prior to an industry-sponsored emissions test program carried out by NCASI, the majority of the available emissions test data for the PCWP industry was limited to THC and formaldehyde emissions data for dryers and presses. The industry-sponsored test program provided speciated HAP emissions data for a variety of process units at 29 different PCWP plants. For some of these previously untested process units, the NCASI data represent the only available HAP emissions data for those sources. A few of these process units, such as blenders, may emit quantities of HAP equal to or greater than the quantities emitted from some types of dryers and presses. In addition to emitting more HAP, these other types of process units often have a lower volume of exhaust gas to be treated compared to dryers and presses. The combination of higher pollutant concentrations and lower exhaust gas flow rates may make these other process units more cost effective to control. However, very few PCWP facilities have installed emission control devices on process units other than dryers and presses. Therefore, when determining the MACT floors for existing process units, the process units most likely to have controlled MACT floors have been dryers and presses, with some exceptions. Most other types of process units are largely uncontrolled throughout the industry and based on our MACT analysis, we did not include existing source control requirements for these process units in today's proposed rule. Therefore, emissions from these other types of process units at existing sources would not be controlled under the point-by-point compliance options in today's proposed rule. By allowing emissions averaging across the affected source, which is broadly defined in today's proposed rule, sources can achieve the same environmental gains as point-by-point compliance, but at reduced cost.

The emissions averaging provisions in today's proposed rule are based in part on the emissions averaging provisions in the Hazardous Organic NESHAP (HON). The legal basis and rationale for the HON emissions averaging provisions were provided in the preamble to the final HON (59 FR 19425, April 22, 1994). The rationale for including certain limitations and requirements as part of today's emissions averaging provisions follows the HON and is summarized below.

Emission points allowed in emissions averaging. Only those emission points (process units) that are part of the affected source (PCWP manufacturing facility), as defined in today's proposed rule, can be included in an emissions average. Therefore, a PCWP facility collocated with a pulp and paper mill, for example, cannot include emission points in the pulp and paper mill as part of the emissions average.

Today's proposed rule also excludes new affected sources from the proposed emissions averaging provisions. Today's proposed rule defines affected sources broadly, such that a new source is essentially a whole new ''green field'' mill. Therefore, not allowing emissions averaging at new sources does not affect existing sources' ability to use emissions averaging. New sources have historically been held to a stricter standard than existing sources because it is most cost effective to integrate state-of-the-art controls into equipment design and to install the technology during construction of new sources. One reason we allow emissions averaging is to give existing sources flexibility to achieve compliance at diverse points with varying degrees of control already in place in the most cost-effective and technically reasonable fashion. This concern does not apply to new sources which can be designed and constructed with compliance in mind.

Today's proposed rule also excludes from emissions averaging any process units equipped with emission control systems that were installed to comply with a State or Federal rule or statute (other than today's proposed rule). We are including this restriction because credits for controls applied to comply with another rule increase your ability to generate credits, but do not generate any new emissions reductions, thus creating more emissions. However, if a process unit in your approved EAP used to generate emission credits later becomes subject to a State or Federal rule other than the proposed PCWP rule, the process unit can continue to generate credits in the approved plan. Work practice requirements are excluded from emissions averaging because, by definition, the level of emissions reduction achieved by compliance with those requirements is not sufficiently quantifiable.

Limits on credit for control efficiencies. The proposed emissions averaging provisions limit the value of the control system efficiency (CD_i) to 90 percent in the equation for calculating the AMR of total HAP from all process units generating credits. No credit above 90 percent is allowed.

Differences from the HON emissions averaging approach. Some aspects of the HON emissions averaging approach have not been included in the proposed PCWP rule. Specifically, today's proposed rule does not limit the number of emission points allowed in an emissions average, does not require a hazard or risk analysis, and does not include a discount factor. The HON limited the number of emission points that could be used in an emissions average because of significant enforcement concerns. The HON sources have many emission points, are complex and diverse, and as a result are subject to a more complex set of emissions averaging provisions. The PCWP facilities have fewer emission points within each facility. Therefore, the enforcement concerns arising due to the large number of emission points in each HON facility are minimized for PCWP facilities. As a result, we believe a simpler set of emissions averaging provisions is appropriate for PCWP facilities, and the limitation on the number of points available for averaging was not included in the proposed rule.

The HON requires a hazard and risk study for emission points included in an emissions average largely because of the many pollutants and many emission points at the source. The PCWP facilities have fewer pollutants of concern and are likely to have similar HAP emissions from the emission points that would be used to generate debits and credits. Thus, we believe that averages will achieve a comparable hazard/risk benefit as point-by-point compliance. Although States would still have the discretion to require a PCWP facility that requested approval of an emissions average to conduct a hazard and risk study (or preclude the facility from using emissions averaging altogether), the proposed rule does not require a hazard or risk study.

The HON requires a discount factor of 10 percent in credit calculations to share with the environment some portion of the cost savings due to emissions averaging and to account for uncertainty in emissions estimation. Due to differences between PCWP and HON sources (discussed below), we do not believe it is necessary for the proposed PCWP rule to include a discount factor.

The HON proposal preamble (57 FR 62652, December 31, 1992) and the HON final preamble discuss how cost savings due to emissions averaging should be shared between industry and the environment. For the HON, we decided that it was appropriate that industry share any cost savings realized from emissions averaging and included a discount factor because the costs of controlling different emission points could vary significantly. The HON proposal preamble also discussed the level of uncertainty in estimating emissions reductions that may result from facilities using emissions averaging. For the HON, the uncertainty arose from differing accuracies available for estimating emissions from the number of emission points at a HON facility, the number of HAP emitted from HON facilities, and the different types of emission points.

The PCWP industry differs in almost every relevant factor from the HON. First, HON facilities can cover several square miles and some emission points, such as storage vessels, could be some distance from other emission points making them relatively costly to control. Second, as discussed previously, the number of points that might be included in an emissions average at a PWCP facility is fewer than could be included in a HON average and, therefore, less of a concern. Third, the magnitude of emissions from HON emission points is typically much greater than the emissions from PCWP emission points. Fourth, there are six HAP of primary concern emitted from PCWP facilities compared to over 140 HAP emitted from HON facilities. Fifth, the kinds of emission points found at PCWP facilities are much more similar than those regulated by the HON and, therefore, unlikely to introduce additional uncertainty.

We believe the inclusion of emissions averaging into rules and the decision on how to design an emission averaging approach for a particular source category must be evaluated for each source category. Although the HON and the proposed PCWP rule share the same legal basis for including emission averaging as a compliance option and the same basic system of credits and debits, some of the restrictions reasonable for the HON emissions averaging provisions are unnecessary for the proposed PCWP rule.

4. Work Practice Requirements

Section 112(h) of the CAA states that ''* * * if it is not feasible in the judgement of the Administrator to prescribe or enforce an emission standard for control of a hazardous air pollutant or pollutants, the Administrator may, in lieu thereof, promulgate a design, equipment, work practice, or operational standard, or combination thereof * * *'' Section 112(h)(2) further defines the phrase ''not feasible to prescribe or enforce an emission standard'' as any situation in which ''* * * a hazardous air pollutant or pollutants cannot be emitted through a conveyance designed and constructed to emit or capture such pollutant, * * * or the application of measurement methodology to a particular class of sources is not practicable * * *''

Today's proposed rule includes work practice requirements for softwood veneer dryers, dry rotary dryers, hardwood veneer dryers, and veneer redryers. The proposed work practice requirements for softwood veneer dryers include a requirement to minimize fugitive emissions from the veneer dryer doors and the green end of the dryer. It is not practical for sources to measure the fugitive emissions from the softwood veneer dryers; therefore, in lieu of establishing an emission limit for fugitive emissions, we are proposing that sources develop a plan for minimizing these emissions and keep records to document they are following their plan.

For dry rotary dryers, hardwood veneer dryers, and veneer redryers, the proposed work practice requirements would establish limits on how these process units are operated and the types of materials processed in these units. The MACT floors for dry rotary dryers, hardwood veneer dryers and veneer redryers are all equivalent to no emissions reductions because none of these process units have add-on control devices. The emissions from these three types of process units are relatively low compared to the emissions from other PCWP process units subject to today's proposed rule. However, if these three types of process units were operated in a manner that was inconsistent with how they are defined in today's proposed rule, the emissions from these process units could increase.

For example, a green rotary dryer, which has proposed compliance options in today's proposed rule, is essentially the same in terms of equipment as a dry rotary dryer. However, a dry rotary dryer emits much less HAP than a green rotary dryer because it dries wood particles that have been previously dried to some extent; thus, much of the HAP present in the wood has already been released. The dry rotary dryers also operate at lower temperatures, which further reduces the amount of HAP emitted. Therefore, the operation of the rotary dryer, and not the equipment design, determines whether it is classified as a green or dry rotary dryer. Because the dry rotary dryers, veneer redryers and hardwood veneer dryers are defined and classified based on how they are operated, and we made MACT floor determinations based on those classifications, we believe that proposing work practice requirements (such as continuously monitoring dryer temperature and wood moisture content) that ensure that these process units continuously operate as defined in today's proposed rule is more appropriate than proposing compliance options for these process units.

G. How Did We Select the Test Methods for Determining Compliance With the Proposed Rule?

Today's proposed rule would require you to conduct performance tests to demonstrate compliance with the production-based compliance options, compliance options for add-on control devices, and the emissions averaging alternative. Depending upon which compliance option you use, you would be required to measure emissions of methanol, formaldehyde, THC, or total HAP. When determining compliance with compliance options for presses and board coolers, you also would be required to determine the capture efficiency of the enclosures for those presses and board coolers that have enclosures that do not qualify as PTE. For presses and board coolers that have partial enclosures or no enclosures, you must determine the capture efficiency of the emissions capture device by installing a TTE as described in EPA Method 204 or using the tracer gas method as described in Appendix A to today's proposed rule. The test methods you would have to use to measure these pollutants and capture efficiency are discussed below.

We are proposing the use of EPA Method 25A (Determination of Total Gaseous Organic Matter Concentration Using a Flame Ionization Analyzer) for measuring THC emissions because most of the PCWP facilities that are already required to measure THC emissions use this method. Also, most of the available emissions data that we used to establish THC control efficiencies for the various control systems were measured using Method 25A and reported on an ''as carbon'' basis. Method 25A is better suited than EPA Method 25 (Measurement of Total Gaseous Nonmethane Organic Emissions as Carbon (TGNMO)) for measuring emission streams from PCWP process units which typically have lower THC concentrations (*e.g.*, less than 50 ppm) and relatively high moisture contents. However, unlike Method 25, Method 25A does measure methane as a THC. Because many of the well-controlled PCWP facilities are required by permit to reduce VOC emissions, these facilities generally are allowed to subtract methane emissions from the THC measurement when reporting VOC emissions because methane is not a VOC, according to EPA's definition of VOC. Therefore, we also would allow you to subtract methane emissions from measured THC values using EPA Method 18 (Measurement of Gaseous Organic Compound Emissions by Gas Chromotography). Method 18 is a self-validating method.

We are proposing the use of the NCASI Method (NCASI Method CI/WP–98.01, Chilled Impinger Method for Use at Wood Products Mills to Measure Formaldehyde, Methanol, and Phenol, 1998) for measuring methanol or formaldehyde. We are also proposing the NCASI Chilled Impinger Canister Method (NCASI Method IM/CAN/WP–99.01) for measuring total HAP emissions. Total HAP emissions are defined, for purposes of today's proposed rule, as the sum of the emissions of acetaldehyde, acrolein, formaldehyde, methanol, phenol, and propionaldehyde. The NCASI Chilled Impinger Method (NCASI Method CI/WP–98.01), which we are proposing to incorporate by reference, has been validated (using EPA Method 301 criteria) for measuring formaldehyde, methanol, and phenol from dryers and press vents at PCWP facilities. The NCASI Method IM/CAN/WP–99.01, which we are proposing to incorporate by reference (pending EPA review of the method), is a self-validating method that can be used to measure numerous HAP compounds.

As an alternative to the NCASI methods, we are proposing use of other applicable EPA test methods in order to increase the flexibility of the proposed rule. You could use EPA Method 320 (Measurement of Vapor Phase Organic and Inorganic Emission by Extractive FTIR) to measure emissions of methanol, formaldehyde and total HAP. Method 320 is a self-validating method that uses Fourier transform infrared (FTIR) spectroscopy. You could also use EPA Method 308 (Procedure for Determination of Methanol Emission from Stationary Sources) for measuring emissions of methanol. Method 308 predates the NCASI Chilled Impinger Method and the NCASI Impinger Canister Method and has been used to test PCWP emission sources in the past. You could use EPA Method 0011 (Sampling for Selected Aldehyde and Ketone Emissions from Stationary Sources) or EPA Method 316 (Sampling and Analysis for Formaldehyde Emissions from Stationary Sources in the Mineral Wool and Wool Fiberglass Industries) to measure formaldehyde emissions. Although EPA Method 0011 has not been validated for use in the PCWP industry, it predates the NCASI methods and EPA Method 320 and is frequently used to measure formaldehyde emissions from PCWP process units. A comparison of formaldehyde measurements made using the NCASI methods and EPA Method 0011 showed no significant differences (see Docket number A–98–44); therefore, we would allow you to use EPA Method 0011 as an alternative to the NCASI Methods for measuring formaldehyde. Although EPA Method 316 has not been validated for testing of PCWP process units, it is a relatively new method for measuring formaldehyde concentrations as low as 11 parts per billion. Therefore, it is included as an alternative to the other test methods for formaldehyde in today's proposed rule.

We are proposing the use of EPA Method 204 (Criteria for and Verification of Permanent or Temporary Total Enclosure) and Methods 204A through 204F for determining the capture efficiency of enclosures. Methods 204A through 204F include the following: Method 204A—Volatile Organic Compounds Content In Liquids Input Stream; Method 204B—Volatile Organic Compounds Emissions In Captured Stream; Method 204C—Volatile Organic Compounds Emissions In Captured Stream (Dilution Technique); Method 204D—Volatile Organic Compounds Emissions In Uncaptured Stream From Temporary Total Enclosure; Method 204E—Volatile Organic Compounds Emissions In Uncaptured Stream From Building Enclosure; and Method 204F—Volatile Organic Compounds Content In Liquid Input Stream (Distillation Approach). If the enclosure meets the definition and criteria in EPA Method 204 for a PTE, then you may assume that its capture efficiency is 100 percent. If the enclosure is not a PTE, then you would have to build a total temporary enclosure (TTE) around the process unit that meets the definition of a TTE in EPA Method 204, and you would be required to determine the capture efficiency of the TTE using Methods 204A through 204F (as appropriate). You would then have to measure emissions from both the control device (if applicable) and the TTE and use the combined emissions to determine compliance. If the process unit is uncontrolled, you would have to use the capture efficiency of the TTE in determining the uncontrolled emissions from the process unit.

Industry representatives have expressed concern with using EPA Methods 204 and 204A through F for determining capture efficiency of press enclosures. The industry representatives have indicated that some facilities may have difficulty retrofitting a PTE or TTE that meets the EPA Method 204 criteria. Partial enclosures may be able to achieve high capture. We recognize the need for flexibility in determining capture efficiency for PCWP press enclosures and, therefore, as an alternative to Methods 204 and 204A through F, we are working with PCWP industry representatives to develop and propose a tracer gas procedure that may be used to determine the capture efficiency of PCWP press partial enclosures. This alternative tracer gas procedure is provided as Appendix A to today's proposed rule. This procedure would be applicable for determination of capture efficiency for press enclosures that are not considered to be PTE as defined in EPA Method 204, and the procedure is proposed as an alternative to the construction of TTE. Sulfur hexafluoride (SF6) is used as a tracer gas. This gas is not indigenous to the ambient atmosphere and is nonreactive. The alternative tracer gas procedure provided as Appendix A to today's proposed rule is a ''work in progress.'' Industry representatives are testing the tracer gas procedure and are expected to provide data and feedback that may be used in revising the procedure if necessary. Discussions with industry representatives regarding development of the proposed alternative tracer gas procedure are documented in Docket A–98–44. We welcome your comments on the proposed alternative tracer gas procedure. We also welcome your comments on additional approaches for determining capture efficiency, such as the use of computational fluid dynamics (CFD) models or other methods that would meet the data quality objective (DQO) or lower confidence limit (LCL) statistical criteria outlined in Appendix A to subpart KK of 40 CFR part 63 (National Emission Standards for the Printing and Publishing Industry). Today's proposed rule would allow facilities to petition the Administrator for use of alternative test methods.

H. How Did We Select the Monitoring and Recordkeeping Requirements?

We are proposing monitoring and recordkeeping requirements based on a combination of general monitoring and recordkeeping requirements in the NESHAP General Provisions (40 CFR part 63, subpart A) and specific monitoring methods already in use at PCWP plants. The proposed monitoring requirements we selected pertain to the operating requirements for control devices and the work practice requirements for various dryers.

The proposed recordkeeping requirements include submitting 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)(2)(xiv). You would also have to keep the records specified in § 63.6(e)(3) related to startup, shutdown, and malfunction (SSM), records of performance tests, as required in § 63.7(g)(1), and records for each continuous monitoring system (CMS), including CPMS or CEMS. The records for the CMS would include records of the applicable operating requirements and monitoring data required in today's proposed rule. You also would have to keep records to demonstrate compliance with any work practice requirements that apply to you.

How we selected the specific proposed monitoring and recordkeeping requirements is discussed in the following subsections.

1. Control Device Parameter Monitoring and Recordkeeping Requirements

According to today's proposed rule, you would have the option of either monitoring control device operating parameters or operating a THC CEMS at the control device outlet to demonstrate continuous compliance with the operating requirements. The operating parameters for thermal oxidizers, catalytic oxidizers, and biofilters were selected based on information from the questionnaire responses and information from other source categories regarding the parameters that are currently used as reliable indicators of control device performance.

For thermal oxidizers, we would require monitoring for 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 of pollutants. We also would require you to monitor the static pressure at the inlet of the thermal oxidizer as an indicator of capture efficiency and the process unit exhaust flow rate entering the thermal oxidizer. You may monitor gas flow rate at the thermal oxidizer stack as an alternative to monitoring static pressure. Monitoring of gas flow or static pressure can alert the operator to problems such as plugging of the thermal oxidizer. Parameter monitoring would not be required for combustion units with greater than or equal to 44 MW heat input capacity that accept process exhausts into the flame zone.

For catalytic oxidizers, we would require monitoring of the temperature at the inlet of the catalyst bed. The rate at which pollutants in the exhaust stream are oxidized on the catalyst is greatly affected by temperature, as well as other parameters (such as residence time and turbulence) that are fixed by the design of the catalytic oxidizer. Monitoring of the inlet temperature to the catalytic oxidizer helps to ensure that the system is operating as designed with a temperature high enough to oxidize the pollutants. As for thermal oxidizers, we also would require you to monitor the static pressure at the inlet of the catalytic oxidizer or stack gas flow rate.

If you operate a thermal oxidizer or catalytic oxidizer, you would be required to calculate and record 3-hour block averages of the operating parameter values. We selected the 3-hour averaging time because the initial performance test provisions in today's proposed rule require you to perform a minimum of three 1-hour test runs, and the control device operating requirements would be based on the average values obtained using all test data obtained during the performance test. Each 3-hour average parameter value must remain within the level established during the performance test in order for you to demonstrate continuous compliance with the operating requirement.

The proposed operating parameters for biofilters are based on information about parameters currently monitored for biofilters operated in the PCWP industry and on information supplied by a biofilter vendor. For biofilters, you would be required to monitor the following parameters to demonstrate continuous compliance: (1) Temperature of the air stream entering the biofilter, (2) pressure drop across the media bed, and (3) pH of the effluent. Monitoring temperature and pH help determine the health of the microorganism population. Extremes in either temperature or pH can slow or halt microbial activity. Monitoring the pressure drop across the biofilter can alert the operator to problems such as plugging or drying of the bed media. Because factors that affect the performance of biofilters and biofilter monitoring methods can be site specific, you would be allowed to establish your biofilter operating parameter requirements and their corresponding monitoring methods, monitoring frequencies, and averaging times based on historical biofilter operating records. We allow the use of historical records in setting the biofilter parameter limits because establishing limits during a 3-hour performance test may not adequately identify acceptable operating ranges for biofilter parameters. Some facilities in the PCWP industry have been operating biofilters for years, and these facilities have learned through experience the most appropriate monitoring methods, monitoring frequencies, and optimal operating ranges for their biofilters. Because historical biofilter operating records may not be available for some biofilters (such as new biofilter installations), today's proposed rule would allow up to 180 days following the compliance date for the necessary operating data to be gathered for use in setting parameter requirements. To ensure compliance, all historical operating data used to establish the operating parameter limits must be accompanied by performance test data for the same time period that show that the biofilter was meeting the emission limits in today's proposed rule, and that the data were collected using the test methods in today's proposed rule. In addition, you would have to certify that no modifications have been made to the biofilter or associated process unit(s) subsequent to the date the historical data were collected. Because there are only a few biofilters operating in the PCWP industry and we have limited information on how changes in biofilter operating parameters affect biofilter performance, we welcome your comments on these proposed monitoring requirements for biofilters.

If you operate a control device other than a thermal oxidizer, catalytic oxidizer, or biofilter, you would be required to petition the Administrator for site-specific operating parameters to indicate proper operation and continued performance of the control device. You would establish the operating parameter values during the performance test and maintain the parameters within the range established during the performance test. The Administrator would determine whether maximum value, minimum value, or a range of operating parameters is appropriate. The Administrator would also determine the appropriate averaging time for each monitoring parameter for the control device.

If you comply with the production-based compliance options, then you would be required to continuously monitor a process operating parameter (temperature). You would monitor dryer inlet temperature for green rotary dryers, tube dryers, or strand dryers. You would monitor operating temperature for hardboard ovens, press predryers, reconstituted wood product presses, fiberboard mat dryer hot zones, and softwood veneer dryer hot zones. You would not be required to monitor process parameters for reconstituted wood product board coolers or pressurized refiners. We request comment on whether the temperature parameters are appropriate for monitoring to show compliance with the production-based compliance options. The production-based compliance options were developed for inherently low-emitting process units or process units using pollution prevention. We believe that process unit HAP emissions are somewhat dependent on dryer or press temperature; however, other factors such as resin HAP content and percent of furnish that enters the plant already dried may also affect HAP emissions. It is not clear what pollution prevention techniques will be used to comply with the production-based compliance options (partly because pollution prevention measures are expected to evolve in the future), therefore, we request your feedback on how facilities that will use pollution prevention could show continuous compliance with the production-based compliance options.

Instead of monitoring process or control system operating parameters for thermal oxidizers, catalytic oxidizers, biofilters, or other control systems, you could choose to monitor THC concentration with a CEMS at the control device outlet to show compliance with the operating requirements. If you use a THC CEMS, you would be required to maintain the average THC concentration at the control device outlet below the maximum THC concentration established during the performance test. The purpose of monitoring THC concentration is to show compliance with the operating requirements (as opposed to the compliance options); thus, you could use the THC CEMS instead of CPMS regardless of whether you demonstrate compliance with the THC, formaldehyde, methanol, or total HAP compliance options. For example, you could conduct a performance test to show that you reduce formaldehyde by 90 percent while simultaneously operating the THC CEMS to determine the maximum 3-hour block outlet THC concentration that would become your parameter value representing your operating requirement. Generally, the same parameters that affect control device formaldehyde, methanol, or total HAP reduction efficiency also impact the THC reduction efficiency; thus, we believe that allowing use of a THC CEMS instead of a operating CPMS to demonstrate continuous compliance with the operating requirements is appropriate. If you choose to do so, you may subtract methane from the THC concentration measured with your THC CEMS (*e.g.*, by using a CEMS that measures TGNMO).

Control device maintenance requirements vary significantly from facility to facility. Although we believe that most of the maintenance activities can be accomplished during scheduled facilitywide or partial shutdowns, we recognize that some facilities may need to perform more maintenance on their control systems than other facilities due to site-specific factors, such as the nature and quantity of particulate entering an RTO or the ability of an RTO to perform online bakeouts (a feature often incorporated into newer RTO designs).

The most widely used add-on control systems at PCWP facilities are RTO, RCO, and biofilters. As with any control device in any industry, these control devices require routine maintenance. Routine maintenance includes activities such as cleaning or replacement of corroded parts, media replacement, bakeouts (RTO and RCO), washouts (RTO and RCO), and cleaning of ducts. Some PCWP drying processes release particulates and salts that can plug and weaken RTO and RCO media beds. Frequent bakeouts and washouts are necessary to combat the particulate and salt buildup. Partial or total media replacement is done when bakeouts and washouts are no longer effective.

Plywood and composite wood products industry representatives have requested that today's proposed rule include a downtime allowance that would allow process units to operate while the control device is offline for routine maintenance. After considering the available data, we included in today's proposed rule a routine control device maintenance exemption. To obtain the exemption, you must explain to the Administrator why you cannot perform routine control device maintenance during process shutdowns and describe how you plan to minimize emissions to the greatest extent possible during the maintenance. The routine control device maintenance exemption may not exceed 3 percent of annual operating uptime for each green rotary dryer, tube dryer, strand dryer, or pressurized refiner controlled. The routine control device maintenance exemption is limited to 0.5 percent of annual operating uptime for each softwood veneer dryer, reconstituted wood product press, reconstituted wood product board cooler, hardboard oven, press predryer, or fiberboard mat dryer controlled. If your control device is used to control a combination of equipment with different downtime allowances (*e.g.*, a tube dryer and a press), then the highest (*i.e.*, 3 percent) downtime allowance applies. The maximum percentages of operating time allowed for the routine control device maintenance exemption are based on our independent analysis of data from an extensive control device downtime survey conducted by the PCWP industry.

We are requesting comment on the appropriateness of including a routine control device maintenance exemption in today's proposed rule and whether or not the downtime allowance allotted is appropriate as the maximum amount of time per year for such an exemption. Commenters should submit information and data that support their comments such as detailed maintenance records and descriptions of the add-on control systems, sources controlled by the control system, and any particulate removal devices that precede the control system.

2. Monitoring and Recordkeeping Requirements for Process Units Without Add-On Control Devices

If you comply with the production-based compliance options in today's proposed rule without using an add-on control system, then you would be required to monitor and record process unit operating parameters. For most process units, temperature would be the required process monitoring parameter. Although HAP emissions vary within and among process units and no one process parameter is responsible for these variations, we selected temperature as the proposed required process monitoring parameter for most process units. We chose operating temperature because it affects HAP emissions and can be controlled and monitored relatively easily.

As for the control device operating requirements, you could choose to monitor THC concentration using a CEMS at the process unit outlet instead of monitoring process unit temperature. If you use a THC CEMS, you would be required to maintain the average THC concentration at the process unit outlet below the maximum THC concentration established during the performance test.

If you elect to use emissions averaging, you would not be required to monitor process parameters for those uncontrolled process units that are used to generate debits. However, when you determine the total HAP emissions from these uncontrolled process units, you would have to perform the emissions measurements under representative operating conditions, and you would be required to keep records of the hours of operation for these uncontrolled process units.

3. Monitoring and Recordkeeping Requirements for Dry Rotary Dryer Work Practice Requirements

Rotary dryers that meet the definition of ''dry rotary dryers'' in today's proposed rule would not be subject to the proposed control requirements. Green rotary dryers and dry rotary dryers are essentially the same in terms of equipment design. The differences between the two types of dryers are operational. Green rotary dryers are used to dry green furnish, and dry rotary dryers are used to dry furnish that has been previously dried. Green rotary dryers are defined as dryers that dry wood particles that have a moisture content greater than 30 percent on a dry basis or operate at an inlet dryer temperature greater than 600° F. Conversely, dry rotary dryers dry wood particles that have a moisture content less than or equal to 30 percent on a dry basis and operate at an inlet dryer temperature less than or equal to 600° F. The 30 percent moisture and 600° F values were selected for the definitions of dry and green rotary dryers based on values reported in literature, in the questionnaire responses, and in the emissions test reports.

Because the differences in dry rotary dryers and green rotary dryers are operational, we are including monitoring requirements for dry rotary dryers in today's proposed rule that would ensure that these dryers operate as dry rotary dryers on a continuous basis. If you own or operate a dry rotary dryer, you would be required to continuously monitor, calculate, and record the 24-hour average dryer inlet temperature and the 24-hour average moisture content of the incoming wood particles. In addition to monitoring dryer inlet temperature and furnish moisture, you would be required to take representative grab samples of wood particles at the dryer inlet once each day of dryer operation and manually determine the moisture content of the sample on a dry basis. We have included the grab sampling requirement as a means of checking the accuracy of the correlation between the moisture content measured by the continuous moisture sensor and the dry basis moisture content manually determined using a grab sample. The continuous moisture sensors measure moisture level as the ratio of the weight of water to the volume of wood (in the sensing zone). Today's proposed rule defines moisture content, on a dry basis, as the ratio of the weight of water to the weight of dry wood, multiplied by 100.

The requirements for the continuous moisture sensor and the grab sample requirement are specified in § 63.2268(f). We plan to add performance specifications for the continuous moisture sensor to include such parameters as the amount of drift allowed. We request comment on drift and any other performance specifications that should be added to ensure moisture content is being measured accurately, to ensure flexibility in the type of continuous moisture sensor that can be used by a facility, and to ensure compliance and enforceability. We also plan to add specifications to the grab sample requirements, such as including the period of time a sample must maintain a constant weight. We request comment on what this period of time should be and any other specifications that should be added to ensure accurate and precise results.

However, if you choose or are required by some other regulatory action to install a control device designed to reduce VOC or HAP emissions from a dry rotary dryer, you would be exempted from the process monitoring requirements for dry rotary dryers in today's proposed rule.

4. Monitoring and Recordkeeping Requirements for Veneer Redryer Work Practice Requirements

Veneer dryers that meet the definition of ''veneer redryers'' in today's proposed rule would not be subject to the proposed control requirements. Like the differences between green and dry rotary particle dryers, the differences between veneer dryers and veneer redryers are operational. Veneer dryers are used to dry green veneer, and veneer redryers are used to redry veneer that has been previously dried but requires some additional moisture reduction. Thus, in today's proposed rule, veneer redryers are defined as veneer dryers with an inlet veneer moisture content of less than 25 percent (by weight, dry basis). The 25 percent value was selected as the criterion for distinguishing between veneer dryers and veneer redryers because 25 percent was the highest reported veneer dryer outlet moisture content in responses to a survey. If you own or operate a veneer redryer, you would be required to continuously monitor, calculate, and record the 24-hour average inlet veneer moisture content to show that you continuously meet the definition of a veneer redryer.

For purposes of today's proposed rule, process units heated by microwaves or radio frequency that are used to remove moisture from veneer are not considered to be veneer dryers or veneer redryers, although these process units are typically used to redry veneer. Emissions test data from the NCASI sampling program indicate that emissions from radio frequency veneer redryers are minimal compared to the emissions from veneer dryers heated by conventional means (such as direct firing or steam heating). Thus, the monitoring requirements for veneer redryers described above would not apply to process units that dry or redry veneer using microwaves or radio frequency.

5. Monitoring and Recordkeeping Requirements for Hardwood Veneer Dryer Work Practice Requirements

Veneer dryers that meet the definition of ''hardwood veneer dryer'' in today's proposed rule would not be subject to the proposed control requirements. Hardwood veneer dryers are defined in the proposed rule as veneer dryers that process less than 30 percent softwood species on an annual volume basis. If you own or operate a hardwood veneer dryer, you would be required to keep a record (such as a purchase or production record) of the annual volume percentage of softwood species processed in the dryer to show that your dryer continuously meets the definition of a hardwood veneer dryer.

6. Monitoring and Recordkeeping Requirements for Softwood Veneer Dryer Work Practice Requirements

The proposed work practice requirement for softwood veneer dryers is to minimize fugitive emissions from the dryer doors and green end. If you own or operate a softwood veneer dryer, you would be required to develop a plan for minimizing fugitive emissions from the dryer, and you would have to keep records to document that you are following your plan to show continuous compliance with the work practice requirement.

7. Additional Recordkeeping Requirements for Sources Complying With Emissions Averaging Alternative

If you comply with the emissions averaging provisions, you would be required to keep records of all information necessary to calculate debits and credits, including records of your process unit operating hours, records of total HAP measurements for debit-generating process units, and records of performance tests for credit-generating process units. You would also have to keep monitoring records for add-on control systems used to control credit-generating process units.

I. How Did We Select the Notification and Reporting Requirements?

We selected the proposed notification and reporting requirements based on requirements in the NESHAP General Provisions (40 CFR part 63, subpart A) and specific requirements for the PCWP source category.

The notification requirements that we are proposing 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(e) and (f), 63.9(b) through (h), and 63.10(d)(2).

In addition, we selected notification requirements for the emissions averaging provisions. If you comply with the emissions averaging provisions, you would have to submit an EAP to the Administrator for approval at least 1 year prior to the compliance date, or 1 year prior to the date you would begin using an emissions average to comply with the proposed rule, whichever is later. The EAP would have to be submitted prior to the date you would begin using an emissions average so that the Administrator would have time to review and approve or disapprove the plan, and so that you would have time to ensure that the emissions credits would equal or exceed the emissions debits.

The proposed reporting requirements that we selected include semiannual compliance reports, required in § 63.10(e)(3), and immediate SSM reports, required in § 63.10(d)(5)(ii). If there are no deviations from the compliance options, operating requirements, or work practice requirements during the reporting period, then you would only be required to include a statement that there were no deviations in your semiannual compliance report. If there are deviations from the compliance options, operating requirements, or work practice requirements during a reporting period, then you would be required to submit the information required in today's proposed rule in your semiannual compliance report. If you have a startup, shutdown or malfunction during the reporting period, and you take actions consistent with your SSM plan (SSMP), then your compliance report would have to include the information in § 63.10(d)(5)(i). The submittal date for the compliance report is based on information in § 63.10(e)(3)(v).

If there is a startup, shutdown, or malfunction during the reporting period, and you take actions inconsistent with the SSMP, then you would be required to submit an immediate SSM report. The report would have to include the actions taken for the event and the information provided in § 63.10(d)(5)(ii). The submittal date for the immediate SSM report is based on § 63.10(d)(5)(ii). For facilities complying with the emissions averaging provisions, the semiannual compliance report would have to contain calculations showing that the AMR equals or exceeds the RMR in addition to the requirements outlined above for semiannual compliance reports.

We have included a routine control device maintenance exemption in today's proposed rule to provide an allowance for control device downtime associated with routine maintenance such as bakeouts, washouts, and media replacement. We would like to clarify that there will also be instances when a control device is offline for correction of malfunctions such as electrical problems, mechanical problems, utility supply problems, pre-filer upsets, production malfunctions (*e.g.,* dryer fires), and weather-related problems. Because these malfunctions are sudden, infrequent, and not reasonably preventable, they would be covered under the SSM provisions of today's proposed rule. In addition, control device downtime due to process upsets that require shutdown and restarting of equipment would be covered under the SSM provisions.

IV. Summary of Environmental, Energy and Economic Impacts

A. How Many Facilities Are Impacted by This Proposed Rule?

This proposed rule is expected to affect an estimated 223 existing major source facilities that manufacture PCWP. The impacted facilities generally manufacture one or more of the following products: softwood plywood, softwood veneer, medium density fiberboard (MDF), oriented strandboard (OSB), particleboard, hardboard, laminated strand lumber, and laminated veneer lumber. The number of impacted facilities was determined based on the estimated potential to emit (*i.e.,* uncontrolled HAP emissions) from each facility and whether or not the facility already operates control systems necessary to meet the proposed standards. Facilities with estimated potential to emit 25 tons or more of total HAP or 10 or more tons of an individual HAP are major sources of HAP and are subject to today's proposed rule. Of the estimated 223 facilities affected by this proposed rule, an estimated 166 are expected to install add-on control systems to reduce emissions. The remaining facilities already have installed add-on controls, do not have any process units subject to the compliance options, or are expected to comply with work practice requirements only.

The environmental and cost impacts presented in this preamble represent the estimated impacts for the 223 facilities. The impact estimates were based on the use of RTOs (or in some cases a combination WESP and RTO) because RTOs are the most prevalent HAP emissions control technology used in the PCWP industry. However, technologies other than RTOs could be used to comply with today's proposed standards. For a facility that we believe already achieves the emissions reductions required by today's proposed rule, only recordkeeping cost impacts were estimated.

The number of affected facilities presented above (223) does not include major source facilities with lumber kilns that are not otherwise PCWP facilities. Some of these facilities may be major sources of HAP emissions due to lumber drying operations. Because today's proposed rule contains no control requirements for lumber kilns, we expect there to be no cost, environmental, or energy impacts associated with today's proposed rule for these facilities.

B. What Are the Air Quality Impacts?

We estimate nationwide baseline HAP emissions from the PCWP source category to be 17,000 Mg/yr (19,000 tons/yr) at the current level of control. We estimate that the proposed standards would reduce total HAP emissions from the PCWP source category by about 9,700 Mg/yr (11,000 tons/yr). In addition, we estimate that the proposed standards would reduce VOC emissions (approximated as THC) by about 25,000 Mg/yr (27,000 tons/yr) from a baseline level of 45,000 Mg/yr (50,000 tons/yr).

In addition to reducing emissions of HAP and VOC, the proposed standards would also reduce emissions of criteria pollutants, such as carbon monoxide (CO) from direct-fired emission sources and particulate matter less than 10 microns in diameter (PM_{10}). We estimate that the proposed standards would reduce CO emissions by about 10,000 Mg/yr (11,000 tons/yr). We estimate that the proposed standards would reduce PM_{10} emissions by about 11,000 Mg/yr (13,000 tons/yr).

Combustion of exhaust gases in an RTO generates some emissions of nitrogen oxides (NO_X). We estimate that the nationwide increase in NO_X emissions due to the use of RTOs would be about 4,300 Mg/yr (4,800 tons/yr). This estimated increase in NO_X emissions may be an overestimate because some plants may select control technologies other than RTOs to comply with the proposed standards.

Indirect air impacts of today's proposed rule would result from increased electricity usage associated with operation of control devices. Assuming that plants will purchase electricity from a power plant, we estimate that the proposed standards may increase secondary emissions of criteria pollutants such as PM_{10}, sulfur dioxide (SO_2), NO_X, and CO from power plants by about 6,200 Mg/yr (6,900 tons/yr).

C. What Are the Water Quality Impacts?

Wastewater is produced from WESP blowdown, washing out of RTOs, and biofilters. We based all of our impact estimates on the use of RTOs (with or without a WESP upstream depending on the process unit). We estimate that the wastewater generated from WESP blowdown and RTO washouts would increase by about 43 thousand cubic meters per year (m^3/yr)(11 million gal/yr) as a result of today's proposed rule. Facilities would likely dispose of this wastewater by sending it to a municipal treatment facility, evaporating it onsite, incinerating it in an onsite boiler, reusing it onsite (*e.g.*, in log vats or resin mix), or hauling it offsite for spray irrigation.

D. What Are the Solid Waste Impacts?

Solid waste is produced in the form of solids from WESPs and by RTO or RCO media replacement. We estimate that 4,500 Mg/yr (5,000 tons/yr) of solid waste would be generated as a result of today's proposed rule. This solid material may be disposed of in a landfill or used for other purposes. Some PCWP facilities have been able to use RTO or RCO media as aggregate in onsite roadbeds. Some facilities have also been able to identify a beneficial reuse for wet control device solids (such as giving them away to local farmers for soil amendment).

E. What Are the Energy Impacts?

The overall energy demand (*i.e.*, electricity and natural gas) is expected to increase by about 4.3 million gigajoules per year (GJ/yr) (4.1 trillion British thermal units per year (Btu/yr)) nationwide under the proposed standards. The estimated increase in the energy demand is based on the electricity requirements associated with RTOs and WESPs and the fuel requirements associated with RTOs. Electricity requirements are expected to increase by about 718 gigawatt hours per year (Gwh/yr) under the proposed standards. Natural gas requirements are expected to increase by about 45 million m^3/yr (1.6 billion cubic feet per year (ft^3/yr)) under the proposed standards.

F. What Are the Cost Impacts?

The cost impacts estimated for today's proposed rule represent a high-end estimate of costs. Although the use of RTO technology to reduce HAP emissions represents the most expensive compliance option, we based our nationwide cost estimates on the use of RTO technology at all of the impacted facilities because: (1) RTO technology can be used to reduce emissions from all types of PCWP process units; and (2) we could not accurately predict which facilities would use emissions averaging or production-based emissions limits or install less expensive add-on control devices, such as RCO and biofilters. Therefore, our cost estimates are likely to be overstated, as we anticipate that owners and operators of impacted sources will take advantage of available cost saving opportunities.

The high-end estimated total capital costs of today's proposed rule are $479 million. These capital costs apply to existing sources and include the costs to purchase and install both the RTO equipment (and in some cases, a WESP upstream of the RTO) and the monitoring equipment, and the costs of performance tests. Permanent total enclosure costs are also included for reconstituted wood products presses.

The high-end estimated annualized costs of the proposed standards are $142 million. The annualized costs account for the annualized capital costs of the control and monitoring equipment, operation and maintenance expenses, and recordkeeping and reporting costs. Potential control device cost savings and increased recordkeeping and reporting costs associated with today's proposed emissions averaging alternative standard are not accounted for in either the capital or annualized cost estimates.

G. Can We Achieve the Goals of the Proposed Rule in a Less Costly Manner?

We have made every effort in developing this proposal to minimize the cost to the regulated community and allow maximum flexibility in compliance options consistent with our statutory obligations. We recognize, however, that the proposal may still require some facilities to take costly steps to further control emissions even though those emissions may not result in exposures which could pose an excess individual lifetime cancer risk greater than one in one million, or which exceed thresholds determined to provide an ample margin of safety for protecting public health and the environment from the effects of hazardous air pollutants. We are, therefore, specifically soliciting comment on whether there are further ways to structure the proposed rule to focus on the facilities which pose significant risks and avoid the imposition of high costs on facilities that pose little risk to public health and the environment.

Representatives of the plywood and composite wood products industry provided EPA with descriptions of three mechanisms that they believed could be used to implement more cost-effective reductions in risk. The docket for today's proposed rule contains ''white papers'' prepared by industry that outline their proposed approaches (see docket number A–98–44, Item # II–D–525). These approaches could be effective in focusing regulatory controls on facilities that pose significant risks and avoiding the imposition of high costs on facilities that pose little risk to public health or the environment, and we are seeking public comment on the utility of each of these approaches with respect to this proposed rule.

One of the approaches, an applicability cutoff for threshold pollutants, would be implemented under the authority of CAA section 112(d)(4); the second approach, subcategorization and delisting, would be implemented under the authority of CAA section 112(c)(1) and (c)(9); and, the third approach, would involve the use of a concentration-based applicability threshold. We are seeking comment on whether these approaches are legally justified and, if so, we ask for information that could be used to support such approaches.

The maximum achievable control technology, or MACT, program outlined in CAA section 112(d) is intended to reduce emissions of HAP through the application of MACT to major sources of toxic air pollutants. Section 112(c)(9) is intended to allow EPA to avoid setting MACT standards for categories or subcategories of sources that pose less than a specified level of risk to public health and the environment. The EPA requests comment on whether the approaches described here appropriately rely on the provisions of CAA section 112. While the approaches focus on assessing the inhalation exposures of HAP emitted by a source, EPA specifically requests comment on the appropriateness and necessity of extending these approaches to account for non-inhalation exposures or to account for adverse environmental impacts. In addition to the specific requests for comment noted in this section, we are also interested in any information or comment concerning technical limitations, environmental and cost impacts, compliance assurance, legal rationale, and implementation relevant to the identified approaches. We also request comment on appropriate practicable and verifiable methods to ensure that sources' emissions remain below levels that protect public health and the environment. We will evaluate all comments before determining whether either of the three approaches will be included in the final rule.

1. Industry Emissions and Potential Health Effects

For the PCWP source category, six HAP make up about 96 percent of the total organic HAP (*i.e.*, does not include metals that are HAP). Those six HAP are methanol, formaldehyde, acetaldehyde, phenol, acrolein, and propionaldehyde. All HAP are not emitted by all sources. However, all of the 223 major sources emit all six of the predominant HAP, with a few exceptions. Some engineered wood plants do not emit phenol; these plants are major sources but would not be affected by the proposed rule because they have no equipment subject to the proposed rule. Also, several particleboard plants do not emit propionaldehyde; these particleboard plants have dry rotary particle dryers (as opposed to green particle dryers), which are not subject to control requirements. (For more information, see section III.C.3).

In accordance with section 112(k), EPA developed a list of 33 HAP which present the greatest threat to public health in the largest number of urban areas. Some of the PCWP HAP are included on this list for the EPA's Urban Air Toxics Program. These HAP include three of the six most predominant PCWP HAP (acetaldehyde, acrolein, and formaldehyde). Additional urban HAP that may be emitted by PCWP facilities include benzene, carbon tetrachloride, chloroform, and methylene chloride.

In November 1998, EPA published ''A Multimedia Strategy for Priority Persistent, Bioaccumulative, and Toxic (PBT) Pollutants.'' The organic HAP emitted by PCWP facilities do not appear on the published list of PBT compounds referenced in the EPA strategy.

To estimate the potential baseline risks posed by the PCWP source category and the potential impact of applicability cutoffs, EPA performed a ''rough'' risk assessment for 185 of the 223 facilities in the PCWP source category. The HAP included in the assessment were acetaldehyde, acrolein, benzene, formaldehyde, manganese, methanol, methylene chloride, and phenol. Of these HAP, four are presently not considered to have thresholds for cancer effects: acetaldehyde, benzene, formaldehyde, and methylene chloride.

Of the 185 facilities assessed, 148 facilities were found to pose cancer risks equal to or greater than one in one million to their surrounding population. Forty-six facilities were predicted to pose cancer risks of one in 100,000 or greater, and two PCWP facilities were found to pose cancer risks equal to or greater than one in 10,000.

2. Applicability Cutoffs for Threshold Pollutants Under Section 112(d)(4) of the CAA

The first approach is an ''applicability cutoff'' for threshold pollutants that is based on EPA's authority under CAA section 112(d)(4) to establish standards for HAP which are ''threshold pollutants.'' A ''threshold pollutant'' is one for which there is a concentration or dose below which adverse effects are not expected to occur over a lifetime of exposure. For such pollutants, section 112(d)(4) allows EPA to consider the threshold level, with an ample margin of safety, when establishing emission standards. Specifically, section 112(d)(4) allows EPA to establish emission standards that are not based upon the MACT specified under section 112(d)(2) for pollutants for which a health threshold has been established. Such standards may be less stringent than MACT. Historically, EPA has interpreted section 112(d)(4) to allow categories of sources that emit only threshold pollutants to avoid further regulation if those emissions result in ambient levels that do not exceed the threshold, with an ample margin of safety.[1]

A different interpretation would allow us to exempt individual facilities within a source category that meet the section 112(d)(4) requirements. There are three potential scenarios under this interpretation of the section 112(d)(4) provision. One scenario would allow an exemption for individual facilities that emit only threshold pollutants and can demonstrate that their emissions of

[1] *See* 63 FR 18754, 18765–66 (April 15, 1998) (Pulp and Paper Combustion Sources Proposed NESHAP)

threshold pollutants would not result in air concentrations above the threshold levels, with an ample margin of safety, even if the category is otherwise subject to MACT. A second scenario would allow the section 112(d)(4) provision to be applied to both threshold and non-threshold pollutants, using the one in a million cancer risk level for decisionmaking for non-threshold pollutants. A third scenario would allow a section 112(d)(4) exemption at a facility that emits both threshold and non-threshold pollutants. For those emission points where only threshold pollutants are emitted and where emissions of the threshold pollutants would not result in air concentrations above the threshold levels, with an ample margin of safety, those emission points could be exempt from the MACT standard. The MACT standard would still apply to non-threshold emissions from other emission points at the source. For this third scenario, emission points that emit a combination of threshold and non-threshold pollutants that are co-controlled by MACT would still be subject to the MACT level of control. However, any threshold HAP eligible for exemption under section 112(d)(4) that are controlled by control devices different from those controlling non-threshold HAP would be able to use the exemption, and the facility would still be subject to the provisions of the standard that control non-threshold pollutants or that control both threshold and non-threshold pollutants.

Estimation of hazard quotients and hazard indices. Under the section 112(d)(4) approach, EPA would have to determine that emissions of each of the threshold pollutants emitted by PCWP sources at the facility do not result in exposures which exceed the threshold levels, with an ample margin of safety. The common approach for evaluating the potential hazard of a threshold air pollutant is to calculate a ''hazard quotient'' by dividing the pollutant's inhalation exposure concentration (often assumed to be equivalent to its estimated concentration in air at a location where people could be exposed) by the pollutant's inhalation Reference Concentration (RfC). An RfC is defined as an estimate (with uncertainty spanning perhaps an order of magnitude) of a continuous inhalation exposure that, over a lifetime, likely would not result in the occurrence of adverse health effects in humans, including sensitive individuals. The EPA typically establishes an RfC by applying uncertainty factors to the critical toxic effect derived from the lowest- or no-observed-adverse-effect level of a pollutant.[2] A hazard quotient less than one means that the exposure concentration of the pollutant is less than the RfC and, therefore, presumed to be without appreciable risk of adverse health effects. A hazard quotient greater than one means that the exposure concentration of the pollutant is greater than the RfC. Further, EPA guidance for assessing exposures to mixtures of threshold pollutants recommends calculating a ''hazard index'' by summing the individual hazard quotients for those pollutants in the mixture that affect the same target organ or system by the same mechanism.[3] Hazard index (HI) values would be interpreted similarly to hazard quotients; values below one would generally be considered to be without appreciable risk of adverse health effects, and values above one would generally be cause for concern.

For the determinations discussed herein, EPA would generally plan to use RfC values contained in EPA's toxicology database, the Integrated Risk Information System (IRIS). When a pollutant does not have an approved RfC in IRIS, or when a pollutant is a carcinogen, EPA would have to determine whether a threshold exists based upon the availability of specific data on the pollutant's mode or mechanism of action, potentially using a health threshold value from an alternative source, such as the Agency for Toxic Substances and Disease Registry (ATSDR) or the California Environmental Protection Agency (CalEPA). Table 2 of this preamble provides RfC's, as well as unit risk estimates, for the HAP emitted by facilities in the PCWP source category. A unit risk estimate is defined as the upper-bound excess lifetime cancer risk estimated to result from continuous exposure to an agent at a concentration of 1 $\mu g/m^3$ in air.

TABLE 2.—DOSE-RESPONSE ASSESSMENT VALUES FOR SOME HAP REPORTED EMITTED BY THE PLYWOOD AND COMPOSITE WOOD PRODUCTS SOURCE CATEGORY [a, b]

Chemical name	CAS No.	Reference concentration [c] (mg/m^3)	Unit risk estimate [d] ($1/(ug/m^3)$)
Acetaldehyde	75–07–0	9.0E–03 (IRIS)	2.2E–06 (IRIS)
Acrolein	107–02–8	2.0E–05 (IRIS)	
Benzene	71–43–2	6.0E–02 (CAL)	7.8E–06 (IRIS)
Carbon tetrachloride [e]	56–23–5	4.0E–02 (CAL)	1.5E–05 (IRIS)
Chloroform [e]	67–66–3	9.8E–02 (ATSDR)	
Formaldehyde	50–00–0	9.8E–03 (ATSDR)	1.3E–05 (IRIS)
Manganese compounds	7439–96–5	5.0E–05 (IRIS)	
Methanol	67–56–1	4.0E+00 (CAL)	
Methyl ethyl ketone	78–93–3	1.0E+00 (IRIS)	
Methylene chloride	75–09–2	1.0E+00 (ATSDR)	4.7E–07 (IRIS)

[2] ''Methods for Derivation of Inhalation Reference Concentrations and Applications of Inhalation Dosimetry.'' EPA–600/8–90–066F, Office of Research and Development, USEPA, October 1994.

[3] ''Supplementary Guidance for Conducting Health Risk Assessment of Chemical Mixtures. Risk Assessment Forum Technical Panel,'' EPA/630/R–00/002. USEPA, August 2000. *http://www.epa.gov/nceawww1/pdfs/chem mix/chem mix 08 2001.pdf.*

TABLE 2.—DOSE-RESPONSE ASSESSMENT VALUES FOR SOME HAP REPORTED EMITTED BY THE PLYWOOD AND COMPOSITE WOOD PRODUCTS SOURCE CATEGORY [a, b]—Continued

Chemical name	CAS No.	Reference concentration [c] (mg/m^3)	Unit risk estimate [d] (1/(ug/m^3))
Phenol	108–95–2	2.0E–01 (CAL)	

[a] Propionaldehyde, a HAP emitted by the PCWP source category, is not included in Table 2 because there are no dose-response values for it.

[b] The table includes many, but not all, of the HAP emitted by the PCWP source category. The following additional HAP have been detected at more than one PCWP facility: cumene, methyl isobutyl ketone (MIBK), styrene, toluene, m,p-xylene, o-xylene, methylene diphenyl diisocyanate (MDI), chloromethane, and ethyl benzene. In addition, the following HAP have been detected at only one PCWP facility: acetophenone, biphenyl, bis-(2-ethylhexyl phthalate), bromomethane, carbon disulfide, di-n-butyl phthalate, ethyl benzene, hydroquinone, n-hexane, 1,1,1-trichloroethane, 4-methyl-2-pentanone, chloroethane, m,p-cresol, and o-cresol. Other HAP, including metal compounds (in addition to manganese compounds) may be emitted by facilities in the PCWP source category.

[c] *Reference Concentration:* An estimate (with uncertainty spanning perhaps an order of magnitude) of a continuous inhalation exposure to the human population (including sensitive subgroups which include children, asthmatics and the elderly) that is likely to be without an appreciable risk of deleterious effects during a lifetime. It can be derived from various types of human or animal data, with uncertainty factors generally applied to reflect limitations of the data used.

[d] Unit Risk Estimate: The upper-bound excess lifetime cancer risk estimated to result from continuous exposure to an agent at a concentration of 1 $\mu g/m^3$ in air. The interpretation of the Unit Risk Estimate would be as follows: if the Unit Risk Estimate = $1.5 \times 10{-}6$ per $\mu g/m^3$, 1.5 excess tumors are expected to develop per 1,000,000 people if exposed daily for a lifetime to 1 μg of the chemical in 1 cubic meter of air. Unit Risk Estimates are considered upper bound estimates, meaning they represent a plausible upper limit to the true value. (Note that this is usually not a true statistical confidence limit.) The true risk is likely to be less, but could be greater.

[e] This HAP was detected at only one PCWP facility.

Sources:
IRIS = EPA Integrated Risk Information System (*http://www.epa.gov/iris/subst/index.html*).
ATSDR = U.S. Agency for Toxic Substances and Disease Registry (*http://www.atsdr.cdc.gov/mrls.html*).
CAL = California Office of Environmental Health Hazard Assessment (*http://www.oehha.ca.gov/air/hot_spots/index.html*).
HEAST = EPA Health Effects Assessment Summary Tables (#PB(=97–921199, July 1997).

To establish an applicability cutoff under section 112(d)(4), EPA would need to define ambient air exposure concentration limits for any threshold pollutants involved. There are several factors to consider when establishing such concentrations. First, we would need to ensure that the concentrations that would be established would protect public health with an ample margin of safety. As discussed above, the approach EPA commonly uses when evaluating the potential hazard of a threshold air pollutant is to calculate the pollutant's hazard quotient, which is the exposure concentration divided by the RfC.

The EPA's ''Supplementary Guidance for Conducting Health Risk Assessment of Chemical Mixtures'' suggests that the noncancer health effects associated with a mixture of pollutants ideally are assessed by considering the pollutants' common mechanisms of toxicity.[4] The guidance also suggests, however, that when exposures to mixtures of pollutants are being evaluated, the risk assessor may calculate an HI. The recommended method is to calculate multiple hazard indices for each exposure route of interest and for a single specific toxic effect or toxicity to a single target organ. The default approach recommended by the guidance is to sum the hazard quotients for those pollutants that induce the same toxic effect or affect the same target organ. A mixture is then assessed by several HI, each representing one toxic effect or target organ. The guidance notes that the pollutants included in the HI calculation are any pollutants that show the effect being assessed, regardless of the critical effect upon which the RfC is based. The guidance cautions that if the target organ or toxic effect for which the HI is calculated is different from the RfC's critical effect, then the RfC for that chemical can be an overestimate, that is, the resultant HI potentially may be overprotective. Conversely, since the calculation of an HI does not account for the fact that the potency of a mixture of HAP can be more potent than the sum of the individual HAP potencies, an HI may potentially be underprotective in some situations.

Options for establishing a hazard index limit. One consideration in establishing a hazard index limit is whether the analysis considers the total ambient air concentrations of all the emitted HAP to which the public is exposed.[5] There are at least several options for establishing a hazard index limit for the section 112(d)(4) analysis that reflect, to varying degrees, public exposure.

One option is to allow the hazard index posed by all threshold HAP emitted from PCWP sources at the facility to be no greater than one. This approach is protective if no additional threshold HAP exposures would be anticipated from other sources in the vicinity of the facility or through other routes of exposure (*e.g.,* through ingestion).

A second option is to adopt a ''default percentage'' approach, whereby the hazard index limit of the HAP emitted by the facility is set at some percentage of one (*e.g.,* 20 percent or 0.2). This approach recognizes the fact that the facility in question is only one of many sources of threshold HAP to which people are typically exposed every day. Because noncancer risk assessment is predicated on total exposure or dose, and because risk assessments focus only on an individual source, establishing a hazard index limit of 0.2 would account for an assumption that 20 percent of an individual's total exposure is from that individual source. For the purposes of this discussion, we will call all sources of HAP, other than the facility in question, ''background'' sources. If the facility is allowed to emit HAP such that its own impacts could result in HI values of one, total exposures to threshold HAP in the vicinity of the facility could be substantially greater than one due to background sources, and this would not be protective of public health since only HI values below one are considered to be without appreciable risk of adverse health effects. Thus, setting the hazard index limit for the facility at some default percentage of one will provide a buffer which would help to ensure that total exposures to threshold HAP near the facility (*i.e.,* in combination with exposures due to background sources) will generally not exceed one and can

[4] Ibid.

[5] Senate Debate on Conference Report (October 27, 1990), reprinted in ''A Legislative History of the Clean Air Act Amendments of 1990,'' Comm. Print S. Prt. 103–38 (1993) (''Legis. Hist.'' at 868.

generally be considered to be without appreciable risk of adverse health effects.

The EPA requests comment on using the ''default percentage'' approach and on setting the default hazard index limit at 0.2. The EPA is also requesting comment on whether an alternative HI limit, in some multiple of one, would be a more appropriate applicability cutoff.

A third option is to use available data (from scientific literature or EPA studies, for example) to determine background concentrations of HAP, possibly on a national or regional basis. These data would be used to estimate the exposures to HAP from non-PCWP sources in the vicinity of an individual facility. For example, the EPA's National-Scale Air Toxics Assessment (NATA)[6] and ATSDR's Toxicological Profiles[7] contain information about background concentrations of some HAP in the atmosphere and other media. The combined exposures from PCWP sources and from other sources (as determined from the literature or studies) would then not be allowed to exceed a hazard index limit of one. The EPA requests comment on the appropriateness of setting the hazard index limit at one for such an analysis.

A fourth option is to allow facilities to estimate or measure their own facility-specific background HAP concentrations for use in their analysis. With regard to the third and fourth options, the EPA requests comment on how these analyses could be structured. Specifically, EPA requests comment on how the analyses should take into account background exposure levels from air, water, food and soil encountered by the individuals exposed to PCWP emissions. In addition, we request comment on how such analyses should account for potential increases in exposures due to the use of a new or the increased use of a previously emitted HAP, or the effect of other nearby sources that release HAP.

The EPA requests comment on the feasibility and scientific validity of each of these or other approaches. Finally, EPA requests comment on how we should implement the section 112(d)(4) applicability cutoffs, including appropriate mechanisms for applying cutoffs to individual facilities. For example, would the title V permit process provide an appropriate mechanism?

Tiered analytical approach for predicting exposure. Establishing that a facility meets the cutoffs under section 112(d)(4) will necessarily involve combining estimates of pollutant emissions with air dispersion modeling to predict exposures. The EPA envisions that we would promote a tiered analytical approach for these determinations. A tiered analysis involves making successive refinements in modeling methodologies and input data to derive successively less conservative, more realistic estimates of pollutant concentrations in air and estimates of risk.

As a first tier of analysis, EPA could develop a series of simple look-up tables based on the results of air dispersion modeling conducted using conservative input assumptions. By specifying a limited number of input parameters, such as stack height, distance to property line, and emission rate, a facility could use these look-up tables to easily determine whether the emissions from their sources might cause a hazard index limit to be exceeded.

A facility that does not pass this initial conservative screening analysis could implement increasingly more site-specific but more resource-intensive tiers of analysis using EPA-approved modeling procedures in an attempt to demonstrate that exposure to emissions from the facility does not exceed the hazard index limit. The EPA's guidance could provide the basis for conducting such a tiered analysis.[8]

The EPA requests comment on methods for constructing and implementing a tiered analytical approach for determining applicability of the section 112(d)(4) criterion to specific PCWP sources. It is also possible that ambient monitoring data could be used to supplement or supplant the tiered modeling approach described above. It is envisioned that the appropriate monitoring to support such a determination could be extensive. The EPA requests comment on the appropriate use of monitoring in the determinations described above.

Accounting for dose-response relationships. In the past, EPA routinely treated carcinogens as non-threshold pollutants. The EPA recognizes that advances in risk assessment science and policy may affect the way EPA differentiates between threshold and non-threshold HAP. The EPA's Draft Revised Guidelines for Carcinogen Risk Assessment[9] suggest that carcinogens be assigned non-linear dose-response relationships where data warrant. Moreover, it is possible that dose-response curves for some pollutants may reach zero risk at a dose greater than zero, creating a threshold for carcinogenic effects. It is possible that future evaluations of the carcinogens emitted by this source category would determine that one or more of the carcinogens in the category is a threshold carcinogen or is a carcinogen that exhibits a non-linear dose-response relationship but does not have a threshold.

The dose-response assessments for formaldehyde and acetaldehyde are currently undergoing revision by the EPA. As part of this revision effort, EPA is evaluating formaldehyde and acetaldehyde as potential non-linear carcinogens. The revised dose-response assessments will be subject to review by the EPA Science Advisory Board, followed by full consensus review, before adoption into the EPA IRIS. At this time, EPA estimates that the consensus review will be completed by the end of 2003. The revision of the dose-response assessments could affect the potency factors of these HAP, as well as their status as threshold or non-threshold pollutants. At this time, the outcome is not known. In addition to the current reassessment by EPA, there have been several reassessments of the toxicity and carcinogenicity of formaldehyde in recent years, including work by the World Health Organization and the Canadian Ministry of Health.

The EPA requests comment on how we should consider the state of the science as it relates to the treatment of threshold pollutants when making determinations under section 112(d)(4). In addition, EPA requests comment on whether there is a level of emissions of a non-threshold carcinogenic HAP (*e.g.*, benzene, methylene chloride) at which it would be appropriate to allow a facility to use the approaches discussed in this section.

Risk assessment results. The results of the human health risk assessments described below are based on approaches for quantifying exposure, risk, and cancer incidence that carry significant assumptions, uncertainties, and limitations. For example, in conducting these types of analyses, there are typically many uncertainties regarding dose-response functions, levels of exposure, exposed populations, air quality modeling applications, emission levels, and control effectiveness. Because the estimates derived from the various scoping approaches are necessarily rough, we are concerned that they not convey a

[6] *See http://www.epa.gov/ttn/atw/nata.*

[7] *See http://www.atsdr.cdc.gov/toxpro2.html.*

[8] ''A Tiered Modeling Approach for Assessing the Risks due to Sources of Hazardous Air Pollutants.'' EPA–450/4–92–001. David E. Guinnup, Office of Air Quality Planning and Standards, USEPA, March 1992.

[9] ''Draft Revised Guidelines for Carcinogen Risk Assessment.'' NCEA–F–0644. USEPA, Risk Assessment Forum, July 1999. pp 3–9ff. *http://www.epa.gov/ncea/raf/pdfs/cancer_gls.pdf*

false sense of precision. It is expected that any point estimate of risk reduction or benefits generated by these approaches should be considered as part of a range of potential estimates.

If the final rule is implemented as proposed at all PCWP facilities, annual cancer incidence would be reduced from about 0.09 cases/year to about 0.02 cases/year, while the number of people at or above a cancer risk level of one in a million would be reduced from about 900,000 to 150,000. In addition, the number of people exposed to HI values equal to or greater than one was estimated to be reduced from about 270,000 to about 30,000, and the number of people exposed to HI values of 0.2 or greater was predicted to decrease from about 1,500,000 to about 250,000. (Details of these analyses are available in the docket.)

Based on the results of this rough assessment, if the section 112(d)(4) approach is applied only to threshold pollutants, EPA estimates that few, if any, of the 223 facilities in the plywood source category could obtain an exemption from the rule, since it appears that all or nearly all facilities emit some amount of one or more non-threshold pollutants. If the revised dose-response assessments for formaldehyde and acetaldehyde determine that they are threshold carcinogens, these estimates could increase. This application of the section 112(d)(4) approach is estimated to produce minimal potential cost savings.

The second scenario under the section 112(d)(4) provision would apply to both threshold and non-threshold pollutants. If this interpretation is selected, EPA estimates that, if a HI limit of one and a cancer risk level of 10^{-6} were used, as many as 33 of the 223 facilities in the source category may be exempt from the proposed rule and that, if a HI limit of 0.2 and a cancer risk level of 10^{-6} were used, as many as 26 of the 223 facilities may be exempt. The EPA estimates that the cost of the rule as proposed would be approximately $142 million per year, resulting in an annual cost savings of about $9 million per year (for a HI limit of one) or about $7 million per year (for a HI limit of 0.2) (as compared to establishing a MACT standard for all plants in the industry).

The EPA does not expect the third scenario, which would allow emission point exemptions, to be applicable for the PCWP source category because mixtures of threshold and non-threshold pollutants are co-emitted, and the same emission controls would apply to both. The risk estimates from this rough assessment are based on typical facility configurations (*i.e.*, model plants) and, as such, they are subject to significant uncertainties, such that the actual risks at any one facility could be significantly higher or lower. Therefore, while these risk estimates assist in providing a broad picture of impacts across the source category, they should not be the basis for an exemption from the requirements of the proposed rule. Rather, facility-specific risks would require site-specific data and a more refined analysis.

For either of the first two approaches described above, the actual number of facilities that would qualify for an exemption would depend upon site-specific risk assessments and the specified hazard index limit. If the section 112(d)(4) approach were adopted, the rulemaking would likely indicate that the requirements of the rule do not apply to any source that demonstrates, based on a tiered approach that includes EPA-approved modeling of the affected source's emissions, that the anticipated HAP exposures do not exceed the specified hazard index limit.

3. Subcategory Delisting Under Section 112(c)(9)(B) of the CAA

The EPA is authorized to establish categories and subcategories of sources, as appropriate, pursuant to CAA section 112(c)(1), in order to facilitate the development of MACT standards consistent with section 112 of the CAA. Further, section 112(c)(9)(B) allows EPA to delete a category (or subcategory) from the list of major sources for which MACT standards are to be developed when the following can be demonstrated: (1) In the case of carcinogenic pollutants, that ''* * * no source in the category * * * emits (carcinogenic) air pollutants in quantities which may cause a lifetime risk of cancer greater than one in one million to the individual in the population who is most exposed to emissions of such pollutants from the source''; (2) in the case of pollutants that cause adverse noncancer health effects, that ''* * * emissions from no source in the category or subcategory * * * exceed a level which is adequate to protect public health with an ample margin of safety''; and (3) in the case of pollutants that cause adverse environmental effects, that ''* * * no adverse environmental effect will result from emissions from any source.''

Given these authorities and the suggestions from the white paper prepared by industry representatives (see docket number A–98–44), EPA is considering whether it would be possible to establish a subcategory of facilities within the larger PCWP category that would meet the risk-based criteria for delisting. Such criteria would likely include the same requirements as described previously for the second scenario under the section 112(d)(4) approach, whereby a facility would be in the low-risk subcategory if its emissions of threshold pollutants do not result in exposures which exceed the HI limits and if its emissions of non-threshold pollutants do not result in exposures which exceed a cancer risk level of 10^{-6}. The EPA requests comment on what an appropriate HI limit would be for a determination that a facility be included in the low-risk subcategory.

Since each facility in such a subcategory would be a low-risk facility (*i.e.*, if each met these criteria), the subcategory could be delisted in accordance with section 112(c)(9), thereby limiting the costs and impacts of the proposed MACT rule to only those facilities that do not qualify for subcategorization and delisting. The EPA estimates that the maximum potential effect of this approach would be the same as that of applying the section 112(d)(4) approach that allows exemption of facilities emitting threshold and non-threshold pollutants if exemption criteria are met (*i.e.*, as many as 33 of the 223 facilities may be exempt under this approach, if an HI limit of one and a cancer risk level of 10^{-6} are used; or, as many as 26 of the 223 may be exempt if an HI limit of 0.2 and a cancer risk level of 10^{-6} are used).

Facilities seeking to be included in the delisted subcategory would be responsible for providing all data required to determine whether they are eligible for inclusion. Facilities that could not demonstrate that they are eligible to be included in the low-risk subcategory would be subject to MACT and possible future residual risk standards. The EPA solicits comment on implementing a risk-based approach for establishing subcategories of PCWP facilities.

Establishing that a facility qualifies for the low-risk subcategory under section 112(c)(9) will necessarily involve combining estimates of pollutant emissions with air dispersion modeling to predict exposures. The EPA envisions that we would employ the same tiered analytical approach described earlier in the section 112(d)(4) discussion for these determinations.

One concern that EPA has with respect to this section 112(c)(9) approach is the effect that it could have on the MACT floors. If many of the facilities in the low-risk subcategory are well-controlled, that could make the

MACT floor less stringent for the remaining facilities. One approach that has been suggested to mitigate this effect would be to establish the MACT floor now, based on controls in place for the entire category, and to allow facilities to become part of the low-risk subcategory in the future, after the MACT standard is established. This would allow low risk facilities to use the section 112(c)(9) exemption without affecting the MACT floor calculation. The EPA requests comment on this suggested approach.

Another approach under section 112(c)(9) would be to define a subcategory of facilities within the PCWP source category based upon technological differences, such as differences in production rate, emission vent flow rates, overall facility size, emissions characteristics, processes, or air pollution control device viability. The EPA requests comment on how we might establish PCWP subcategories based on these, or other, source characteristics. If it could then be determined that each source in this technologically-defined subcategory presents a low risk to the surrounding community, the subcategory could then be delisted in accordance with section 112(c)(9). The EPA requests comment on the concept of identifying technologically-based subcategories that may include only low-risk facilities within the PCWP source category.

If this section 112(c)(9) approach were adopted, the rulemaking would likely indicate that the rule does not apply to any source that demonstrates that it belongs in a subcategory which has been delisted under section 112(c)(9).

Consideration of criteria pollutants. Finally, EPA projects that adoption of the MACT floor level of controls would result in increases in NO_X emissions. This pollutant is a precursor in the formation of fine PM, which has been associated with a variety of adverse health effects (including premature mortality, chronic bronchitis, and increased frequency of asthma attacks). The EPA requests comment on the extent to which consideration should be given to the adverse effects of the possible increase in NO_X emissions from applying MACT technology, in the context of implementing our authority under section 112(c)(9) or other exemptions.

H. What Are the Economic Impacts?

The economic impact analysis shows that the expected price increases for affected output would range from only 0.7 to 2.5 percent as a result of the proposed NESHAP for PCWP manufacturers. The expected change in production of affected output is a reduction of 0.1 to 0.7 percent for PCWP manufacturers as a result of the proposed rule. There is only one plant closure expected out of the 223 facilities affected by the proposed rule. It should be noted that the baseline economic condition of the facility predicted to close rather than incur the costs of compliance with the proposed rule affects the closure estimate provided by the economic model, and that the facility predicted to close appears to have low profitability levels currently. Therefore, it is likely that there is no adverse impact expected to occur for those industries that produce output affected by the proposed rule, such as hardboard, softwood plywood and veneer, engineered wood products, and other wood composites.

I. What Are the Social Costs and Benefits?

Our assessment of costs and benefits of the proposed rule is detailed in the ''Regulatory Impact Analysis for the Proposed Plywood and Composite Wood Products MACT.'' The Regulatory Impact Analysis (RIA) is located in Docket number A–98–44.

It is estimated that 3 years after implementation of the proposed requirements, HAP would be reduced by 9,700 Mg/yr (11,000 tons/yr) due to reductions in formaldehyde, acetaldehyde, acrolein, methanol, phenol and several other HAP from existing PCWP emission sources. The health effects associated with these HAP are discussed earlier in this preamble.

At this time, we are unable to provide a comprehensive quantification and monetization of the HAP-related benefits of this proposal. Nevertheless, it is possible to derive rough estimates for one of the more important benefit categories, *i.e.*, the potential number of cancer cases avoided and cancer risk reduced as a result of the imposition of the MACT level of control on this source category. Our analysis suggests that imposition of the MACT level of control would reduce cancer cases by zero to less than one case per year, on average, starting some years after implementation of the standards. We present these results in the RIA. This risk reduction estimate is uncertain and should be regarded as an extremely rough estimate and should be viewed in the context of the full spectrum of unquantified noncancer effects associated with the HAP reductions.

The control technologies used to reduce the level of HAP emitted from PCWP sources are also expected to reduce emissions of CO, PM_{10}, and VOC. It is estimated that CO emission reductions total approximately 10,000 Mg/yr (11,000 tons/yr), PM_{10} emission reductions total approximately 11,000 Mg/yr (13,000 tons/yr), and VOC emission reductions (approximated as THC) total approximately 25,000 Mg/yr (27,000 tons/yr). These estimated reductions occur from existing sources in operation 3 years after the implementation of the requirements of the proposed rule and are expected to continue throughout the life of the sources. Human health effects associated with exposure to CO include cardiovascular system and central nervous system (CNS) effects, which are directly related to reduced oxygen content of blood and which can result in modification of visual perception, hearing, motor and sensorimotor performance, vigilance, and cognitive ability. The VOC emissions reductions may lead to some reduction in ozone concentrations in areas in which the affected sources are located. There are both human health and welfare effects that result from exposure to ozone, and these effects are listed in Table 3 of this preamble.

At the present time, we cannot provide a monetary estimate for the benefits associated with the reductions in CO. We also did not provide a monetary estimate for the benefits associated with the changes in ozone concentrations that result from the VOC emission reductions since we are unable to do the necessary air quality modeling to estimate the ozone concentration changes. For PM_{10}, we did not provide a monetary estimate for the benefits associated with the reduction of the emissions, although these reductions are likely to have significant health benefits to populations living in the vicinity of affected sources.

There may be increases in NO_X emissions associated with the proposed rule as a result of increased use of incineration-based controls. These NO_X emission increases by themselves could cause some increase in ozone and PM concentrations, which could lead to impacts on human health and welfare as listed in Table 3. The potential impacts associated with increases in ambient PM and ozone due to these emission increases are discussed in the RIA. In addition to potential NO_X increases at affected sources, the proposed rule may also result in additional electricity use at affected sources due to application of controls. These potential increases in electricity use may increase emissions of SO_2 and NO_X from electricity generating utilities. As such, the proposed rule may result in additional health impacts from increased ambient PM and ozone from these increased utility emissions. We did not quantify or monetize these impacts.

Every benefit-cost analysis examining the potential effects of a change in environmental protection requirements is limited to some extent by data gaps, limitations in model capabilities (such as geographic coverage), and uncertainties in the underlying scientific and economic studies used to configure the benefit and cost models. Deficiencies in the scientific literature often result in the inability to estimate changes in health and environmental effects, such as potential increases in premature mortality associated with increased exposure to carbon monoxide. Deficiencies in the economics literature often result in the inability to assign economic values even to those health and environmental outcomes which can be quantified. These general uncertainties in the underlying scientific and economics literatures are discussed in detail in the RIA and its supporting documents and references.

A full listing of the benefit categories that could not be quantified or monetized in our analysis are provided in Table 3 of this preamble. A full appreciation of the overall economic consequences of the proposed PCWP standards requires consideration of all benefits and costs expected to result from today's proposed rule, not just those benefits and costs which could be expressed here in dollar terms.

TABLE 3.—UNQUANTIFIED BENEFIT CATEGORIES FROM HAP, OZONE-RELATED, AND PM EMISSIONS REDUCTIONS

	Unquantified effect categories associated with HAP	Unquantified effect categories associated with ozone	Unquantified effect categories associated with PM
Health Categories	Carcinogenicity mortality, Genotoxicity mortality, Non-cancer lethality, Pulmonary function, decrement, Dermal irritation, Eye irritation, Neurotoxicity, Immunotoxicity, Pulmonary function decrement, Liver damage, Gastrointestinal toxicity, Kidney damage, Cardiovascular impairment, Hematopoietic (Blood disorders), Reproductive/Developmental toxicity.	Airway responsiveness, Pulmonary inflammation, Increased susceptibility to respiratory infection, Acute inflamation and respiratory cell damage, Chronic respiratory damage/Premature aging of lungs, Emergency room visits for asthma, Hospital admissions for respiratory diseases, Asthma attacks, Minor restricted activity days.	Premature mortality, Chronic bronchitis, Hospital admissions for chronic obstructive pulmonary disease, pneumonia, cardiovascular diseases, and asthma, Changes in pulmonary function, Morphological changes, Altered host defense mechanisms, Cancer, Other chronic respiratory disease, Emergency room visits for asthma, Lower and upper respiratory symptoms, Acute bronchitis, Shortness of breath, Minor restricted activity days, Asthma attacks, Work loss days.
Welfare Categories	Corrosion/Deterioration, Unpleasant odors, Transportation safety concerns, Yield reductions/ Foliar injury, Biomass decrease, Species richness decline, Species diversity decline, Community size decrease, Organism lifespan, decrease, Trophic web shortening.	Ecosystem and vegetation effects in Class I areas (*e.g.,* national parks), Damage to urban ornamentals (*e.g.,* grass, flowers, shrubs, and trees in urban areas), Commercial field crops, Fruit and vegetable crops, Reduced yields of tree seedlings, commercial and non-commercial forests, Damage to ecosystems, Materials damage, Reduced worker productivity.	Materials damage, Damage to ecosystems (*e.g.,* acid sulfate deposition), Nitrates in drinking water.

V. Relationship to Other Standards and Programs Under the CAA and Other Statutes

A. Wood Building Products Surface Coating NESHAP Proposal

The proposed PCWP rule includes some miscellaneous coating operations that are performed where the substrate is manufactured. We included these miscellaneous coating operations in the proposed PCWP rule instead of the upcoming Wood Building Products Surface Coating NESHAP (40 CFR part 63, subpart QQQQ) so that most facilities would be subject to only one of the rules. The miscellaneous coating operations proposed today include the application of any of the following to plywood or composite wood products: edge seals, moisture sealants, anti-skid coatings, company logos, trademark or grade stamps, nail lines, synthetic patches, wood patches, wood putty, concrete forming oils, glues for veneer composing, and shelving edge fillers. In addition, miscellaneous coating operations also include the application of primer to OSB siding that occurs at the same site as the OSB manufacture.

B. Wood Furniture Manufacturing Operations NESHAP (40 CFR Part 63, Subpart JJ)

The Wood Furniture Manufacturing Operations NESHAP apply to wood furniture manufacturing facilities that are engaged, either in part or in whole, in the manufacture of wood furniture or wood furniture components that are located at a plant site that is a major source of HAP emissions. In the preamble to the final rule (60 FR 62936, December 7, 1995), we stated that wood furniture manufacturing operations involving urea-formaldehyde resins were excluded from the Wood Furniture Manufacturing Operations NESHAP and would be covered by the proposed PCWP rule. Today's proposed rule covers manufacturing operations at wood furniture manufacturing facilities that use urea-formaldehyde resins. These operations include, but are not limited to, the manufacture of hardwood plywood, particleboard, and medium density fiberboard, all of which are included in the definition of a PCWP manufacturing facility. Although some wood furniture plants may be subject to both the Wood Furniture Manufacturing Operations NESHAP and today's proposed rule, there are no overlapping requirements for individual process units.

C. Combustion Related NESHAP

Plywood and composite wood products facilities operate combustion units such as boilers, fuel cells, and thermal oil heaters that supply heat to process units such as dryers and presses that are used in the manufacture of PCWP. When the combustion unit supplies heat by directly exhausting the combustion gas through a dryer, the dryer is considered a ''direct-fired dryer.'' Therefore, the HAP emissions from a direct-fired dryer are actually a combination of the emissions from the combustion unit exhausting into the dryer and the emissions that result from drying the wood. Because today's proposed rule regulates emissions from direct-fired dryers, those combustion units associated with direct-fired dryers are excluded from the requirements of other combustion-related NESHAP, such as the Industrial/Commercial/Institutional Boilers NESHAP and the Process Heaters NESHAP. However, those combustion units that supply heat or steam to indirect-fired dryers or presses (*i.e.*, combustion unit exhaust does not contact wood particles or veneers), and those thermal oil heaters that supply hot oil for presses but which don't exhaust through dryers are not covered by today's proposed rule and would be subject to the requirements of the applicable combustion related NESHAP.

D. New Source Review/Prevention of Significant Deterioration Applicability

We expect that many of the PCWP facilities impacted by today's proposed rule will install RTOs to comply with the proposed HAP control requirements. However, RTOs can generate NO_X emissions during normal operation. If NO_X emission increases are great enough, they may trigger the need for preconstruction permits under the nonattainment new source review (NSR) or prevention of significant deterioration (PSD) program (referred to in the remainder of this preamble as ''major NSR''). During the development of today's proposed rule, representatives from the PCWP industry requested that we consider the application of an RTO to reduce HAP emissions to be a pollution control project (PCP), as defined within the context of PSD and NSR, such that RTOs installed to meet today's proposed rule would qualify for an exemption from NSR/PSD.

In 1992, the EPA adopted an explicit PCP exclusion for electric utility steam generating units (57 FR 32314). In a July 1, 1994 guidance memorandum, we provided guidance to permitting authorities on the approvability of PCP exclusions for source categories other than electric utilities. In that guidance (available on the TTN; see ''Pollution Control Projects and New Source Review (NSR) Applicability'' from John S. Seitz, Director, OAQPS, to EPA Regional Air Division Directors), we indicated that add-on controls and fuel switches to less polluting fuels may qualify for an exclusion from major NSR as a PCP. To be eligible to be excluded from otherwise applicable major NSR requirements, a PCP must, on balance, be ''environmentally beneficial,'' and the permitting authority must ensure that the project will not cause or contribute to a violation of the NAAQS or PSD increment, or adversely affect visibility or other air quality related values (AQRV) in a Class I area, and that offsetting reductions are secured in the case of a project which would result in a significant increase of a nonattainment pollutant. The permitting authority can make these determinations outside of the major NSR process. The 1994 guidance did not supercede existing NSR requirements, including approved State NSR programs, nor void or create an exclusion from any applicable minor source preconstruction review requirements in an approved SIP. Any minor NSR permitting requirements in a SIP would continue to apply, regardless of any exclusion from major NSR that might be approved for a source under the PCP exclusion policy.

In the July 1, 1994 guidance memorandum, we specifically identified the RTO as an example of an add-on control that is an appropriate candidate for a case-by-case exclusion from major NSR as a PCP. We believe that the current guidance on the PCP exclusion adequately provides for the possible exemption from major NSR for PCP resulting from today's proposed rule. Permitting authorities should follow that guidance to the extent allowed under the applicable SIP in order to determine whether the installation of an RTO in a given circumstance qualifies as a PCP. Projects that qualify for the exclusion would be covered under minor source regulations in the applicable SIP, and permitting authorities would be expected to provide adequate safeguards against NAAQS and increment violations and adverse impacts on AQRV in Federal Class I areas. Only in those areas where potential adverse impacts cannot be resolved through the minor NSR programs or other mechanisms would major NSR apply.

E. Interrelationship Between MACT Provisions and PSD

We have received comments from some in industry who would like to use the provisions of the proposed PCWP rule to satisfy requirements for PSD. While many of the proposed PCWP provisions for HAP may be used to comply with PSD, the PCWP provisions are not universally applicable. In cases where one rule is more stringent than the other, you must comply with both rules.

We do not usually state this explicitly in rule preambles because it is established as a matter of law and precedence. However, because of some misunderstandings from some in industry and our on-going enforcement review of PSD compliance in the PCWP industry, we believe it is helpful to discuss areas where the proposed PCWP rule and PSD may have different requirements.

First, the proposed PCWP rule is a rule that would regulate HAP. Decisions on control levels and compliance demonstrations are based on HAP reductions. If decisions had been based on control of VOC, the control level may have been different. For example, this proposed rule requires 90 percent reduction of HAP from affected process units. Prevention of significant deterioration may require control efficiencies in excess of 90 percent. Another example is which process units require control. In the proposed PCWP rule, the level of control that represents the MACT floor for dry rotary dryers and hardwood veneer dryers is no emissions reductions. We determined that requiring controls was not cost effective for HAP. However, these process units emit more VOC than HAP; therefore, we may determine for PSD that dry rotary dryers and hardwood veneer dryers should be controlled.

Second, we want to clarify that THC is not the same as VOC. Two of the compliance options in the proposed PCWP rule are based on measurement of THC, as carbon, either with or without methane, as a surrogate for measuring HAP. While THC, as carbon, is a good way to determine percent reduction of a control device for HAP of concern for the PCWP industry, it may not be appropriate for VOC.

F. Effluent Guidelines

Effluent guidelines applicable to categories and subcategories of industrial point sources are issued under authority of the Clean Water Act (sections 301, 304, 306, 307, 308, 402, and 501). The current effluent guidelines are applicable to many PCWP facilities and are found at 40 CFR part 429. Effluent limitations for a number of the subcategories covered in 40 CFR part 429 prohibit discharge of process wastewater pollutants into navigable waters of the United States. Industry has requested that we propose to amend the effluent guidelines in 40 CFR part 429, specifically the definition of process wastewaters at § 429.11(c), which affects all subparts requiring no discharge of process wastewater pollutants, to allow discharge of certain wastewaters, specifically wastewaters associated with APCD operation and maintenance, by excluding them from the applicability of these subparts. Industry has asserted that effluent limitations for these wastewaters could be developed by permit writers on a case-by-case basis based upon best professional judgment. Industry comments are in Docket number A–98–44.

At this time, we are not proposing to amend the effluent guidelines because many PCWP facilities are disposing of these wastewaters in compliance with the existing regulations, for example, by recycling them in the process or discharging them to a publicly owned treatment works. We lack comprehensive information to support the industry's suggestion that simultaneous compliance with the proposed rule and the existing effluent guidelines would not be possible.

In order to consider industry's request, we would need to obtain additional and more-detailed information than currently available that: (1) Quantifies the volumes and pollutants present in the wastewaters generated by APCD used to comply with the proposed rule so that comparisons can be made with wastewaters regulated by the existing effluent guidelines, and (2) documents the industry's wastewater treatment and disposal practices to support the assertions that any additional APCD wastewaters that may not have been considered in the original rulemaking for part 429 are not or could not be disposed of in a manner compliant with the existing effluent guidelines. We are requesting comment and additional detailed information and supporting data from interested parties on whether 40 CFR part 429, subparts B, C, D, F, K, L, M, and O, should be amended by revising the applicability of any or all of these subparts requiring no discharge of process wastewater pollutants (*i.e.*, by changing the definition of process wastewater at § 429.11(c)), such that the effluent guidelines would not apply to wastewater produced by operation or maintenance of APCD that are used to comply with the proposed rule. Any new information and data will be considered and, if appropriate, could serve as the basis for amending the definition of process wastewater found at 40 CFR § 429.11(c) at the time the final PCWP MACT rule is promulgated. (The EPA would consider employing a direct final rule to promulgate any such amendment if we receive convincing supporting information as described above and do not receive significant adverse comment on this issue in response to today's proposed rule. If we do receive adverse comments, we would need to propose the amendment prior to promulgation.) If appropriate and promulgated, this amendment, or a similar amendment designed to achieve the same result, would allow for the discharge of such APCD wastewater that may result from compliance with the PCWP MACT rule. We are considering an amendment to 40 CFR § 429.11(c), to read as follows (amending language in italics): The term ''process wastewater'' specifically excludes non-contact cooling water, material storage yard runoff (either raw material or processed wood storage), *boiler blowdown, and wastewater from air pollution control devices installed to comply with the proposed national emissions standards for hazardous air pollutants (NESHAP) for plywood and composite wood products (PCWP) facilities (40 CFR § 63.22).* For the dry process hardboard, veneer, finishing, particleboard, and sawmills and planing mills subcategories, fire control water is excluded from the definition.

The actual discharge allowances would be determined initially on a case-by-case basis by NPDES permitting authorities using their best professional judgment (*See* 40 CFR § 125.3). (In this regard, the industry has suggested that discharge limitations could be expressed in the form of allowances for the discharges attributable to the proposed PCWP MACT rule.) If we promulgate an amendment to part 429 of the type described above at the time we promulgate the final PCWP MACT rule, we will consider, through the CWA section 304(m) planning process, whether it is appropriate to revise part 429 at a later time in order to establish category-or subcategory-specific effluent limitations and standards for such APCD wastewater discharges.

VI. Administrative Requirements

A. Executive Order 12866, Regulatory Planning and Review

Under Executive Order 12866 (58 FR 51735, October 4, 1993), the 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 proposed rule is a ''significant regulatory action'' because the annual costs of complying with the rule as proposed are expected to exceed $100 million. Consequently, this action was submitted to OMB for review under Executive Order 12866. Any written comments from OMB and written EPA responses are available in the docket (see **ADDRESSES** section of this preamble).

We did not estimate health and welfare benefits associated with changes in emissions of HAP, CO, VOC, PM, NO_X and SO2 for this proposed rule.

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 the Agency 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 the agency'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, EPA must include a certification from the Agency's Federalism Official stating that EPA has met the requirements of Executive Order 13132 in a meaningful and timely manner.

This proposed 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. The proposed rule would not impose directly enforceable requirements on States, nor would it preempt them from adopting their own more stringent programs to control emissions from PCWP facilities. Moreover, States are not required under the CAA to take delegation of Federal NESHAP and bear their implementation costs, although States are encouraged and often choose to do so. Thus, the requirements of section 6 of the Executive Order do not apply to this proposed rule. Although section 6 of Executive Order 13132 does not apply to this proposed rule, EPA is providing State and local officials an opportunity to comment on this proposed rule. A summary of the concerns raised during the notice and comment process and EPA's response to those concerns will be provided in the final rulemaking notice.

C. Executive Order 13175, Consultation and Coordination With Indian Tribal Governments

Executive Order 13175, entitled ''Consultation and Coordination with Indian Tribal Governments'' (65 FR 67249, November 6, 2000), requires EPA to develop an accountable process to ensure ''meaningful and timely input by tribal officials in the development of regulatory policies that have tribal implications.'' ''Policies that have tribal implications'' is defined in the Executive Order to include regulations that have ''substantial direct effects on one or more Indian tribes, on the relationship between the Federal government and the Indian tribes, or on the distribution of power and responsibilities between the Federal government and Indian tribes.''

This proposed rule does not have tribal implications. It will not have substantial direct effects on tribal governments, on the relationship between the Federal government and Indian tribes, or on the distribution of power and responsibilities between the Federal government and Indian tribes, as specified in Executive Order 13175. No affected plant sites are owned or operated by Indian tribal governments. Thus, Executive Order 13175 does not apply to this rule. In the spirit of Executive Order 13175, and consistent with EPA policy to promote communications between EPA and tribal governments, EPA specifically solicits additional comment on this proposed rule from tribal officials.

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, the 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 considered by the Agency.

The Agency does not have reason to believe the environmental health or safety risks associated with the emissions addressed by this proposed rule present a disproportionate risk to children. The public is invited to submit or identify peer-reviewed studies and data, of which the Agency may not be aware, that assess the results of early life exposure to the pollutants addressed by this proposed rule and suggest a disproportionate impact.

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, the 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 the 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 the 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 the 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 regulatory proposals with significant Federal intergovernmental mandates, and informing, educating, and advising small governments on compliance with the regulatory requirements.

Since this rule is estimated to impose costs to the private sector in excess of $100 million per year, it is considered a significant regulatory action. Therefore, we have prepared the following statement with respect to sections 202 through 205 of the UMRA.

1. Statutory Authority

This proposed rule establishes control requirements for existing and new PCWP sources pursuant to section 112 of the CAA. The CAA requires NESHAP to reflect the maximum degree of reduction in emissions of HAP that is achievable. This is commonly referred to as MACT. Section 112(d)(3) further defines a minimum level of control that can be considered for MACT standards, commonly referred to as the MACT floor—which for new sources, is the level of control achieved by the best controlled similar source, and for existing sources is the level of control achieved by the average of the best performing 12 percent of sources in the category (or the best-performing five sources for categories with fewer than 30 sources).

Control technologies and their performance are discussed in the background information document for this proposal (Docket number A–98–44). We considered emission reductions, costs, environmental impacts, and energy impacts in selecting the proposed MACT standards. The proposed standards achieve sizable reductions in HAP and other pollutant emissions.

2. Social Costs and Benefits

The regulatory analyses prepared for this proposed rule, including our assessment of costs and benefits, is detailed in the ''Regulatory Impact Analysis for the Proposed Plywood and Composite Wood Products NESHAP'' in Docket A–98–44. Based on estimated compliance costs associated with this proposed rule and the predicted change in prices and production in the affected industries, the estimated social costs of this proposed rule are $134.2 million (1999 dollars). The social costs of this proposed rule are the costs imposed upon society as a result of efforts toward compliance, and include the effects upon consumers of products made by the affected facilities.

It is estimated that 3 years after implementation of the requirements as proposed, HAP would be reduced by 9,700 Mg/yr (11,000 tons/yr) due to reductions in formaldehyde, acetaldehyde, acrolein, methanol and other HAP from PCWP sources. Formaldehyde and acetaldehyde have been classified as ''probable human carcinogens.'' Acrolein, methanol and the other HAP are not considered carcinogenic, but produce several other toxic effects. If implemented, the requirements of this proposed rule would also achieve reductions of 10,000 Mg/yr (11,000 tons/yr) of CO, approximately 11,000 Mg/yr (13,000 tons/yr) of PM_{10}, and approximately 25,000 Mg/yr (27,000 tons/yr) of VOC (approximated as THC). Exposure to CO can effect the cardiovascular system and the central nervous system. The PM emissions can result in fatalities and many respiratory problems (such as asthma or bronchitis).

At the present time, we cannot provide a monetary estimate for the benefits associated with the reductions in HAP and CO. For VOC, we are not able to estimate the benefits associated with the reductions due to a lack of available air quality modeling to estimate the change in ozone concentrations that occur with VOC emissions reductions. We estimated the benefits associated with health effects of PM_{10} but were unable to quantify all categories of benefits (particularly those associated with ecosystem and environmental effects). The estimated benefits include the effects of potential additional NO_X emissions that result from additional combustion controls. The estimates of the potential additional NO_X emissions are presented in Section IV of this preamble. Nitrogen oxides are transformed into PM_{10} in the atmosphere, and these emissions hence offset the benefits from the PM_{10} reductions mentioned above. Total monetized benefits for the PME_{10} and NO_X emissions changes using our preferred approach to value benefits is $8.5 million (1999 dollars), and $5.3 million (1999 dollars) using an alternative age-adjusted approach recommended by others. The two approaches to valuing benefits is discussed in more detail in this preamble in the Executive Order 12866 section and in the Regulatory Impact Analysis. The monetized benefits should be considered along with the many categories of benefits that we are unable to place a dollar value on to consider the total benefits of this proposed rule.

3. Regulatory Alternatives Considered

The proposed standards reflect the MACT floor, the least stringent regulatory alternative we may propose. In addition, we are proposing the least burdensome and most flexible monitoring, reporting, and recordkeeping requirements that we believe will assure compliance with the compliance options and requirements of this proposed rule. Therefore, the proposed regulatory alternative reflects the least costly, most cost-effective, and least burdensome regulatory option that achieves the objectives of the proposed rule.

4. Effects on the National Economy

The economic impact analysis for this proposed rule estimates effects upon employment and foreign trade for the industries affected by this proposed rule. The total reduction in employment for the affected industries is 0.3 percent of the current employment level (or 225 employees). This estimate includes the increase in employment among firms in these industries that do not incur any cost associated with the proposed rule. There is also minimal change in the foreign trade behavior for the firms in these industries since the level of imports of affected composite wood products only increases by less than 0.1 percent.

5. Consultation With Government Officials

Throughout the development of this proposed rule, we interacted with representatives of affected State and local officials to inform them of the progress of our rulemaking efforts. We also consulted with representatives from other entities affected by the proposed rule, such as the American Forest & Paper Association, National Council for Air and Stream Improvement, APA—The Engineered Wood Association, Composite Panel Association, American Hardboard Association, Hardwood Plywood and Veneer Association, and representatives from affected companies. We will continue to interact with government officials and other entities during the public comment period for this proposed rule and throughout development of the promulgated PCWP standards.

The number of small entities that are significantly affected by today's proposed PCWP standards is not expected to be substantial. This proposed rule contains no regulatory requirements that might significantly affect small governments because no PCWP facilities are owned by such governments. The full analysis of potential regulatory impacts on small organizations, small governments, and small businesses is included in the economic impact analysis in the docket and is listed at the beginning of today's action under **SUPPLEMENTARY INFORMATION**. Because the number of small entities that are likely to experience significant economic impacts as a result of today's proposed standards is not expected to be substantial, no plan to inform and advise small governments is required under section 203 of the UMRA.

F. Regulatory Flexibility Act (RFA), as Amended by the Small Business Regulatory Enforcement Fairness Act (SBREFA) of 1996, 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 ranging from 500 to 750 employees; (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, we certify that this action will not have a significant impact on a substantial number of small entities. In accordance with the RFA, we conducted an assessment of the proposed standards on small businesses in the industries affected by the proposed rule. Based on SBA size definitions for the affected industries and reported sales and employment data, the Agency identified 17 of the 52 companies, or 32 percent, owning affected facilities as small businesses. Although small businesses represent 32 percent of the companies within the source category, they are expected to incur only 8 percent of the total industry compliance costs of $142 million. There are only three small firms with compliance costs equal to or greater than 3 percent of their sales. In addition, there are seven small firms with cost-to-sales ratios between 1 and 3 percent.

We performed an economic impact analysis to estimate the changes in product price and production quantities for the firms affected by this proposed rule. The analysis shows that of the 32 facilities owned by affected small firms, only one would be expected to shut down rather than incur the cost of compliance with the proposed rule. Although any facility closure is cause for concern, it should be noted that the baseline economic condition of the facilities predicted to close affects the closure estimate provided by the economic model. Facilities which are already experiencing adverse economic conditions for reasons unconnected to this proposed rule are more vulnerable to the impact of any new costs than those that are not.

The analysis indicates that the proposed rule should not generate a significant impact on a substantial number of small entities for the PCWP manufacturing source category for the following reasons. First, of the ten small firms that have compliance costs greater than 1 percent of sales, only three have compliance costs of greater than 3 percent of sales. Second, the results of the economic impact analysis show that only one facility owned by a small firm out of the 32 facilities owned by affected small firms may close due to the implementation of this proposed rule. The facility that may close rather than incur the cost of compliance appears to have low profitability levels currently. It also should be noted that the estimate of compliance costs for this facility is likely to be an overestimate due to the lack of facility-specific data available to assign a precise control cost in this case. In sum, the analysis supports today's certification under the RFA because, while a few small firms may experience significant impacts, there will not be a substantial number incurring such a burden.

Although this proposed rule will not have a significant economic impact on a substantial number of small entities, we minimized the impact of this proposed rule on small entities in several ways. First, we considered subcategorization based on production and throughput level to determine whether smaller process units would have a different MACT floor than larger process units. Our data show that subcategorization based on size would not result in a less stringent level of control for the smaller process units. Second, we chose to set the control requirements at the MACT floor control level and not at a control level more stringent. Thus, the control level specified in the proposed PCWP rule is the least stringent allowed by the CAA. Third, the proposed rule contains multiple compliance options to provide facilities with the flexibility to comply in the least costly manner while maintaining a workable and enforceable rule. The compliance options include emissions averaging and production-based compliance options which allow inherently low-emitting process units to comply without installing add-on control devices and facilities to use innovative technology and pollution prevention methods. Fourth, the proposed rule includes multiple test method options for measuring methanol, formaldehyde, and total HAP. In addition, we worked with various trade associations during the development of the proposed rule. We continue to be interested in the potential impacts of the proposed rule on small entities and welcome 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 OMB under the Paperwork Reduction Act, 44 U.S.C. 3501 *et seq.* The EPA has prepared an Information Collection Request (ICR) document (1984.01), and you may obtain a copy from Susan Auby by mail at Office of Environmental Information, Collection Strategies Division (2822T), U.S. EPA, 1200 Pennsylvania Avenue NW., Washington, DC 20460, by e-mail at *auby.susan@epa.gov,* or by calling (202) 566–1672. 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 the EPA pursuant to the recordkeeping and reporting requirements for which a claim of confidentiality is made is safeguarded according to Agency policies set forth in 40 CFR part 2, subpart B.

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. The recordkeeping requirements require only the specific information needed to determine compliance.

The annual monitoring, reporting, and recordkeeping burden for this collection (averaged over the first 3 years after the effective date of the rule) is estimated to be 4,658 labor hours per year, at a total annual cost of $207,322. This estimate includes notifications that facilities are subject to the rule; notifications of performance tests; notifications of compliance status, including the results of performance tests and other initial compliance demonstrations that do not include performance tests; startup, shutdown, and malfunction reports; semiannual compliance reports; and recordkeeping. In addition to the requirements of 40 CFR part 63, subpart A, facilities that wish to implement emissions averaging provisions must submit an emissions averaging plan. Facilities may also submit a request for a routine control device maintenance exemption to justify the need for routine maintenance on the control device and to show how the facilities plan to minimize emissions to the greatest extent possible during the maintenance. Total capital/startup costs associated with the testing, monitoring, reporting, and recordkeeping requirements over the 3-year period of the ICR are estimated to be $122,040, with operation and maintenance costs of $3,957.

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 Ave., 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 January 9, 2003, a comment to OMB is best assured of having its full effect if OMB receives it by February 10, 2003. 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 (NTTAA) of 1995 (Pub. L. 104–113) (15 U.S.C. 272 note) directs us to use voluntary consensus standards in our regulatory and procurement activities unless to do so would be inconsistent with applicable law or otherwise impractical. Voluntary consensus standards are technical standards (*e.g.*, materials specifications, test methods, sampling procedures, business practices) developed or adopted by one or more voluntary consensus bodies. The NTTAA directs us to provide Congress, through annual reports to the OMB, with explanations when we do not use available and applicable voluntary consensus standards.

In this proposed rule, we are proposing requirements to use EPA Methods 1, 1a, 2, 2a, 2c, 2d, 2f, 2g, 3, 3a, 3b, 4, 18, 25a, 204, 204(a–f), 308, 316, 320, and SW 846 0011, and the NCASI methods previously discussed in this preamble. Consistent with the NTTAA, we conducted searches to identify voluntary consensus standards that could be used in addition to the EPA methods.

No voluntary consensus standards were identified as applicable to this proposed rule. For EPA Methods 1a, 2a, 2d, 2f, 2g, 204, 204a–f, 308, 316, and SW 846 0011, no applicable voluntary consensus standards were found. The search and review results are documented in Docket A–98–44. For EPA Methods 1, 2, 2c, 3, 3a, 3b, 4, 18, and 25a, we identified voluntary consensus standards that would not be practical due to lack of equivalency, detail, and/or quality assurance/quality control requirements. Specific reasons why the voluntary consensus standards are not practical are detailed in Docket A–98–44. For EPA Methods 2, 3a, 25a, and 320, we identified voluntary consensus standards that are under development or under EPA review. These voluntary consensus standards are listed in Docket A–98–44. Therefore, we do not propose to use any voluntary consensus standards.

We are requesting comment on compliance demonstration requirements in this proposed rule and specifically invite you to identify potentially-applicable voluntary consensus standards. You should explain why this regulation should adopt a particular voluntary consensus standard in lieu of or in addition to EPA's methods and/or the NCASI methods. Emission test methods and performance specifications 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 method other than Method 301, 40 CFR part 63, appendix A, was used).

Table 4 of proposed subpart DDDD lists the testing methods and performance standards included in the proposed regulations. Several of the methods have been used by States and industry for more than 10 years. Nevertheless, under § 63.7(e)(2)(ii) and (f), the proposal also allows any State or source to apply to EPA for permission to use an alternative method in place of any of the EPA testing methods or performance standards listed in Table 4 of proposed subpart DDDD.

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

Executive Order 13211, ''Actions Concerning Regulations That Significantly Affect Energy Supply, Distribution, or Use'' (66 FR 28355, May 22, 2001), provides that agencies shall prepare and submit to the Administrator of the Office of Information and Regulatory Affairs, Office of Management and Budget, a Statement of Energy Effects for certain actions identified as ''significant energy actions.'' Section 4(b) of Executive Order 13211 defines ''significant energy actions'' as ''any action by an agency (normally published in the **Federal Register**) that promulgates or is expected to lead to the promulgation of a final rule or regulation, including notices of inquiry, advance notices of proposed rulemaking, and notices of proposed rulemaking: (1) (i) That is a significant regulatory action under Executive Order 12866 or any successor order, and (ii) is likely to have a significant adverse effect on the supply, distribution, or use of energy; or (2) that is designated by the Administrator of the Office of Information and Regulatory Affairs as a significant energy action.'' The proposed rule is not a ''significant energy action'' because it is not likely to have a significant adverse effect on the supply, distribution, or use of energy. The basis for the determination is as follows.

This proposed rule affects manufacturers in the softwood veneer and plywood (NAICS 321212), reconstituted wood products (NAICS 321219), and engineered wood products (NAICS 321213) industries. There is no crude oil, fuel, or coal production from these industries. Hence, there is no direct effect on such energy production related to implementation of this proposal. In fact, as previously mentioned in this preamble, there will be an increase in energy consumption, and hence an increase in energy production, resulting from installation of RTO and WESP likely needed for sources to meet the requirements of the proposed rule. This increase in energy consumption is equal to 718 million kilowatt-hours/year (kWh/yr) for electricity and 45 million cubic meters/year (m^3/yr) for natural gas. These increases are equivalent to 0.012 percent of 1998 U.S. electricity production and 0.000001 percent of 1998 U.S. natural gas production.[10] It should be noted, however, that the reduction in demand for product output from these industries may lead to a negative indirect effect on such energy production, for the output reduction will lead to less energy use by these industries and thus some reduction in overall energy production.

For fuel production, the result of this indirect effect from reduced product output is a reduction of only about 1 barrel per day nationwide, or a 0.00001 percent reduction nationwide based on 1998 U.S. fuel production data.[11] For coal production, the resulting indirect effect from reduced product output is a reduction of only 2,000 tons per year nationwide, or only a 0.00001 percent reduction nationwide based on 1998 U.S. coal production data. For electricity production, the resulting indirect effect from reduced product output is a reduction of 42.8 million kWh/yr, or only a 0.00013 percent reduction nationwide based on 1998 U.S. electricity production data. Given that the estimated price increase for product output from any of the affected industries is no more than 2.5 percent, there should be no price increase for any energy type by more than this amount. The cost of energy distribution should not be affected by this proposal at all since the rule does not affect energy distribution facilities. Finally, with changes in net exports being a minimal percentage of domestic output (0.01 percent) from the affected industries, there will be only a negligible change in international trade, and hence in dependence on foreign energy supplies. No other adverse outcomes are expected to occur with regards to energy supplies.Thus, the net effect of this proposed rule on energy production is an increase in electricity output of 0.012 percent compared to 1998 output data, and a negligible change in output of other energy types. All of the results presented above account for the passthrough of costs to consumers, as well as the cost impact to producers. These results also account for how energy use is related to product output for the affected industries.[12] For more information on the estimated energy effects, please refer to the background memo [13] to these calculations and the economic impact analysis for the proposed rule. The background memo and economic impact analysis are available in the public docket.

Therefore, we conclude that the rule if implemented as proposed is not likely to have a significant adverse effect on the supply, distribution, or use of energy.

List of Subjects in 40 CFR Part 63

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

Dated: November 26, 2002.

Christine Todd Whitman,

Administrator.

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

PART 63—[AMENDED]

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

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

Subpart A—[Amended]

2. Section 63.14 is amended by revising paragraph (f) to read as follows:

§ 63.14 Incorporations by reference.

* * * * *

(f) The following material is available from the National Council of the Paper Industry for Air and Stream Improvement, Inc. (NCASI), Methods Manual, P.O. Box 133318, Research Triangle Park, NC 27709–3318, (919) 558–1987, or at *http://www.ncasi.org.*

(1) NCASI Method DI/MEOH–94.02, Methanol in Process Liquids GC/FID (Gas Chromatography/Flame Ionization Detection), August 1998, IBR approved for § 63.457(c)(3)(ii).

(2) NCASI Method CI/WP–98.01, Chilled Impinger Method For Use At Wood Products Mills to Measure Formaldehyde, Methanol, and Phenol, 1998, IBR approved for proposed § 63.2262.

(3) NCASI Method IM/CAN/WP–99.01, Impinger/Canister Source Sampling Method For Speciated HAPs at Wood Products Facilities, 1999, IBR approved for proposed § 63.2262.

* * * * *

3. Part 63 is amended by adding subpart DDDD to read as follows:

Subpart DDDD—National Emission Standards for Hazardous Air Pollutants: Plywood and Composite Wood Products

[10] U.S. Department of Energy, Energy Information Administration. Annual Energy Review, End-Use Energy Consumption for 1998. Located on the Internet at *http://www.eia.doe.gov/emeu/aer/enduse.html.*

[11] Ibid.

[12] U.S. Department of Energy, Energy Information Administration. 1998 Manufacturing Energy Consumption Survey. Located on the Internet at *http://www.eia.doe.gov/emeu/mecs/mecs98/datatables/contents.html.*

[13] U.S. Environmental Protection Agency. ''Energy Impact Analysis of the Proposed Plywood and Composite Wood Products NESHAP.'' July 30, 2001.

What This Subpart Covers

§ 63.2230 What is the purpose of this subpart?

This subpart establishes national compliance options, operating requirements, and work practice requirements for hazardous air pollutants (HAP) emitted from plywood and composite wood products manufacturing facilities. This subpart also establishes requirements to demonstrate initial and continuous compliance with the compliance options, operating requirements, and work practice requirements.

§ 63.2231 Does this subpart apply to me?

This subpart applies to you if you meet the criteria in paragraphs (a) and (b) of this section.

(a) You own or operate a plywood and composite wood products (PCWP) manufacturing facility. A PCWP manufacturing facility is a plant site that manufactures plywood and/or composite wood products by bonding wood material (fibers, particles, strands, veneers, etc.) or agricultural fiber, generally with resin under heat and pressure, to form a structural panel or engineered wood product. Plywood and composite wood products manufacturing facilities also include facilities that manufacture dry veneer and lumber kilns located at any facility. Plywood and composite wood products include (but are not limited to) plywood, veneer, particleboard, oriented strandboard, hardboard, fiberboard, medium density fiberboard, laminated strand lumber, laminated veneer lumber, wood I-joists, kiln-dried lumber, and glue-laminated beams.

(b) The PCWP manufacturing facility is located at a major source of HAP emissions. A major source of HAP emissions is any stationary source or group of stationary sources 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.

§ 63.2232 What parts of my plant does this subpart cover?

(a) This rule applies to each new, reconstructed, or existing affected source at a PCWP manufacturing facility.

(b) The affected source is the collection of dryers, blenders, formers, presses, board coolers, and other process units associated with the manufacturing of plywood and composite wood products at a plant site. The affected source includes, but is not limited to, green end operations, drying operations, blending and forming operations, pressing and board cooling operations, and miscellaneous finishing operations (such as sanding, sawing, patching, edge sealing, and other finishing operations not subject to other NESHAP). The affected source also includes onsite storage of raw materials used in the manufacture of plywood and/or composite wood products, such as resins; onsite wastewater treatment operations specifically associated with plywood and composite wood products manufacturing; and miscellaneous coating operations (defined in § 63.2292). The affected source includes lumber kilns at PCWP manufacturing facilities and at any other kind of facility.

(c) An affected source is a new affected source if you commenced construction of the affected source after January 9, 2003 and you meet the applicability criteria at the time you commenced 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.

§ 63.2233 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 paragraph (a)(1) or (2) of this section, whichever is applicable.

(1) If the initial startup of your affected source is before the effective date of the subpart, then you must comply with the compliance options, operating requirements, and work practice requirements for new and reconstructed sources in this subpart no later than the effective date of the subpart.

(2) If the initial startup of your affected source is after the effective date of the subpart, then you must comply with the compliance options, operating requirements, and work practice requirements for new and reconstructed sources in this subpart upon initial startup of your affected source.

(b) If you have an existing affected source, you must comply with the compliance options, operating requirements, and work practice requirements for existing sources no later than the date 3 years after the effective date of the subpart.

(c) If you have an area source that increases its emissions or its potential to emit such that it becomes a major source of HAP, you must be in compliance with this subpart by the date 3 years after the effective date of the subpart or upon initial startup of your affected source as a major source, whichever is later.

(d) You must meet the notification requirements according to the schedule in § 63.2280 and according to 40 CFR part 63, subpart A. Some of the notifications must be submitted before you are required to comply with the compliance options, operating requirements, and work practice requirements in this subpart.

Compliance Options, Operating Requirements, and Work Practice Requirements

§ 63.2240 What are the compliance options and operating requirements and how must I meet them?

You must meet the compliance options and operating requirements described in Tables 1A, 1B, and 2 of this subpart and in paragraph (c) of this section by using one or more of the compliance options listed in paragraphs (a), (b), and (c) of this section. The process units subject to the compliance options are listed in Tables 1A and 1B (the same process units are listed in both tables) and are defined in § 63.2292. You need only to meet one of the compliance options outlined in paragraphs (a) through (c) of this section for each process unit. You cannot use multiple compliance options for a single process unit. (For example, you cannot use a production-based compliance option for one vent of a veneer dryer and an add-on control system compliance option for another vent on the same veneer dryer. You must use either the production-based compliance option or an add-on control system compliance option for the entire dryer.)

(a) *Production-based compliance options.* Meet the production-based total HAP compliance options in Table 1A of this subpart and the applicable operating requirements in Table 2 of this subpart. You may not use an add-on control system to meet the production-based compliance options.

(b) *Compliance options for add-on control systems.* Use an emissions control system and demonstrate that the resulting emissions meet the compliance options and operating requirements in Tables 1B and 2 of this subpart. If you own or operate a reconstituted wood product press at a new or existing affected source or a reconstituted wood product board cooler at a new affected source, and you choose to comply with one of the concentration-based compliance options for a control system outlet (presented as option numbers 2, 4, and 6 in Table 1B of this subpart), you must have a capture device that either meets the EPA Method 204 criteria for a permanent total enclosure (PTE) or achieves a capture efficiency of greater than or equal to 95 percent.

(c) *Emissions averaging compliance option (for existing sources only).* Using the procedures in paragraphs (c)(1) through (3) of this section, demonstrate that emissions included in the emissions average meet the compliance options and operating requirements. New sources may not use emissions averaging to comply with this subpart.

(1) *Calculation of required and actual mass removal.* Limit emissions of total HAP, as defined in § 63.2292, to include acetaldehyde, acrolein, formaldehyde, methanol, phenol, and propionaldehyde from your affected source to the standard specified by Equations 1, 2, and 3 of this section.

$$RMR = 0.90 \times \left(\sum_{i=1}^{n} UCEP_i \times OH_i \right) \qquad \text{(Eq. 1)}$$

$$AMR = \left(\sum_{i=1}^{n} CD_i \times OCEP_i \times OH_i \right) \qquad \text{(Eq. 2)}$$

$$AMR \geq RMR \qquad \text{(Eq. 3)}$$

Where:

RMR = required mass removal of total HAP from all process units generating debits (*i.e.*, all process units that are subject to the compliance options in Tables 1A and 1B of this subpart and that are either uncontrolled or under-controlled), pounds per semiannual period

AMR = actual mass removal of total HAP from all process units generating credits (*i.e.*, all process units that are controlled as part of the Emissions Averaging Plan), pounds per semiannual period

$UCEP_i$ = mass of total HAP from an uncontrolled or under-controlled process unit (i) that generates debits, pounds per hour

OH_i = number of hours a process unit (i) is operated during the semiannual period, hours per 6 month period

CD_i = control system efficiency for the emission point (i) for total HAP, expressed as a fraction, and not to exceed 90 percent, unitless

$OCEP_i$ = mass of total HAP from a process unit (i) that generates credits, pounds per hour

0.90 = required control system efficiency of 90 percent multiplied, unitless

(2) *Requirements for debits and credits.* You must calculate debits and credits as specified in paragraphs (c)(2)(i) through (vi) of this section.

(i) You must limit process units in the emissions average to those process units located at the existing affected source, as defined in § 63.2292.

(ii) You cannot use nonoperating process units to generate emissions averaging credits. You cannot use process units that are shutdown to generate emissions averaging debits or credits.

(iii) You may not include in your emissions average process units controlled to comply with a State, Tribal, or Federal rule other than this subpart, except when the control system installation and process unit inclusion in the emissions average both pre-date the effective date of the State, Tribal, or Federal rule.

(iv) You must use actual measurements of total HAP emissions from process units to calculate your required mass removal (RMR) and actual mass removal (AMR). The total HAP measurements must be obtained according to § 63.2262(b) through (d), (g), and (h), using the methods specified in Table 4 of this subpart.

(v) Your initial demonstration that the credit-generating process units will be capable of generating enough credits to offset the debits from the debit-generating process units must be made under representative operating conditions. After the compliance date, you must use actual operating data for all debit and credit calculations.

(vi) Do not include emissions from the following time periods in your emissions averaging calculations:

(A) Emissions during periods of startup, shutdown, and malfunction as described in the startup, shutdown, and malfunction plan.

(B) Emissions during periods of monitoring malfunctions, associated repairs, and required quality assurance or control activities or during periods of control device maintenance covered in your routine control device maintenance exemption. No credits may be assigned to credit-generating process units, and maximum debits must be assigned to debit-generating process units during these periods.

(3) *Operating requirements.* You must meet the operating requirements in Table 2 of this subpart for each process unit or control device used in calculation of emissions averaging credits.

§ 63.2241 What are the work practice requirements and how must I meet them?

(a) You must meet each work practice requirement in Table 3 of this subpart that applies to you.

(b) As provided in § 63.6(g), we, the EPA, may choose to grant you permission to use an alternative to the work practice requirements in this section.

General Compliance Requirements

§ 63.2250 What are the requirements for periods of startup, shutdown, and malfunction?

(a) You must be in compliance with the compliance options, operating requirements, and the work practice requirements in this subpart at all times, except during periods of startup, shutdown, and malfunction; prior to initial startup; and during the routine control device maintenance exemption specified in § 63.2251.

(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 plan (SSMP) according to the provisions in § 63.6(e)(3).

(d) The compliance options, operating requirements, and work practice requirements do not apply during times when the process unit(s) subject to the compliance options, operating requirements, and work practice requirements are not operating, or during scheduled startup and shutdown periods, and during malfunctions. These startup and shutdown periods must not exceed the minimum amount of time necessary for these events, and during these events, you must minimize emissions to the greatest extent possible.

(e) You must, at the beginning of each semiannual compliance period, record your control device maintenance schedule for that period. To the extent practical, startup and shutdown of emission control systems must be scheduled during times when process equipment is also shutdown for routine maintenance.

(f) If you use a catalytic oxidizer, you must maintain and operate the catalyst according to the manufacturer's specifications.

§ 63.2251 What are the requirements for the routine control device maintenance exemption?

(a) You may request a routine control device maintenance exemption from the Administrator. Your request must justify the need for the routine maintenance on the control device and the time required to accomplish the maintenance activities, describe the maintenance activities and the frequency of the maintenance activities, explain why the maintenance cannot be accomplished during process shutdowns, describe how you plan to minimize emissions to the greatest extent possible during the maintenance, and provide any other documentation required by the Administrator.

(b) The routine control device maintenance exemption must not exceed the percentages of process unit operating uptime in paragraphs (b)(1) and (2) of this section.

(1) If the control device is used to control a green rotary dryer, tube dryer, strand dryer, or pressurized refiner, then the routine control device maintenance exemption must not exceed 3 percent of annual operating uptime for each process unit controlled.

(2) If the control device is used to control a softwood veneer dryer, reconstituted wood product press, reconstituted wood product board cooler, hardboard oven, press predryer, or fiberboard mat dryer, then the routine control device maintenance exemption must not exceed 0.5 percent of annual operating uptime for each process unit controlled.

(3) If the control device is used to control a combination of equipment listed in both paragraphs (b)(1) and (2) of this section, such as a tube dryer and a reconstituted wood product press, then the routine control device maintenance exemption must not exceed 3 percent of annual operating uptime for each process unit controlled.

(c) The request for the routine control device maintenance exemption, if approved by the Administrator, must be incorporated by reference in and attached to the affected source's title V permit.

(d) The compliance options and operating requirements do not apply during times when control device maintenance covered under your approved routine control device maintenance exemption is performed. You must minimize emissions to the greatest extent possible during these routine control device maintenance periods.

(e) You must, at the beginning of each semiannual compliance period, record your control device maintenance schedule for that period. To the extent practical, startup and shutdown of emission control systems must be scheduled during times when process equipment is also shutdown.

Initial Compliance Requirements

§ 63.2260 How do I demonstrate initial compliance with the compliance options, operating requirements, and work practice requirements?

(a) To demonstrate initial compliance with the compliance options and operating requirements, you must conduct performance tests and establish each site-specific operating requirement in Table 2 of this subpart according to the requirements in § 63.2262 and Table 4 of this subpart. Combustion units with heat input capacity of greater than or equal to 44 megawatts that accept process exhausts into the flame zone are exempt from the initial performance testing and operating requirements for thermal oxidizers.

(b) You must demonstrate initial compliance with each compliance option, operating requirement, and work practice requirement that applies to you according to Tables 5 and 6 of this subpart and according to §§ 63.2260 through 63.2268 of this subpart.

(c) You must submit the Notification of Compliance Status containing the results of the initial compliance demonstration according to the requirements in § 63.2280(d).

§ 63.2261 By what date must I conduct performance tests or other initial compliance demonstrations?

(a) You must conduct performance tests upon initial startup or no later than 180 calendar days after the compliance date that is specified for your source in § 63.2233 and according to § 63.7(a)(2), whichever is later.

(b) You must conduct initial compliance demonstrations that do not require performance tests upon initial startup or no later than 30 calendar days after the compliance date that is specified for your source in § 63.2233, whichever is later.

§ 63.2262 How do I conduct performance tests and establish operating requirements?

(a) You must conduct each performance test according to the requirements in § 63.7(e)(1), the requirements in paragraphs (b) through (o) of this section, and according to the methods specified in Table 4 of this subpart.

(b) *Periods when performance tests must be conducted.*

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

(2) You must test under representative operating conditions as defined in § 63.2292. You must describe representative operating conditions in your performance test report for the process and control systems and explain why they are representative.

(c) *Number of test runs.* 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 except for: testing of a temporary total enclosure (TTE) conducted using Methods 204A through 204F which require three separate test runs of at least 3 hours each; and testing of an enclosure conducted using the alternative tracer gas method in appendix A to this subpart which requires a minimum of three separate runs of at least 20 minutes each.

(d) *Location of sampling sites.* Sampling sites must be located at the inlet (if emission reduction testing or documentation of inlet methanol or formaldehyde concentration is required) and outlet of the control device and prior to any releases to the atmosphere.

(e) *Collection of monitoring data.* You must collect operating parameter monitoring system or continuous emissions monitoring system (CEMS) data at least every 15 minutes during the entire initial performance test and determine the parameter or concentration value for the operating requirement during the performance test using the methods specified in paragraphs (k) through (o) of this section.

(f) *Collection of production data.* To comply with any of the production-based compliance options, you must measure and record the process unit throughput during each test.

(g) *Nondetect data.* When determining total HAP, formaldehyde, methanol, or THC emission rates, all nondetect data, as defined in § 63.2292, must be treated as one-half of the method detection limit.

(h) *Calculation of percent reduction across a control system.* When determining the control system efficiency for any control system included in your emissions averaging plan (not to exceed 90 percent) and when complying with any of the compliance options based on percent reduction across a control system in Table 1B of this subpart, as part of the performance test, you must calculate the percent reduction using Equation 1 of this section:

$$PR = CE \times \frac{ER_{in} - ER_{out}}{ER_{in}}(100) \qquad \text{(Eq. 1)}$$

Where:

PR = percent reduction, percent

CE = capture efficiency, percent (determined for reconstituted wood product presses and board coolers as required in Table 4 of this subpart)

ER_{in} = emission rate of total HAP (calculated as the sum of the emission rates of acetaldehyde, acrolein, formaldehyde, methanol, phenol, and propionaldehyde), THC, formaldehyde, or methanol in the inlet vent stream of the control device, pounds per hour

ER_{out} = emission rate of total HAP (calculated as the sum of the emission rates of acetaldehyde, acrolein, formaldehyde, methanol, phenol, and propionaldehyde), THC, formaldehyde, or methanol in the outlet vent stream of the control device, pounds per hour

(i) *Calculation of mass per unit production.* To comply with any of the production-based compliance options in Table 1A of this subpart, you must calculate your mass per unit production emissions for each test run using Equation 2 of this section:

$$MP = \frac{ER_{HAP}}{P \times CE} \qquad \text{(Eq. 2)}$$

Where:

MP = mass per unit production, pounds per oven dried ton OR pounds per thousand square feet on a specified thickness basis (see paragraph (j) of this section if you need to convert from one thickness basis to another)

ER_{HAP} = emission rate of total HAP (calculated as the sum of the emission rates of acetaldehyde, acrolein, formaldehyde, methanol, phenol, and propionaldehyde) in the stack, pounds per hour

P = process unit production rate (throughput), oven dried tons per hour OR thousand square feet per hour on a specified thickness basis

CE = capture efficiency, percent (determined for reconstituted wood product presses and board coolers as required in Table 4 of this subpart)?≤

(j) *Thickness basis conversion.* Use Equation 3 of this section to convert from one thickness basis to another:

$$MSF_B = MSF_A \times \frac{A}{B} \qquad \text{(Eq. 3)}$$

Where:

MSF_A = thousand square feet on an A-inch basis

MSF_B = thousand square feet on a B-inch basis

A = old thickness you are converting from, inches

B = new thickness you are converting to, inches

(k) *Establishing thermal oxidizer operating requirements.* If you operate a thermal oxidizer, you must establish your thermal oxidizer operating parameters according to paragraphs (k)(1) through (4) of this section.

(1) During the initial performance test, you must continuously monitor the firebox temperature during each of the required 1-hour test runs. The minimum firebox temperature must then be established as the average of the three minimum 15-minute firebox temperatures monitored during the three test runs. Multiple 3-run performance tests may be conducted to establish a range of parameter values under different operating conditions.

(2) If you choose to monitor inlet static pressure during the initial performance test, you must continuously monitor the static pressure at the inlet of the thermal oxidizer during each of the required 1-hour test runs. The static pressure operating range must then be established as the maximum and minimum of the 15-minute static pressures monitored during the entire 3-hour test. Multiple 3-run performance tests may be conducted to establish a range of parameter values under different operating conditions.

(3) If you choose to monitor stack gas flow during the initial performance test, you must continuously monitor the gas flow rate at the thermal oxidizer stack during each of the required 1-hour test runs. The maximum flow rate must then be established as the average of the three maximum 15-minute flow rates monitored during the three test runs. Multiple 3-run performance tests may be conducted to establish a range of parameter values under different operating conditions.

(4) You may establish a different minimum firebox temperature, static

pressure operating range, or maximum stack gas flow rate for your thermal oxidizer by submitting the notification specified in § 63.2280(g) and conducting a repeat performance test as specified in paragraphs (k)(1) and (3) of this section that demonstrates compliance with the compliance options in Table 1B of this subpart.

(5) If your thermal oxidizer is a combustion unit with a heat input capacity greater than or equal to 44 megawatts, then you are exempt from the initial performance testing and monitoring requirements specified in paragraphs (k)(1) through (4) of this section. To demonstrate initial compliance, you must submit documentation with your Notification of Compliance Status showing that your combustion unit has a heat input capacity of greater than or equal to 44 megawatts and that process exhausts controlled by the combustion unit enter into the flame zone.

(l) *Establishing catalytic oxidizer operating requirements.* If you operate a catalytic oxidizer, you must establish your catalytic oxidizer operating parameters according to paragraphs (l)(1) through (4) of this section.

(1) During the initial performance test, you must continuously monitor the temperature upstream of the catalyst bed during the required 1-hour test runs. The minimum upstream temperature must then be established as the average of the three minimum 15-minute temperatures upstream of the catalyst bed monitored during the three test runs. Multiple 3-run performance tests may be conducted to establish a range of parameter values under different operating conditions.

(2) If you choose to monitor inlet static pressure during the initial performance test, you must continuously monitor the static pressure at the inlet of the catalytic oxidizer during each of the required 1-hour test runs. The static pressure operating range must then be established as the maximum and minimum of the 15-minute static pressures monitored during the entire 3-hour test. Multiple 3-run performance tests may be conducted to establish a range of parameter values under different operating conditions.

(3) If you choose to monitor stack gas flow during the initial performance test, you must continuously monitor the gas flow rate at the catalytic oxidizer stack during each of the required 1-hour test runs. The maximum flow rate must then be established as the average of the three maximum 15-minute flow rates monitored during the three test runs. Multiple 3-run performance tests may be conducted to establish a range of parameter values under different operating conditions.

(4) You may establish a different minimum upstream temperature, static pressure operating range, or maximum stack gas flow rate for your catalytic oxidizer by submitting the notification specified in § 63.2280(g) and conducting a repeat performance test as specified in paragraphs (l)(1) through (3) of this section that demonstrates compliance with the compliance options in Table 1B of this subpart.

(m) *Establishing biofilter operating requirements.* If you operate a biofilter, you must establish your average biofilter operating requirements according to paragraphs (m)(1) through (3) of this section.

(1) During the initial performance test, you must monitor the temperature of the air stream entering the biofilter, pH of the biofilter effluent, and pressure drop across the biofilter bed. You must specify appropriate monitoring methods, monitoring frequencies, and averaging times for the parameters. You also must specify appropriate minimum limits, maximum limits, or operating ranges for the parameters you will monitor. You may base operating ranges on values recorded during previous performance tests provided that the data used to establish the operating ranges have been obtained using the test methods required in this subpart. If you use data from previous performance tests, you must certify that the biofilter and associated process unit(s) have not been modified subsequent to the date the historical data were collected.

(2) If historical operating records are not readily available (as would be the case for a new biofilter installation), you will be allowed up to 180 days following the compliance date to gather data and complete the requirements in paragraph (m)(1) of this section.

(3) You may establish different operating ranges for your biofilter operating parameters by submitting the notification specified in § 63.2280(g) and conducting a repeat performance test as specified in paragraph (m)(1) of this section that demonstrates compliance with the compliance options in Table 1B of this subpart.

(n) *Establishing uncontrolled process unit operating requirements.* If you operate a process unit that meets a compliance option in Table 1A of this subpart without the use of a control device, you must establish your process unit operating parameters according to paragraphs (n)(1) through (2) of this section.

(1) During the initial performance test, you must continuously monitor the process unit inlet temperature or operating temperature (whichever applies, as specified for different process units in Table 2 of this subpart) during each of the required 1-hour test runs. The maximum inlet temperature or maximum operating temperature must then be established as the average of the three maximum 15-minute temperatures monitored during the three test runs. Multiple 3-run performance tests may be conducted to establish a range of parameter values under different operating conditions.

(2) You may establish a different maximum temperature for your process unit by submitting the notification specified in § 63.2280(g) and conducting a repeat performance test as specified in paragraph (n)(1) of this section that demonstrates compliance with the compliance options in Table 1A of this subpart.

(o) *Establishing operating requirements using total hydrocarbon (THC) CEMS.* If you choose to meet the operating requirements by monitoring THC concentration instead of monitoring control device or process operating parameters, you must establish your THC concentration operating requirement according to paragraphs (o)(1) through (2) of this section.

(1) During the initial performance test, you must continuously monitor THC concentration using your CEMS during each of the required 1-hour test runs. The maximum THC concentration must then be established as the average of the three maximum 15-minute THC concentrations monitored during the three test runs. Multiple 3-run performance tests may be conducted to establish a range of THC concentration values under different operating conditions.

(2) You may establish a different maximum THC concentration by submitting the notification specified in § 63.2280(g) and conducting a repeat performance test as specified in paragraph (o)(1) of this section that demonstrates compliance with the compliance options in Tables 1A and 1B of this subpart.

§ 63.2263 Initial compliance demonstration for a dry rotary dryer.

If you operate a dry rotary dryer, you must demonstrate that your dryer processes furnish with an inlet moisture content of less than or equal to 30 percent (by weight, dry basis) and operates with a dryer inlet temperature of less than or equal to 600 °F. You must designate and clearly identify each dry rotary dryer. You must record the inlet furnish moisture content (dry basis) and inlet dryer operating temperature according to § 63.2268(a), (b), and (f) for a minimum of 30 calendar days. You must submit the highest recorded 24-hour average inlet furnish moisture content and the highest recorded 24-hour average dryer inlet temperature with your Notification of Compliance Status. In addition, submit with the Notification of Compliance Status a signed statement by a responsible official that certifies with truth, accuracy, and completeness that the dry rotary dryer will dry furnish with a maximum inlet moisture content less than or equal to 30 percent (by weight, dry basis) and will operate with a maximum inlet temperature of less than or equal to 600°F in the future.

§ 63.2264 Initial compliance demonstration for a hardwood veneer dryer.

If you operate a hardwood veneer dryer, you must record the annual volume percentage of softwood veneer species processed in the dryer as follows:

(a) Use Equation 1 of this section to calculate the annual volume percentage of softwood species dried:

$$SW_{\%} = \frac{SW}{T}(100) \qquad \text{(Eq. 1)}$$

Where:

$SW_{\%}$ = annual volume percent softwood species dried

SW = softwood veneer dried during the previous 12 months, thousand square feet (3/8-inch basis)

T = total softwood and hardwood veneer dried duringthe previous 12 months, thousand square feet (3/8-inch basis)

(b) You must designate and clearly identify each hardwood veneer dryer. Submit with the Notification of Compliance Status the annual volume percentage of softwood species dried in the dryer based on your dryer production for the 12 months prior to the compliance date specified for your source in § 63.2233. If you did not dry any softwood species in the dryer during the 12 months prior to the compliance date, then you need only to submit a statement indicating that no softwood species were dried. In addition, submit with the Notification of Compliance Status a signed statement by a responsible official that certifies with truth, accuracy, and completeness that the veneer dryer will be used to process less than 30 volume percent softwood species in the future.

§ 63.2265 Initial compliance demonstration for a softwood veneer dryer.

If you operate a softwood veneer dryer, you must develop a plan for review and approval for minimizing fugitive emissions from the veneer dryer heated zones, and you must submit the plan with your Notification of Compliance Status.

§ 63.2266 Initial compliance demonstration for a veneer redryer.

If you operate a veneer redryer, you must record the inlet moisture content of the veneer processed in the redryer according to § 63.2268(a) and (f) for a minimum of 30 calendar days. You must designate and clearly identify each veneer redryer. You must submit the highest recorded 24-hour average inlet veneer moisture content with your Notification of Compliance Status to show that your veneer redryer processes veneer with an inlet moisture content of less than or equal to 25 percent (by weight, dry basis). In addition, submit with the Notification of Compliance Status a signed statement by a responsible official that certifies with truth, accuracy, and completeness that the veneer redryer will dry veneer with a moisture content less than 25 percent (by weight, dry basis) in the future.

§ 63.2267 Initial compliance demonstration for a reconstituted wood product press or board cooler.

If you operate a reconstituted wood product press at a new or existing affected source or a reconstituted wood product board cooler at a new affected source, then you must verify the capture efficiency of the capture device for the press or board cooler using Methods 204 and 204A through 204F of 40 CFR part 51, appendix M (as appropriate) or using the alternative tracer gas method contained in appendix A to this subpart. You must submit the results of the capture efficiency verification with your Notification of Compliance Status.

§ 63.2268 What are my monitoring installation, operation, and maintenance requirements?

(a) *General continuous parameter monitoring requirements.* You must install, operate, and maintain each continuous parameter monitoring system (CPMS) according to paragraphs (a)(1) through (5) of this section.

(1) The CPMS must complete a minimum of one cycle of operation for each successive 15-minute period. To calculate a valid hourly value, you must have at least three equally spaced data values for that hour from a CPMS that is not out of control.

(2) At all times, you must maintain the monitoring equipment including, but not limited to, maintaining necessary parts for routine repairs of the monitoring equipment.

(3) Except as provided in paragraph (a)(4) of this section, determine the 3-hour block average of all recorded readings, calculated after every 3 hours of operation as the average of the previous 3 operating hours (not including startup, shutdown, and malfunction or periods of control device maintenance covered by any approved routine control device maintenance exemption).

(4) For dry rotary dryer and veneer redryer wood moisture monitoring and for dry rotary dryer temperature monitoring, determine the 24-hour block average of all recorded readings, calculated after every 24 hours of operation as the average of the previous 24 operating hours (not including startup, shutdown, and malfunction). To calculate the average wood moisture or temperature for each 24-hour averaging period, you must have at least 75 percent of the hourly averages for that period using only hourly average values that are based on valid data (*i.e.*, not from periods when the monitor is out of control).

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

(b) *Temperature monitoring.* For each temperature monitoring device, you must meet the requirements in paragraphs (a) and (b)(1) through (6) 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 4 °F or 0.75 percent of the temperature value, whichever is larger.

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

(4) Perform an electronic calibration at least semiannually 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 nearby the process temperature sensor must yield a reading within 30 °F of the process temperature sensor's reading.

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

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

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

(1) Locate the pressure sensor(s) in or as close to 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 inches of water column or a transducer with a minimum tolerance of 1 percent of the pressure range.

(4) Check pressure tap daily to ensure it is not plugged.

(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 quarterly, inspect all components for integrity, all electrical connections for continuity, and all mechanical connections for leakage.

(d) *pH monitoring.* For each pH measurement device, you must meet the requirements in paragraphs (a) and (d)(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 quarterly, inspect all components for integrity and all electrical connections for continuity.

(e) *Flow monitoring.* For each flow measurement device, you must meet the requirements in paragraphs (a) and (e)(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) Conduct a flow sensor calibration check at least semiannually.

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

(f) *Wood moisture monitoring.* For each furnish or veneer moisture meter, you must meet the requirements in paragraphs (a)(1), (2), (4) and (5) and paragraphs (f)(1) through (4) of this section.

(1) Use a moisture monitor with a minimum accuracy of 1 percent moisture or better. Alternatively, you may use a moisture monitor with a minimum accuracy of 5 percent moisture or better for dry rotary dryers used to dry furnish with less than 25 percent moisture or for veneer redryers used to redry veneer with less than 20 percent moisture.

(2) Locate the moisture meter in a position that provides a representative measure of furnish or veneer moisture.

(3) Check the moisture meter's calibration by manually determining the moisture content of samples of furnish or veneer at least once each day of process operation as follows:

(i) Collect a sample of furnish or veneer just as it passes by the meter.

(ii) Record the moisture meter reading for the sample of furnish or veneer collected.

(iii) Determine the moisture content of the furnish or veneer sample by first weighing the wet sample and thoroughly drying the sample until it reaches a constant weight in a bench-scale dryer. Use Equation 1 of this section to calculate the furnish or veneer moisture weight percent on a dry basis:

$$MC = \frac{W_{wet} - W_{dry}}{W_{dry}}(100) \qquad \text{(Eq. 1)}$$

Where:

MC = moisture content of wood material (weight percent, dry basis)

W_{wet} = original weight of the wood, pounds

W_{dry} = weight of the dried wood, pounds

(4) At least quarterly, inspect all components of the moisture meter for integrity and all electrical connections for continuity.

(g) *Continuous emission monitoring system(s).* Each CEMS must be installed, operated, and maintained according to paragraphs (g)(1) through (4) of this section.

(1) Each CEMS for monitoring THC concentration must be installed, operated, and maintained according to Performance Specification 8 of 40 CFR part 60, appendix B. You must also comply with Procedure 1 of 40 CFR part 60, appendix F.

(2) You must conduct a performance evaluation of each CEMS according to the requirements in 40 CFR 63.8 and according to Performance Specification 8 of 40 CFR part 60, appendix B.

(3) As specified in § 63.8(c)(4)(ii), each CEMS must complete a minimum of one cycle of operation (sampling, analyzing, and data recording) for each successive 15-minute period.

(4) The CEMS data must be reduced as specified in § 63.8(g)(2) and paragraph (a)(3) of this section.

Continuous Compliance Requirements

§ 63.2270 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, as appropriate, monitor malfunctions, associated repairs, and required quality assurance or control activities (including, as applicable, calibration checks and required zero and span adjustments), you must conduct all monitoring in continuous operation at all times that the process unit is operating. For purposes of calculating data averages, you must not use data recorded during monitoring malfunctions, associated repairs, out-of-control periods, or required quality assurance or control activities. You must use all the data collected during all other periods in assessing compliance. A monitoring malfunction is any sudden, infrequent, not reasonably preventable failure of the monitoring to provide valid data. Monitoring failures that are caused in part by poor maintenance or careless operation are not malfunctions. Any period for which the monitoring system is out-of-control and data are not available for required calculations constitutes a deviation from the monitoring requirements.

(c) You may not use data recorded during monitoring malfunctions, associated repairs, and required quality assurance or control activities or data recorded during periods of control device downtime covered in any approved routine control device maintenance exemption 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 system.

§ 63.2271 How do I demonstrate continuous compliance with the compliance options, operating requirements, and work practice requirements?

(a) You must demonstrate continuous compliance with the compliance options, operating requirements, and work practice requirements in §§ 63.2240 and 63.2241 that apply to you according to the methods specified in Tables 7 and 8 of this subpart.

(b) You must report each instance in which you did not meet each compliance option, operating requirement, and work practice requirement in Tables 7 and 8 of this subpart that applies to you. This includes periods of startup, shutdown, or malfunction and periods of control device maintenance specified in paragraphs (b)(1) and (3) of this section. These instances are deviations from the compliance options, operating requirements, and work practice requirements in this subpart. These deviations must be reported according to the requirements in § 63.2281.

(1) During periods of startup, shutdown, or malfunction, you must operate in accordance with the SSMP.

(2) 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 in accordance with the SSMP. The Administrator will determine whether deviations that occur during a period of startup, shutdown, or malfunction are violations, according to the provisions in § 63.6(e).

(3) Deviations that occur during periods of control device maintenance covered by any approved routine control device maintenance exemption are not violations if you demonstrate to the Administrator's satisfaction that you were operating in accordance with the approved routine control device maintenance exemption.

Notifications, Reports, and Records

§ 63.2280 What notifications must I submit and when?

(a) You must submit all of the notifications in §§ 63.7(b) and (c), 63.8(e), (f)(4) and (f)(6), 63.9(b) through (e), and (g) and (h) by the dates specified.

(b) You must submit an Initial Notification no later than 120 calendar days after the effective date of the subpart or after initial startup, whichever is later, as specified in § 63.9(b)(2) and (3).

(c) If you are required to conduct a performance test, you must submit a written notification of intent to conduct a performance test at least 60 calendar days before the performance test is scheduled to begin as specified in § 63.7(b)(1).

(d) If you are required to conduct a performance test, design evaluation, or other initial compliance demonstration as specified in Tables 4, 5, and 6 of this subpart, you must submit a Notification of Compliance Status as specified in § 63.9(h)(2)(ii).

(1) For each initial compliance demonstration required in Table 5 or 6 of this subpart that does not include a performance test, 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.

(2) For each initial compliance demonstration required in Tables 5 and 6 of this subpart that includes a performance test conducted according to the requirements in Table 4 of this subpart, 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).

(e) If you request a routine control device maintenance exemption according to § 63.2251, you must submit your request for the exemption no later than 30 days before the compliance date.

(f) If you use the emissions averaging compliance option in § 63.2240(c), you must submit an Emissions Averaging Plan to the Administrator for approval no later than 1 year before the compliance date or no later than 1 year before the date you would begin using an emissions average, whichever is later. The Emissions Averaging Plan must include the information in paragraphs (f)(1) through (6) of this section.

(1) Identification of all the process units to be included in the emissions average indicating which process units will be used to generate credits, and which process units that are subject to compliance options in Tables 1A and 1B of this subpart will be uncontrolled or under-controlled (used to generate debits).

(2) Description of the control system used to generate emission credits for each process unit used to generate credits.

(3) Determination of the total HAP control efficiency for the control system used to generate emission credits for each credit-generating process unit.

(4) Calculation of the RMR and AMR, as calculated using Equations 1 through 3 of § 63.2240(c)(1).

(5) Documentation of total HAP measurements made according to § 63.2240(c)(2)(iv) and other relevant documentation to support calculation of the RMR and AMR.

(6) A summary of the operating parameters you will monitor and monitoring methods for each credit-generating process unit.

(g) You must notify the Administrator within 30 days before you take any of the actions specified in paragraphs (g)(1) through (3) of this section.

(1) You modify or replace the control system for any process unit subject to the compliance options and operating requirements in this subpart.

(2) You shutdown any process unit included in your Emissions Averaging Plan.

(3) You change a continuous monitoring parameter or the value or range of values of a continuous monitoring parameter for any process unit or control device.

§ 63.2281 What reports must I submit and when?

(a) You must submit each report in Table 9 of this subpart that applies to you.

(b) Unless the Administrator has approved a different schedule for submission of reports under § 63.10(a), you must submit each report by the date in Table 9 of this subpart and as specified 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 § 63.2233 ending on June 30 or December 31, and lasting at least 6 months, but less than 12 months. For example, if your compliance date is March 1, then the first semiannual reporting period would begin on March 1 and end on December 31.

(2) The first compliance report must be postmarked or delivered no later than July 31 or January 31 for compliance periods ending on June 30 and December 31, respectively.

(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 for the semiannual reporting period ending on June 30 and December 31, respectively.

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

(c) The compliance report must contain the information in paragraphs (c)(1) through (8) 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.

(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 SSMP, the compliance report must include the information specified in § 63.10(d)(5)(i).

(5) A description of control device maintenance performed while the control device was offline and one or more of the process units controlled by the control device was operating, including the information specified in paragraphs (c)(5)(i) through (iii) of this section.

(i) The date and time when the control device was shutdown and restarted.

(ii) Identification of the process units that were operating and the number of hours that each process unit operated while the control device was offline.

(iii) A statement of whether or not the control device maintenance was included in your approved routine control device maintenance exemption developed pursuant to § 63.2251. If the control device maintenance was included in your approved routine control device maintenance exemption, then you must report the information in paragraphs (c)(5)(iii)(A) through (C) of this section.

(A) The total amount of time that each process unit controlled by the control device operated during the semiannual compliance period and during the previous semiannual compliance period.

(B) The amount of time that each process unit controlled by the control device operated while the control device was down for maintenance covered under the routine control device maintenance exemption during the semiannual compliance period and during the previous semiannual compliance period.

(C) Based on the information recorded under paragraphs (c)(5)(iii)(A) and (B) of this section for each process unit, compute the annual percent of process unit operating uptime during which the control device was offline for routine maintenance using Equation 1 of this section.

$$RM = \frac{PU_p + PU_c}{DT_p + DT_c} \qquad \text{(Eq. 1)}$$

Where:

RM = Annual percentage of process unit uptime during which control device is down for routine control device maintenance

PU_p = Process unit uptime for the previous semiannual compliance period

PU_c = Process unit uptime for the current semiannual compliance period

DT_p = Control device downtime claimed under the routine control device maintenance exemption for the previous semiannual compliance period

DT_c = Control device downtime claimed under the routine control device maintenance exemption for the current semiannual compliance period

(6) The results of any performance tests conducted during the semiannual reporting period.

(7) If there are no deviations from any applicable compliance option or operating requirement, and there are no deviations from the requirements for work practice requirements in Table 8 of this subpart, a statement that there were no deviations from the compliance options, operating requirements, or work practice requirements during the reporting period.

(8) If there were no periods during which the continuous monitoring system(s) (CMS), including CEMS and CPMS, was out-of-control as specified in § 63.8(c)(7), a statement that there were no periods during which the CMS was out-of-control during the reporting period.

(d) For each deviation from a compliance option or operating requirement and for each deviation from the work practice requirements in Table 8 of this subpart that occurs at an affected source where you are not using a CMS to comply with the compliance options, operating requirements, or work practice requirements in this subpart, the compliance report must contain the information in paragraphs (c)(1) through (6) of this section and the information in paragraphs (d)(1) and (2) of this section. This includes periods of startup, shutdown, and malfunction and routine control device maintenance.

(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 a compliance option or operating requirement occurring at an affected source where you are using a CMS to comply with the compliance options and operating requirements in this subpart, you must include the information in paragraphs (c)(1) through (6) and the information in paragraphs (e)(1) through (11) of this section. This includes periods of startup, shutdown, and malfunction and routine control device maintenance.

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

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

(3) The date, time, and duration that each CMS was out-of-control, including the information in § 63.8(c)(8).

(4) The date and time that each deviation started and stopped, and whether each deviation occurred during a period of startup, shutdown, or malfunction; during a period of control device maintenance covered in your approved routine control device maintenance exemption; 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 system problems, control device maintenance, process problems, other known causes, and other unknown causes.

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

(8) A brief description of the process units.

(9) A brief description of the CMS.

(10) The date of the latest CMS certification or audit.

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

(f) If you comply with the emissions averaging compliance option in § 63.2240(c), you must include in your semiannual compliance report calculations based on operating data from the semiannual reporting period that demonstrate that actual mass removal equals or exceeds the required mass removal.

(g) Each affected source that has obtained a title V operating permit pursuant to 40 CFR part 70 or 71 must report all deviations as defined in this subpart in the semiannual monitoring report required by § 70.6(a)(3)(iii)(A) or § 71.6(a)(3)(iii)(A). If an affected source submits a compliance report pursuant to

Table 9 of this subpart along with, or as part of, the semiannual monitoring report required by § 70.6(a)(3)(iii)(A) or § 71.6(a)(3)(iii)(A), and the compliance report includes all required information concerning deviations from any compliance option, operating requirement, or work practice requirement in this subpart, submission of the compliance report shall be deemed to satisfy any obligation to report the same deviations in the semiannual monitoring report. However, submission of a compliance report shall not otherwise affect any obligation the affected source may have to report deviations from permit requirements to the permitting authority.

§ 63.2282 What records must I keep?

(a) You must keep the records listed in paragraphs (a)(1) through (4) of this section.

(1) A copy of each notification and report that you submitted to comply with this subpart, including 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)(iii) through (v) related to startup, shutdown, and malfunction.

(3) The records in § 63.2250(e) relating to control device maintenance and documentation of your approved routine control device maintenance exemption, if you request such an exemption under § 63.2251.

(4) Records of performance tests and performance evaluations as required in § 63.10(b)(2)(viii).

(b) You must keep the records required in Tables 7 and 8 of this subpart to show continuous compliance with each compliance option, operating requirement, and work practice requirement that applies to you.

(c) For each CEMS, you must keep the following records.

(1) Records described in § 63.10(b)(2)(vi) through (xi).

(2) Previous (*i.e.*, superseded) versions of the performance evaluation plan as required in § 63.8(d)(3).

(3) Request for alternatives to relative accuracy testing for CEMS as required in § 63.8(f)(6)(i).

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

(d) If you comply with the emissions averaging compliance option in § 63.2240(c), you must keep records of all information required to calculate emission debits and credits.

§ 63.2283 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 as specified in § 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

§ 63.2290 What parts of the General Provisions apply to me?

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

§ 63.2291 Who implements and enforces this subpart?

(a) This subpart can be implemented and enforced by the U.S. EPA or a delegated authority such as your State, local, or tribal agency. If the EPA 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 section 40 CFR part 63, subpart E, the authorities contained in paragraph (c) of this section are retained by the EPA Administrator and are not transferred to the State, local, or tribal agency.

(c) The authorities that will not be delegated to State, local, or tribal agencies are listed in paragraphs (c)(1) through (4) of this section.

(1) Approval of alternatives to the compliance options, operating requirements, and work practice requirements in §§ 63.2240 and 63.2241 as specified in § 63.6(g). For the purposes of delegation authority under 40 CFR part 63, subpart E, ''compliance options'' represent ''emission limits''; ''operating requirements'' represent ''operating limits''; and ''work practice requirements'' represent ''work practice standards.''

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

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

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

§ 63.2292 What definitions apply to this subpart?

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

Affected source means the collection of dryers, blenders, formers, presses, board coolers, and other process units associated with the manufacturing of plywood and composite wood products at a plant site. The affected source includes, but is not limited to, green end operations, drying operations, blending and forming operations, pressing and board cooling operations, and miscellaneous finishing operations (such as sanding, sawing, patching, edge sealing, and other finishing operations not subject to other NESHAP). The affected source also includes onsite storage of raw materials used in the manufacture of plywood and/or composite wood products, such as resins; onsite wastewater treatment operations specifically associated with plywood and composite wood products manufacturing; and miscellaneous coating operations (defined elsewhere in this section). The affected source includes lumber kilns at PCWP manufacturing facilities and at any other kind of facility.

Biofilter means an enclosed control system such as a tank or series of tanks with a fixed roof that are filled with media (such as bark) and use microbiological activity to transform organic pollutants in a process exhaust stream to innocuous compounds such as carbon dioxide, water, and inorganic salts. Wastewater treatment systems such as aeration lagoons or activated sludge systems are not considered to be biofilters.

Capture device means a hood, enclosure, or other means of collecting emissions into a duct so that the emissions can be measured.

Capture efficiency means the fraction (expressed as a percentage) of the pollutants from an emission source that are collected by a capture device.

Catalytic oxidizer means a control system that combusts or oxidizes, in the presence of a catalyst, exhaust gas from a process unit. Catalytic oxidizers include regenerative catalytic oxidizers and thermal catalytic oxidizers.

Control device means any equipment that reduces the quantity of a hazardous air pollutant that is emitted to the air. The device may destroy the hazardous air pollutant or secure the hazardous air pollutant for subsequent recovery. Control devices include, but are not limited to, thermal or catalytic oxidizers, combustion units that incinerate process exhausts, biofilters, and condensers.

Control system or add-on control system means the combination of capture and control devices used to reduce hazardous air pollutant emissions to the atmosphere.

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 compliance option, operating requirement, or work practice requirement;

(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 compliance option, operating requirement, or work practice requirement in this subpart during startup, shutdown, or malfunction, regardless or whether or not such failure is permitted by this subpart.

Dryer heated zones means the zones of a softwood veneer dryer or fiberboard mat dryer that are equipped with heating and hot air circulation units. The cooling zone(s) of the dryer through which ambient air is blown are not part of the dryer heated zones.

Dry rotary dryer means a rotary dryer that dries wood particles or fibers with a maximum inlet moisture content of less than or equal to 30 percent (by weight, dry basis) and operates with a maximum inlet temperature of less than or equal to 600°F. A dry rotary dryer is a process unit.

Dry forming means the process of making a mat of resinated fiber to be compressed into a reconstituted wood product such as particleboard, oriented strandboard (OSB), medium density fiberboard (MDF), or hardboard.

Fiber means the slender threadlike elements of wood or similar cellulosic material, which are separated by chemical and/or mechanical means, as in pulping, that can be formed into boards.

Fiberboard means a composite panel composed of cellulosic fibers (usually wood or agricultural material) made by wet forming and compacting a mat of fibers. Fiberboard density is less than 0.50 grams per cubic centimeter (31.5 pounds per cubic foot).

Fiberboard mat dryer means a dryer used to reduce the moisture of wet-formed wood fiber mats by operation at elevated temperature. A fiberboard mat dryer is a process unit.

Furnish means the fibers, particles, or strands used for making boards.

Glue-laminated beam means a structural wood beam made by bonding lumber together along its faces with resin.

Green rotary dryer means a rotary dryer that dries wood particles or fibers with an inlet moisture content of greater than 30 percent (by weight, dry basis) at any dryer inlet temperature or operates with an inlet temperature of greater than 600 °F with any inlet moisture content. A green rotary dryer is a process unit.

Hardboard means a composite panel composed of cellulosic fibers made by dry or wet forming and pressing of a resinated fiber mat. Hardboard has a density of 0.50 to 1.20 grams per cubic centimeter (31.5 to 75 pounds per cubic foot).

Hardboard oven means an oven used to heat treat or temper hardboard after hot pressing. Humidification chambers are not considered as part of hardboard ovens. A hardboard oven is a process unit.

Hardwood means the wood of a broad-leafed tree, either deciduous or evergreen. Examples of hardwoods include (but are not limited to) aspen, birch, and oak.

Hardwood veneer dryer means a dryer that removes excess moisture from veneer by conveying the veneer through a heated medium on rollers, belts, cables, or wire mesh. Hardwood veneer dryers are used to dry veneer with less than 30 percent softwood species on an annual volume basis. Veneer kilns that operate as batch units, veneer dryers heated by radio frequency or microwaves that are used to redry veneer, and veneer redryers (defined elsewhere in this section) that are heated by conventional means are not considered to be hardwood veneer dryers. A hardwood veneer dryer is a process unit.

Kiln-dried lumber means solid wood lumber that has been dried in a lumber kiln.

Laminated strand lumber (LSL) means a composite product formed into a billet made of thin wood strands cut from whole logs, resinated, and pressed together with the grain of each strand oriented parallel to the length of the finished product.

Laminated veneer lumber (LVL) means a composite product formed into a billet made from layers of resinated wood veneer sheets or pieces pressed together with the grain of each veneer aligned primarily along the length of the finished product. Laminated veneer lumber includes parallel strand lumber (PSL).

Lumber kiln means an enclosed dryer operated at elevated temperature to reduce the moisture content of lumber.

Medium density fiberboard (MDF) means a composite panel composed of cellulosic fibers (usually wood) made by dry forming and pressing of a resinated fiber mat.

Method detection limit means the minimum concentration of an analyte that can be determined with 99 percent confidence that the true value is greater than zero.

Miscellaneous coating operations means application of any of the following to plywood or composite wood products: Edge seals, moisture sealants, anti-skid coatings, company logos, trademark or grade stamps, nail lines, synthetic patches, wood patches, wood putty, concrete forming oils, glues for veneer composing, and shelving edge fillers. Miscellaneous coating operations also include the application of primer to OSB siding that occurs at the same site as OSB manufacture.

MSF means thousand square feet (92.9 square meters). Square footage of panels is usually measured on a thickness basis, such as 3/8-inch, to define the total volume of panels. Equation 6 of § 63.2262(j) shows how to convert from one thickness basis to another.

Nondetect data means, for the purposes of this subpart, any value that is below the method detection limit.

Oriented strandboard (OSB) means a composite panel produced from thin wood strands cut from whole logs, formed into resinated layers (with the grain of strands in one layer oriented perpendicular to the strands in adjacent layers), and pressed.

Oven-dried ton(s) (ODT) means tons of wood dried until all of the moisture in the wood is removed. One oven-dried ton equals 907 oven-dried kilograms.

Particle means a distinct fraction of wood or other cellulosic material produced mechanically and used as the aggregate for a particleboard. Particles are larger in size than fibers.

Particleboard means a composite panel composed of cellulosic materials (usually wood or agricultural fiber) in the form of discrete pieces or particles, as distinguished from fibers, which are pressed together with resin.

Permanent total enclosure (PTE) means a permanently installed containment that meets the criteria of Method 204 (40 CFR part 51, appendix M).

Plant site means all contiguous or adjoining property that is under common control, including properties that are separated only by a road or other public right-of-way. Common control includes properties that are owned, leased, or operated by the same entity, parent entity, subsidiary, or any combination thereof.

Plywood and composite wood products (PCWP) manufacturing facility means a plant site that manufactures plywood and/or composite wood products by bonding wood material (fibers, particles, strands, veneers, etc.) or agricultural fiber, generally with resin under heat and pressure, to form a structural panel or engineered wood product. Plywood and composite wood products manufacturing facilities also include facilities that manufacture dry veneer and lumber kilns located at any facility. Plywood and composite wood products include (but are not limited to) plywood, veneer, particleboard, oriented strandboard, hardboard, fiberboard, medium density fiberboard, laminated strand lumber, laminated veneer lumber, wood I-joists, kiln-dried lumber, and glue-laminated beams.

Plywood means a panel product consisting of layers of wood veneers hot pressed together with resin. Plywood includes panel products made by hot pressing (with resin) veneers to a substrate such as particleboard, MDF, or lumber.

Press predryer means a dryer used to reduce the moisture and elevate the temperature of a wet-formed fiber mat before the mat enters a hot press. A press predryer is a process unit.

Pressurized refiner means a piece of equipment operated under pressure for preheating (usually by steaming) wood material and refining (rubbing or grinding) the wood material into fibers. Pressurized refiners are operated with continuous infeed and outfeed of wood material and maintain elevated internal pressures (*i.e.*, there is no pressure release) throughout the preheating and refining process. A pressurized refiner is a process unit.

Process unit means equipment classified according to its function such as a blender, dryer, press, former, or board cooler.

Reconstituted wood product board cooler means a piece of equipment designed to reduce the temperature of a board by means of forced air or convection within a controlled time period after the board exits the reconstituted wood product press unloader. Board coolers include wicket and star type coolers commonly found at MDF and particleboard plants. Board coolers do not include cooling sections of dryers (*e.g.*, veneer dryers or fiberboard mat dryers) or coolers integrated into or following hardboard bake ovens or humidifiers. A reconstituted wood product board cooler is a process unit.

Reconstituted wood product press means a press, including (if applicable) the press unloader, that presses a resinated mat of wood fibers, particles, or strands between hot platens or hot rollers to compact and set the mat into a panel by simultaneous application of heat and pressure. Reconstituted wood product presses are used in the manufacture of hardboard, medium density fiberboard, particleboard, and oriented strandboard. Extruders are not considered to be reconstituted wood product presses. A reconstituted wood product press is a process unit.

Representative operating conditions means operation of a process unit during performance testing under the conditions that the process unit will typically be operating in the future, including use of a representative range of materials (*e.g.*, wood material of a typical species mix and moisture content or typical resin formulation) and representative operating temperature range.

Resin means the synthetic adhesive (including glue) or natural binder, including additives, used to bond wood or other cellulosic materials together to produce plywood and composite wood products.

Responsible official means responsible official as defined in 40 CFR 70.2 and 71.2.

Softwood means the wood of a coniferous tree. Examples of softwoods include (but are not limited to) Southern yellow pine, Douglas fir, and White spruce.

Softwood veneer dryer means a dryer that removes excess moisture from veneer by conveying the veneer through a heated medium on rollers, belts, cables, or wire mesh. Softwood veneer dryers are used to dry veneer with greater than or equal to 30 percent softwood species on an annual volume basis. Veneer kilns that operate as batch units, veneer dryers heated by radio frequency or microwaves that are used to redry veneer, and veneer redryers (defined elsewhere in this section) that are heated by conventional means are not considered to be softwood veneer dryers. A softwood veneer dryer is a process unit.

Startup means bringing equipment online and starting the production process.

Startup, initial means the first time equipment is put into operation. Initial startup does not include operation solely for testing equipment. Initial startup does not include subsequent startups (as defined in this section) following malfunction or shutdowns or following changes in product or between batch operations. Initial startup does not include startup of equipment that occurred when the source was an area source.

Startup, shutdown, and malfunction plan (SSMP) means a plan developed according to the provisions of § 63.6(e)(3).

Strand means a long (with respect to thickness and width), flat wood piece specially cut from a log for use in oriented strandboard, laminated strand lumber, or other wood strand-based product.

Strand dryer means a dryer operated at elevated temperature and used to reduce the moisture of wood strands used in the manufacture of OSB, LSL, or other wood strand-based products. A strand dryer is a process unit.

Temporary total enclosure (TTE) means an enclosure constructed for the purpose of measuring the capture efficiency of pollutants emitted from a given source, as defined in Method 204 of 40 CFR part 51, appendix M.

Thermal oxidizer means a control system that combusts or oxidizes exhaust gas from a process unit. Thermal oxidizers include regenerative thermal oxidizers and burners or combustion units that accept process exhausts in the flame zone.

Total hazardous air pollutant (HAP) emissions means, for purposes of this rulemaking, the sum of the emissions of the following six compounds: acetaldehyde, acrolein, formaldehyde, methanol, phenol, and propionaldehyde.

Tube dryer means a single-stage or multistage dryer operated at elevated temperature and used to reduce the moisture of wood fibers or particles as they are conveyed (usually pneumatically) through the dryer. Resin may or may not be applied to the wood material before it enters the tube dryer. A tube dryer is a process unit.

Veneer means thin sheets of wood peeled or sliced from logs for use in the manufacture of wood products such as plywood, laminated veneer lumber, or other products.

Veneer redryer means a dryer heated by conventional means, such as direct wood-fired, direct-gas-fired, or steam heated, that is used to redry veneer that has been previously dried. Because the veneer dried in a veneer redryer has been previously dried, the inlet moisture content of the veneer entering the redryer is less than 25 percent (by weight, dry basis). Batch units used to redry veneer (such as redry cookers) are not considered to be veneer redryers. A veneer redryer is a process unit.

Wet forming means the process of making a slurry of water, fiber, and additives into a mat of fibers to be compressed into a fiberboard or hardboard product.

Wood I-joists means a structural wood beam with an I-shaped cross section formed by bonding (with resin) wood or laminated veneer lumber flanges onto a web cut from a panel such as plywood or oriented strandboard.

Work practice requirement 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 1A TO SUBPART DDDD.—PRODUCTION-BASED COMPLIANCE OPTIONS

For the following process units . . .	You must meet the following production-based compliance option (total HAP[a] basis) . . .
(1) Fiberboard mat dryer heated zones (at new affected sources only)	0.022 lb/MSF ½″
(2) Green rotary dryers	0.058 lb/ODT
(3) Hardboard ovens	0.022 lb/MSF ⅛″
(4) Press predryers (at new affected sources only)	0.037 lb/MSF ½″
(5) Pressurized refiners	0.039 lb/ODT
(6) Tube dryers	0.26 lb/ODT
(7) Reconstituted wood product board coolers (at new affected sources only)	0.015 lb/MSF ¾″
(8) Reconstituted wood product presses	0.30 lb/MSF ¾″
(9) Softwood veneer dryer heated zones	0.022 lb/MSF ⅜″
(10) Strand dryers	0.18 lb/ODT

[a] Total HAP, as defined in § 63.2292, includes acetaldehyde, acrolein, formaldehyde, methanol, phenol, and propionaldehyde. lb/ODT = pounds per oven dried ton; lb/MSF = pounds per thousand square feet with a specified thickness basis (inches). Section 63.2262(j) shows how to convert from one thickness basis to another.

TABLE 1B TO SUBPART DDDD.—ADD-ON CONTROL SYSTEMS COMPLIANCE OPTIONS

For each of the following process units . . .	You must comply with one of the following six compliance options by using an emissions control system . . .
Fiberboard mat dryer heated zones (at new affected sources only); Green rotary dryers; Hardboard ovens; Press predryers (at new affected sources only); Pressurized refiners; Tube dryers; Reconstituted wood product board coolers (at new affected sources only); Reconstituted wood product presses; Softwood veneer dryer heated zones; and Strand dryers.	(1) Reduce emissions of total HAP, measured as THC (as carbon),[a] by 90 percent; or (2) Limit emissions of total HAP, measured as THC (as carbon),[a] to 20 parts per million by volume, dry (ppmvd); or (3) Reduce methanol emissions by 90 percent; or (4) Limit methanol emissions to less than or equal to 1 ppmvd if uncontrolled methanol emissions entering the control device are greater than or equal to 10 ppmvd; or (5) Reduce formaldehyde emissions by 90 percent; or (6) Limit formaldehyde emissions to less than or equal to 1 ppmvd if uncontrolled formaldehyde emissions entering the control device are greater than or equal to 10 ppmvd.

[a] You may choose to subtract methane from THC as carbon measurements.

TABLE 2 TO SUBPART DDDD.—OPERATING REQUIREMENTS

If you operate a(n) . . .	You must . . .	Or you must . . .	Or you must . . .
(1) Thermal oxidizer	Maintain the 3-hour block average firebox temperature above the minimum temperature established during the performance test; AND maintain in 3-hour block average static pressure at the inlet of the thermal oxidizer within the operating range established during the performance test.	Maintain the 3-hour block average firebox temperature above the minimum temperature established during the performance test; AND maintain the 3-hour block average gas flow at the outlet of the thermal oxidizer below the maximum flow rate established during the performance test.	Maintain the 3-hour block average THC concentration[a] in the thermal oxidizer exhaust below the maximum concentration established during performance test.

TABLE 2 TO SUBPART DDDD.—OPERATING REQUIREMENTS—Continued

If you operate a(n) . . .	You must . . .	Or you must . . .	Or you must . . .
(2) Catalytic oxidizer	Maintain the 3-hour block average temperature upstream of the catalyst bed above the minimum temperature established during the performance test; AND maintain the 3-hour block average static pressure at the inlet of the catalytic oxidizer within the operating range established during the performance test.	Maintain the 3-hour block average temperature upstrem of the catalyst bed above the minimum temperature established during the performance test; AND maintain the 3-hour block average gas flow at the outlet of the catalytic oxidizer below the maximum flow rate established during the performance test.	Maintain the 3-hour block average THC concentration [a] in the catalytic oxidizer exhaust below the maximum concentration established during the performance test.
(3) Biofilter	Maintain the temperature of the air stream entering the biofilter, pH of the biofilter effluent, and pressure drop across the biofilter bed within the ranges established according to § 63.2262(m).	Maintain the 3-hour block average THC concentration [a] in the biofilter exhaust below the maximum concentration established during the performance test.	
(4) Control device other than a thermal oxidizer, catalytic oxidizer, or biofilter.	Petition the Administrator for site-specific operating parameter(s) to be established during the performance test and maintain the average operating parameter(s) within the range(s) established during the performance test.	Maintain the 3-hour block average THC concentration [a] in the control device exhaust below the maximu concentration established during the performance test.	
(5) Process unit that meets a compliance option in Table 1A of this subpart.	Maintain the 3-hour block average inlet temperature below the maximum inlet temperature established during the performance test if the process unit is a green rotary dryer, tube dryer, or strand dryer; OR maintain the 3-hour block average process unit operating temperature below the maximum operating temperature established during the performance test if the process unit is a hardboard oven, press predryer, or reconstituted wood product press; OR maintain the 3-hour block average operating temperature in each of the hot zones below the maximum hot zone temperatures established during the performance test if the process unit is a fiberboard mat dryer or softwood veneer dryer.	Maintain the 3-hour block average tHC concentration [a] in the process unit exhaust below the maximum concentration established during the performance test.	

[a] You may choose to substract methane from THC measurements.

TABLE 3 TO SUBPART DDDD.—WORK PRACTICE REQUIREMENTS

For the following process units at existing or new affected sources . . .	You must . . .
(1) Dry rotary dryers	Process furnish with a 24-hour block average inlet moisture content of less than or equal to 30 percent (by weight, dry basis); AND operate with a 24-hour block average inlet dryer temperature of less than or equal to 600°F.
(2) Hardwood veneer dryers	Process less than 30 volume percent softwood species on an annual basis.
(3) Softwood veneer dryers	Minimize fugitive emissions from the dryer doors through (proper maintenance procedures) and the green end of the dryers (though proper balancing of the heated zone exhausts).

TABLE 3 TO SUBPART DDDD.—WORK PRACTICE REQUIREMENTS—Continued

For the following process units at existing or new affected sources . . .	You must . . .
(4) Veneer redryers	Process veneer that has been previously dried, such that the 24-hour block average inlet moisture content of the veneer is less than or equal to 25 percent (by weight, dry basis).

TABLE 4 TO SUBPART DDDD.—REQUIREMENTS FOR PERFORMANCE TESTS

For . . .	You must . . .	Using . . .
(1) Each process unit subject to a compliance option in Table 1A or 1B of this subpart or used in calculation of an emissions average under § 63.2240(c).	Select sampling port's location and the number of traverse ports.	Method 1 or 1A of 40 CFR part 60, appendix A (as appropriate).
(2) Each process unit subject to a compliance option in Table 1A or 1B of this subpart or used in calculation of an emissions average under § 63.2240(c).	Determine velocity and volumetric flow rate.	Method 2 in addition to Method 2A, 2C, 2D, 2F, or 2G in appendix A to 40 CFR part 60 (as appropriate).
(3) Each process unit subject to a compliance option in Table 1A or 1B of this subpart or used in calculation of an emissions average under § 63.2240(c).	Conduct gas molecular weight analysis.	Method 3, 3A, or 3B in appendix A to 40 CFR part 60 (as appropriate).
(4) Each process unit subject to a compliance option in Table 1A or 1B of this subpart or used in calculation of an emissions average under § 63.2240(c).	Measure moisture content of the stack gas.	Method 4 in appendix A to 40 CFR part 60.
(5) Each process unit subject to a compliance option in Table 1B of this subpart for which you choose to demonstrate compliance using a total HAP as THC compliance option.	Measure emissions of total HAP as THC.	Method 25A in appendix A to 40 CFR part 60. You may measure emissions of methane using EPA Method 18 in appendix A to 40 CFR part 60 and subtract the methane emissions from the emissions of total HAP as THC.
(6) Each process unit subject to a compliance option in Table 1A; OR for each process unit used in calculation of an emissions average under § 63.2240(c).	Measure emissions of total HAP (as defined in § 63.2292).	Method 320 in appendix A to 40 CFR part 63; OR the NCASI Method IM/CAN/WP–99.01 (incorporated by reference, see § 63.14(f)).
(7) Each process unit subject to a compliance option in Table 1B of this subpart for which you choose to demonstrate compliance using a methanol compliance option.	Measure emissions of methanol	Method 308 in appendix A to 40 CFR part 63; OR Method 320 in appendix A to 40 CFR part 63; OR the NCASI Method CI/WP–98.01 (incorporated by reference, see § 63.14(f)); OR the NCASI Method IM/CAN/WP–99.01 (incorporated by reference, see § 63.14(f)).
(8) Each process unit subject to a compliance option in Table 1B of this subpart for which you choose to demonstrate compliance using a formaldehyde compliance option.	Measure emissions of formaldehyde.	Method 316 in appendix A to 40 CFR part 63; OR Method 320 in appendix A to 40 CFR part 63; OR Method 0011 in ''Test Methods for Evaluating Solid Waste, Physical/Chemical Methods'' (EPA Publication No. SW–846) for formaldehyde; OR the NCASI Method CI/WP–98.01 (incorporated by reference, see § 63.14(f)); OR the NCASI Method IM/CAN/WP–99.01 (incorporated by reference, see § 63.14(f)).
(9) Each reconstituted wood product press at a new or existing affected source or reconstituted wood product board cooler at a new affected source subject to a compliance option in Table 1B or used in calculation of an emissions average under § 63.2240(c).	Determine the percent capture efficiency of the enclosure directing emissions to an add-on control device.	Methods 204 and 204A through 204F of 40 CFR part 51, appendix M. Enclosures that meet the Method 204 requirements for a PTE are assumed to have a capture efficiency of 100%. Enclosures that do not meet the PTE requirements must determine the capture efficiency by constructing a TTE according to the requirements of Method 204 and applying Methods 204A through 204F (as appropriate). As an alternative to Methods 204 and 204A through 204F, you may use the tracer gas method contained in appendix A to this subpart.

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

For . . .	You must . . .	Using . . .
(10) Each reconstituted wood product press at a new or existing affected source or reconstituted wood product board cooler at a new affected source subject to a compliance option in Table 1A of this subpart.	Determine the percent capture efficiency.	A TTE and Methods 204 and 204A through 204F (as appropriate) of 40 CFR part 51, appendix M. As an alternative to installing a TTE and using Methods 204 and 204A through 204F, you may use the tracer gas method contained in appendix A to this subpart.
(11) Each process unit subject to a compliance option in Tables 1A and 1B of this subpart or used in calculation of emissions averaging credits under § 63.2240(c).	Establish the site-specific operating requirements (including the parameter limits or THC concentration limits) in Table 2 of this subpart.	Data from the parameter monitoring system or THC CEMS and the applicable performance test method(s).

TABLE 5 TO SUBPART DDDD.—PERFORMANCE TESTING AND INITIAL COMPLIANCE DEMONSTRATIONS FOR THE COMPLIANCE OPTIONS AND OPERATING REQUIREMENTS

For each . . .	For the following compliance options and operating requirements . . .	You have demonstrated initial compliance if . . .
(1) Process unit listed in Table 1A of this subpart.	Meet the production-based compliance options listed in Table 1A of this subpart.	The average total HAP emissions measured using the methods in Table 4 of this subpart over the 3-hour initial performance test are no greater than the compliance option in Table 1A of this subpart; AND you have a record of the operating requirement(s) listed in Table 2 of this subpart for the process unit over the performance test during which emissions did not exceed the compliance option value.
(2) Process unit listed in Table 1B of this subpart.	Reduce emissions of total HAP, measured as THC, by 90 percent.	Total HAP emissions, measured using the methods in Table 4 of this subpart over the 3-hour performance test, are reduced by at least 90 percent, as calculated using the procedures in § 63.2262; AND you have a record of the operating requirement(s) listed in Table 2 of this subpart for the process unit over the performance test during which emissions were reduced by at least 90 percent.
(3) Process unit listed in Table 1B of this subpart.	Limit emissions of total HAP, measured as THC, to 20 ppmvd.	The average total HAP emissions, measured using the methods in Table 4 of this subpart over the 3-hour initial performance test, do not exceed 20 ppmvd; AND you have a record of the operating requirement(s) listed in Table 2 of this subpart for the process unit over the performance test during which emissions did not exceed 20 ppmvd.
(4) Process unit listed in Table 1B of this subpart.	Reduce methanol or formaldehyde emissions by 90 percent.	The methanol or formaldehyde emissions measured using the methods in Table 4 of this subpart over the 3-hour initial performance test, are reduced by at least 90 percent, as calculated using the procedures in § 63.2262; AND you have a record of the operating requirement(s) listed in Table 2 of this subpart for the process unit over the performance test during which emissions were reduced by at least 90 percent.
(5) Process unit listed in Table 1B of this subpart.	Limit methanol or formaldehyde emissions to less than or equal to 1 ppmvd (if uncontrolled emissions are greater than or equal to 10 ppmvd).	The average methanol or formaldehyde emissions, measured using the methods in Table 4 of this subpart over the 3-hour initial performance test, do not exceed 1 ppmvd; AND you have a record of the operating requirement(s) listed in Table 2 of this subpart for the process unit over the performance test during which emissions did not exceed 1 ppmvd. If the process unit is a reconstituted wood product press or a reconstituted wood product board cooler, your capture device either meets the EPA Method 204 criteria for a PTE or achieves a capture efficiency of greater than or equal to 95 percent.
(6) Reconstituted wood product press at a new or existing affected source, or reconstituted wood product board cooler at a new affected source.	Compliance options in Tables 1A and 1B of this subpart or the emissions averaging compliance option in § 63.2240(c).	You submit the results of capture efficiency verification using the methods in Table 4 of this subpart with your Notification of Compliance Status.

TABLE 5 TO SUBPART DDDD.—PERFORMANCE TESTING AND INITIAL COMPLIANCE DEMONSTRATIONS FOR THE COMPLIANCE OPTIONS AND OPERATING REQUIREMENTS—Continued

For each . . .	For the following compliance options and operating requirements . . .	You have demonstrated initial compliance if . . .
(7) Process unit listed in Table 1B of this subpart controlled by routing exhaust to a combustion unit with heat input capacity greater than or equal to 44 megawatts.	Compliance options in Table 1B of this subpart or the emissions averaging compliance option in § 63.2240(c).	You submit with your Notification of Compliance Status documentation showing that your combustion unit has a heat input capacity greater than or equal to 44 megawatts and that the process exhausts controlled enter into the flame zone.

TABLE 6 TO SUBPART DDDD.—INITIAL COMPLIANCE DEMONSTRATIONS FOR WORK PRACTICE REQUIREMENTS

For each. . .	For the following work practice requirements. . .	You have demonstrated initial compliance if. . .
(1) Dry rotary dryer	Process furnish with an inlet moisture content less than or equal to 30 percent (by weight, dry basis) AND operate with an inlet dryer temperature of less than or equal to 600°F.	You meet the work practice requirement AND you submit a signed statement with the Notification of Compliance Status that the dryer meets the criteria of a ''dry rotary dryer'' AND you have a record of the inlet moisture content and inlet dryer temperature (as required in § 63.2263).
(2) Hardwood veneer dryer	Process less than 30 volume percent softwood species.	You meet the work practice requirement AND you submit a signed statement with the Notification of Compliance Status that the dryer meets the criteria of a ''hardwood veneer dryer'' AND you have a record of the percentage of softwoods processed in the dryer (as required in § 63.2264).
(3) Softwood veneer dryer	Minimize fugitive emissions from the dryer doors and the green end.	You meet the work practice requirement AND you submit with the Notification of Compliance Status a copy of your plan for minimizing fugitive emissions from the veneer dryer heated zones (as required in § 63.2265).
(4) Veneer redryers	Process veneer with an inlet moisture content of less than or equal to 25 percent (by weight, dry basis).	You meet the work practice requirement AND you submit a signed statement with the Notification of Compliance Status that the dryer operates only as a redryer AND you have a record of the veneer inlet moisture content of the veneer processed in the redryer (as required in § 63.2266).

TABLE 7 TO SUBPART DDDD.—CONTINUOUS COMPLIANCE WITH THE COMPLIANCE OPTIONS AND OPERATING REQUIREMENTS

For . . .	For the following compliance options and operating requirements . . .	You must demonstrate continuous compliance by . . .
(1) Each process unit listed in Tables 1A and 1B of this subpart or used in calculation of emissions averaging credits under § 63.2240(c).	Compliance options in Tables 1A and 1B of this subpart or the emissions averaging compliance option in § 63.2240(c) and the operating requirements in Table 2 of this subpart based on monitoring of operating parameters.	Collecting and recording the operating parameter monitoring system data listed in Table 2 of this subpart for the process unit according to § 63.2268(a)–(e); AND reducing the operating parameter monitoring system data to the specified average in units of the applicable requirement according to calculations in § 63.2268(a); AND maintaining the average operating parameter at or above the maximum, at or below the minimum, or within the range (whichever applies) established according to § 63.2262.
(2) Each process unit listed in Tables 1A and 1B of this subpart or used in calculation of emissions averaging credits under § 63.2240(c).	Compliance options in Tables 1A and 1B of this subpart or the emissions averaging compliance option in § 63.2240(c) and the operating requirements in Table 2 of this subpart based on THC CEMS data.	Collecting and recording the THC monitoring data listed in Table 2 of this subpart for the process unit according to § 63.2268(g); AND reducing the CEMS data to 3-hour block averages according to calculations in § 63.2268(g); AND maintaining the 3-hour block average THC concentration in the exhaust gases less than or equal to the THC concentration established according to § 63.2262.

TABLE 8 TO SUBPART DDDD.—CONTINUOUS COMPLIANCE WITH THE WORK PRACTICE REQUIREMENTS

For . . .	For the following work practice requirements . . .	You must demonstrate continuous compliance by . . .
(1) Dry rotary dryer	Process furnish with an inlet moisture content less than or equal to 30 percent (by weight, dry basis) AND operate with an inlet dryer temperature of less than or equal to 600 °F.	Maintaining the inlet furnish moisture content at less than or equal to 30 percent (by weight, dry basis) AND maintaining the inlet dryer temperature at less than or equal to 600 °F; AND keeping records of the inlet furnish moisture content and inlet dryer temperature.
(2) Hardwood veneer dryer	Process less than 30 volume percent softwood species.	Maintaining the volume percent softwood species processed below 30 percent AND keeping records of the volume percent softwood species processed.
(3) Softwood veneer dryer	Minimize fugitive emissions from the dryer doors and the green end.	Following (and documenting that you are following) your plan for minimizing fugitive emissions.
(4) Veneer redryers	Process veneer with an inlet moisture content of less than or equal to 25 percent (by weight, dry basis).	Maintaining the inlet moisture content of the veneer processed at or below 25 percent AND keeping records of the inlet moisture content of the veneer processed.

TABLE 9 TO SUBPART DDDD.—REQUIREMENTS FOR REPORTS

You must submit a(n) . . .	The report must contain . . .	You must submit the report . . .
(1) Compliance report	The information in § 63.2281(c) through (g)	Semiannually according to the requirements in § 63.2281(b).
(2) Immediate startup, shutdown, and malfunction report if you had a startup, shutdown, or malfunction during the reporting period that is not consistent with your SSMP.	(i) Actions taken for the event	By fax or telephone within 2 working days after starting actions inconsistent with the plan.
	(ii) The information in § 63.10(d)(5)(ii)	By letter within 7 working days after the end of the event unless you have made alternative arrangements with the permitting authority.

TABLE 10 TO SUBPART DDDD.—APPLICABILITY OF GENERAL PROVISIONS TO SUBPART DDDD

Citation	Subject	Brief description	Applies to subpart DDDD
§ 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	GP apply unless compliance extension; GP 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; 3 years after effective date; upon startup; 10 years after construction or reconstruction commences for 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 TO SUBPART DDDD.—APPLICABILITY OF GENERAL PROVISIONS TO SUBPART DDDD—Continued

Citation	Subject	Brief description	Applies to subpart DDDD
§ 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; for section 112(f) standards, comply within 90 days of effective date 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 (e.g., 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 (SSMP).	Requirement for SSM and SSMP; Content of SSMP	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)(1)–(9)	Opacity/Visible Emission (VE) Standards.	Requirements for opacity and visible emission standards.	NA.
§ 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 rule.	Yes.
§ 63.7(a)(1)–(2)	Performance Test Dates	Dates for Conducting Initial Performance Testing and Other Compliance Demonstrations; Must conduct 180 days after first subject to rule.	Yes.
§ 63.7(a)(3)	Section 114 Authority	Administrator may require a performance test under CAA section 114 at any time.	Yes.
§ 63.7(b)(1)	Notification of Performance Test	Must notify Administrator 60 days before the test	Yes.
§ 63.7(b)(2)	Notification of Rescheduling	If have to reschedule performance test, must notify Administrator 5 days before scheduled date of rescheduled date.	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.

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

Citation	Subject	Brief description	Applies to subpart DDDD
§ 63.7(e)(2)	Conditions for Conducting Performance Tests.	Must conduct according to rule and EPA test methods unless Administrator approves alternative.	Yes.
§ 63.7(e)(3)	Test Run Duration	Must have three test runs of at least one hour each; compliance is based on arithmetic mean of three runs; specifies conditions when data from an additional test run can be used.	Yes.
§ 63.7(f)	Alternative Test Method	Procedures by which Administrator can grant approval to use an alternative test method.	Yes.
§ 63.7(g)	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 Part 60 apply.	Yes.
§ 63.8(a)(3)	[Reserved]		
§ 63.8(a)(4)	Monitoring with Flares	Requirements for flares in § 63.11 apply	NA
§ 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 SSMP	Reporting requirements for SSM Yes 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; COMS must have a minimum of one cycle of sampling and analysis for each successive 10-second period and one cycle of data recording for each successive 6-minute period; CEMS must have a minimum of one cycle of operation for each successive 15-minute period.	Yes.

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

Citation	Subject	Brief description	Applies to subpart DDDD
§ 63.8(c)(5)	COMS Minimum Procedures	COMS minimum procedures	NA.
§ 63.8(c)(6)–(8)	CMS Requirements	Zero and high level calibration check requirements; out-of- control periods.	Yes.
§ 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.	Yes.
§ 63.8(e)	CMS Performance Evaluation	Notification, performance evaluation test plan, reports..	Yes.
§ 63.8(f)(1)–(5)	Alternative Monitoring Method	Procedures for Administrator to approve alternative monitoring.	Yes.
§ 63.8(f)(6)	Alternative Relative Accuracy Test	Procedures for Administrator to approve alternative relative accuracy tests for CEMS.	Yes.
§ 63.8(g)	Data Reduction	COMS 6-minute averages calculated over at least 36 evenly spaced data points; CEMS 1 hour averages computed over at least 4 equally spaced data points; data that can't be used in average.	Yes.
§ 63.9(a)	Notification Requirements	Applicability and State Delegation	Yes.
§ 63.9(b)(1)–(5)	Initial Notifications	Submit notification 120 days after effective date; notification of intent to construct/reconstruct; notification of commencement of construct/reconstruct; 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.	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.
§ 63.9(g)	Additional Notifications When Using CMS.	Notification of performance evaluation; notification using COMS data; notification that exceeded criterion for relative accuracy.	Yes.
§ 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.
§ 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 1 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) and (x)–(xi)	CMS Records	Malfunctions, inoperative, out-of-control	Yes.

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

Citation	Subject	Brief description	Applies to subpart DDDD
§ 63.10(b)(2)(vii)–(ix)	Records	Measurements to demonstrate compliance with compliance options and operating requirements; performance test, performance evaluation, and visible emission observation results; measurements to determine conditions of performance tests and performance evaluations.	Yes.
§ 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.	Yes.
§ 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	Yes.
§ 63.10(c)(7)–(8)	Records	Records of excess emissions and parameter monitoring exceedances for CMS.	No.
§ 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	NA.
§ 63.10(d)(4)	Progress Reports	Must submit progress reports on schedule if under compliance.	Yes.
§ 63.10(d)(5)	Startup, Shutdown, and Malfunction Reports.	Contents and submission	Yes.
§ 63.10(e)(1)–(2)	Additional CMS Reports	Must report results for each CEM Reports on a unit; written copy of performance evaluation; 3 copies of COMS performance evaluation.	Yes.
§ 63.10(e)(3)	Reports	Excess Emission Reports	No.
§ 63.10(e)(4)	Reporting COMS data	Must submit COMS data with performance test data	NA.
§ 63.10(f)	Waiver for Recordkeeping/Reporting.	Procedures for Administrator to waive	Yes.
§ 63.11	Flares	Requirements for flares	NA.
§ 63.12	Delegation	State authority to enforce standards	Yes.
§ 63.13	Addresses	Addresses where reports, notifications, and requests are send.	Yes.
§ 63.14	Incorporation by Reference	Test methods incorporated by reference	Yes.
§ 63.15	Availability of Information	Public and confidential information	Yes.

Appendix A to Subpart DDDD—Alternative Procedure To Determine Capture Efficiency From A Hot Press Enclosure in the Plywood and Composite Wood Products Industry Using Sulfur Hexafluoride Tracer Gas

1.0 Scope and Application

This procedure has been developed specifically for the proposed rule for the plywood and composite wood products industry and is used to determine the capture efficiency of a partial hot press enclosure in that industry. This procedure is applicable for the determination of capture efficiency for press enclosures that are not considered to be permanent total enclosures (PTEs) as defined in EPA Method 204 and is proposed as an alternative to the construction of temporary total enclosures (TTEs). Sulfur hexafluoride (SF_6) is used as a tracer gas (other tracer gases may be used if approved by the Administrator). This gas is not indigenous to the ambient atmosphere and is nonreactive.

This procedure uses infrared spectrometry (IR) as the analytical technique. When the infrared spectrometer used is a Fourier-Transform Infrared spectrometer (FTIR), an alternate instrument calibration procedure may be used; the alternate calibration procedure is the calibration transfer standard (CTS) procedure of EPA Method 320. Other analytical techniques which are capable of equivalent Method Performance (Section 13.0) also may be used. Specifically, gas chromatography with electron capture detection (GC/ECD) is an applicable technique for analysis of SF_6.

2.0 Summary of Method

A constant mass flow rate of SF_6 tracer gas is released through manifolds at multiple locations within the enclosure to mimic the release of HAP during the press process. This test method requires a minimum of three SF_6 injection points (two at the press unloader and one at the press) and provides details about considerations for locating the injection points. An infrared spectrometer (or GC/ECD) is used to measure the concentration of SF_6 at the inlet duct to the control device (outlet duct from enclosure). Simultaneously, EPA Method 2 is used to measure the flow rate at the inlet duct to the control device. The concentration and flow rate measurements are used to calculate the mass emission rate of SF_6 at the control device inlet. Through calculation of the mass of SF_6 released through the manifolds and the mass of SF_6 measured at the inlet to the control device, the capture efficiency of the enclosure is calculated.

In addition, optional samples of the ambient air may be taken at locations around the perimeter of the enclosure to quantify the ambient concentration of SF_6 and to identify those areas of the enclosure that may be performing less efficiently; these samples would be taken using disposable syringes and would be analyzed using a GC/ECD.

Finally, in addition to the requirements specified in this procedure, the data quality objectives (DQO) or lower confidence limit (LCL) criteria specified in Appendix A to 40 CFR part 63, subpart KK, Data Quality Objective and Lower Confidence Limit Approaches for Alternative Capture Efficiency Protocols and Test Methods, must also be satisfied. A minimum of three test runs are required for this procedure; however, additional test runs may be required based on the results of the DQO or LCL analysis.

3.0 Definitions

3.1 Capture efficiency (CE). The weight per unit time of SF_6entering the control device divided by the weight per unit time of SF_6 released through manifolds at multiple locations within the enclosure.

3.2 Control device (CD). The equipment used to reduce, by destruction or removal, press exhaust air pollutants prior to discharge to the ambient air.

3.3 Control/destruction efficiency (DE). The VOC or HAP removal efficiency of the control device.

3.4 Data Quality Objective (DQO) Approach. A statistical procedure to determine the precision of the data from a test series and to qualify the data in the determination of capture efficiency for compliance purposes. If the results of the DQO analysis of the initial three test runs do not satisfy the DQO criterion, the LCL approach can be used or additional test runs must be conducted. If additional test runs are conducted, then the DQO or LCL analysis is conducted using the data from both the initial test runs and all additional test runs.

3.5 Lower Confidence Limit (LCL) Approach. An alternative statistical procedure that can be used to qualify data in the determination of capture efficiency for compliance purposes. If the results of the LCL approach produce a CE that is too low for demonstrating compliance, then additional test runs must be conducted until the LCL or DQO is met. As with the DQO, data from all valid test runs must be used in the calculation.

3.6 Minimum Measurement Level (MML). The minimum tracer gas concentration expected to be measured during the test series. This value is selected by the tester based on the capabilities of the IR spectrometer (or GC/ECD) and the other known or measured parameters of the hot press enclosure to be tested. The selected MML must be above the low-level calibration standard and preferably below the mid-level calibration standard.

3.7 Method 204. The U.S. EPA Method 204, ''Criteria For and Verification of a Permanent or Temporary Total Enclosure'' (40 CFR part 51, Appendix M). If the permanent total enclosure (PTE) criteria in Method 204 are satisfied, the PTE around a hot press is assumed to be 100 percent capture efficient.

3.8 Method 205. The U.S. EPA Method 205, ''Verification of Gas dilution Systems for Field Instrument Calibrations'' (40 CFR part 51, Appendix M).

3.9 Method 320. The U.S. EPA Method 320, ''Measurement of Vapor Phase Organic and Inorganic Emissions by Extractive Fourier Transform Infrared (FTIR) Spectroscopy'' (40 CFR part 63, Appendix A).

3.10 Overall capture and control efficiency (CCE). The collection and control/destruction efficiency of both the PPE and CD combined. The CCE is calculated as the product of the CE and DE.

3.11 Partial press enclosure (PPE). The physical barrier that ''partially'' encloses the press equipment, captures a significant amount of the associated emissions, and transports those emissions to the CD.

3.12 Test series. A minimum of three test runs or, when more than three runs are conducted, all of the test runs conducted.

4.0 Interferences

There are no known interferences.

5.0 Safety

Sulfur hexafluoride is a colorless, odorless, nonflammable liquefied gas. It is stable and nonreactive and, because it is noncorrosive, most structural materials are compatible with it. The Occupational Safety and Health Administration PEL–TWA and TLV–TWA concentrations are 1,000 parts per million. Sulfur hexafluoride is an asphyxiant. Exposure to an oxygen deficient atmosphere (less than 19.5 percent oxygen) may cause dizziness, drowsiness, nausea, vomiting, excess salivation, diminished mental alertness, loss of consciousness and death. Exposure to atmospheres containing less than 12 percent oxygen will bring about unconsciousness without warning and so quickly that the individuals cannot help themselves. Contact with liquid or cold vapor may cause frostbite. Avoid breathing sulfur hexafluoride gas. Self contained breathing apparatus may be required by rescue workers. Sulfur hexafluoride is not listed as a carcinogen or a potential carcinogen.

6.0 Equipment and Supplies

This method requires equipment and supplies for: (a) The injection of tracer gas into the enclosure, (b) the measurement of the tracer gas concentration in the exhaust gas entering the control device, and (c) the measurement of the volumetric flow rate of the exhaust gas entering the control device. In addition, the requisite equipment needed for EPA Methods 1—4 will be required. Equipment and supplies for optional ambient air sampling are discussed in Section 8.6.

6.1 Tracer Gas Injection.

6.1.1 Manifolds. This method requires the use of tracer gas supply cylinder(s) along with the appropriate flow control elements. Figure 1 shows a schematic drawing of the injection system showing potential locations for the tracer gas manifolds. Figure 2 shows a schematic drawing of the recommended configuration of the injection manifold. Three tracer gas discharge manifolds are required at a minimum.

6.1.2 Flow Control Meter. Flow control and measurement meter for measuring the quantity of tracer gas injected. A mass flow, volumetric flow, or critical orifice control meter can be used for this method. The meter must be accurate to within ± 5 percent at the flow rate used. This means that the flow meter must be calibrated against a primary standard for flow measurement at the appropriate flow rate.

6.2 Measurement of Tracer Gas Concentration.

6.2.1 Sampling Probes. Use Pyrex or stainless steel sampling probes of sufficient length to reach the traverse points calculated according to EPA Method 1.

6.2.2 Sampling Line. Use a heated Teflon sampling line to transport the sample to the analytical instrument.

6.2.3 Sampling Pump. Use a sampling pump capable of extracting sufficient sample from the duct and transporting to the analytical instrument.

6.2.4 Sample Conditioning System. Use a particulate filter sufficient to protect the sampling pump and analytical instrument. At the discretion of the tester and depending on the equipment used and the moisture content of the exhaust gas, it may be necessary to further condition the sample by removing moisture using a condenser.

6.2.5 Analytical Instrument. Use one of the following analytical instruments.

6.2.1.1 Spectrometer. Use an infrared spectrometer designed to measuring SF6 tracer gas and capable of meeting or exceeding the specifications of this procedure. An FTIR meeting the specifications of Method 320 may be used.

6.2.1.2 GC/ECD. Use a GC/ECD designed to measure SF6 tracer gas and capable of meeting or exceeding the specifications of this procedure.

6.2.6 Recorder. At a minimum, use a recorder with linear strip chart. An automated data acquisition system (DAS) is recommended.

6.3 Exhaust Gas Flow Rate Measurement. Use equipment specified for EPA Methods 2, 3, and 4 for measuring flow rate of exhaust gas at the inlet to the control device.

7.0 Reagents and Standards

7.1 Tracer Gas. Use SF6 as the tracer gas. The manufacturer of the SF6 tracer gas should provide a recommended shelf life for the tracer gas cylinder over which the concentration does not change more than ± 2 percent from the certified value. A gas mixture of SF6 diluted with nitrogen should be used; based on experience and calculations, pure SF6 gas is not necessary to conduct tracer gas testing. Select a concentration and flow rate that is appropriate for the analytical instrument's detection limit, the minimum measurement level (MML), and the exhaust gas flow rate from the enclosure (see section 8.1.1). You may use a tracer gas other than SF6 with the prior approval of the Administrator. If you use an approved tracer gas other than SF6, all references to SF6 in this protocol instead refer to the approved tracer gas.

7.2 Calibration Gases. The SF_6 calibration gases required will be dependent on the selected MML and the appropriate span selected for the test. Commercial cylinder gases certified by the manufacturer to be accurate to within 1 percent of the certified label value are preferable, although cylinder gases certified by the manufacturer to 2 percent accuracy are allowed. Additionally, the manufacturer of the SF6 calibration gases should provide a recommended shelf life for each calibration gas cylinder over which the concentration does not change more than ± 2 percent from the certified value. Another option allowed by this method is for the tester to obtain high concentration certified cylinder gases and then use a dilution system meeting the requirements of EPA Method 205, 40 CFR part 51, Appendix M, to make multi-level calibration gas standards. Low-level, mid-level, and high-level calibration gases will be required. The MML must be above the low-level standard, the high-level standard must be no more than four times the low-level standard, and the mid-level standard must be approximately halfway between the high- and low-level standards. See section 12.1 for an example calculation of this procedure.

Note: If using an FTIR as the analytical instrument, the tester has the option of following the CTS procedures of Method 320; the calibration standards (and procedures) specified in Method 320 may be used in lieu of the calibration standards and procedures in this protocol.

7.2.1 Zero Gas. High purity nitrogen.

7.2.2 Low-Level Calibration Gas. An SF6 calibration gas in nitrogen with a concentration equivalent to 20 to 30 percent of the applicable span value.

7.2.3 Mid-Level Calibration Gas. An SF6 calibration gas in nitrogen with a concentration equivalent to 45 to 55 percent of the applicable span value.

7.2.4 High-Level Calibration Gas. An SF6 calibration gas in nitrogen with a concentration equivalent to 80 to 90 percent of the applicable span value.

8.0 Sample Collection, Preservation, Storage, and Transport

8.1 Test Design

8.1.1 Determination of Minimum Tracer Gas Flow Rate.

8.1.1.1 Determine (via design calculations or measurements) the approximate flow rate of the exhaust gas through the enclosure (acfm).

8.1.1.2 Calculate the minimum tracer gas injection rate necessary to assure a detectable SF6 concentration at the exhaust gas measurement point (see section 12.1 for calculation).

8.1.1.3 Select a flow meter for the injection system with an operating range appropriate for the injection rate selected.

8.1.2 Determination of the Approximate Time to Reach Equilibrium.

8.1.2.1 Determine the volume of the enclosure.

8.1.2.2 Calculate the air changes per minute of the enclosure by dividing the approximate exhaust flow rate (8.1.1.1 above) by the enclosed volume (8.1.2.1 above).

8.1.2.3 Calculate the time at which the tracer concentration in the enclosure will achieve approximate equilibrium. Divide 3 by the air changes per minute (8.1.2.2 above) to establish this time. This is the approximate length of time for the system to come to equilibrium. Concentration equilibrium occurs when the tracer concentration in the enclosure stops changing as a function of time for a constant tracer release rate. Because the press is continuously cycling, equilibrium may be exhibited by a repeating, but stable, cyclic pattern rather than a single constant concentration value. Assure sufficient tracer gas is available to allow the system to come to equilibrium, and to sample for a minimum of 20 minutes and repeat the procedure for a minimum of 3 test runs. Additional test runs may be required based on the results of the DQO and LCL analyses described in 40 CFR part 63, subpart KK, Appendix A.

8.1.3 Location of Injection Points. This method requires a minimum of three tracer gas injection points. The injection points should be located within leak prone, VOC/HAP-producing areas around the press, or horizontally within 12 inches of the defined equipment. One potential configuration of the injection points is depicted in Figure 1. The effect of wind, exfiltration through the building envelope, and air flowing through open building doors should be considered when locating tracer gas injection points within the PPE. The injection points should also be located at a vertical elevation equal to the VOC/HAP generating zones. The injection points should not be located beneath obstructions that would prevent a natural dispersion of the gas. Document the selected injection points in a drawing(s).

8.1.4 Location of Flow Measurement and Tracer Sampling. Accurate CD inlet gas flow rate measurements are critical to the success of this procedure. Select a measurement location meeting the criteria of EPA Method 1 (40 CFR part 60, Appendix A), Sampling and Velocity Traverses for Stationary Sources. Also, when selecting the measurement location, consider whether stratification of the tracer gas is likely at the location (e.g., do not select a location immediately after a point of air in-leakage to the duct).

8.2 Tracer Gas Release. Release the tracer gas at a calculated flow rate (see section 12.1 for calculation) through a minimum of three injection manifolds located as described above in 8.1.3. The tracer gas delivery lines must be routed into the enclosure and attached to the manifolds without violating the integrity of the enclosure.

8.3 Pretest Measurements.

8.3.1 Location of Sampling Point(s). If stratification is not suspected at the measurement location, select a single sample point located at the centroid of the CD inlet duct or at a point no closer to the CD inlet duct walls than 1 meter. If stratification is suspected, establish a ''measurement line'' that passes through the centroidal area and in the direction of any expected stratification. Locate three traverse points at 16.7, 50.0 and 83.3 percent of the measurement line and sample from each of these three points during each run, or follow the procedure in section 8.3.2 to verify whether stratification does or does not exist.

8.3.2 Stratification Verification. The presence or absence of stratification can be verified by using the following procedure. While the facility is operating normally, initiate tracer gas release into the PPE. For rectangular ducts, locate at least nine sample points in the cross section such that the sample points are the centroids of similarly-shaped, equal area divisions of the cross section. Measure the tracer gas concentration at each point. Calculate the mean value for all sample points. For circular ducts, conduct a 12-point traverse (*i.e.,* six points on each of the two perpendicular diameters) locating the sample points as described in 40 CFR part 60, Appendix A, Method 1. Perform the measurements and calculations as described above. Determine if the mean pollutant concentration is more than 10 percent different from any single point. If so, the cross section is considered to be stratified, and the tester may not use a single sample point location, but must use the three traverse points at 16.7, 50.0, and 83.3 percent of the entire measurement line. Other traverse points may be selected, provided that they can be shown to the satisfaction of the Administrator to provide a representative sample over the stack or duct cross section.

8.4 CD Inlet Gas Flow Rate Measurements. The procedures of EPA Methods 1–4 (40 CFR part 60, Appendix A) are used to determine the CD inlet gas flow rate. Molecular weight (Method (3) and moisture (Method (4) determinations are only required once for each test series. However, if the test series is not completed within 24 hours, then the molecular weight and moisture measurements should be repeated daily. As a minimum, velocity measurements are conducted according to the procedures of Methods 1 and 2 before and after each test run, as close to the start and end of the run as practicable. A velocity measurement between two runs satisfies both the criterion of ''after'' the run just completed and ''before'' the run to be initiated. Accurate exhaust gas flow rate measurements are critical to the success of this procedure. If significant temporal variations of flow rate are anticipated during the test run under normal process operating conditions, take appropriate steps to accurately measure the flow rate during the test. Examples of steps that might be taken include: (1) Conducting additional velocity traverses during the test run; or (2) continuously monitoring a single point of average velocity during the run and using these data, in conjunction with the pre- and post-test traverses, to calculate an average velocity for the test run.

8.5 Tracer Gas Measurement Procedure.

8.5.1 Calibration Error Test. Immediately prior to the emission test (within 2 hours of the start of the test), introduce zero gas and high-level calibration gas at the calibration valve assembly. Zero and calibrate the analyzer according to the manufacturer's procedures using, respectively, nitrogen and the calibration gases. Calculate the predicted response for the low-level and mid-level gases based on a linear response line between the zero and high-level response. Then introduce the low-level and mid-level calibration gases successively to the measurement system. Record the analyzer responses for the low-level and mid-level calibration gases and determine the differences between the measurement system responses and the predicted responses using the equation in section 12.3. These differences must be less than 5 percent of the respective calibration gas value. If not, the measurement system must be replaced or repaired prior to testing. No adjustments to the measurement system shall be conducted after the calibration and before the drift determination (section 8.5.4). If adjustments are necessary before the completion of the test series, perform the drift checks prior to the required adjustments and repeat the calibration following the adjustments. If multiple electronic ranges are to be used, each additional range must be checked with a mid-level calibration gas to verify the multiplication factor.

Note: If using an FTIR for the analytical instrument, you may choose to follow the pretest preparation, evaluation, and calibration procedures of Method 320 (section 8.0) (40 CFR part 63, Appendix A) in lieu of the above procedure.

8.5.2 Response Time Test. Conduct this test once prior to each test series. Introduce zero gas into the measurement system at the calibration valve assembly. When the system output has stabilized, switch quickly to the high-level calibration gas. Record the time from the concentration change to the measurement system response equivalent to 95 percent of the step change. Repeat the test three times and average the results.

8.5.3 SF_6 Measurement. Sampling of the enclosure exhaust gas at the inlet to the CD should begin at the onset of tracer gas release. If necessary, adjust the tracer gas injection rate such that the measured tracer gas concentration at the CD inlet is within the spectrometer's calibration range (*i.e.*, between the MML and the span value). Once the tracer gas concentration reaches equilibrium, the SF_6 concentration should be measured using the infrared spectrometer continuously for at least 20 minutes per run. Continuously record (*i.e.*, record at least once per minute) the concentration. Conduct at least three test runs. On the recording chart, in the data acquisition system, or in a log book, make a note of periods of process interruption or cyclic operation such as the cycles of the hot press operation. Table 1 summarizes the physical measurements required for the press enclosure testing.

Note: If a GC/ECD is used as the analytical instrument, a continuous record (at least once per minute) likely will not be possible; make a minimum of five injections during each test run. Also, the minimum test run duration criterion of 20 minutes applies.

8.5.4 Drift Determination. Immediately following the completion of the test run, reintroduce the zero and mid-level calibration gases, one at a time, to the measurement system at the calibration valve assembly. (Make no adjustments to the measurement system until both the zero and calibration drift checks are made.) Record the analyzer responses for the zero and mid-level calibration gases and determine the difference between the instrument responses for each gas prior to and after the emission test run using the equation in section 12.4. If the drift values exceed the specified limits (section 13), invalidate the test results preceding the check and repeat the test following corrections to the measurement system. Alternatively, recalibrate the test measurement system as in section 8.5.1 and report the results using both sets of calibration data (*i.e.*, data determined prior to the test period and data determined following the test period).

Note: If using an FTIR for the analytical instrument, you may choose to follow the post-test calibration procedures of Method 320 (section 8.11.2) in lieu of the above procedures.

8.6 Ambient Air Sampling (Optional). Sampling the ambient air surrounding the enclosure is optional. However, taking these samples during the capture efficiency testing will identify those areas of the enclosure that may be performing less efficiently.

8.6.1 Location of Ambient Samples Outside the Enclosure (Optional). In selecting the sampling locations for collecting samples of the ambient air surrounding the enclosure, consider potential leak points, the direction of the release, and laminar flow characteristics in the area surrounding the enclosure. Samples should be collected from all sides of the enclosure, downstream in the prevailing room air flow, and in the operating personnel occupancy areas.

8.6.2 Collection of Ambient Samples (Optional). During the tracer gas release, collect ambient samples from the area surrounding the enclosure perimeter at predetermined location using disposable syringes or some other type of containers that are non-absorbent, inert and that have low permeability (*i.e.*, polyvinyl fluoride film or polyester film sample bags or polyethylene, polypropylene, nylon or glass bottles). The use of disposable syringes allows samples to be injected directly into a gas chromatograph. Concentration measurements taken around the perimeter of the enclosure provide evidence of capture performance and will assist in the identification of those areas of the enclosure that are performing less efficiently.

8.6.3 Analysis and Storage of Ambient Samples (Optional). Analyze the ambient samples using an analytical instrument calibrated and operated according to the procedures of this appendix or ASTM E 260 and ASTM E 697. Samples may be analyzed immediately after a sample is taken, or they may be stored for future analysis. Experience has shown no degradation of concentration in polypropylene syringes when stored for several months as long as the needle or syringe is plugged. Polypropylene syringes should be discarded after one use to eliminate the possibility of cross contamination of samples.

9.0 Quality Control

9.1 Sampling, System Leak Check. A sampling system leak check should be conducted prior to and after each test run to ensure the integrity of the sampling system.

9.2 Zero and Calibration Drift Tests

Section	Quality control measure	Effect
8.5.4	Zero and calibration drift tests	Ensures that bias introduced by drift in the measurement system output during the run is no greater than 3 percent of span.

10.0 Calibration and Standardization

10.1 Control Device Inlet Air Flow Rate Measurement Equipment. Follow the equipment calibration requirements specified in Methods 2, 3, and 4 for measuring the velocity, molecular weight, and moisture of the control device inlet air.

10.2 Tracer Gas Injection Rate. A dry gas volume flow meter, mass flow meter, or orifice can be used to measure the tracer gas injection flow rate. The selected flow measurement device must have an accuracy of greater than ± 5 percent at the field operating range. Prior to the test, verify the calibration of the selected flow measurement device using either a wet test meter, spirometer, or liquid displacement meter as the calibration device. Select a minimum of two flow rates to bracket the expected field operating range of the flow meter. Conduct three calibration runs at each of the two selected flow rates. For each run, note the exact quantity of gas as determined by the calibration standard and the gas volume indicated by the flow meter. For each flow rate, calculate the average percent difference of the indicated flow compared to the calibration standard.

10.3 Spectrometer. Follow the calibration requirements specified by the equipment manufacturer for infrared spectrometer measurements and conduct the pretest calibration error test specified in section 8.5.1. Note: if using an FTIR analytical instrument see Method 320, section 10.

10.4 Gas Chromatograph. Follow the pre-test calibration requirements specified in section 8.5.1.

10.4 Gas Chromatograph for Ambient Sampling (Optional). For the optional ambient sampling, follow the calibration requirements specified in section 8.5.1 or ASTM E 260 and E 697 and by the equipment manufacturer for gas chromatograph measurements.

11.0 Analytical Procedures

The sample collection and analysis are concurrent for this method (see section 8.0).

12.0 Calculations and Data Analysis

12.1 Estimate MML and Span. The MML is the minimum measurement level. The selection of this level is at the discretion of the tester. However, the MML must be higher than the low-level calibration standard and the tester must be able to measure at this level with a precision of ≤10 percent. As an example, select the MML as 10 times the instrument's published detection limit. The detection limit of one instrument is 0.01 parts per million by volume (ppm_v). Therefore, the MML would be 0.10 ppm_v. Select the low-level calibration standard as 0.08 ppm_v. The high-level standard would be four times the low-level standard or 0.32 ppm_v. A reasonable mid-level standard would then be 0.20 ppm_v (halfway between the low-level standard and the high-level standard). Finally, the span value would be approximately 0.40 ppm_v (the high-level value is 80 percent of the span). In this example, the following MML, calibration standards, and span values would apply:

MML = 0.10 ppm_v
Low-level standard = 0.08 ppm_v
Mid-level standard = 0.20 ppm_v
High-level standard = 0.32 ppm_v
Span value = 0.40 ppm_v

12.2 Estimate Tracer Gas Injection Rate for the Given Span. To estimate the minimum and maximum tracer gas injection rate, assume a worst case capture efficiency of 80 percent, and calculate the tracer gas flow rate based on known or measured parameters. To estimate the minimum tracer gas injection rate, assume that the MML concentration (10 times the IR detection limit in this example) is desired at the measurement location. The following equation can be used to estimate the minimum tracer gas injection rate:

$$((Q_{T-MIN} \times 0.8)/Q_E) \times (C_T \div 100) \times 10^6 = MML$$

$$Q_{T-MIN} = 1.25 \times MML \times (Q_E / C_T) \times 10^{-4}$$

Where:

Q_{T-MIN} = minimum volumetric flow rate of tracer gas injected, scfm
Q_E = volumetric flow rate of exhaust gas, scfm
C_T = Tracer gas (SF_6) concentration in gas blend, percent by volume
MML = minimum measured level, ppm_v = 10 × IR_{DL} (for this example)
IR_{DL}= IR detection limit, ppm_v

Standard conditions: 20 °C, 760 mm Hg.

To estimate the maximum tracer gas injection rate, assume that the span value is desired at the measurement location. The following equation can be used to estimate the maximum tracer gas injection rate:

$$((Q_{T-MAX} \times 0.8)/Q_E) \times (C_T \div 100) \times 10^6 = \text{span value}$$

$$Q_{T-MAX} = 1.25 \times \text{span value} \times (Q_E / C_T) \times 10^{-4}$$

Where:

Q_{T-MAX} = maximum volumetric flow rate of tracer gas injected, scfm
Span value = Instrument span value, ppm_v

The following example illustrates this calculation procedure:

Find the range of volumetric flow rate of tracer gas to be injected when the following parameters are known:

Q_E = 60,000 scfm (typical exhaust gas flow rate from a press enclosure)
C_T = 2 percent SF_6 in nitrogen
IR_{DL}= 0.01 ppm_v (per manufacturer's specifications)
MML = 10 × IR_{DL} = 0.10 ppm_v
Span value = 0.40 ppm_v
Q_T = ?

Minimum tracer gas volumetric flow rate:

$$Q_{T-MIN} = 1.25 \times MML \times (Q_E / C_T) \times 10^{-4}$$

$$Q_{T-MIN} = 1.25 \times 0.10 \times (60{,}000/2) \times 10^{-4} = 0.375 \text{ scfm}$$

Maximum tracer gas volumetric flow rate:

$$Q_{T-MAX} = 1.25 \times \text{span value} \times (Q_E / C_T) \times 10^{-4}$$

$$Q_{T-MAX} = 1.25 \times 0.40 \times (60{,}000/2) \times 10^{-4} = 1.5 \text{ scfm}$$

In this example, the estimated total volumetric flow rate of the two percent SF_6 tracer gas injected through the manifolds in the partial enclosure lies between 0.375 and 1.5 scfm.

12.3 Calibration Error. Calculate the calibration error for the low-level and mid-level calibration gases using the following equation:

$$Err = | C_{std} - C_{meas} | \div C_{std} \times 100$$

Where:

Err = Calibration error, percent
C_{std} = Low-level or mid-level calibration gas value, ppm_v
C_{meas} = Measured response to low-level or mid-level concentration gas, ppm_v

12.4 Calibration Drift. Calculate the calibration drift for the zero and low-level calibration gases using the following equation:

$$D = | C_{initial} - C_{final} | \div C_{span} \times 100$$

Where:

D = Calibration drift, percent
$C_{initial}$ = Low-level or mid-level calibration gas value measured before test run, ppm_v
C_{final} = Low-level or mid-level calibration gas value measured after test run, ppm_v
C_{span} = Span value, ppm_v

12.5 Calculate Capture Efficiency. The equation to calculate press enclosure capture efficiency is provided below:

$$CE = (SF_{6-CD} \div SF_{6-INJ}) \times 100$$

Where:

CE = capture efficiency
SF_{6-CD} = mass of SF_6 measured at the inlet to the CD
SF_{6-INJ} = mass of SF_6 injected from the tracer source into the PPE

Calculate the CE for each of the initial three test runs. Then, follow the procedures outlined in section 12.6 to calculate the Overall Capture Efficiency.

12.6 Calculate Overall Capture Efficiency. After calculating the capture efficiency for each of the initial three test runs, follow the procedures in 40 CFR part 63, subpart KK, Appendix A to determine if the results of the testing can be used in determining compliance with the requirements of the proposed rule. There are two methods that can be used: the DQO and LCL methods. The DQO method is described in section 3 of 40 CFR part 63, subpart KK, Appendix A and provides a measure of the precision of the capture efficiency testing conducted. Section 3 of 40 CFR part 63, subpart KK, Appendix A provides an example calculation using results from a facility. If the DQO criteria are met using the first set of three test runs, then the facility can use the average capture efficiency of these test results to determine the capture efficiency of the partial hot press enclosure. If the DQO criteria are not met then the facility can conduct another set of three runs and run the DQO analysis again using the results from the six runs *OR* the facility can elect to use the LCL approach.

The LCL method is described in section 4 of 40 CFR part 63, subpart KK, Appendix A and provides sources that may be performing much better than their regulatory requirement a screening option by which they can demonstrate compliance. The LCL approach compares the 80 percent lower confidence limit for the mean measured CE value to the applicable regulatory requirement. If the LCL capture efficiency is higher than the applicable limit, then the facility is in initial compliance and would use the LCL capture efficiency as the capture efficiency to determine compliance. If the LCL capture efficiency is lower than the applicable limit, then the facility must perform additional test runs and re-run the DQO or LCL analysis.

13.0 Method Performance

13.1 Measurement System Performance Specifications.

13.1.1 Zero Drift. Less than ± 3 percent of the span value.

13.1.2 Calibration Drift. Less than ± 3 percent of the span value.

13.1.3 Calibration Error. Less than ± 5 percent of the calibration gas value.

13.2 Flow Measurement Specifications. The mass flow, volumetric flow, or critical orifice control meter used should have an accuracy of greater than ± 5 percent at the flow rate used.

13.3 Calibration and Tracer Gas Specifications. The manufacturer of the calibration and tracer gases should provide a recommended shelf life for each calibration gas cylinder over which the concentration does not change more than ± 2 percent from the certified value.

14.0 Pollution Prevention [Reserved]

15.0 Waste Management [Reserved]

16.0 References

1. 40 CFR part 60, Appendix A, EPA Method 1—Sample and velocity traverses for stationary sources.

2. 40 CFR part 60, Appendix A, EPA Method 2—Determination of stack gas velocity and volumetric flow rate.

3. 40 CFR part 60, Appendix A, EPA Method 3—Gas analysis for the determination of dry molecular weight.

4. 40 CFR part 60, Appendix A, EPA Method 4—Determination of moisture content in stack gases.

5. SEMI F15–93 Test Method for Enclosures Using Sulfur Hexafluoride Tracer Gas and Gas Chromotography.

6. Memorandum from John S. Seitz, Director, Office of Air Quality Planning and Standards, to EPA Regional Directors, Revised Capture Efficiency Guidance for Control of Volatile Organic Compound Emissions, February 7, 1995. (That memorandum contains an attached technical document from Candace Sorrell, Emission Monitoring and Analysis Division, ''Guidelines for Determining Capture Efficiency,'' January 9, 1994).

7. Technical Systems Audit of Testing at Plant ''C,'' EPA–454/R–00–26, May 2000.

8. Material Safety Data Sheet for SF_6. Air Products and Chemicals, Inc. Website: *www3.airproducts.com.* October 2001.

17.0 Tables, Diagrams, Flowcharts, and Validation Data

TABLE 1.—SUMMARY OF CRITICAL PHYSICAL MEASUREMENTS FOR THE PRESS ENCLOSURE TESTING

Measurement	Measurement instrumentation	Measurement frequency	Measurement site
Tracer gas injection rate	Mass flow meter, volumetric flow meter or critical orifice.	Continuous	Injection manifolds (cylinder gas).
Tracer gas concentration at control device inlet.	Infrared Spectrometer or GC/ECD	Continuous (at least one reading per minute) for a minimum of 20 minutes.	Inlet duct to the control device (outlet duct of enclosure).
Volumetric air flow rate	EPA Methods 1, 2, 3, 4 (40 CFR part 60, Appendix A). • Velocity sensor (Manometer/ Pito t tube). • Thermocouple • Midget Impinger sampler • Orsat or Fyrite	Each test run for velocity (minimum); Daily for moisture and molecular weight.	Inlet duct to the control device (outlet duct of enclosure).

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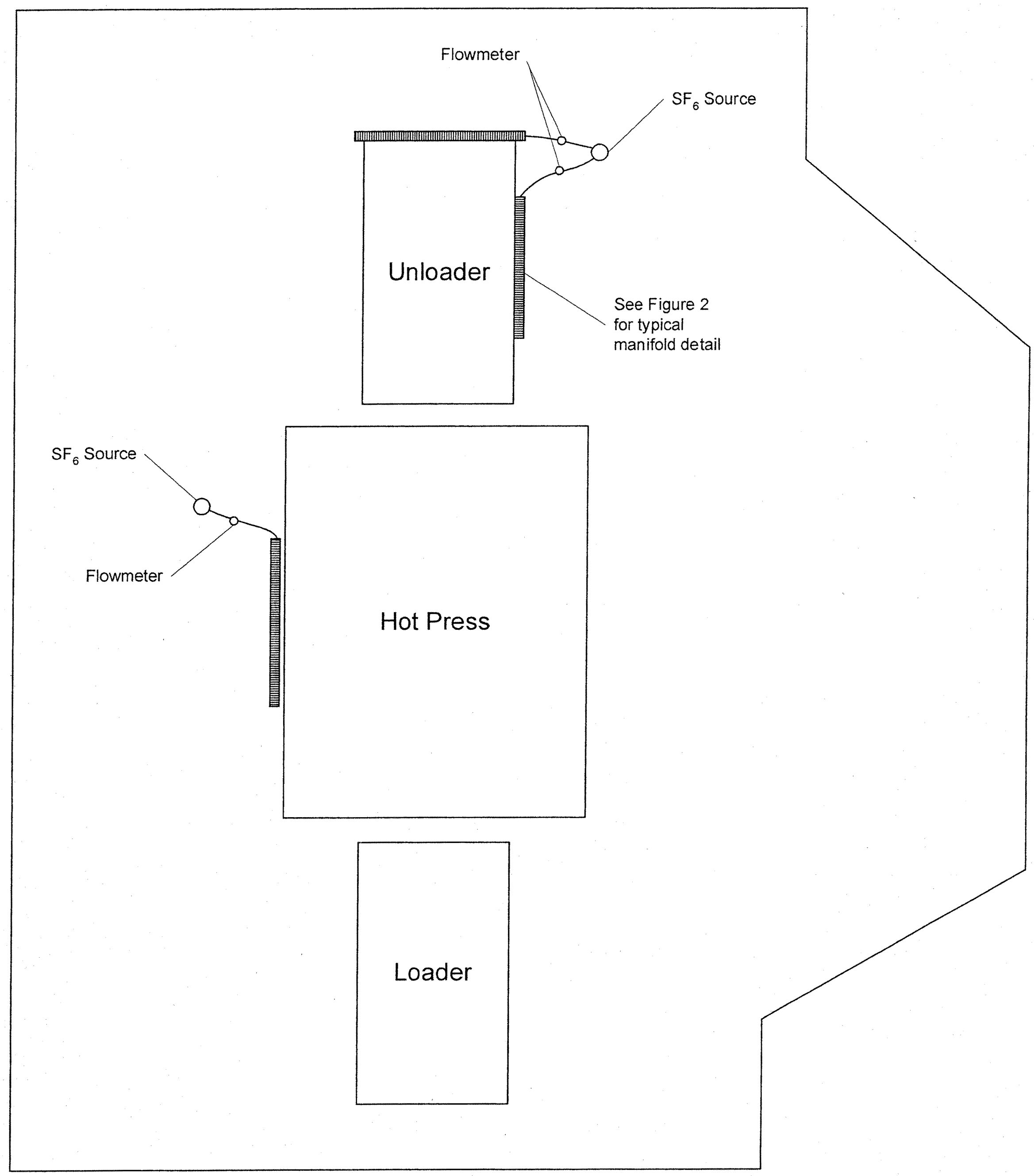

Figure 1. Plan view schematic of hot press and enclosure showing SF_6 manifold locations.

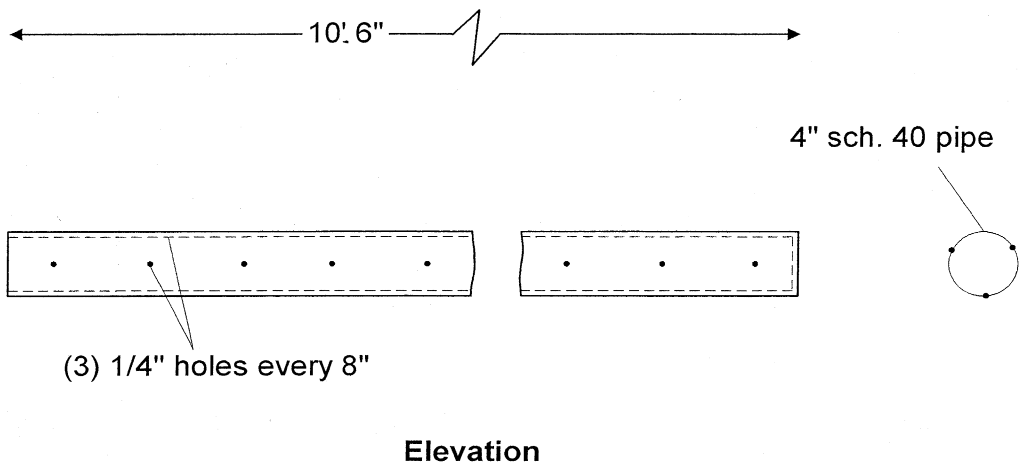

Figure 2. Schematic detail for manifold system for SF_6 injection.

[FR Doc. 03–84 Filed 1–8–03; 8:45 am]

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